



MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY – REMEDIATION AND REDEVELOPMENT DIVISION
PO BOX 30426, LANSING, MI 48909-7926, Phone 517-284-5087, Fax 517-241-9581

**LEAKING UNDERGROUND STORAGE TANK
CLOSURE REPORT COVER SHEET**

☒ NEW or ☐ REVISED PER DEQ AUDIT

INSTRUCTIONS: COMPLETION OF THIS REPORT WITH ALL APPLICABLE INFORMATION IS MANDATORY pursuant to Part 213, Section 324.21312a of the Leaking Underground Storage Tanks, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. **Check one of the boxes above to indicate whether this is a new or revised submittal.** The Owner/Operator (O/O) and Qualified Underground Storage Tank Consultant (QC) must complete the affidavits on page 2. Please submit the completed closure report cover sheet and Table of Contents (Form EQP4008) to the appropriate District Office.

SITE NAME: RACER ACC Penske Site #13100		FACILITY ID NUMBER:	
STREET ADDRESS: 701 and 675 Caesar Chavez Ave			
CITY: Pontiac	ZIP: 48340	COUNTY: Oakland	
DATE(S) RELEASE(S) DISCOVERED: 4 April 1991, 4 May 1992		CONFIRMED RELEASE NUMBER(S): C-0798-91, C-0717-92	
O/O NAME: RACER		O/O EMAIL ADDRESS: dfavero@racertrust.org	
O/O STREET ADDRESS: 500 Woodard Ave, Suite 2650		CITY: Detroit	STATE: MI ZIP: 48226
CONTACT PERSON: David Favero		PHONE: (734) 879-9525	FAX: --

Permission is given for the Department of Environmental Quality to contact the Qualified Consultant: ☒ YES ☐ NO

CLOSURE REPORT INFORMATION: Answer All Questions (DO NOT LEAVE BLANKS)

1. Site Classification (1-4): 4		Previous Site Classification (1-4): Unknown		Type of RBCA Evaluation: ☒ Tier I ☐ Tier II ☐ Tier III
2. Substance(s) released: ☐ Gasoline ☐ Diesel ☐ Ethanol: E-10 ☐ E-85 ☒ Other: Waste Oil				
3. Has contamination migrated off-site above Tier 1 Residential RBSLs? ☐ YES ☒ NO If YES, have off-site impacted parties been notified per Section 21309a(3) of Part 213? ☐ YES ☐ NO				
4. Predominant groundwater flow direction: South Depth to groundwater: 10-15 ft				
5. Is mobile NAPL present: Currently? ☐ YES ☒ NO Previously? ☐ YES ☒ NO If present, was it recovered? ☐ YES ☐ NO If recoverable, total gallons recovered since last reported: to date:				
6. Was migrating NAPL present?: ☐ YES ☒ NO If yes, were actions taken to stop the NAPL migration? ☐ YES ☐ NO				
7. Since Last Report: cubic yards of soil remediated: N/A gallons of groundwater remediated: Totals to date: cubic yards of soil remediated: gallons of groundwater remediated:				
8. Have toxic or explosive vapors been identified in any confined spaces (basement, sewer, etc.)? ☐ YES ☒ NO				
9. Drinking water supply effected? Currently: ☐ YES ☒ NO Previously: ☐ YES ☐ NO Indicate type and # of wells effected: ☐ Private # ☐ Public Type II/III # ☐ Municipal #				
10. Has the release affected surface water or wetlands? ☐ YES ☒ NO				
11. Estimated distance and direction from point of release to nearest: Private well: Municipal well: Surface water/wetland: Is site within a wellhead protection zone? ☐ YES ☒ NO				
12. Closure report based on which type of land use? ☐ Residential ☒ Nonresidential				
13. Institutional Controls: ☐ None ☐ Notice of Corrective Action ☒ Restrictive Covenant ☐ Other:				
14. What type of Corrective Action was Completed? (i.e., Air Sparge/Soil Vapor Extraction; Monitored Natural Attenuation; Multi-phase Extraction; Excavation; Institutional Controls; etc.): N/A				



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**LEAKING UNDERGROUND STORAGE TANK
CLOSURE REPORT COVER SHEET**
(continued)

CLOSURE REPORT AFFIDAVITS: (Must be completed before submitting form.)

OWNER/OPERATOR AFFIDAVIT OF REPORT COMPLETENESS

I attest that the information upon which the closure report is based is complete and true to the best of my knowledge, in accordance with Part 213, Leaking Underground Storage Tanks, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended.

<u>David Favero</u> Signature of Owner or Operator / Affiant	<u>David Favero, Deputy Cleanup Manager</u> Print Owner or Operator / Affiant Name	<u>3/6/2017</u> Date
<u>RACER Trust</u> Name of Company (if applicable)	<u>500 Woodward Ave., Suite 2650, Detroit MI 48226</u> Address, City, State, Zip	
<u>734-879-9525</u> Phone Number	<u>-</u> Fax Number	<u>dfavero@racertrust.org</u> Email Address

Sworn to before me and subscribed in my presence this 6th day of March, 2017

Tracie L. Nichols
Notary Public

Tracie L. Nichols
Print Name

TRACIE L. NICHOLS
Notary Public, State of Michigan
County Of Wayne
My Commission Expires 03-19-2023
Acting in the County of Wayne

County of Wayne
Acting in the County of Wayne

QUALIFIED UNDERGROUND STORAGE TANK CONSULTANT AFFIDAVIT OF CLOSURE

As preparer of the Closure Report, I attest to the fact that the corrective actions detailed in the closure report complies with all applicable requirements under the applicable Risk Based Corrective Action standard and that the information upon which the closure report is based is true and accurate to the best of my knowledge. By signing this form I certify that I meet the qualified underground storage tank consultant requirements identified in section 324.21325 of Part 213, Leaking Underground Storage Tanks, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Attached is a Certificate of Insurance demonstrating that I have obtained the insurances required by sections 324.21312a(1)(c) and 324.21325.

<u>Forrest Paul</u> Signature of Qualified UST Consultant	<u>FORREST PAUL</u> Print Qualified QC Consultant Name	<u>01 MARCH 2017</u> Date
<u>HALEY + ALDRICH, INC.</u> Name of Company	<u>598 BYRNE INDUSTRIAL DRIVE, ROCKFORD, MI 49341</u> Address, City, State, Zip	
<u>(616) 951-6262</u> Phone Number	<u>N/A</u> Fax Number	<u>fpaul@haleyaldrich.com</u> Email Address

Sworn to before me and subscribed in my presence this 1st day of March, 2017

Debbie Amos
Notary Public

Debbie Amos
Print Name

Debbie Amos
Notary Public, Ionia County
My Commission Expires 12/26/2022
Acting in Kent County

County of Kent Ionia
Acting in the County of Kent

My Commission Expires 12-26-2022

Instructions - Utilize the following Table of Contents (TOC) to ensure that all information required by Part 213, Leaking Underground Storage Tanks, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, is provided in the Closure Report. RBCA is defined in Part 213 as the ASTM standards E 1739-95 (2010), E 2081-00 (2010), and E 2531-06. Information in these standards must be provided, as applicable per site conditions. The Department of Environmental Quality (DEQ) may request supporting documentation to the data and conclusions of the Closure Report, which may include information in the ASTM standards referenced above.

Complete the Closure Report cover sheet and pages 1 through 2 of the TOC. The order and format in which the information is provided is at the submitter's discretion. Each page of the report, including appendices, should be consecutively numbered. The column labeled as "Page(s)" should be completed with the range of page numbers for each section. You may reference previously submitted material by specifying where the information is located within the referenced document. Submit the documentation identified in Section IV, as applicable, if IAR/FAR was not previously submitted or additional site characterization was performed following submittal of FAR.

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B. <u>Closure Verification Sampling Results</u> 1. Provide a summary of the analytical data and the appropriate RBSL or SSTL used. 2. Provide the following maps and figures: a. A site map of the location. b. An extended site map to include nearby parcels and their use, nearby groundwater supply wells, site plan view showing location of structures, ASTs, USTs, buried utilities and conduits, suspected/confirmed sources. c. Map(s) and cross-sections of the remaining groundwater plume and impacted soil.	4-6

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<u>C. Institutional Controls</u> 1. Provide an explanation of land or resource use restrictions (i.e., Notice of Corrective Actions, Institutional Controls, Restrictive Covenants, Alternative Mechanisms, Notice of Land Use Restrictions), and how they will prevent or control unacceptable exposures. Provide a copy of the recorded instrument. 2. Provide a copy of the notice and proof of providing the notice to the public directly impacted by the release above a residential RBSL and the proposed corrective action. Reference: Part 213, Section 21310a, and Section 21312a	10
<u>D. Applicable IAR/FAR Documentation</u> 1. If the IAR/FAR was not previously submitted <u>or</u> additional site characterization was performed following submittal of FAR, then refer to IAR/FAR Tables of Contents and include all relevant information that is not already provided in this closure report. Reference: Site Description, Assessment and Evaluation: Part 213, Section 21311a(a), and Section 21312a; ASTM E1739-95(2010), Section 6.2, Section 6.5, Section 6.6, and Section 6.11 thru 6.11.19 Corrective Action Activities: Part 213, Section 21309a, Section 21311a(b), Section 21312a; ASTM E1739-95(2010), Section 6.2.2, Section 6.7 thru 6.7.3, Section 6.8 thru 6.83, and Section 6.6 thru 6.9.2	4-6

LUST CLOSURE REPORT
RACER PENSKE SITE #13100
701 AND 675 CESAR E CHAVEZ AVENUE
PONTIAC, MICHIGAN

by Haley & Aldrich of Michigan, Inc.
Ann Arbor, Michigan

for RACER
Detroit, Michigan

File No. 37147-028
January 23, 2017



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1. Introduction

This report (hereafter referred to as LUST Closure Report) has been prepared by Haley & Aldrich of Michigan, Inc. on behalf of Revitalizing Auto Communities Environmental Response Trust (RACER) to summarize the activities related to the UST Releases #C-0798-91 and #C-0717-92 at the RACER ACC Penske Site #13100 located in Pontiac, MI.

This LUST Closure Report provides a brief description of Property background, a summary of existing conditions, a description of the field activities conducted to assess the status of Part 213 Open Releases #C-0798-91 and #C-0717-92, a discussion of risk assessment, and conclusions.

For purposes of this Closure Report, “Property” refers to the RACER ACC Penske Site #13100 located at 701 and 675 Caesar E Chavez Avenue, Pontiac, MI. “Site” refers to a portion of the Property including the location of the former USTs and immediately surrounding area, a total of approximately 8,700 square feet (Appendix A).

1.1 PROPERTY INFORMATION

The Property consists of a total of 7.235 acres of commercially-zoned property, which exists as two parcels with Oakland County Tax Assessor’s identification numbers of 14-19-432-003 (1.154 acres) and 14-19-432-004 (6.081 acres) (Figure 1). Addresses for these parcels are 701 and 675 Cesar E Chavez Avenue, Pontiac, MI, respectively. Two one-story buildings totaling approximately 32,000-square feet in size are located on the Property and are currently occupied by the current Property owner, Lee Industrial Contracting (Lee).

The Property is generally flat, and the parking lots gently slope toward catch basins located in the south-central portion of the Property. Regional groundwater flow is suspected to be to the south-southeast, generally toward Crystal Lake, located approximately 2 miles south-southeast from the Property.

The Property first appeared in the 1957 Polk’s City Directory with usage as Wilson GMC Company, and was not found in the earlier 1952 edition. On September 3, 1957, General Motors purchased the property from Wilson GMC Company, and operated it as a sales/maintenance facility. From 1996 through 2009, Automotive Component Carrier, Inc., a division of Penske Logistics (Penske) leased the Property from General Motors, and operated a logistics company on the property. Penske operations included performing logistical services, and maintaining a transportation fleet of approximately 82 diesel tractor-trailers. Penske ceased operations at the Property in 2009. The Property was vacant until 2011, when Lee purchased the Property and began using it for truck maintenance and equipment repair operations.

An institutional control in the form of a Declaration of Restrictive Covenant (RC) was approved by the Michigan Department of Environmental Quality (MDEQ) and has been recorded on the deed with the Oakland County Register of Deeds and is currently in place (Appendix B). This RC restricts the use of the Property to those defined by DEQ as nonresidential, prohibits installation and use of drinking water or irrigation wells or other devices (with specific exceptions), and requires proper management of contaminated soils, debris or other environmental media.

1.2 UST BACKGROUND INFORMATION

A Remediation Cost Estimate Summary (RCES) was developed for the Property (among many others) as part of the General Motors bankruptcy proceeding when the Property was controlled by Motors Liquidation Company (MLC). The RCES prepared for the Property (Levine-Fricke-Recon, Inc., an ARCADIS Company, October 2009 [Revised May 2010] identified four waste oil underground storage tanks (USTs) having been located at the Property, and having been removed in 1989. This information is based on an interview with General Motors personnel. One of these USTs was reported to have had a capacity of 500 gallons, while the other three USTs were reported to each have had a capacity of 280 gallons. The RCES notes removal information concerning these USTs to be limited, and considered no other Recognized Environmental Concerns (RECs) associated with the Property.

Additionally, the Draft Phase I Assessment identifies, based on the EDR Report, two open Part 213 releases associated with the subject property. These releases, #C-0798-91 and #C-0717-92, are dated 4 April 1991 and 4 May 1992, respectively. In each case, the substance(s) released is noted to be unknown and no Release Closed Date is listed.

2. Summary of Activities Performed

Historical records for Open Releases #C-0798-91 and #C-0717-92 indicate that all associated underground storage tanks (USTs) have been removed. The results of a 2011 geophysical survey also indicate that the USTs are not present. The findings are summarized in a letter to MDEQ (Haley & Aldrich, November 2011). Historical records indicate that the contaminated media associated with these releases has been addressed through soil excavation and off-site disposal; however, records have not been found to document the activity. As such, subsequent assessments were completed to determine the status of the Open Releases. Details of these assessments are summarized below.

2.1 INITIAL ASSESSMENTS

Considerable information is available pertaining to open releases #C-0798-91 and #C-0717-92. The tanks in each case have been removed, as noted by the available documentation and the September 2011 geophysical survey.

A detailed review and evaluation of analytical data contained in historical records is summarized in the *Work Plan to Further Investigate UST Releases #C-0798-91 and #C-0717-92 at the ACC Penske Property, Site #13100* dated January 29, 2014 (Haley & Aldrich, January 2014) (Work Plan).

As part of the 22 November 1991 Site Characterization Work Plan, soil samples were collected to represent sidewall samples along each side and floor of the excavation cavity of Open Release #C-0798-91. Samples were analyzed for benzene, toluene, ethylbenzene, and xylene (BTEX), polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), lead, cadmium, and chromium.

GM's 16 June 1992 Site Characterization Report submitted to MDNR concerning Open Release #C-0717-92 noted that one of four soil samples collected and analyzed prior to the excavation of the three associated USTs exhibited the presence of various PAHs.

To evaluate current conditions, the results of these analyses were evaluated. The results were compared to the applicable Tier 1 risk-based screening levels (RBSLs) for regulated substances which were the non-residential generic cleanup criteria developed by MDEQ pursuant to Part 201 of the Michigan Natural Resources and Environmental Protection Act (NREPA), 1994 Public Act 451, as amended and dated 28 September 2012 (Part 201), which were the current criteria at the time the work plan was developed. Specifically, the data were compared to the following RBSLs as part of the investigations summarized above:

- Nonresidential Drinking Water Protection Criteria (NRDWP);
- Nonresidential Volatilization to Indoor Air Inhalation Criteria (NVIAI); and
- Nonresidential Direct Contact Criteria (NRDC).

This comparison indicated that concentrations of benzo(a)pyrene, dibenzo(a,h)anthracene, cadmium (total), and chromium (total) at Open Release # C-0798-91 were greater than at least one of the Tier 1 RBSLs. There were no exceedances greater than the Tier 1 RBSLs at Open Release # C-0717-92.

2.2 FINAL ASSESSMENT

In accordance with the Work Plan (Haley & Aldrich, January 2014), a soil and groundwater investigation was conducted in October 2014. This investigation was initiated to assess the current status of conditions associated with the releases and the potential presence of remaining residual contamination in soil and/or groundwater. The activities detailed in the Work Plan were proposed pursuant to Part 213 of NREPA. The Work Plan was approved by MDEQ in correspondence dated February 3, 2014.

The field work, laboratory analyses, and data validation were performed in accordance with the Work Plan. The Mannik & Smith Group (Mannik & Smith) performed the GPR work to clear underground utilities and impediments, drilling, and waste disposal. Merit Laboratories of East Lansing, MI (Merit) performed the associated laboratory analyses, and Haley & Aldrich performed the associated data validation.

As discussed in the Work Plan, a 30-foot by 90-foot grid transcribed over the area of the former USTs was utilized as a sampling approach to assess current soil conditions. Fourteen soil borings were installed within this area at locations selected based on a Simple Random Sampling Method using a Microsoft Excel spreadsheet, as illustrated in Figure 2.

Soil borings were drilled using a truck mounted Geoprobe®, logged in accordance with the Unified Soil Classification System (USCS), and screened in the field using a photoionization detector (PID). Each boring was drilled to a depth of approximately 15-feet below the ground surface (bgs). Boring logs are provided in Appendix C.

One sample from each boring location was collected with a total of fourteen soil samples submitted for analysis. No elevated PID readings were measured and no indications of odor or staining in the soils were observed. As such, soil samples were selected based on visual observations (e.g., change in lithology). The soil samples were analyzed for:

- Full USEPA Method 8260 Target Compound List (TCL) volatile organic compounds (VOCs);
- TCL PAHs;
- TCL PCBs;
- Select metals (total), namely: 10 Michigan metals and manganese;
- Gasoline Range Organics;
- Diesel Range Organics; and
- Oil Range Organics.

Since groundwater was encountered in these borings at a depth generally ranging from 10-15-feet bgs, six soil borings were converted to temporary (1.5-inch diameter) monitoring wells (pre-packed screen and riser installation, but no surface mount or protective casing) to facilitate groundwater sampling (Figure 2). Groundwater samples were collected as grab samples, using a peristaltic pump. These samples were submitted to Merit for the following analyses:

- Full 8260 TCL VOCs;
- TCL PAHs; and
- Select metals (total and dissolved), namely: 10 Michigan metals and manganese.

Groundwater samples were also analyzed for the following parameters in the field:

- Dissolved Oxygen;

- Oxidation-reduction potential;
- Alkalinity/acidity (pH);
- Temperature;
- Conductivity; and
- Turbidity.

Laboratory analyses were performed using standard methods as prescribed by United States Environmental Protection Agency publication SW-846, entitled Test Methods for Evaluating Solid Waste, Physical/Chemical Methods.

Sampling equipment was decontaminated between sample locations. Samples were placed in the appropriate containers and stored in a cooler containing ice for preservation prior to submittal to the analytical laboratory. A field duplicate and matrix spike/matrix spike duplicate were collected for quality assurance/quality control. Standard chain-of-custody procedures were followed.

Investigation derived waste was containerized and sampled for characterization prior to being disposed off-site. A composite sample of waste soil and water were collected, respectively, and analyzed for total characteristic leaching procedure (TCLP) VOCs, SVOCs, PAHs, metals, and total PCBs. Analytical reports are provided in Appendix D. Based on the analytical results, the waste was determined to be non-hazardous. RACER contracted Mannik & Smith to transport the containerized waste for disposal. Waste transportation and disposal documents are provided in Appendix E. Used personal protective equipment was disposed with general refuse with no special handling.

The temporary groundwater monitoring wells were abandoned by Mannik & Smith on April 1, 2015 by pulling the PVC risers and backfilling the hole with bentonite grout (No. 8 Enviroplug). The holes were sealed at the ground surface with approximately 18 inches of concrete.

Prior to abandonment, groundwater levels were collected to determine groundwater elevations at the Site. Figure 3 illustrates the groundwater contours at the Site. Based on these groundwater contours the Site groundwater flow appears to generally be to the south. Based on topography in the area, regional groundwater flow is suspected to be to the south-southeast, generally toward Crystal Lake, located approximately two miles south-southeast from the Property.

2.2.1 Results

Pursuant to the MDEQ-approved Work Plan and taking the RC into consideration, analytical results for the samples discussed above were compared to the following Nonresidential Criteria and Risk Based Screening Levels (RBSLs) developed pursuant to Part 201 Cleanup Criteria Requirement for Response Activity, amended on December 30, 2013:

Soil

- Nonresidential Drinking Water Protection (NRDWP)
- Nonresidential Volatilization to Indoor Air Inhalation (NVIAI); and
- Nonresidential Direct Contact (NRDC)

Groundwater

- Nonresidential Drinking Water (NRDW)
- Nonresidential Groundwater Volatilization to Indoor Air Inhalation (NVIAI)

It was determined that the Tier 1 NVIAI was appropriate for comparison based on the construction of the building (poured concrete floor and cement block walls), the absence of sumps, and the presence of groundwater deeper than 9 feet bgs.

2.2.1.1 Soil

As discussed above, fourteen soil samples were collected at a depth ranging from 8-12-feet bgs and analyzed for VOC, PCBs, PAHs, and metals. Three (SB-9, SB-12 and SB-14) of the fourteen samples collected had exceedances of trichloroethene and tetrachloroethene above the NRDWP Criteria, as shown on Figure 4 and in Table I. Select metals (arsenic, chromium, selenium) were detected in two (SB-8 and SB-12) of the fourteen soil samples above NRDWP Criteria, as shown on Figure 4 and in Table I. No detections of PCBs or PAHs were observed in any of the fourteen soil samples collected. Evaluation of this soil data is discussed in Section 3, below.

Total petroleum hydrocarbons (TPH), specifically diesel range organics (DRO) and oil range organics (ORO), were detected in all fourteen soil samples collected. Gasoline range organics (GRO) were not detected in the soil samples collected. Concentrations of DRO in soil range from 7,000 ug/kg to 512,000 ug/kg. Concentrations of ORO range from 5,000 ug/kg to 657,000 ug/kg. However, specific constituents of DRO and ORO, SVOCs, were not detected in soil. In addition, visual staining and odors were not observed during sampling.

2.2.1.2 Groundwater

Six groundwater samples were collected during this investigation and analyzed for VOCs, PAHs, and metals, as discussed above. Exceedances of metals were not observed in groundwater with the exception of manganese, arsenic, and lead. Manganese (total and dissolved) was detected in all groundwater samples above the NRDW Criteria, as shown on Figure 4 and Table II. Arsenic (total) was above the NRDW Criteria in all but one groundwater sample. Dissolved arsenic was above the NRDW Criteria in one groundwater sample (TW-13). Lead was above the NRDW Criteria in one groundwater sample (TW-1). No detections of PAHs or VOCs were observed in any of the samples collected. Evaluation of this groundwater data is discussed in Section 3, below

2.2.1.3 Non-Aqueous Phase Liquid

Non-aqueous phase liquid (NAPL) was not encountered or observed during the field activities conducted in October 2014 and concentrations of VOCs and PAHs do not suggest the presence of NAPL. In addition, documentation of initial assessments does not mention the presence of NAPL.

3. Evaluation of Existing Data

Previous investigations of the Open Releases #C-0798-91 and #C-0717-92 suggest that soils were impacted with select metals and PAHs. Based on the data collected during the October 2014 investigation, metals and PAHs were either non-detect or below RBSLs in soil and groundwater with the exception of the metals discussed above. Manganese and arsenic concentrations in groundwater samples are consistent, suggesting that these constituents are likely present at background levels specific to the Property.

Trichloroethene was detected above NRDWP Criteria in the soil sample collected at SB-9 from 8-10-feet bgs. Tetrachloroethene was detected above NRDWP Criteria at SB-9 from 8-10-feet bgs.

Tetrachloroethene was also detected above NRDWP Criteria at SB-14 from 10-12 feet bgs.

Tetrachloroethene was detected in soil above NRDWP Criteria at SB-12 from 10-12-feet bgs. All remaining soil samples collected in the vicinity of the Open Releases were either non-detect or below RBSLs for VOCs. In addition, VOCs were not detected in any of the groundwater samples collected.

3.1 EXPOSURE PATHWAY ANALYSIS

As discussed in Section 1.1, the Property is currently zoned commercial/industrial and is currently being used as such. Further discussion of the Property use can be found in Section 4.

The area of the Property that encompasses the Open Releases, the Site, is identified in Appendix A and is primarily located within a one-story building with approximately 16 inches of poured concrete floors and cement block walls. There is no indication of subsurface structures such as sumps or wells, specifically drinking water wells.

Based on the Property use and characteristics, and the land use limitations imposed by the RC for the Property, which limits the land uses to those defined by MDEQ as nonresidential, the Non-Residential RBSLs are applicable to assess exposure pathways.

3.1.1 Soil

The results of the October 2014 field investigation indicate that the soil within the area of the Site is impacted with arsenic, chromium, selenium, trichloroethene, and tetrachloroethene. The maximum concentrations of these constituents in soil are summarized in the following table:

Analyte	CAS Number	Maximum Concentration	Location and Depth of Maximum Concentration	Risk Based Screening Levels (RBSLs)* Exceedance
Arsenic	7440-38-2	6.27 mg/kg	SB-8, 8-10 ft.	NRDWP (4.6 mg/kg)
Chromium	7440-47-3	32.1 mg/kg	SB-8, 8-10 ft.	NRDWP (30 mg/kg)
Selenium	7782-49-2	4.92 mg/kg	SB-8, 8-10 ft.	NRDWP (4 mg/kg)
Trichloroethene	79-01-6	160 ug/kg	SB-9, 8-10 ft.	NRDWP (100 ug/kg)
Tetrachloroethene	127-18-4	690 ug/kg	SB-9, 8-10 ft.	NRDWP (100 ug/kg)

* Michigan Act 451, Part 201 Cleanup Criteria Requirement for Response Activity, amended on December 30, 2013

Based on the data collected as part of the initial and final assessments, as described above, the following potential exposure pathways are applicable:

- Direct contact with soil,
- Soil volatilization to indoor air, and
- Groundwater ingestion.

Potential Exposure Route	Exposure Pathway Relevant?	Analysis
Direct Contact with Soil	No	The contaminants detected in soil are present at concentrations less than the NRDC criteria.
Soil Volatilization To Indoor Air	No	Although VOCs are present in soil, these contaminant concentrations are less than the NVIAI criteria.
Groundwater Ingestion	Yes	Trichloroethylene and tetrachloroethene are present in soils at concentrations greater than NRDWP criteria.

As discussed above, groundwater ingestion appears to be a relevant exposure pathway for the contaminants detected above the Tier 1 NRDWP RBSLs. However, groundwater ingestion is not a complete pathway because the RC prohibits installation and use of drinking water wells or other devices at the Property.

3.1.2 Groundwater

The results of the October 2014 field investigation indicate that the groundwater within the area of the Site is impacted with arsenic (total and dissolved), lead (total), manganese (total and dissolved). The maximum concentrations of these constituents in soil are summarized in the following table:

Analyte	CAS Number	Maximum Concentration (mg/L)	Location and Depth of Maximum Concentration	Risk Based Screening Levels (RBSLs)* Exceedance (mg/L)
Arsenic (total)	7440-38-2	0.056	TW-8	NRDWC (0.01)
Arsenic (dissolved)	7440-38-2	0.011	TW-13	NRDWC (0.01)
Lead (total)	7439-92-1	0.006	TW-1	NRDWC (0.004)
Manganese (total)	7439-96-5	0.892	TW-1	NRDWC (0.05)
Manganese (dissolved)	7439-96-5	0.825	TW-1	NRDWC (0.05)

* Michigan Act 451, Part 201 Cleanup Criteria Requirement for Response Activity, amended on December 30, 2013

The following applicable exposure pathways for groundwater are:

- Direct Contact with Groundwater,
- Groundwater Volatilization to Indoor Air, and
- Groundwater Ingestion.

Potential Exposure Route	Exposure Pathway Relevant?	Analysis
Direct Contact with Groundwater	No	The contaminants detected in groundwater are present at concentrations less than the NRDWP criteria.
Groundwater Volatilization To Indoor Air	No	The contaminants detected in groundwater are not likely to volatilize. In addition, the contaminants that are present are less than NVIAI criteria.
Groundwater Ingestion	Yes	Manganese, arsenic, and lead are present in groundwater at concentrations greater than NRDW criteria.

Groundwater ingestion appears to be a relevant exposure pathway for the contaminants detected in groundwater above the Tier 1 NRDW RBSLs. However, as discussed above, groundwater ingestion is not a complete pathway because an RC recorded with the Oakland County, Michigan Register of Deeds on February 8, 2017 prohibits installation and use of drinking water wells or other devices.

4. Land Use Classification

The Property is currently being used by its owner, Lee, for commercial use that includes truck maintenance and equipment repair services, vehicle parking, and vehicle/trailer storage. The surrounding area of the Property is generally characterized as commercial, industrial and residential land uses. The Property is bordered to the north by Cesar E Chavez Avenue and beyond that, numerous commercial properties including a party supply store, a Coney Island restaurant, a vehicle storage lot for junked cars/cars to be sold, and beyond those, a residential neighborhood. To the west of the Property is a truck repair facility (Clyde's Frame Shop). To the south are numerous railroad tracks. To the east, the Property is bordered by North Cass Avenue. Beyond North Cass Avenue is the Illumination Lighting Company and additional property operated by Lee.

Based on review of historical aerial photographs, the Property has been used for commercial purposes since the 1950s. In addition, the Property and the properties that immediately surround it, are zoned as for commercial use. As such, it is anticipated that its potential future use will remain commercial.

4.1 USE RESTRICTIONS

As discussed above, an RC that covers the Property is recorded on the deed with the Oakland County Register of Deeds (Appendix B). The RC was recorded on February 8, 2017 as part of the corrective actions conducted for the Property to achieve closure. The RC includes a survey and description that defines the Property and all land and resource use limitations, including restricting the use of the Property to those defined by DEQ as nonresidential, prohibiting installation of drinking water or irrigation wells or other devices (with specific exceptions), and requiring proper management of contaminated soils, debris or other environmental media.

5. Conclusions

Based on the findings summarized above, the remaining residual contamination of soil or groundwater as a result of the Open Releases #C-0798-91 and #C-0717-92 are less than applicable Part 201 criteria with the exception of NRDWP and NRDW criteria. However, as discussed above, groundwater ingestion is not a complete pathway because groundwater use as drinking water is prohibited by the RC (Appendix B) recorded with the Oakland County, Michigan Register of Deeds on February 8, 2017. As such, closure of Open Releases #C-0798-91 and #C-0717-92 in accordance with Section 21312a of Part 213, Leaking Underground Storage Tanks (LUST), of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, is requested.

References

1. ENKON Environmental Services, Inc., March 1992, *Subsurface Soils Investigation, GMC Truck Center, 675 Oakland, Pontiac, Michigan.*
2. General Motors Corporation Truck & Bus Group, June 1992, *Site Characterization Report, GM Truck Platforms - Pontiac Truck Center.*
3. Haley & Aldrich of Michigan, Inc., February 2013, Letter to Richard Berak, MDEQ, Subject: *Work Plan to Further Investigate Potential Releases at the ACC Penske Property, Site #1310.*
4. Haley & Aldrich of Michigan, Inc., July 2012, Letter to Richard Berak, MDEQ, Subject: *Work Plan to Further Investigate Potential UST Releases at 675 Oakland Avenue, Pontiac, MI, a.k.a 675 Cesar E Chavez Avenue, Pontiac, Michigan or ACC Penske Property, Site #1310.*
5. Haley & Aldrich of Michigan, Inc., November 2011, Letter to Richard Berak, MDEQ, Subject: *Ground-Penetrating Radar Investigation and Oil/Water Separator Inspection at 675 Oakland Avenue, Pontiac, MI, a.k.a 675 Cesar E Chavez Avenue, Pontiac, Michigan or ACC Penske Property, Site #1310.*
6. Haley & Aldrich, Inc., June 2010 (DRAFT), *Report on ASTM Phase I Environmental Site Assessment, 675 Cesar E Chavez Avenue, Pontiac, Michigan.*
7. Levine-Fricke- Recon, Inc., an ARCADIS Company, October 2009 (Revised May 2010), *Remediation Cost Estimate Summary, ACC Penske – 675 Oakland Avenue, Pontiac, Michigan, MLC ID 1310.*
8. Michigan Department of Environmental Quality, April 2013, Letter to David Favero, RACER, Subject: *Work Plan, ACC Penske Site, 675 and 701 Cesar E Chaves Avenue, Pontiac, Oakland County, Michigan, Facility ID No. 00011332.*
9. Michigan Department of Environmental Quality, October 2012, Letter to David Favero, RACER, Subject: *Notice of Insufficient Information in the Response Activity Plan for the ACC Penske Site, 675 Cesar E. Chavez Avenue Pontiac, Oakland County, Michigan Facility ID No. 00011332.*
10. Haley & Aldrich of Michigan, Inc., January 2014, Letter to Richard Berak, MDEQ, Subject: *Work Plan to Further Investigate Potential UST Releases #C-0798-91 and #C-0717-92 at the ACC Penske Property, Site #1310.*

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TABLES

TABLE I
SUMMARY OF SOIL ANALYTICAL RESULTS
RACER PENSKE
PONTIAC, MI

Location					SB-1	SB-2	SB-3	SB-4	SB-4	SB-5	SB-6	SB-7	SB-8
Sample Date	Sample Type	State	Nonresidential Drinking Water Protection	Nonresidential Volatization to Indoor Air Inhalation	Nonresidential Direct Contact	10/28/2014 N	10/28/2014 N	10/28/2014 N	10/28/2014 N	10/28/2014 FD	10/28/2014 N	10/28/2014 N	10/28/2014 N
Sample Depth (bgs)	Background					8 - 10 (ft)	8 - 10 (ft)	8 - 10 (ft)	10 - 12 (ft)	10 - 12 (ft)	8 - 10 (ft)	8 - 10 (ft)	8 - 10 (ft)
Inorganic Compounds (mg/kg)													
Arsenic	5.8	4.6	-	37	2.26 ^[<A]	3.51 ^[<A]	2.38 ^[<A]	2.73 J ^[<A]	5.45 J ^[<AB]	1.62 ^[<A]	0.81 ^[<A]	2.35 ^[<A]	6.27 ^[B]
Barium	75	1300	-	130000	18.2 ^[<A]	28 ^[<A]	27.5 ^[<A]	37 J ^[<A]	63.2 J ^[<A]	109	146	79.9	182
Cadmium	1.2	6	-	2100	0.25 ^[<A]	0.59 ^[<A]	0.45 ^[<A]	0.68 J ^[<A]	1.15 J ^[<A]	0.65 ^[<A]	0.65 ^[<A]	0.2 U	2.4
Chromium	-	30	-	9200	7.39	28.2	6.04	8.56 J	19.3 J	12.6	10.7	13.6	32.1 ^[B]
Copper	32	5800	-	73000	14.7 ^[<A]	17 ^[<A]	9.65 ^[<A]	15.4 J ^[<A]	38.7 J	179	355	42.2	215
Lead	21	700	-	900	14.7 ^[<A]	18 ^[<A]	7.67 ^[<A]	7.98 J ^[<A]	25.8 J	130	50.2	8.33 ^[<A]	31.1
Manganese	440	1	-	90000	65 ^[<AB]	52 ^[<AB]	47.8 ^[<AB]	98.4 J ^[<AB]	310 J ^[<AB]	381 ^[<AB]	284 ^[<AB]	72 ^[<AB]	155 ^[<AB]
Mercury	0.13	1.7	89	580	0.05 U	0.056 ^[<A]	0.05 U	0.05 U	0.063 J ^[<A]	0.376	0.066 ^[<A]	0.05 U	0.277
Selenium	0.41	4	-	9600	1.26	1.79	1.85	2.24 J	2.68 J	0.4 U	0.4 U	0.54	4.92 ^[B]
Silver	1	13	-	9000	0.2 U	0.2 U	0.2 U	0.2 U	0.26 J ^[<A]	0.2 U	0.2 U	0.2 U	0.2 U
Zinc	47	5000	-	630000	8.28 ^[<A]	22.9 ^[<A]	9.81 ^[<A]	7.35 J ^[<A]	24.6 J ^[<A]	60.8	55.9	7.75 ^[<A]	48.3
Other (%)													
Total Solids	-	-	-	-	70	83	84	61	39	89	85	75	38
PCBs (ug/kg)													
Aroclor-1016 (PCB-1016)	-	-	-	-	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Aroclor-1221 (PCB-1221)	-	-	-	-	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Aroclor-1232 (PCB-1232)	-	-	-	-	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Aroclor-1242 (PCB-1242)	-	-	-	-	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Aroclor-1248 (PCB-1248)	-	-	-	-	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Aroclor-1254 (PCB-1254)	-	-	-	-	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Aroclor-1260 (PCB-1260)	-	-	-	-	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U	330 U
Semi-Volatile Organic Compounds (ug/kg)													
1-Methylnaphthalene					300 U	300 U	300 U	400 U	700 U	300 U	300 U	700 U	300 U
2-Methylnaphthalene	-	170000	4900000	26000000	300 U	300 U	300 U	400 U	700 U	300 U	300 U	700 U	300 U
Acenaphthene	-	880000	350000000	130000000	300 U	300 U	300 U	400 U	700 U	300 U	300 U	700 U	300 U
Acenaphthylene	-	17000	3000000	5200000	300 U	300 U	300 U	400 U	700 U	300 U	300 U	700 U	300 U
Anthracene	-	41000	1000000000	730000000	300 U	300 U	300 U	400 U	700 U	300 U	300 U	700 U	300 U
Benzo(a)anthracene	-	-	-	80000	300 U	300 U	300 U	400 U	700 U	300 U	300 U	700 U	300 U
Benzo(a)pyrene	-	-	-	8000	300 U	300 U	300 U	400 U	700 U	300 U	300 U	700 U	300 U
Benzo(b)fluoranthene	-	-	-	80000	300 U	300 U	300 U	400 U	700 U	300 U	300 U	700 U	300 U
Benzo(g,h,i)perylene	-	-	-	7000000	300 U	300 U	300 U	400 U	700 U	300 U	300 U	700 U	300 U
Benzo(k)fluoranthene	-	-	-	800000	300 U	300 U	300 U	400 U	700 U	300 U	300 U	700 U	300 U
Chrysene	-	-	-	8000000	300 U	300 U	300 U	400 U	700 U	300 U	300 U	700 U	300 U
Dibenz(a,h)anthracene	-	-	-	8000	300 U	300 U	300 U	400 U	700 U	300 U	300 U	700 U	300 U
Fluoranthene	-	730000	1000000000	130000000	300 U	300 U	300 U	400 U	700 U	300 U	300 U	700 U	300 U
Fluorene	-	890000	1000000000	87000000	300 U	300 U	300 U	400 U	700 U	300 U	300 U	700 U	300 U
Indeno(1,2,3-cd)pyrene	-	-	-	80000	300 U	300 U	300 U	400 U	700 U	300 U	300 U	700 U	300 U
Naphthalene	-	100000	470000	52000000	300 U	300 U	300 U	400 U	700 U	300 U	300 U	700 U	300 U
Phenanthrene	-	160000	5100000	5200000	300 U	300 U	300 U	400 U	700 U	300 U	300 U	700 U	300 U
Pyrene	-	480000	1000000000	84000000	300 U	300 U	300 U	400 U	700 U	300 U	300 U	700 U	300 U
Total Petroleum Hydrocarbons (ug/kg)													
Total Petroleum Hydrocarbons (C10-C28) DRO	-	-	-	-	28000	8000	11000	58000	89000	50000	14000	512000	83000
Total Petroleum Hydrocarbons (C28-C36) ORO	-	-	-	-	10000	6000	5000	108000	128000	50000	7000	657000	54000
Total Petroleum Hydrocarbons (C6-C10) GRO	-	-	-	-	9000 U	7000 U	7000 U	10000 U	20000 U	6000 U	7000 U	8000 U	20000 U
Volatile Organic Compounds (ug/kg)													
1,1,1-Trichloroethane	-	4000	460000	1000000000	90 U	70 U	70 U	100 U	200 U	60 U	70 U	80 U	200 U
1,1,2,2-Tetrachloroethane	-	700	23000	240000	90 U	70 U	70 U	100 U	200 U	60 U	70 U	80 U	200 U
1,1,2-Trichloroethane	-	100	24000	840000	90 U	70 U	70 U	100 U	200 U	60 U	70 U	80 U	200 U
1,1-Dichloroethane	-	50000	430000	87000000	90 U	70 U	70 U	100 U	200 U	60 U	70 U	80 U	200 U
1,1-Dichloroethene	-	140	330	660000	90 U	70 U	70 U	100 U	200 U	60 U	70 U	80 U	200 U
1,2,4-Trichlorobenzene	-	4200	18000000	5800000	200 U	100 U	100 U	200 U	400 U	100 U	100 U	200 U	400 U
1,2-Dibromo-3-chloropropane (DBCP)	-	4	1200	20000	90 U	70 U	70 U	100 U	200 U	60 U	70 U	80 U	200 U

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RACER PENSKE
PONTIAC, MI

Location					SB-1	SB-2	SB-3	SB-4	SB-4	SB-5	SB-6	SB-7	SB-8
Sample Date	Sample Type	State	Nonresidential Drinking Water Protection	Nonresidential Volatization to Indoor Air Inhalation	Nonresidential Direct Contact	10/28/2014 N	10/28/2014 N	10/28/2014 N	10/28/2014 N	10/28/2014 FD	10/28/2014 N	10/28/2014 N	10/27/2014 N
Sample Depth (bgs)	Background					8 - 10 (ft)	8 - 10 (ft)	8 - 10 (ft)	10 - 12 (ft)	10 - 12 (ft)	8 - 10 (ft)	8 - 10 (ft)	8 - 10 (ft)
1,2-Dibromoethane (Ethylene Dibromide)		-	1	3600	430	90 U	70 U	70 U	100 U	200 U	60 U	70 U	80 U
1,2-Dichlorobenzene		-	14000	20000000	63000000	90 U	70 U	70 U	100 U	200 U	60 U	70 U	80 U
1,2-Dichloroethane		-	100	11000	420000	90 U	70 U	70 U	100 U	200 U	60 U	70 U	80 U
1,2-Dichloropropane		-	100	7400	660000	90 U	70 U	70 U	100 U	200 U	60 U	70 U	80 U
1,3-Dichlorobenzene		-	480	48000	660000	90 U	70 U	70 U	100 U	200 U	60 U	70 U	80 U
1,4-Dichlorobenzene		-	1700	100000	1900000	90 U	70 U	70 U	100 U	200 U	60 U	70 U	80 U
2-Butanone (Methyl Ethyl Ketone)		-	760000	99000000	700000000	1400 U	1100 U	1000 U	1800 U	3000 U	910 U	1000 U	1200 U
2-Hexanone		-	58000	1800000	100000000	5000 U	4000 U	3000 U	6000 U	10000 U	3000 U	3000 U	4000 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)		-	100000	69000000	180000000	5000 U	4000 U	3000 U	6000 U	10000 U	3000 U	3000 U	4000 U
Acetone		-	42000	540000000	73000000	1400 U	1100 U	1000 U	1800 U	3000 U	910 U	1000 U	1300
Benzene		-	100	8400	840000	90 U	70 U	70 U	100 U	200 U	60 U	70 U	80 U
Bromodichloromethane		-	1600	6400	490000	90 U	70 U	70 U	100 U	200 U	60 U	70 U	80 U
Bromoform		-	1600	770000	3800000	90 U	70 U	70 U	100 U	200 U	60 U	70 U	80 U
Bromomethane (Methyl Bromide)		-	580	1600	1000000	500 U	400 U	300 U	600 U	1000 U	300 U	300 U	400 U
Carbon disulfide		-	46000	140000	43000000	500 U	400 U	300 U	600 U	1000 U	300 U	300 U	400 U
Carbon tetrachloride		-	100	990	440000	90 U	70 U	70 U	100 U	200 U	60 U	70 U	80 U
Chlorobenzene		-	2000	220000	14000000	90 U	70 U	70 U	100 U	200 U	60 U	70 U	80 U
Chloroethane		-	34000	5300000	12000000	500 U	400 U	300 U	600 U	1000 U	300 U	300 U	400 U
Chloroform (Trichloromethane)		-	1600	38000	5500000	90 U	70 U	70 U	100 U	200 U	60 U	70 U	80 U
Chloromethane (Methyl Chloride)		-	22000	10000	7400000	500 U	400 U	300 U	600 U	1000 U	300 U	300 U	400 U
cis-1,2-Dichloroethene		-	1400	41000	8000000	90 U	70 U	70 U	100 U	200 U	60 U	70 U	80 U
cis-1,3-Dichloropropene		-	-	-	-	90 U	70 U	70 U	100 U	200 U	60 U	70 U	80 U
Cyclohexane		-	-	-	-	90 U	70 U	70 U	100 U	200 U	60 U	70 U	80 U
Dibromochloromethane		-	1600	21000	500000	90 U	70 U	70 U	100 U	200 U	60 U	70 U	80 U
Dichlorodifluoromethane (CFC-12)		-	270000	1700000	170000000	90 U	70 U	70 U	100 U	200 U	60 U	70 U	80 U
Ethylbenzene		-	1500	460000	71000000	90 U	70 U	70 U	100 U	200 U	60 U	70 U	80 U
Isopropylbenzene		-	260000	730000	80000000	90 U	70 U	70 U	100 U	200 U	60 U	70 U	80 U
m&p-Xylene		-	-	-	-	200 U	100 U	100 U	200 U	400 U	100 U	100 U	200 U
Methyl acetate		-	-	-	-	5000 U	4000 U	3000 U	6000 U	10000 U	3000 U	3000 U	4000 U
Methyl cyclohexane		-	-	-	-	90 U	70 U	70 U	100 U	200 U	60 U	70 U	80 U
Methyl Tert Butyl Ether		-	800	18000000	7100000	500 U	400 U	300 U	600 U	1000 U	300 U	300 U	400 U
Methylene chloride		-	100	240000	5800000	500 U	400 U	300 U	600 U	1000 U	300 U	300 U	400 U
o-Xylene		-	-	-	-	90 U	70 U	70 U	100 U	200 U	60 U	70 U	80 U
Styrene		-	2700	1300000	1900000	90 U	70 U	70 U	100 U	200 U	60 U	70 U	80 U
Tetrachloroethene		-	100	21000	930000	90 U	70 U	70 U	100 U	200 U	60 U	70 U	80 U
Toluene		-	16000	610000	160000000	90 U	70 U	70 U	100 U	200 U	60 U	70 U	80 U
trans-1,2-Dichloroethene		-	2000	43000	12000000	90 U	70 U	70 U	100 U	200 U	60 U	70 U	80 U
trans-1,3-Dichloropropene		-	-	-	-	90 U	70 U	70 U	100 U	200 U	60 U	70 U	80 U
Trichloroethene		-	100	1900	660000	90 U	70 U	70 U	100 U	200 U	60 U	70 U	80 U
Trichlorofluoromethane (CFC-11)		-	150000	5100000	260000000	200 U	100 U	100 U	200 U	400 U	100 U	100 U	200 U
Trifluorotrichloroethane (Freon 113)		-	9000000	9300000	1000000000	200 U	100 U	100 U	200 U	400 U	100 U	100 U	200 U
Vinyl chloride		-	40	2800	34000	200 U	100 U	100 U	200 U	400 U	100 U	100 U	200 U

- Notes:
- [<A] - Result is less than Statewide Default Background Levels
 - Results in **red** exceed one or more of the following Part 201 Criteria (12/2013):
 - [B]** - Non-residential Drinking Water Protection Criteria & RBSLs
 - [C]** - Non-residential Soil Volatilization to Indoor Air Inhalation Criteria & RBSLs
 - [D]** - Non-residential Direct Contact Criteria & RBSLs
 - U - Not detected above reporting limit.
 - J - Estimated result
 - Results in **bold** were detected.
 - Sample Types: N - Normal Sample, FD - Field Duplicate
 - Data has been validated by Haley & Aldrich.

TABLE I
SUMMARY OF SOIL ANALYTICAL RESULTS
RACER PENSKE
PONTIAC, MI

Location						SB-9	SB-10	SB-11	SB-12	SB-13	SB-14
Sample Date	Sample Type	State	Nonresidential	Nonresidential	Nonresidential	10/27/2014	10/28/2014	10/27/2014	10/27/2014	10/27/2014	10/27/2014
Sample Depth (bgs)	Background	Drinking Water	Volatization to Indoor	Air Inhalation	Direct Contact	N	N	N	N	N	N
		Protection				8 - 10 (ft)	8 - 10 (ft)	10 - 12 (ft)	10 - 12 (ft)	10 - 12 (ft)	10 - 12 (ft)
Inorganic Compounds (mg/kg)											
Arsenic	5.8	4.6	-	37	1.14 ^[<A]	1.71 ^[<A]	0.8 ^[<A]	1.91 ^[<A]	2.22 ^[<A]	1.28 ^[<A]	
Barium	75	1300	-	130000	55.7 ^[<A]	36.9 ^[<A]	9.34 ^[<A]	27.6 ^[<A]	54.8 ^[<A]	28.2 ^[<A]	
Cadmium	1.2	6	-	2100	0.2 U	0.21 ^[<A]	0.2 U	0.22 ^[<A]	0.2 U	0.22 ^[<A]	
Chromium	-	30	-	9200	6.55	5.65	6.79	30.7 ^[B]	7.09	10.8	
Copper	32	5800	-	73000	10.1 ^[<A]	8.3 ^[<A]	5.92 ^[<A]	14 ^[<A]	12.7 ^[<A]	15.4 ^[<A]	
Lead	21	700	-	900	6.26 ^[<A]	7.94 ^[<A]	3.8 ^[<A]	9.6 ^[<A]	4.93 ^[<A]	20.5 ^[<A]	
Manganese	440	1	-	90000	98.9 ^[<AB]	41 ^[<AB]	81.3 ^[<AB]	103 ^[<AB]	142 ^[<AB]	392 ^[<AB]	
Mercury	0.13	1.7	89	580	0.05 U	0.05 U	0.062 ^[<A]	0.05 U	0.05 U	0.05 U	
Selenium	0.41	4	-	9600	0.4 U	0.9	0.4 U	0.71	0.4 U	0.4 U	
Silver	1	13	-	9000	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	
Zinc	47	5000	-	630000	3.88 ^[<A]	9.11 ^[<A]	3.59 ^[<A]	10.1 ^[<A]	9.09 ^[<A]	17.8 ^[<A]	
Other (%)											
Total Solids	-	-	-	-	88	90	87	70	80	95	
PCBs (ug/kg)											
Aroclor-1016 (PCB-1016)	-	-	-	-	330 U	330 U	330 U	330 U	330 U	330 U	
Aroclor-1221 (PCB-1221)	-	-	-	-	330 U	330 U	330 U	330 U	330 U	330 U	
Aroclor-1232 (PCB-1232)	-	-	-	-	330 U	330 U	330 U	330 U	330 U	330 U	
Aroclor-1242 (PCB-1242)	-	-	-	-	330 U	330 U	330 U	330 U	330 U	330 U	
Aroclor-1248 (PCB-1248)	-	-	-	-	330 U	330 U	330 U	330 U	330 U	330 U	
Aroclor-1254 (PCB-1254)	-	-	-	-	330 U	330 U	330 U	330 U	330 U	330 U	
Aroclor-1260 (PCB-1260)	-	-	-	-	330 U	330 U	330 U	330 U	330 U	330 U	
Semi-Volatile Organic Compounds (ug/kg)											
1-Methylnaphthalene					300 U	300 U	300 U	300 U	300 U	300 U	
2-Methylnaphthalene	-	170000	4900000	26000000	300 U	300 U	300 U	300 U	300 U	300 U	
Acenaphthene	-	880000	350000000	130000000	300 U	300 U	300 U	300 U	300 U	300 U	
Acenaphthylene	-	17000	3000000	5200000	300 U	300 U	300 U	300 U	300 U	300 U	
Anthracene	-	41000	1000000000	730000000	300 U	300 U	300 U	300 U	300 U	300 U	
Benzo(a)anthracene	-	-	-	80000	300 U	300 U	300 U	300 U	300 U	300 U	
Benzo(a)pyrene	-	-	-	8000	300 U	300 U	300 U	300 U	300 U	300 U	
Benzo(b)fluoranthene	-	-	-	80000	300 U	300 U	300 U	300 U	300 U	300 U	
Benzo(g,h,i)perylene	-	-	-	7000000	300 U	300 U	300 U	300 U	300 U	300 U	
Benzo(k)fluoranthene	-	-	-	800000	300 U	300 U	300 U	300 U	300 U	300 U	
Chrysene	-	-	-	8000000	300 U	300 U	300 U	300 U	300 U	300 U	
Dibenz(a,h)anthracene	-	-	-	8000	300 U	300 U	300 U	300 U	300 U	300 U	
Fluoranthene	-	730000	1000000000	130000000	300 U	300 U	300 U	300 U	300 U	300 U	
Fluorene	-	890000	1000000000	87000000	300 U	300 U	300 U	300 U	300 U	300 U	
Indeno(1,2,3-cd)pyrene	-	-	-	80000	300 U	300 U	300 U	300 U	300 U	300 U	
Naphthalene	-	100000	470000	52000000	300 U	300 U	300 U	300 U	300 U	300 U	
Phenanthrene	-	160000	5100000	5200000	300 U	300 U	300 U	300 U	300 U	300 U	
Pyrene	-	480000	1000000000	84000000	300 U	300 U	300 U	300 U	300 U	300 U	
Total Petroleum Hydrocarbons (ug/kg)											
Total Petroleum Hydrocarbons (C10-C28) DRO	-	-	-	-	13000	7000	27000	18000	9000	10000	
Total Petroleum Hydrocarbons (C28-C36) ORO	-	-	-	-	5000	4000 U	16000	8000	7000	6000	
Total Petroleum Hydrocarbons (C6-C10) GRO	-	-	-	-	6000 U	6000 U	7000 U	9000 U	7000 U	5000 U	
Volatile Organic Compounds (ug/kg)											
1,1,1-Trichloroethane	-	4000	460000	1000000000	60 U	60 U	70 U	90 U	70 U	50 U	
1,1,2,2-Tetrachloroethane	-	700	23000	240000	60 U	60 U	70 U	90 U	70 U	50 U	
1,1,2-Trichloroethane	-	100	24000	840000	60 U	60 U	70 U	90 U	70 U	50 U	
1,1-Dichloroethane	-	50000	430000	87000000	60 U	60 U	70 U	90 U	70 U	50 U	
1,1-Dichloroethene	-	140	330	660000	60 U	60 U	70 U	90 U	70 U	50 U	
1,2,4-Trichlorobenzene	-	4200	18000000	5800000	100 U	100 U	100 U	200 U	100 U	100 U	
1,2-Dibromo-3-chloropropane (DBCP)	-	4	1200	20000	60 U	60 U	70 U	90 U	70 U	50 U	

TABLE I
SUMMARY OF SOIL ANALYTICAL RESULTS
RACER PENSKE
PONTIAC, MI

Location						SB-9	SB-10	SB-11	SB-12	SB-13	SB-14
Sample Date			Nonresidential	Nonresidential		10/27/2014	10/28/2014	10/27/2014	10/27/2014	10/27/2014	10/27/2014
Sample Type	State		Drinking Water	Volatization to Indoor	Nonresidential	N	N	N	N	N	N
Sample Depth (bgs)	Background		Protection	Air Inhalation	Direct Contact	8 - 10 (ft)	8 - 10 (ft)	10 - 12 (ft)	10 - 12 (ft)	10 - 12 (ft)	10 - 12 (ft)
1,2-Dibromoethane (Ethylene Dibromide)	-		1	3600	430	60 U	60 U	70 U	90 U	70 U	50 U
1,2-Dichlorobenzene	-		14000	20000000	63000000	60 U	60 U	70 U	90 U	70 U	50 U
1,2-Dichloroethane	-		100	11000	420000	60 U	60 U	70 U	90 U	70 U	50 U
1,2-Dichloropropane	-		100	7400	660000	60 U	60 U	70 U	90 U	70 U	50 U
1,3-Dichlorobenzene	-		480	48000	660000	60 U	60 U	70 U	90 U	70 U	50 U
1,4-Dichlorobenzene	-		1700	100000	1900000	60 U	60 U	70 U	90 U	70 U	50 U
2-Butanone (Methyl Ethyl Ketone)	-		760000	99000000	700000000	940 U	890 U	980 U	1400 U	1100 U	810 U
2-Hexanone	-		58000	1800000	100000000	3000 U	3000 U	3000 U	5000 U	4000 U	3000 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	-		100000	69000000	180000000	3000 U	3000 U	3000 U	5000 U	4000 U	3000 U
Acetone	-		42000	540000000	73000000	940 U	890 U	980 U	1400 U	1100 U	810 U
Benzene	-		100	8400	840000	60 U	60 U	70 U	90 U	70 U	50 U
Bromodichloromethane	-		1600	6400	490000	60 U	60 U	70 U	90 U	70 U	50 U
Bromoform	-		1600	770000	3800000	60 U	60 U	70 U	90 U	70 U	50 U
Bromomethane (Methyl Bromide)	-		580	1600	1000000	300 U	300 U	300 U	500 U	400 U	300 U
Carbon disulfide	-		46000	140000	43000000	300 U	300 U	300 U	500 U	400 U	300 U
Carbon tetrachloride	-		100	990	440000	60 U	60 U	70 U	90 U	70 U	50 U
Chlorobenzene	-		2000	220000	14000000	60 U	60 U	70 U	90 U	70 U	50 U
Chloroethane	-		34000	5300000	12000000	300 U	300 U	300 U	500 U	400 U	300 U
Chloroform (Trichloromethane)	-		1600	38000	5500000	60 U	60 U	70 U	90 U	70 U	50 U
Chloromethane (Methyl Chloride)	-		22000	10000	7400000	300 U	300 U	300 U	500 U	400 U	300 U
cis-1,2-Dichloroethene	-		1400	41000	8000000	60 U	60 U	70 U	90 U	70 U	50 U
cis-1,3-Dichloropropene	-		-	-	-	60 U	60 U	70 U	90 U	70 U	50 U
Cyclohexane	-		-	-	-	370	60 U	70 U	90 U	70 U	50 U
Dibromochloromethane	-		1600	21000	500000	60 U	60 U	70 U	90 U	70 U	50 U
Dichlorodifluoromethane (CFC-12)	-		270000	1700000	170000000	60 U	60 U	70 U	90 U	70 U	50 U
Ethylbenzene	-		1500	460000	71000000	60 U	60 U	70 U	90 U	70 U	50 U
Isopropylbenzene	-		260000	730000	80000000	60 U	60 U	70 U	90 U	70 U	50 U
m&p-Xylene	-		-	-	-	300	100 U	100 U	200 U	100 U	100
Methyl acetate	-		-	-	-	3000 U	3000 U	3000 U	5000 U	4000 U	3000 U
Methyl cyclohexane	-		-	-	-	950	60 U	70 U	90 U	70 U	50
Methyl Tert Butyl Ether	-		800	18000000	7100000	300 U	300 U	300 U	500 U	400 U	300 U
Methylene chloride	-		100	240000	5800000	300 U	300 U	300 U	500 U	400 U	300 U
o-Xylene	-		-	-	-	230	60 U	70 U	90 U	70 U	50 U
Styrene	-		2700	1300000	1900000	60 U	60 U	70 U	90 U	70 U	50 U
Tetrachloroethene	-		100	21000	930000	690 [B]	60 U	70 U	160 [B]	70 U	210 [B]
Toluene	-		16000	610000	160000000	140	60 U	70 U	90 U	70 U	50 U
trans-1,2-Dichloroethene	-		2000	43000	12000000	60 U	60 U	70 U	90 U	70 U	50 U
trans-1,3-Dichloropropene	-		-	-	-	60 U	60 U	70 U	90 U	70 U	50 U
Trichloroethene	-		100	1900	660000	160 [B]	60 U	70 U	90 U	70 U	50 U
Trichlorofluoromethane (CFC-11)	-		150000	5100000	260000000	100 U	100 U	100 U	200 U	100 U	100 U
Trifluorotrichloroethane (Freon 113)	-		9000000	9300000	1000000000	100 U	100 U	100 U	200 U	100 U	100 U
Vinyl chloride	-		40	2800	34000	100 U	100 U	100 U	200 U	100 U	100 U

- Notes:
- [<A] - Result is less than Statewide Default Background Levels
 - Results in **red** exceed one or more of the following Part 201 Criteria (12/2013):
 - [B]** - Non-residential Drinking Water Protection Criteria & RBSLs
 - [C]** - Non-residential Soil Volatilization to Indoor Air Inhalation Criteria & RBSLs
 - [D]** - Non-residential Direct Contact Criteria & RBSLs
 - U - Not detected above reporting limit.
 - J - Estimated result
 - Results in **bold** were detected.
 - Sample Types: N - Normal Sample, FD - Field Duplicate
 - Data has been validated by Haley & Aldrich.

TABLE II
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
RACER PENSKE
PONTIAC, MI

	Location Sample Date Sample Type	Non-residential Drinking Water Criteria & RBSLs	Nonresidential Groundwater Volatilization to Indoor Air Inhalation Criteria & RBSLs	TW-1 10/30/2014 N	TW-12 10/30/2014 N	TW-13 10/29/2014 N	TW-14 10/29/2014 N	TW-6 10/30/2014 N	TW-8 10/30/2014 N
Field Parameters									
Temperature (Deg C)		-	-	13.9	14.3	15.1	14.8	14	14.7
Dissolved Oxygen, Field (mg/L)		-	-	0.8	1.5	0.69	1.4	0.71	0.57
Conductivity, Field (mS/cm)		-	-	8.74	6.87	5.88	5.81	8.5	5.52
ORP, Field (mV)		-	-	-80	-181	-175	-252	-139	-131
Turbidity, Field (NTU)		-	-	135	76.3	220	0	225	28.7
pH, Field (s.u.)		-	-	6.25	6.64	6.5	6.55	6.37	6.42
Dissolved Inorganic Compounds (mg/L)									
Arsenic, Dissolved	0.01	-	-	0.007	0.006	0.011 ^[A]	0.003	0.005	0.007
Barium, Dissolved	2	-	-	0.223	0.122	0.18	0.116	0.417	0.178
Cadmium, Dissolved	0.005	-	-	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
Chromium, Dissolved	0.1	-	-	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Copper, Dissolved	1	-	-	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Lead, Dissolved	0.004	-	-	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Manganese, Dissolved	0.05	-	-	0.825 ^[A]	0.131 ^[A]	0.319 ^[A]	0.192 ^[A]	0.5 ^[A]	0.179 ^[A]
Mercury, Dissolved	0.002	0.056	-	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Selenium, Dissolved	0.05	-	-	0.006	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Silver, Dissolved	0.098	-	-	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
Zinc, Dissolved	5	-	-	0.008	0.009	0.015	0.014	0.016	0.005
Inorganic Compounds (mg/L)									
Arsenic, Total	0.01	-	-	0.025 ^[A]	0.028 ^[A]	0.053 ^[A]	0.007	0.029 ^[A]	0.056 ^[A]
Barium, Total	2	-	-	0.256	0.155	0.227	0.132	0.489	0.209
Cadmium, Total	0.005	-	-	0.0005 U	0.0005 U	0.0009	0.0005 U	0.0005 U	0.0005 U
Chromium, Total	0.1	-	-	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Copper, Total	1	-	-	0.01	0.005 U	0.007	0.006	0.005	0.005 U
Lead, Total	0.004	-	-	0.006 ^[A]	0.003 U	0.004	0.003 U	0.003	0.003
Manganese, Total	0.05	-	-	0.892 ^[A]	0.131 ^[A]	0.373 ^[A]	0.201 ^[A]	0.543 ^[A]	0.179 ^[A]
Mercury, Total	0.002	0.056	-	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Selenium, Total	0.05	-	-	0.006	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Silver, Total	0.098	-	-	0.0012	0.0012	0.0014	0.0011	0.0016	0.0015
Zinc, Total	5	-	-	0.023	0.009	0.015	0.014	0.016	0.005
Semi-Volatile Organic Compounds (ug/L)									
1-Methylnaphthalene	-	-	-	5 U	5 U	5 U	5 U	5 U	5 U
2-Methylnaphthalene	750	25000	-	5 U	5 U	5 U	5 U	5 U	5 U
Acenaphthene	3800	4200	-	5 U	5 U	5 U	5 U	5 U	5 U
Acenaphthylene	150	3900	-	5 U	5 U	5 U	5 U	5 U	5 U
Anthracene	43	43	-	5 U	5 U	5 U	5 U	5 U	5 U
Benzo(a)anthracene	8.5	-	-	1 U	1 U	1 U	1 U	1 U	1 U
Benzo(a)pyrene	5	-	-	1 U	1 U	1 U	1 U	1 U	1 U
Benzo(b)fluoranthene	1.5	-	-	1 U	1 U	1 U	1 U	1 U	1 U
Benzo(g,h,i)perylene	0.26	-	-	1 U	1 U	1 U	1 U	1 U	1 U
Benzo(k)fluoranthene	0.8	-	-	1 U	1 U	1 U	1 U	1 U	1 U
Chrysene	1.6	-	-	1 U	1 U	1 U	1 U	1 U	1 U
Dibenz(a,h)anthracene	0.85	-	-	2 U	2 U	2 U	2 U	2 U	2 U
Fluoranthene	210	210	-	1 U	1 U	1 U	1 U	1 U	1 U
Fluorene	2000	2000	-	5 U	5 U	5 U	5 U	5 U	5 U
Indeno(1,2,3-cd)pyrene	0.022	-	-	2 U	2 U	2 U	2 U	2 U	2 U
Naphthalene	1500	31000	-	5 U	5 U	5 U	5 U	5 U	5 U
Phenanthrene	150	1000	-	2 U	2 U	2 U	2 U	2 U	2 U
Pyrene	140	140	-	5 U	5 U	5 U	5 U	5 U	5 U

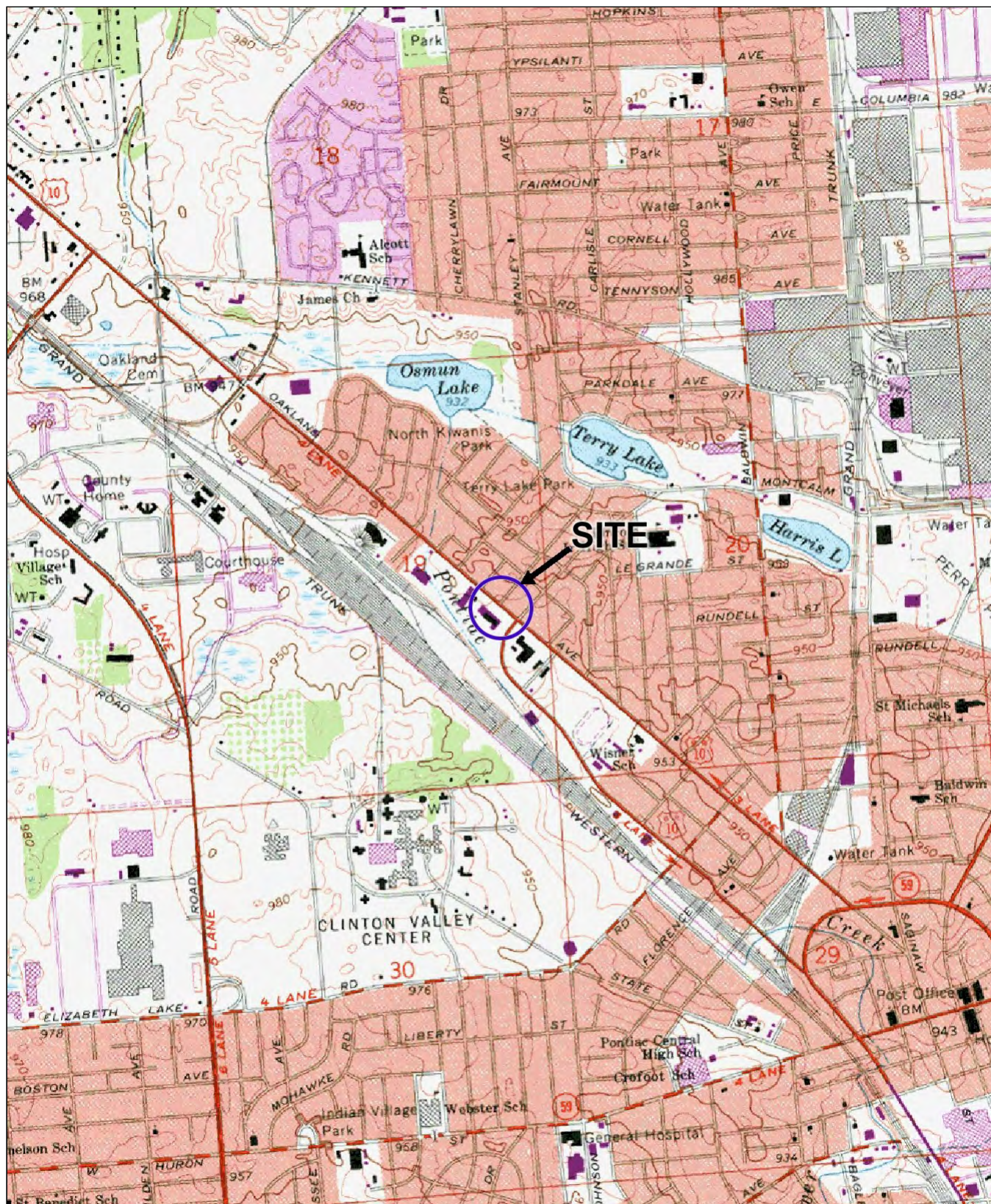
TABLE II
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
RACER PENSKE
PONTIAC, MI

Location Sample Date Sample Type	Non-residential Drinking Water Criteria & RBSLs	Nonresidential Groundwater Volatilization to Indoor Air Inhalation Criteria & RBSLs	TW-1 10/30/2014 N	TW-12 10/30/2014 N	TW-13 10/29/2014 N	TW-14 10/29/2014 N	TW-6 10/30/2014 N	TW-8 10/30/2014 N
Volatile Organic Compounds (ug/L)								
1,1,1-Trichloroethane	200	1.30E+06	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	35	77000	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	5	110000	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	2500	2.30E+06	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene	7	1300	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	70	300000	2 U	2 U	2 U	2 U	2 U	2 U
1,2-Dibromo-3-chloropropane (DBCP)	0.2	1200	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dibromoethane (Ethylene Dibromide)	0.05	15000	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichlorobenzene	600	160000	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane	5	59000	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloropropane	5	36000	1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichlorobenzene	19	41000	1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dichlorobenzene	75	74000	1 U	1 U	1 U	1 U	1 U	1 U
2-Butanone (Methyl Ethyl Ketone)	38000	2.40E+08	20 U	20 U	20 U	20 U	20 U	20 U
2-Hexanone	2900	8.70E+06	50 U	50 U	50 U	50 U	50 U	50 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	5200	2.00E+07	10 U	10 U	10 U	10 U	10 U	10 U
Acetone	2100	1.00E+09	20 U	20 U	20 U	20 U	20 U	20 U
Benzene	5	35000	1 U	1 U	1 U	1 U	1 U	1 U
Bromodichloromethane	80	37000	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform	80	3.10E+06	1 U	1 U	1 U	1 U	1 U	1 U
Bromomethane (Methyl Bromide)	29	9000	2 U	2 U	2 U	2 U	2 U	2 U
Carbon disulfide	2300	550000	5 U	5 U	5 U	5 U	5 U	5 U
Carbon tetrachloride	5	2400	1 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	100	470000	1 U	1 U	1 U	1 U	1 U	1 U
Chloroethane	1700	5.70E+06	1 U	1 U	1 U	1 U	1 U	1 U
Chloroform (Trichloromethane)	80	180000	1 U	1 U	1 U	1 U	1 U	1 U
Chloromethane (Methyl Chloride)	1100	45000	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,2-Dichloroethene	70	210000	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	-	-	1 U	1 U	1 U	1 U	1 U	1 U
Cyclohexane	-	-	1 U	1 U	1 U	1 U	1 U	1 U
Dibromochloromethane	80	110000	1 U	1 U	1 U	1 U	1 U	1 U
Dichlorodifluoromethane (CFC-12)	4800	300000	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	74	170000	1 U	1 U	1 U	1 U	1 U	1 U
Isopropylbenzene	2300	56000	1 U	1 U	1 U	1 U	1 U	1 U
m&p-Xylene	-	-	2 U	2 U	2 U	2 U	2 U	2 U
Methyl acetate	-	-	10 U	10 U	10 U	10 U	10 U	10 U
Methyl cyclohexane	-	-	20 U	20 U	20 U	20 U	20 U	20 U
Methyl Tert Butyl Ether	40	4.70E+07	5 U	5 U	5 U	5 U	5 U	5 U
Methylene chloride	5	1.40E+06	5 U	5 U	5 U	5 U	5 U	5 U
o-Xylene	-	-	1 U	1 U	1 U	1 U	1 U	1 U
Styrene	100	310000	1 U	1 U	1 U	1 U	1 U	1 U
Tetrachloroethene	5	170000	1 U	1 U	1 U	1 U	1 U	1 U
Toluene	790	530000	1 U	1 U	1 U	1 U	1 U	1 U
trans-1,2-Dichloroethene	100	200000	1 U	1 U	1 U	1 U	1 U	1 U
trans-1,3-Dichloropropene	-	-	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene	5	4900	1 U	1 U	1 U	1 U	1 U	1 U
Trichlorofluoromethane (CFC-11)	7300	1.10E+06	1 U	1 U	1 U	1 U	1 U	1 U
Trifluorotrichloroethane (Freon 113)	170000	170000	30 U	30 U	30 U	30 U	30 U	30 U
Vinyl chloride	2	13000	1 U	1 U	1 U	1 U	1 U	1 U

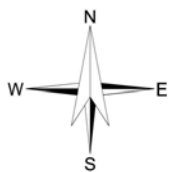
Notes:

1. Results in **red** exceed one or more of the following Part 201 Criteria (12/2013):
 [A] - Non-residential Drinking Water Criteria & RBSLs
 [B] - Nonresidential Groundwater Volatilization to Indoor Air Inhalation Criteria & RBSLs
2. U - Not detected above reporting limit.
3. Results in **bold** were detected.

FIGURES



SITE COORDINATES: 42°39'13"N 83°18'42"W



U.S.G.S. QUADRANGLE: PONTIAC NORTH, MI

HALEY & ALDRICH

ACC - PENSKE
675 CESAR E CHAVEZ AVENUE
PONTIAC, MICHIGAN

PROJECT LOCUS

SCALE: 1:24,000
MAY 2010

FIGURE 1

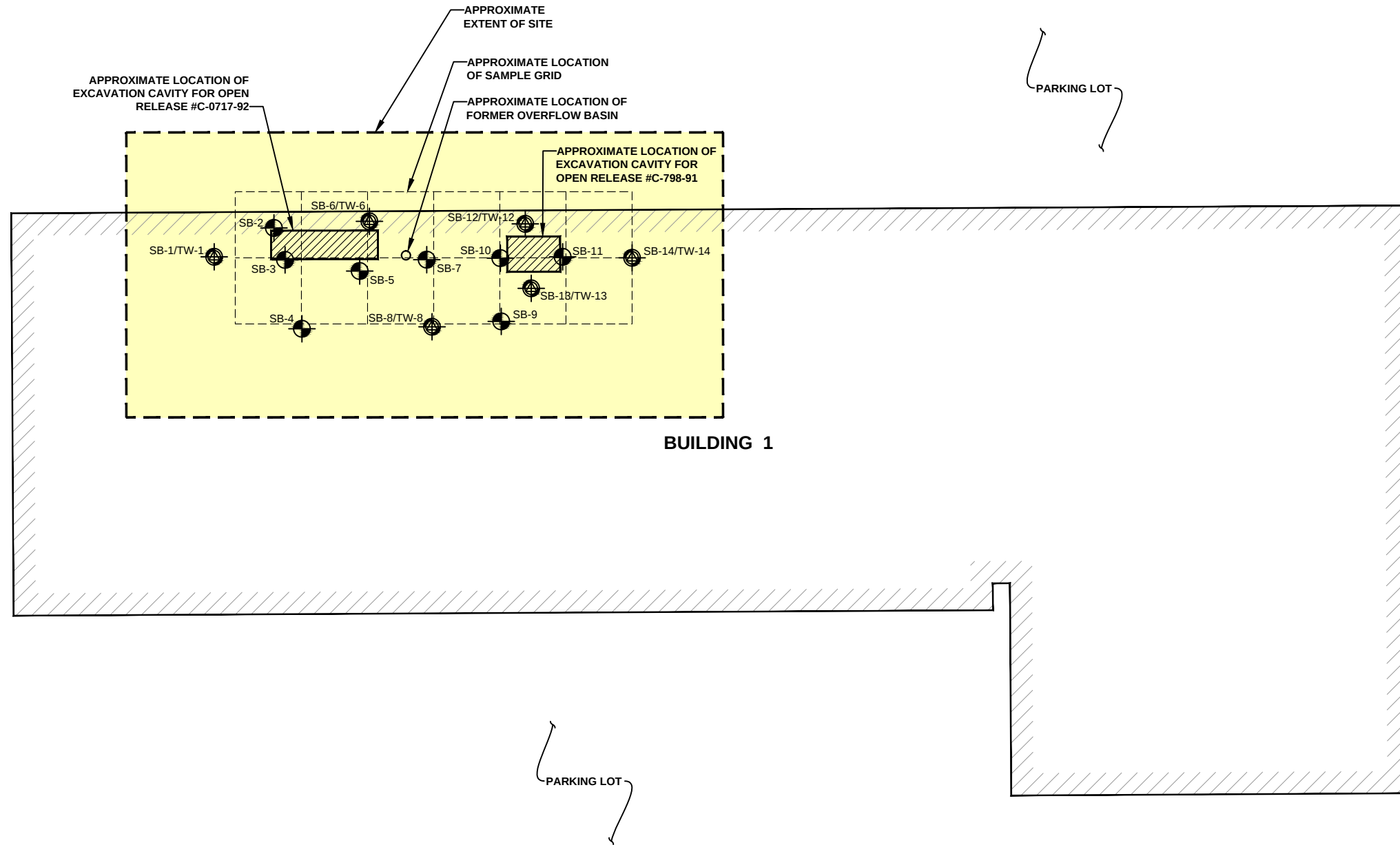
J:\GRAPHICS\37147\37147-025-B001 SOIL BORING.DWG

LEGEND

- SB APPROXIMATE SOIL BORING LOCATION
- TW APPROXIMATE TEMPORARY WELL LOCATION
- PROPERTY LINE
- BUILDING

NOTES

1. ALL LOCATIONS APPROXIMATE.
2. THIS FIGURE WAS GENERATED WITH THE USE OF AN AERIAL IMAGE OBTAINED FROM GOOGLE EARTH PRO, AND OAKLAND COUNTY'S PROPERTY INFORMATION LOOKUP SYSTEM.
3. EXCAVATION CAVITY LOCATIONS AND FORMER OVERFLOW BASIN LOCATION ARE BASED ON: ENKON ENVIRONMENTAL SERVICES, INC., MARCH 1992, SUBSURFACE SOILS INVESTIGATION, GMC TRUCK CENTER, 675 OAKLAND, PONTIAC, MICHIGAN AND GENERAL MOTORS CORPORATION TRUCK & BUS GROUP, JUNE 1992, SITE CHARACTERIZATION REPORT, GM TRUCK PLATFORMS - PONTIAC TRUCK CENTER..



HALEY
ALDRICH

ACC-PENSKE
675 CESAR CHAVEZ
PONTIAC, MICHIGAN

SOIL BORING / TEMPORARY
MONITORING WELL LOCATIONS

SCALE: AS SHOWN
JUNE 2015

FIGURE 2

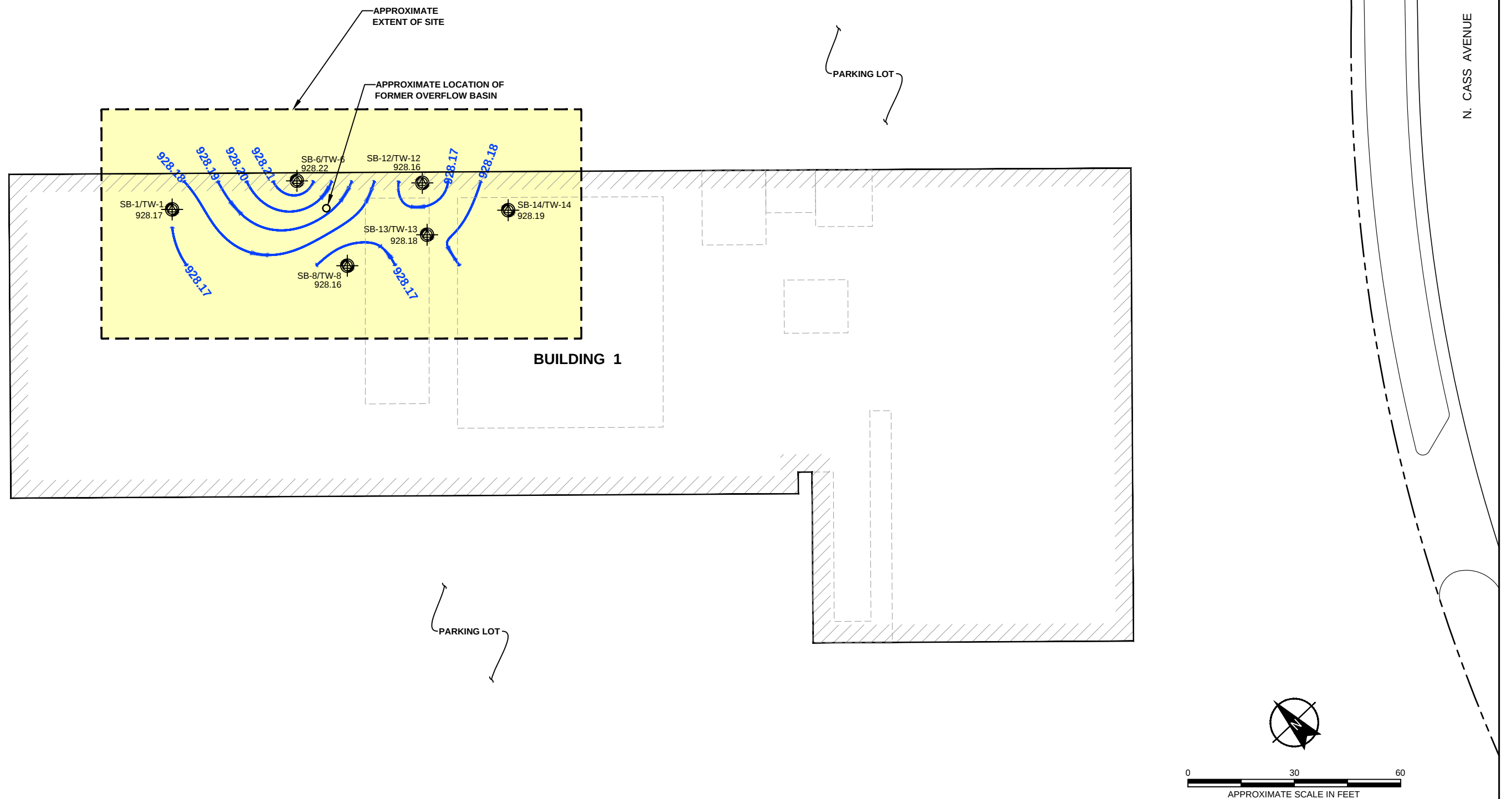
N. CASS AVENUE

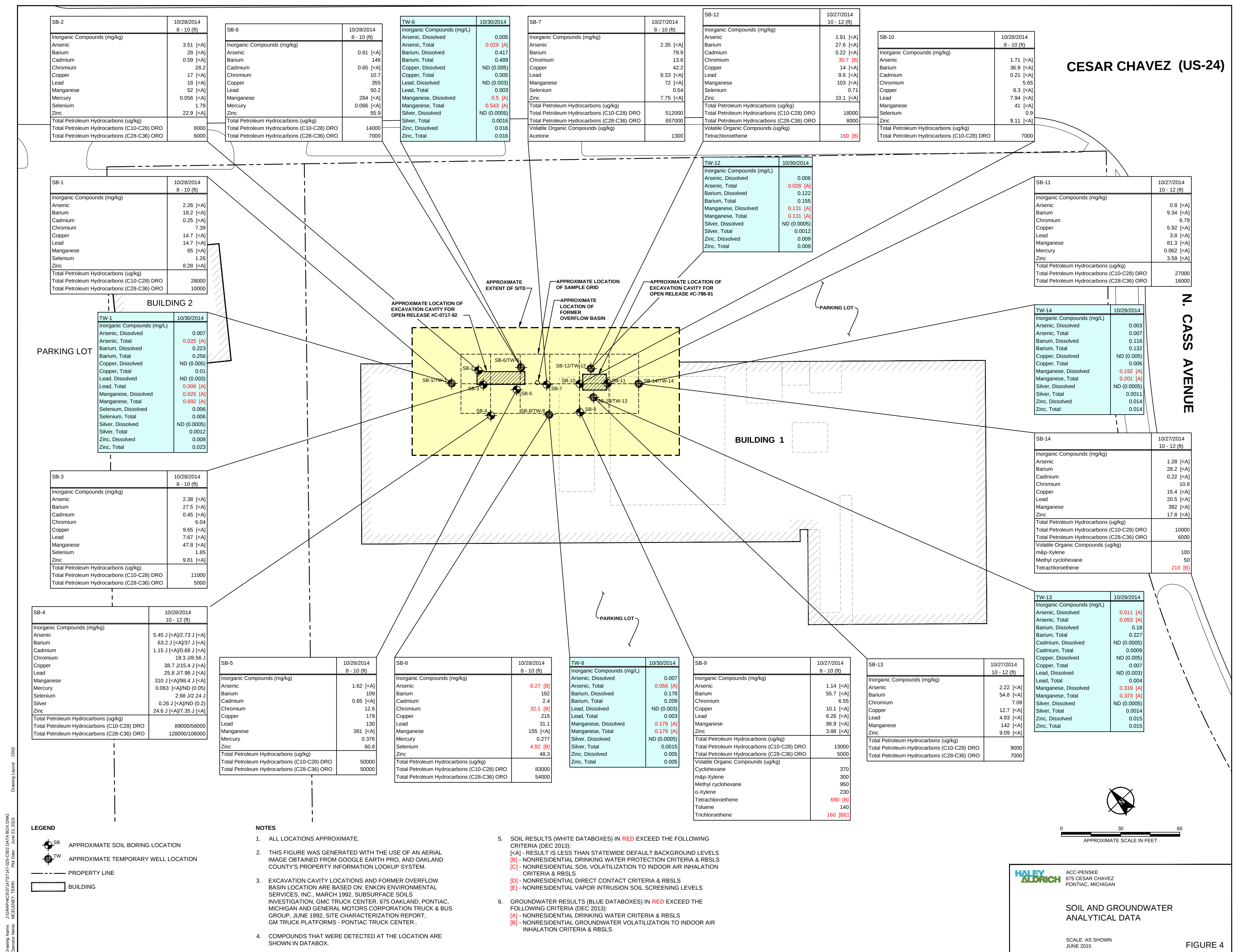
LEGEND

- 928.17 — GROUNDWATER CONTOURS
-  TW APPROXIMATE TEMPORARY WELL LOCATION
- PROPERTY LINE
-  BUILDING

NOTES

1. ALL LOCATIONS APPROXIMATE.
2. THIS FIGURE WAS GENERATED WITH THE USE OF AN AERIAL IMAGE OBTAINED FROM GOOGLE EARTH PRO, AND OAKLAND COUNTY'S PROPERTY INFORMATION LOOKUP SYSTEM.
3. EXCAVATION CAVITY LOCATIONS AND FORMER OVERFLOW BASIN LOCATION ARE BASED ON: ENKON ENVIRONMENTAL SERVICES, INC., MARCH 1992, SUBSURFACE SOILS INVESTIGATION, GMC TRUCK CENTER, 675 OAKLAND, PONTIAC, MICHIGAN AND GENERAL MOTORS CORPORATION TRUCK & BUS GROUP, JUNE 1992, SITE CHARACTERIZATION REPORT, GM TRUCK PLATFORMS - PONTIAC TRUCK CENTER..





APPENDIX A

Property Boundary and Site Survey

14-19-432-003:

- 1: S 43 Deg 16 Min 00 Sec W, 495.24'; th
- 2: S 38 Deg 24 Min 00 Sec E, 101.07'; th
- 3: N 46 Deg 16 Min 00 Sec E, 509.89'; th
- 4: N 46 Deg 45 Min 00 Sec W, 100.00' to P.O.B.

P.O.B.

Cesar E Chavez Ave
(aka Oakland Ave)

Lounsbury Ave

14-19-432-003

Portion of Property
Subject to LUST Closure
64.50' x 135.00'

14-19-432-004

Parcel
Boundary

0 100 200 Feet

14-19-432-004:

- 5: N 43 Deg 00 Min 30 Sec E, 125.15'; th
- 6: Curve to Right: Radius=543.00' and Distance=466.83'; th
- 7: N 43 Deg 00 Min 20 Sec E, 62.34'; th
- 8: N 46 Deg 40 Min 10 Sec W, 405.78'; th
- 9: S 46 Deg 16 Min 00 Sec W, 509.89'; th
- 10: S 38 Deg 22 Min 00 Sec E, 605.20' to P.O.B.

P.O.B.

N Cass Ave



DECLARATION OF RESTRICTIVE COVENANT EXHIBIT

PART OF LOT 2, "ASSESSORS PLAT NO. 3"
PARTS OF THE SW 1/4 AND SE 1/4 OF SECTION 19 AND
THE NE 1/4 OF SECTION 30, T. 3 N., R. 10 E
CITY OF PONTIAC, OAKLAND COUNTY, MI

S43°16'00"W
27.00'
POINT OF COMMENCING

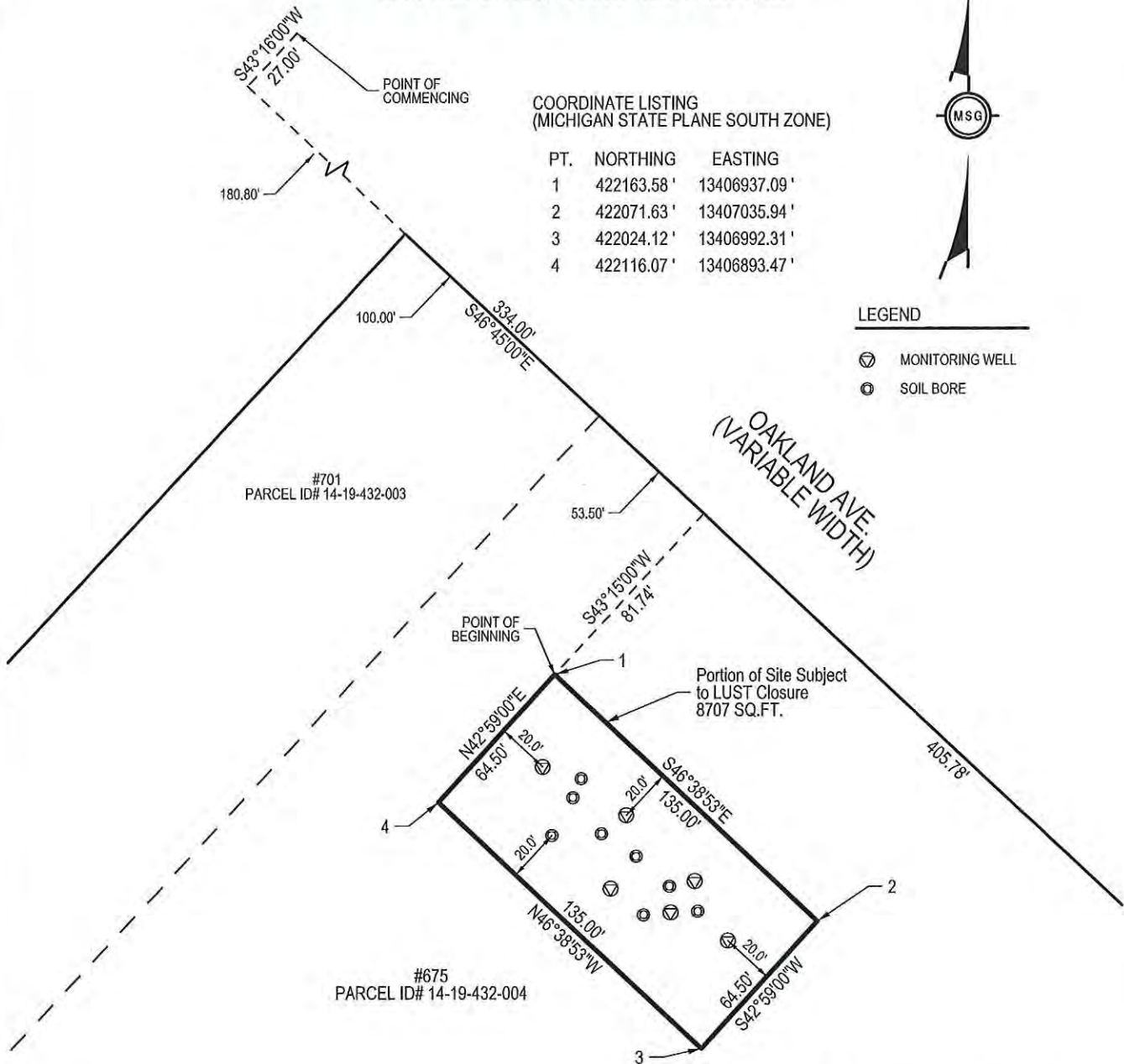
COORDINATE LISTING (MICHIGAN STATE PLANE SOUTH ZONE)

PT.	NORTHING	EASTING
1	422163.58'	13406937.09'
2	422071.63'	13407035.94'
3	422024.12'	13406992.31'
4	422116.07'	13406893.47'

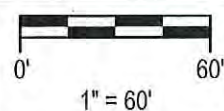


LEGEND

- ⊙ MONITORING WELL
- ⊙ SOIL BORE



NOTE:
BEARINGS BASED ON LEGAL DESCRIPTION
PROVIDED BY CLIENT



DRAWN BY: JZ

CHECKED BY: KSW

PREPARED FOR:

RACER
500 WOODWARD AVE.
SUITE 2650
DETROIT, MI 48226

JOB No.: R2330020

PAGE 1 OF 1



2365 HAGGERTY ROAD S.
CANTON, MICHIGAN 48188
TEL: (734) 397-3100
FAX: (734) 397-3131



KENNETH S. WILKERSON, P.S.
LICENSED PROFESSIONAL SURVEYOR
MICHIGAN LICENSE NO. 21584
DATE: 08/08/16

DECLARATION OF RESTRICTIVE COVENANT

LEGAL DESCRIPTION

Property located in part of Lot 2, "Assessors Plat No.3", parts of the Southwest and Southeast 1/4's of Section 19 and the Northeast 1/4 of Section 30, Township 3 North, Range 10 East, City of Pontiac, Oakland County, Michigan, according to the plat thereof as recorded in Liber 1A of Assessor's Plat, Page 3, Oakland County Records, and being described as:

commencing at a point on the Northwesternly line of Oakland Avenue, as widened, and bearing South 43°16'00" West 27.00 feet; thence South 46°45'00" East 334 feet; thence South 43°15'00" West 81.74 feet to the POINT OF BEGINNING; thence South 46°38'53" East 135.00 feet; thence South 42°59'00" West 64.50 feet; thence North 46°38'53" West 135.00 feet; thence North 42°59'00" East 64.50 feet to the POINT OF BEGINNING, containing 0.200 acre of land, more or less.

APPENDIX B

Declaration of Restrictive Covenant

LIBER 50367 PAGE 829
\$21.00 MISC RECORDING
\$4.00 REMONUMENTATION
\$5.00 AUTOMATION
02/08/2017 05:04:34 PM RECEIPT# 17104
PAID RECORDED - Oakland County, MI
Lisa Brown, Clerk/Register of Deeds

DECLARATION OF RESTRICTIVE COVENANT

MDEQ Reference No: RC-RRD-213-17-012

This Declaration of Restrictive Covenant (Restrictive Covenant) has been recorded with the Oakland County Register of Deeds to protect public health, safety, welfare, and the environment by prohibiting or restricting activities that could result in unacceptable exposure to regulated substances present at the property commonly known as 675 Cesar E. Chavez Avenue, Pontiac, Oakland County, Michigan 48340, Tax Parcel Identification Numbers 14-19-432-003 and 14-19-432-004, and legally described and illustrated in Exhibit 1 - Legal Description and Illustration of Property, (Property or Site).

The Property is associated with the former Pontiac GM Truck Center for which a Closure Report was completed under Part 213, Leaking Underground Storage Tanks of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA), Michigan Compiled Law (MCL) 324.21301, *et seq.* Exhibit 2 - Legal Description and Illustration of the Portion of the Property Subject to Underground Storage Tank Closure, (Portion of the Property), provides a description and illustration of the Portion of the Property that is subject to Underground Storage Tank Closure under Part 213, Leaking Underground Storage Tanks of the NREPA, 1994 PA 451, as amended, MCL 324.21301, *et seq.* Corrective actions that have been implemented to address environmental contamination are fully described in the Closure Report dated January 23, 2017 (Closure Report). Closure of the reported Underground Storage Tank releases requires the recordation of this Restrictive Covenant. A copy of the Closure Report is available from the Michigan Department of Environmental Quality (MDEQ), Remediation and Redevelopment Division (RRD) Southeast District Office.

The Property described contains regulated substances in excess of the concentrations developed as the unrestricted residential cleanup criteria under Section 21304a(2) of NREPA. MDEQ recommends that prospective purchasers or users of this Property undertake appropriate due diligence prior to acquiring or using this Property, and undertake appropriate actions to comply with the requirements of Section 21304c of NREPA.

Part 213 requires the recording of this Restrictive Covenant with the Oakland County Register of Deeds based upon the corrective action measures for the Property to: 1) restrict unacceptable exposures to regulated substances located on the Property; and 2) assure that the use of the Property is consistent with the exposure assumptions used to develop cleanup criteria under Section 21304a(2) of NREPA.

The restrictions contained in this Restrictive Covenant are based upon information available at the time the corrective action was implemented by Revitalizing Auto Communities Environmental Response Trust (Trust). Failure of the corrective action to achieve and maintain the cleanup criteria, exposure controls, and requirements specified in the Closure Report to be submitted to MDEQ; future changes in the environmental condition of the Property; changes in the cleanup criteria developed under Section 21304a(2) of NREPA; the discovery of environmental conditions at the Property that were not accounted for in the Closure Report; or use of the Property in a manner inconsistent with the restrictions described herein may result in this Restrictive Covenant not being protective of public health, safety, and welfare, and the environment. The adequacy of the corrective action undertaken pursuant to the Closure Report may not have been reviewed by MDEQ.

Definitions

"MDEQ" means the Michigan Department of Environmental Quality, its successor entities, and those persons or entities acting on its behalf.

"Owner" means at any given time the then current fee title holder(s) of the Property or any portion thereof, including the fee title holder's lessees and those persons or entities authorized to act on its behalf. The title to the Property is currently held by Lee Industrial Plaza LLC.

"Property" means the real property as described and illustrated in Exhibit 1 of this Restrictive Covenant that is subject to the restrictions, terms and conditions described herein.

"Portion of the Property" is the portion of the real Property as described and illustrated in Exhibit 2 of this Restrictive Covenant that is subject to Underground Storage Tank Closure under Part 213, Leaking Underground Storage Tanks of the NREPA, 1994 PA 451, as amended, MCL 324.21301, et seq., MDEQ Site ID 00011332.

"Trust" means the Revitalizing Auto Communities Environmental Response Trust, which on March 31, 2011 was established and assumed the rights, title, and interest of Motors Liquidation Company in and to the Property pursuant to an Environmental Response Trust Consent Decree and Settlement Agreement (Settlement Agreement) entered by the U.S. Bankruptcy Court for the Southern District of New York on March 29, 2011, in the case of *In re Motors Liquidation Company, et al., f/k/a General Motors Corp., et al. Debtors*, Case No. 09-50026 (REG), among the Debtors, the United States of America, certain states including the State of Michigan, the Saint Regis Mohawk Tribe, and EPLET, LLC (not individually but solely in its representative capacity as Administrative Trustee of the Trust).

All other terms used in this document which are defined in Part 3 Definitions, of NREPA, and Part 213 of NREPA, shall have the same meaning in this document as in those statutes and rules as of the date this Restrictive Covenant is made.

Summary of Environmental Conditions and Corrective Action

Hazardous substances including arsenic, chromium, selenium, trichloroethene, and tetrachloroethene are present at the site resulting in contamination of the Portion of the Property identified in Exhibit 2. These contaminants remain in soil at concentrations that do not allow unrestricted use of the Portion of the Property. Arsenic, lead, and manganese remain in groundwater at concentrations above the residential and nonresidential drinking water criteria and risk-based screening levels developed by MDEQ under Part 201 of NREPA and required for

corrective actions required under Part 213, Leaking Underground Storage Tanks, of NREPA, as amended, effective December 30, 2013.

The investigation data and analytical results of confirmatory soil and groundwater samples (as summarized in the Closure Report) show that the current conditions on the Property comply with MDEQ requirements for a Tier I Restricted Nonresidential closure.

This restrictive covenant serves to protect the public by restricting the land use to nonresidential (Exhibit 3) and restricting the use of the groundwater. Any change in land use would necessitate further evaluation of potential risks to the public health, safety, welfare, and the environment.

NOW THEREFORE,

Declaration of Land Use or Resource Use Restrictions

1. The Trust, with the express written consent of the Owner (Exhibit 4), hereby declares and covenants that the Property shall be subject to the following restrictions and conditions and intends that said restrictions and covenants shall run with the land, and may be enforced in perpetuity against the Owner by the following entities: (1) the State of Michigan through, MDEQ; and (2) the Trust or its successor.
 - a. Land Use Prohibitions. The Owner shall prohibit all uses of the Property that are not compatible with or are inconsistent with the assumptions and basis for the nonresidential land use risk-based screening levels established pursuant to Section 21304a of NREPA, and generally described in the Description of Allowable Uses, attached hereto as Exhibit 3.
 - b. Prohibited Activities to Eliminate Unacceptable Exposures to Regulated Substances: The Owner shall prohibit activities at the Property that may result in exposures above levels established in the Closure Report. These prohibited activities include:
 - i. The construction and use of wells to extract groundwater for consumption, irrigation, or any other purpose, except as provided below:
 - (a) Wells and other devices constructed for the purpose of evaluating groundwater quality or to remediate subsurface contamination associated with a release of regulated substances into the environment are permitted provided the construction of the wells or devices complies with all applicable local, state, and federal laws and regulations and does not cause or result in a new release, exacerbation of existing contamination, or any other violation of local, state, or federal laws or regulations.
 - (b) Short-term dewatering for construction purposes is permitted provided the dewatering, including management and disposal of the groundwater, is conducted in accordance with all applicable local, state, and federal laws and regulations and does not cause or result in a new release, exacerbation of existing contamination, or any other violation of local, state, and federal environmental laws and regulations.

2. Contaminated Soil Management. The Owner shall manage all soils, media, and/or debris located on the Property in accordance with any applicable requirements of Section 21304B of NREPA; Part 111, Hazardous Waste Management, of NREPA; Subtitle C of the Resource Conservation and Recovery Act (RCRA); the administrative rules promulgated pursuant to Part 111 and RCRA; and all other relevant State and Federal laws, including but not limited to MCL 324.20120c.
3. Access. The Owner grants to MDEQ and the Trust, and their designated representatives, the right to enter the Property at reasonable times: (1) to conduct and complete any and all response activities, together with any reasonably needed ingress and egress to the Property; and (2) for the purpose of determining and monitoring compliance with this Restrictive Covenant, including the right to take samples and, inspect any records relating thereto, and to perform any actions necessary to maintain compliance with Part 213.
4. Conveyance of Property Interest. A conveyance of title, easement, or other interest in the Property shall not be consummated by the Owner without adequate and complete provision for compliance with the terms and conditions of the Closure Report. The Owner shall provide a copy of this Restrictive Covenant to all future owners, heirs, successors, lessees, easement holders, assigns, and transferees by the person transferring the interest in accordance with Section 21310a(2) of NREPA.
5. Compliance with this Restrictive Covenant and Applicable Due Care Obligations. The Owner shall at all times comply with the conditions and restrictions of this Restrictive Covenant and the applicable due care obligations under Section 21304c of NREPA and CERCLA, 42 U.S.C. § 9601, *et seq.* Owner agrees to maintain records of its applicable due care activities and shall supply copies of any records documenting such compliance upon request from Grantor or any Agency.
6. Audits Pursuant to Section 21315 of NREPA. This Restrictive Covenant is subject to audits in accordance with the provisions of Section 21315 of NREPA, and such an audit may result in a finding by MDEQ that this Restrictive Covenant is not protective of the public health, safety, and welfare, and the environment.
7. Term of Restrictive Covenant. This Restrictive Covenant shall run with the Property and shall be binding on the Owner, and all current and future successors, lessees, easement holders, their assigns, and their authorized agents, employees, or persons acting under their direction and control. This Restrictive Covenant shall continue in effect until it is determined that the regulated substances no longer present an unacceptable risk to the public health, safety, or welfare, or the environment. Improper modification or rescission of any restriction necessary to prevent unacceptable exposure to regulated substances may result in the need to perform additional corrective actions by those parties responsible for performing corrective action at the Property or to comply with Section 21304c of the NREPA.
8. Enforcement of Restrictive Covenant. The State of Michigan, through MDEQ, the Trust, and Lee Industrial Plaza, LLC are entitled to enforce the restrictions and covenants in this Restrictive Covenant by specific performance or other legal action in a court of competent jurisdiction. All remedies available hereunder shall be in addition to any and all other remedies at law or equity.
9. Severability. If any provision of this Restrictive Covenant is held to be invalid by a court of competent jurisdiction, the invalidity of such provision shall not affect the validity of any other

provisions of this Restrictive Covenant and all other provisions shall continue to remain in full force and effect.

10. Authority to Execute Restrictive Covenant. The undersigned person executing this Restrictive Covenant has the express written permission of the current Owner, Lee Industrial Plaza LLC, and represents and certifies that he is duly authorized and has been empowered to execute and record this Restrictive Covenant (Exhibit 4).
11. Limitation on the Trust's Liability. The Trust's and the Administrative Trustee's liability is limited by the terms and conditions of the Settlement Agreement, which are incorporated herein by reference.

[signature page follows]

IN WITNESS WHEREOF, the Trust has caused this Restrictive Covenant, MDEQ Reference Number: RC-RRD-213-17-012, to be executed on this 30th day of January, 2017.

By: EPLET, LLC, acting solely in its capacity as
Administrative Trustee of Revitalizing Auto
Communities Environmental Response Trust

By: Elliott P. Laws
ELLIOTT P. LAWS, not individually, but acting solely
in his capacity as Managing Member

DISTRICT/STATE OF Columbia)
) ss.
CITY/COUNTY OF _____)

The foregoing instrument was acknowledged before me this 30th day of January, 2017, by ELLIOTT P. LAWS, not individually, but acting solely in his capacity as Managing Member of EPLET, LLC, a Delaware limited liability company, acting solely in its capacity as Administrative Trustee of Revitalizing Auto Communities Environmental Response Trust, a trust formed under the laws of the State of New York, on behalf of said limited liability company and said trust.

Notary Public: Sharon M. Davis

My commission expires: 9/30/19

This document is exempt from state and county transfer taxes pursuant MCL 207.505(a) and MCL 207.526(a).

Prepared by and return to:
Carl P. Garvey, General Counsel
RACER Trust
500 Woodward Avenue, Suite 2650
Detroit, MI 48226



EXHIBIT 1**LEGAL DESCRIPTION AND ILLUSTRATION OF PROPERTY**

Commonly known as: 675 Cesar E. Chavez Avenue, Pontiac, MI 48340

Tax Parcel ID 14-19-432-003

Land situated in the City of Pontiac, in the County of Oakland, in the State of Michigan is described as follows:

Part of Lot 2, Assessor's Plat No. 3, parts of Southwest and Southeast $\frac{1}{4}$'s of Section 19 and Northeast $\frac{1}{4}$ of Section 30, Township 3 North, Range 10 East, City and Township of Pontiac, Oakland County, Michigan, according to the plat thereof as recorded in Liber 1A of Assessor's Plat, Page 3, Oakland County Records, and more particularly described as follows: Beginning at a point on the Northwestern line of Oakland Avenue, as widened, and bearing South 43 degrees 16 minutes 00 seconds West 27.00 feet and South 46 degrees 45 minutes 00 seconds East 180.80 feet from the Northeasterly corner of said Lot 2; thence South 43 degrees 16 minutes 00 seconds West, parallel to the Northwestern line of said Lot, 495.24 feet to the Southwesterly line of said Lot; thence South 38 degrees 24 minutes 00 seconds East along the Southwesterly line of said Lot, 101.07 feet; thence North 46 degrees 16 minutes 00 seconds East 509.89 feet to the widened line of Oakland Avenue; thence North 46 degrees 45 minutes 00 seconds West along Oakland Avenue 100.00 feet to the point of beginning.

And Also,

Tax Parcel ID 14-19-432-004

Part of Assessor's Plat No. 3, parts of Southwest and Southeast $\frac{1}{4}$'s of Section 19, and Northeast $\frac{1}{4}$ of Section 30, Town 3 North, Range 10 East, City and Township of Pontiac, Oakland County, Michigan, according to the plat thereof as recorded in Liber 1A of Assessor's Plats, Page 3, Oakland County Records, and more particularly described as follows: Beginning at South corner of Lot 2; thence North 43 degrees 00 minutes 30 seconds East 125.15 feet to a point on a curve; thence to right on said curve having radius of 543.00 feet a distance of 466.83 feet to a point of tangency; thence North 43 degrees 00 minutes 20 seconds East 62.34 feet to a point on the Southwesterly line of Oakland Avenue as widened; thence North 46 degrees 40 minutes 10 seconds West 405.78 feet along said widened line to a point on the Northwestern line of said Lot 2; thence South 46 degrees 16 minutes 00 seconds West 509.89 feet to the West line of Lot 2; thence South 38 degrees 22 minutes 00 seconds East 605.20 feet along the Southwesterly line of said Lot 2 to the point of beginning.

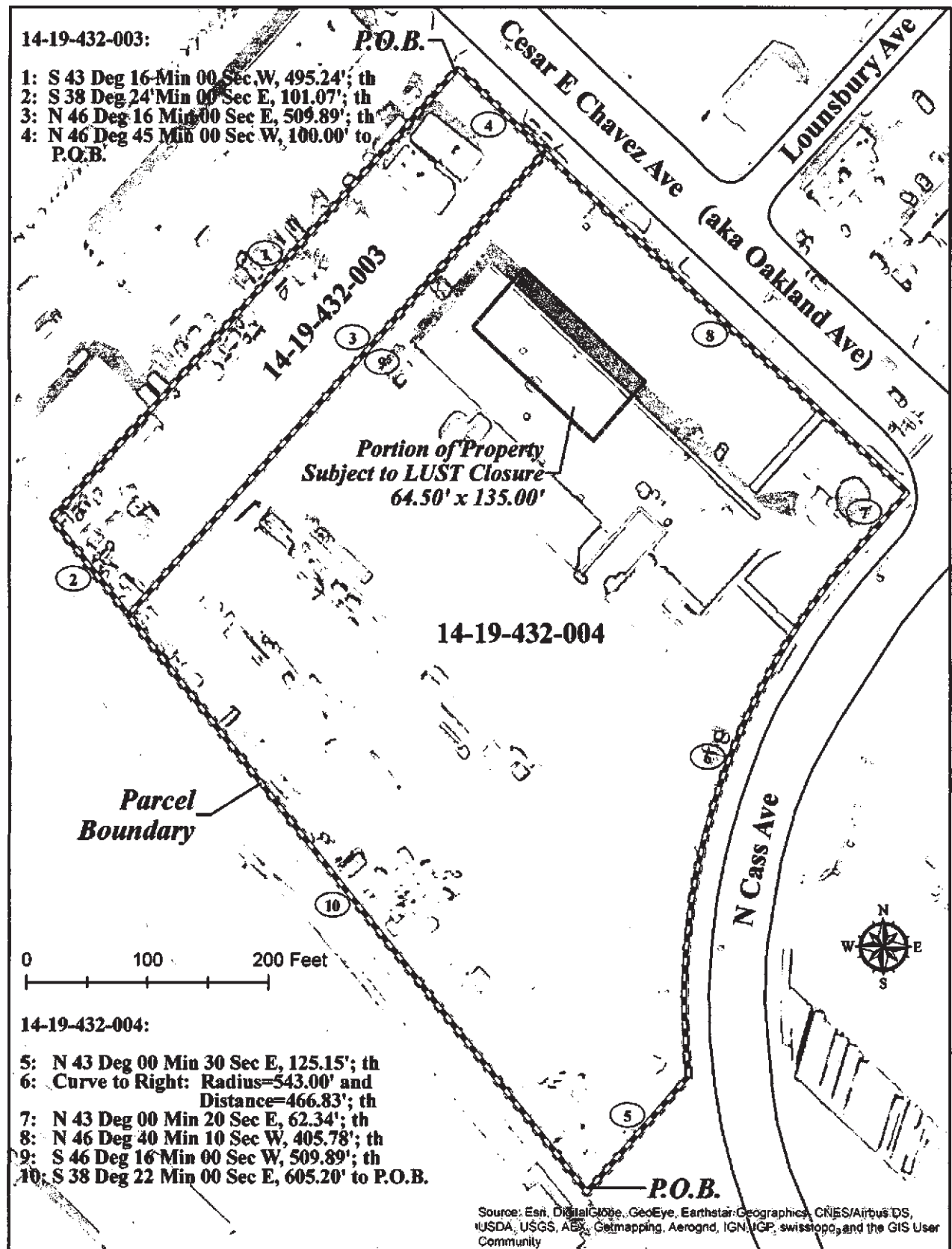


EXHIBIT 2**LEGAL DESCRIPTION AND ILLUSTRATION OF THE PORTION OF THE PROPERTY
SUBJECT TO UNDERGROUND STORAGE TANK CLOSURE**

Property located in part of Lot 2, "Assessors Plat No.3", parts of the Southwest and Southeast 1/4's of Section 19 and the Northeast 1/4 of Section 30, Township 3 North, Range 10 East, City of Pontiac, Oakland County, Michigan, according to the plat thereof as recorded in Liber 1A of Assessor's Plat, Page 3, Oakland County Records, and being described as:

commencing at a point on the Northwesternly line of Oakland Avenue, as widened, and bearing South 43°16'00" West 27.00 feet; thence South 46°45'00" East 334 feet; thence South 43°15'00" West 81.74 feet to the POINT OF BEGINNING; thence South 46°38'53" East 135.00 feet; thence South 42°59'00" West 64.50 feet; thence North 46°38'53" West 135.00 feet; thence North 42°59'00" East 64.50 feet to the POINT OF BEGINNING, containing 0.200 acre of land, more or less.

DECLARATION OF RESTRICTIVE COVENANT EXHIBIT

PART OF LOT 2, "ASSESSORS PLAT NO. 3"
PARTS OF THE SW 1/4 AND SE 1/4 OF SECTION 19 AND
THE NE 1/4 OF SECTION 30, T. 3 N., R. 10 E
CITY OF PONTIAC, OAKLAND COUNTY, MI

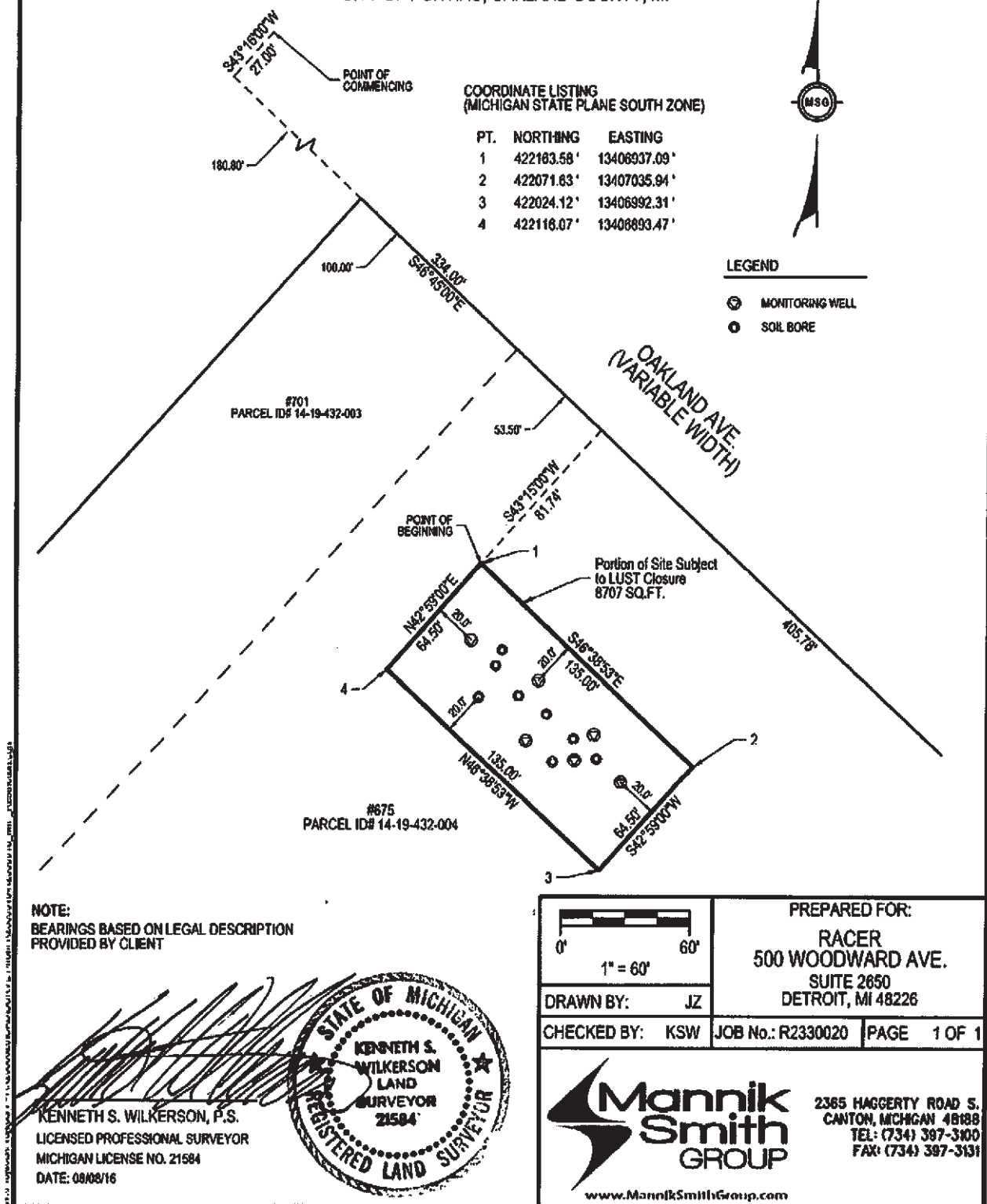


EXHIBIT 3**DESCRIPTION OF ALLOWABLE USES**

Nonresidential Land Use: This land use is characterized by any use which is not residential in nature and is primarily characterized by industrial and commercial uses. Industrial uses typically involve manufacturing operations engaged in processing and manufacturing of materials or products. Other examples of industrial uses are utility companies, industrial research and development, and petroleum bulk storage. Commercial uses include any business or income-producing use such as commercial warehouses, lumber yards, retail gas stations, auto dealerships and service stations, as well as office buildings, banks, and medical/dental offices (not including hospitals). Commercial uses also include retail businesses whose principal activity is the sale of food or merchandise within an enclosed building and personal service establishments which perform services indoors such as health clubs, barber/beauty salons, photographic studios, etc.

Any residential use is specifically prohibited from the non-residential land use category. This would include the primary use of the property for human habitation and includes structures such as single family dwellings, multiple family structures, mobile homes, condominiums, and apartment buildings. Residential use is also characterized by any use which is intended to house, educate, or provide care for children, the elderly, the infirm, or other sensitive populations, and therefore could include day care centers, educational facilities, hospitals, elder care facilities, and nursing homes. The use of any accessory building or portion of an existing building as a dwelling unit permitted for a proprietor or storekeeper and their families, located in the same building as their place of occupation, or for a watchman or caretaker is also prohibited. Any authority that allows for residential use of the Property as a legal non-conforming use is also restricted per the prohibitions contained in this restrictive covenant.

EXHIBIT 4

CONSENT OF OWNER

Lee Industrial Plaza LLC, the current and legal Owner of the Property, does hereby consent to the recording of this Declaration of Restrictive Covenant, RC-RRD-213-17-012, and authorizes the Revitalizing Auto Communities Environmental Response Trust to file this Declaration of Restrictive Covenant with the Oakland County Register of Deeds for recording.

LEE INDUSTRIAL PLAZA LLC

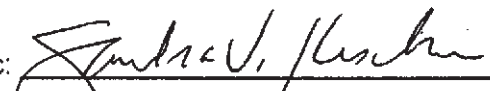
By: 

Printed Name: ED LEE

Title: PRES

STATE OF MICHIGAN)
) ss.
COUNTY OF OAKLAND)

The foregoing instrument was acknowledged before me this 23rd day of JANUARY 2017, by ED LEE,
of Lee Industrial Plaza LLC, on behalf of said corporation.

Notary Public: 

My commission expires: 6/30/2019

SANDRA V. KISCHUK
Notary Public, Macomb County, MI
My Commission Expires 6/30/2019

APPENDIX C

Boring Logs

BORING REPORT

Boring No. SB-1

Project ACC Penske-2014 Task 3 Soil Investigation Pontiac MI
 Client RACER Trust
 Contractor Mannik & Smith

File No. 37147-028
 Sheet No. 1 of 1
 Start October 28, 2014
 Finish October 28, 2014
 Driller R. Schippert
 H&A Rep. E. Shirley

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type		S	--	Rig Make & Model: Geoprobe
Inside Diameter (in.)		1 3/8	--	Bit Type:
Hammer Weight (lb)		140	-	Drill Mud:
Hammer Fall (in.)		30	-	Casing:
				Hoist/Hammer:
				PID Make & Model: MiniRAE 2000

Elevation
 Datum
 Location See Plan

Depth (ft)	Sample No. & Rec. (in.)	Sample Depth (ft)	PID (PPM)	Elev/Depth (ft)	Well Diagram	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	Gravel		Sand			% Fines	Field Test					
								% Coarse	% Fine	% Coarse	% Medium	% Fine		Dilatancy	Toughness	Plasticity	Strength		
0	S-1 49	0.0					- CONCRETE TO 16 INCHES -												
			0	1.3		SP	Loose yellow-brown poorly-graded SAND mps = 9.0 mm, no odor, moist.				10	90							
			0																
			0																
			0	4.0		SP	Loose dark brown/black poorly-graded SAND mps = 5.0 mm, no odor, moist. Like foundry sand.				5	95							
5	S-2 37	5.0	0				Red and light brown colors observed.												
			0																
			0																
			0																
			0	9.5		MH	Soft dark brown elastic SILT mps = 1.0 mm, no odor, moist. Like foundry sand.						100	N	L	L	M		
10	S-3 44	10.0	0	10.5		SM	Loose dark brown silty SAND mps = 2.0 mm, no odor, wet.				5	65	30						
			0																
			0	12.0		CL	Soft tan/gray CLAY mps = 2.0 mm, no odor, wet. Shell fragments observed.				5	15	N	M	M	H			
			0																
			0	13.5			Medium dense light brown well-graded SAND mps = 18.0 mm, no odor, wet.	5	25	35	30	5							
			0	14.5			Medium dense to dense light brown poorly-graded SAND mps = 0.5 mm, no odor, wet.					100							
15				15.0			- END OF BORING 15.0 FEET - Sample: SB1-102814-1245 at 8-10 ft.												

Water Level Data						Sample ID		Well Diagram		Summary	
Date	Time	Elapsed Time (hr.)	Depth (ft) to:			O	Open End Rod		Riser Pipe	Overburden (ft) Rock Cored (ft) Samples SB-1	
			Bottom of Casing	Bottom of Hole	Water	T	Thin Wall Tube		Screen		
						U	Undisturbed Sample		Filter Sand	Boring No. SB-1	
						S	Split Spoon Sample		Cuttings		
						G	Geoprobe		Grout		
									Concrete		
									Bentonite Seal		

Field Tests: Dilatancy: R - Rapid S - Slow N - None Plasticity: N - Nonplastic L - Low M - Medium H - High
 Toughness: L - Low M - Medium H - High Dry Strength: N - None L - Low M - Medium H - High V - Very High

*Note: Maximum particle size is determined by direct observation within the limitations of sampler size.

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

BORING REPORT

Boring No. SB-2

Project ACC Penske-2014 Task 3 Soil Investigation Pontiac MI
 Client RACER Trust
 Contractor Mannik & Smith

File No. 37147-028
 Sheet No. 1 of 1
 Start October 28, 2014
 Finish October 28, 2014
 Driller R. Schippert
 H&A Rep. E. Shirley

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type		S	--	Rig Make & Model: Geoprobe
Inside Diameter (in.)		1 3/8	--	Bit Type:
Hammer Weight (lb)		140	-	Drill Mud:
Hammer Fall (in.)		30	-	Casing:
				Hoist/Hammer:
				PID Make & Model: MiniRAE 2000

Elevation
 Datum
 Location See Plan

Depth (ft)	Sample No. & Rec. (in.)	Sample Depth (ft)	PID (PPM)	Elev/Depth (ft)	Well Diagram	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	Gravel		Sand		Field Test			
								% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness
0	S-1 45	0.0					- CONCRETE TO 14.5 INCHES -								
				1.0		SP	Loose yellow-brown poorly-graded SAND mps = 3.0 mm, no odor, moist.			5	95				
				4.0		SP	Loose dark brown/black poorly-graded SAND mps = 25.0 mm, no odor, moist. Like foundry sand.								
5	S-2 39	5.0													
				9.5		MH	Soft dark brown elastic SILT mps = 1.0 mm, no odor, moist.					5	95	N	L
10	S-3 60	10.0					4-inch pocket wet SAND at 11 feet.								
				11.0		CL	Soft tan to light brown lean CLAY mps = 1.0 mm, no odor, wet to moist.			5	95		N	M	H
				11.5											
15				15.0			- END OF BORING 15.0 FEET -								
							Sample: SB2-102814-1130 at 8-10 ft.								

Water Level Data						Sample ID		Well Diagram		Summary	
Date	Time	Elapsed Time (hr.)	Depth (ft) to:			O	T	U	S	G	Overburden (ft)
			Bottom of Casing	Bottom of Hole	Water						
											Rock Cored (ft)
											Samples SB-2
											Boring No. SB-2

Field Tests: Dilatancy: R - Rapid S - Slow N - None Plasticity: N - Nonplastic L - Low M - Medium H - High
 Toughness: L - Low M - Medium H - High Dry Strength: N - None L - Low M - Medium H - High V - Very High

*Note: Maximum particle size is determined by direct observation within the limitations of sampler size.

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

BORING REPORT

Boring No. SB-3

Project ACC Penske-2014 Task 3 Soil Investigation Pontiac MI
 Client RACER Trust
 Contractor Mannik & Smith

File No. 37147-028
 Sheet No. 1 of 1
 Start October 28, 2014
 Finish October 28, 2014
 Driller R. Schippert
 H&A Rep. E. Shirley

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type		S	--	Rig Make & Model: Geoprobe
Inside Diameter (in.)		1 3/8	--	Bit Type:
Hammer Weight (lb)		140	-	Drill Mud:
Hammer Fall (in.)		30	-	Casing:
				Hoist/Hammer:
				PID Make & Model: MiniRAE 2000

Elevation
 Datum
 Location See Plan

Depth (ft)	Sample No. & Rec. (in.)	Sample Depth (ft)	PID (ppm)	Elev/Depth (ft)	Well Diagram	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	Gravel		Sand			Field Test					
								% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength	
0	S-1 52	0.0					- CONCRETE TO 15.0 INCHES -											
				1.3		SP	Loose yellow-brown poorly-graded SAND mps = 7.0 mm, no odor, moist.				5	95						
			0															
			0															
			0	4.0		SP	Loose dark brown/black poorly-graded SAND mps = 12.0 mm, no odor, moist. Like foundry sand.				5	5	90					
5	S-2 37	5.0	0				Red and light brown colrs also observed.											
			0															
			0															
			0															
			0	9.5		MH	Soft dark brown elastic SILT mps = 1.0 mm, no odor, moist. Organic material observed.					5	95	N	L	L	M	
10	S-3 37	10.0		10.5			Loose dark brown silty SAND mps = 1.0 mm, no odor, wet.					60	40					
				11.5		CL	Soft tan lean CLAY mps = 0.5 mm, no odor, wet. Shells observed.					100		N	M	M	H	
15				15.0			- END OF BORING 15.0 FEET - Sample: SB3-102814-1205 at 8-10 ft.											

Water Level Data						Sample ID		Well Diagram		Summary	
Date	Time	Elapsed Time (hr.)	Depth (ft) to:			O	Open End Rod		Riser Pipe	Overburden (ft) Rock Cored (ft) Samples SB-3	
			Bottom of Casing	Bottom of Hole	Water	T	Thin Wall Tube		Screen		
						U	Undisturbed Sample		Filter Sand		
						S	Split Spoon Sample		Cuttings		
						G	Geoprobe		Grout		
									Concrete		
									Bentonite Seal		

Field Tests: Dilatancy: R - Rapid S - Slow N - None Plasticity: N - Nonplastic L - Low M - Medium H - High
 Toughness: L - Low M - Medium H - High Dry Strength: N - None L - Low M - Medium H - High V - Very High

*Note: Maximum particle size is determined by direct observation within the limitations of sampler size.

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

BORING REPORT

Boring No. SB-4

Project ACC Penske-2014 Task 3 Soil Investigation Pontiac MI
 Client RACER Trust
 Contractor Mannik & Smith

File No. 37147-028
 Sheet No. 1 of 1
 Start October 28, 2014
 Finish October 28, 2014
 Driller R. Schippert
 H&A Rep. E. Shirley

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type		S	--	Rig Make & Model: Geoprobe
Inside Diameter (in.)		1 3/8	--	Bit Type:
Hammer Weight (lb)		140	-	Drill Mud:
Hammer Fall (in.)		30	-	Casing:
				Hoist/Hammer:
				PID Make & Model: MiniRAE 2000

Elevation
 Datum
 Location See Plan

Depth (ft)	Sample No. & Rec. (in.)	Sample Depth (ft)	PID (PPM)	Elev/Depth (ft)	Well Diagram	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	Gravel		Sand			Field Test					
								% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength	
0	S-1 52	0.0					- CONCRETE TO 16.0 INCHES -											
				1.4		SP	Loose light brown poorly-graded SAND mps = 13.0 mm, no odor, moist.				5	95						
				3.0		SP	Loose dark brown/black poorly-graded SAND mps = 40.0 mm, no odor, moist like foundry sand.				10	90						
							Pockets of red and gray observed.											
5	S-2 40	5.0																
				9.5		MH	Soft dark brown elastic SILT mps = 0.5 mm, no odor, moist. Organic material observed.						100	N	L	L	M	
10	S-3 37	10.0																
				12.5		CL	Soft tan lean CLAY mps = 1.0 mm, no odor, moist to wet. Shell fragments observed.				5	95	N	M	M	H		
15				15.0			- END OF BORING 15.0 FEET - Sample: SB4-102814-1045 at 10-12 ft. FD											

Water Level Data						Sample ID		Well Diagram		Summary	
Date	Time	Elapsed Time (hr.)	Depth (ft) to:			O	Open End Rod		Riser Pipe	Overburden (ft) Rock Cored (ft) Samples SB-4	
			Bottom of Casing	Bottom of Hole	Water	T	Thin Wall Tube		Screen		
						U	Undisturbed Sample		Filter Sand	Boring No. SB-4	
						S	Split Spoon Sample		Cuttings		
						G	Geoprobe		Grout		
									Concrete		
									Bentonite Seal		

Field Tests: Dilatancy: R - Rapid S - Slow N - None Plasticity: N - Nonplastic L - Low M - Medium H - High
 Toughness: L - Low M - Medium H - High Dry Strength: N - None L - Low M - Medium H - High V - Very High

*Note: Maximum particle size is determined by direct observation within the limitations of sampler size.

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

BORING REPORT

Boring No. SB-5

Project ACC Penske-2014 Task 3 Soil Investigation Pontiac MI
 Client RACER Trust
 Contractor Mannik & Smith

File No. 37147-028
 Sheet No. 1 of 1
 Start October 28, 2014
 Finish October 28, 2014
 Driller R. Schippert
 H&A Rep. E. Shirley

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type		S	--	Rig Make & Model: Geoprobe
Inside Diameter (in.)		1 3/8	--	Bit Type:
Hammer Weight (lb)		140	-	Drill Mud:
Hammer Fall (in.)		30	-	Casing:
				Hoist/Hammer:
				PID Make & Model: MiniRAE 2000

Elevation
 Datum
 Location See Plan

Depth (ft)	Sample No. & Rec. (in.)	Sample Depth (ft)	PID (PPM)	Elev/Depth (ft)	Well Diagram	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	Gravel		Sand			Field Test					
								% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength	
0	S-1 52	0.0					- CONCRETE TO 18.0 INCHES -											
			0	1.5		SP	Loose light brown poorly-graded SAND mps = 20 mm, no odor, moist.				5	95						
			0															
			0															
			0															
5	S-2 29	5.0	0															
			0															
			0															
			0															
			0	8.0		SM	Loose light brown silty SAND mps = 10 mm, no odor, moist.				10	70	20					
			0	9.0		SP	Loose dark brown poorly-graded SAND mps = 40.0 mm, no odor, moist.				5	95						
			0	9.5		MH	Like foundry sand.				5	95		N	L	L	M	
10	S-3 60	10.0	0	10.5		SP	Soft dark brown elastic SILT mps = 2.0 mm, no odor, moist.											
			0	10.5		SP	Loose dark brown poorly-graded SAND mps = 2.0 mm, no odor, wet.				95	5						
			0	11.5		CL	Soft tan lean CLAY mps = 1.0 mm, no odor, wet.						100	N	M	M	H	
			0															
			0															
			0															
			0	14.5		SW	Medium dense light brown well-graded SAND MPS = 2.0 mm, no odor, wet.	5	30	30	30	5						
15			0	15.0			- END OF BORING 15.0 FEET -											
							Sample:SB5-102814-1010 at 8-10 ft.											

Water Level Data						Sample ID		Well Diagram		Summary	
Date	Time	Elapsed Time (hr.)	Depth (ft) to:			O	T	U	S	G	Overburden (ft)
			Bottom of Casing	Bottom of Hole	Water						
											Rock Cored (ft)
											Samples SB-5
											Boring No. SB-5

Field Tests: Dilatancy: R - Rapid S - Slow N - None Plasticity: N - Nonplastic L - Low M - Medium H - High
 Toughness: L - Low M - Medium H - High Dry Strength: N - None L - Low M - Medium H - High V - Very High

*Note: Maximum particle size is determined by direct observation within the limitations of sampler size.

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

BORING REPORT

Boring No. SB-6

Project ACC Penske-2014 Task 3 Soil Investigation Pontiac MI
 Client RACER Trust
 Contractor Mannik & Smith

File No. 37147-028
 Sheet No. 1 of 1
 Start October 28, 2014
 Finish October 28, 2014
 Driller R. Schippert
 H&A Rep. E. Shirley

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type		S	--	Rig Make & Model: Geoprobe
Inside Diameter (in.)		1 3/8	--	Bit Type:
Hammer Weight (lb)		140	-	Drill Mud:
Hammer Fall (in.)		30	-	Casing:
				Hoist/Hammer:
				PID Make & Model: MiniRAE 2000

Elevation
 Datum
 Location See Plan

Depth (ft)	Sample No. & Rec. (in.)	Sample Depth (ft)	PID (PPM)	Elev/Depth (ft)	Well Diagram	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	Gravel		Sand			Field Test					
								% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength	
0	S-1 44	0.0					- CONCRETE TO 17.5 INCHES -											
			0	1.5		SP	Loose light brown poorly-graded SAND mps = 19.0 mm, no odor, moist.				10	90						
			0															
			0															
			0															
5	S-2 24	5.0																
			0															
			0															
			0	7.5		SP	Loose dark brown/black poorly-graded SAND mps = 40.0 mm, no odor, moist.				5	90	5					
			0															
			0															
10	S-3 24	10.0																
			0	10.5		MH	Stiff dark brown elastic SILT mps = 1.0 mm, no odor, moist.					5	95	N	L	L	M	
			0	11.5		SM	Loose tan silty SAND mps = 4.0 mm, no odor, wet.				5	65	30					
			0	12.5		SW	Medium dense light brown well-graded SAND mps = 8.0 mm, no odor, wet.	5	30	35	25	5						
			0															
			0															
15				15.0			- END OF BORING 15.0 FEET - Sample: SB6-102814-0925 at 8-10 ft.											

Water Level Data						Sample ID		Well Diagram		Summary	
Date	Time	Elapsed Time (hr.)	Depth (ft) to:			O	T	U	S	G	Overburden (ft)
			Bottom of Casing	Bottom of Hole	Water						
											Rock Cored (ft)
											Samples SB-6
											Boring No. SB-6

Field Tests: Dilatancy: R - Rapid S - Slow N - None Plasticity: N - Nonplastic L - Low M - Medium H - High
 Toughness: L - Low M - Medium H - High Dry Strength: N - None L - Low M - Medium H - High V - Very High

*Note: Maximum particle size is determined by direct observation within the limitations of sampler size.

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

BORING REPORT

Boring No. SB-7

Project ACC Penske-2014 Task 3 Soil Investigation Pontiac MI
 Client RACER Trust
 Contractor Mannik & Smith

File No. 37147-028
 Sheet No. 1 of 1
 Start October 27, 2014
 Finish October 27, 2014
 Driller R. Schippert
 H&A Rep. E. Shirley

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type		S	--	Rig Make & Model: Geoprobe
Inside Diameter (in.)		1 3/8	--	Bit Type:
Hammer Weight (lb)		140	-	Drill Mud:
Hammer Fall (in.)		30	-	Casing:
				Hoist/Hammer:
				PID Make & Model: MiniRAE 2000

Elevation
 Datum
 Location See Plan

Depth (ft)	Sample No. & Rec. (in.)	Sample Depth (ft)	PID (PPM)	Elev/Depth (ft)	Well Diagram	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	Gravel		Sand			Field Test				
								% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength
0	S-1 45	0.0					- CONCRETE TO 17.0 INCHES -										
			0	1.3		SP	Loose yellow-brown poorly-graded SAND mps = 10.0 mm, no odor, moist.				5	90	5				
			0														
			0														
			0														
5	S-2 39	5.0	0	5.0		SP	Loose dark brown/black poorly-graded SAND mps = 30.0 mm, no odor, moist.				5	95					
			0														
			0														
			0														
			0	9.5		CL	Soft dark brown lean CLAY mps = 1.0 mm, no odor, moist.					10	90	N	M	M	H
10	S-3 47	10.0	0														
			0														
			0														
			0	13.5		SW	Medium dense light brown well-graded SAND mps = 10.0 mm, no odor, wet.			30	35	30	5				
			0														
15				15.0			- END OF BORING 15.0 FEET - Sample: SB7-102714-1600 at 8-10 ft.										

Water Level Data						Sample ID		Well Diagram		Summary	
Date	Time	Elapsed Time (hr.)	Depth (ft) to:			O	Open End Rod		Riser Pipe	Overburden (ft)	Rock Cored (ft)
			Bottom of Casing	Bottom of Hole	Water						
						T	Thin Wall Tube		Screen		
						U	Undisturbed Sample		Filter Sand		
						S	Split Spoon Sample		Cuttings		
						G	Geoprobe		Grout		
									Concrete		
									Bentonite Seal		
										Boring No. SB-7	

Field Tests: Dilatancy: R - Rapid S - Slow N - None Plasticity: N - Nonplastic L - Low M - Medium H - High
 Toughness: L - Low M - Medium H - High Dry Strength: N - None L - Low M - Medium H - High V - Very High

*Note: Maximum particle size is determined by direct observation within the limitations of sampler size.

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

BORING REPORT

Boring No. SB-8

Project ACC Penske-2014 Task 3 Soil Investigation Pontiac MI
 Client RACER Trust
 Contractor Mannik & Smith

File No. 37147-028
 Sheet No. 1 of 1
 Start October 28, 2014
 Finish October 28, 2014
 Driller R. Schippert
 H&A Rep. E. Shirley

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type		S	--	Rig Make & Model: Geoprobe
Inside Diameter (in.)		1 3/8	--	Bit Type:
Hammer Weight (lb)		140	-	Drill Mud:
Hammer Fall (in.)		30	-	Casing:
				Hoist/Hammer:
				PID Make & Model: MiniRAE 2000

Elevation
 Datum
 Location See Plan

Depth (ft)	Sample No. & Rec. (in.)	Sample Depth (ft)	PID (PPM)	Elev/Depth (ft)	Well Diagram	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	Gravel		Sand			Field Test					
								% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength	
0	S-1 47	0.0					- CONCRETE TO 17.5 INCHES -											
			0	1.5		SP	Loose light brown poorly-graded SAND mps = 2.0 mm, no odor, moist.				10	90						
			0															
			0															
			0															
5	S-2 38	5.0	0															
			0															
			0	7.0		SP	Loose dark brown poorly-graded SAND mps = 25.0 mm, no odor, moist.				5	95						
			0	7.5		SM	Like foundry sand.		5	10	60	25						
			0				Loose red-brown silty SAND mps = 25.0 mm, no odor, moist.											
			0	9.5		MH	5-inch layer of wood at 9.5 feet.					5	95	N	L	L	M	
10	S-3 41	10.0	0	10.5		CL	3 inches of gray gravel at 8.5 feet.											
			0				5 inches of wood/organic materials at 9.5 feet.											
			0				Soft dark brown elastic SILT mps = 1.0 mm, no odor, moist.						100	N	M	M	H	
			0				Soft tan lean CLAY mps = 0.5 mm, no odor, moist to wet.											
			0															
			0															
			0	14.3		SW	Medium dense light brown well-graded SAND mps = 12 mm, no odor, wet.											
15			0	15.0			- END OF BORING 15.0 FEET - Sample: SB8-102814-0835 at 8-10 ft.			30	35	30	5					

Water Level Data						Sample ID		Well Diagram		Summary	
Date	Time	Elapsed Time (hr.)	Depth (ft) to:			O	T	U	S	G	Overburden (ft)
			Bottom of Casing	Bottom of Hole	Water						
											Rock Cored (ft)
											Samples SB-8
											Boring No. SB-8

Field Tests: Dilatancy: R - Rapid S - Slow N - None Plasticity: N - Nonplastic L - Low M - Medium H - High
 Toughness: L - Low M - Medium H - High Dry Strength: N - None L - Low M - Medium H - High V - Very High

*Note: Maximum particle size is determined by direct observation within the limitations of sampler size.

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

BORING REPORT

Boring No. SB-9

Project ACC Penske-2014 Task 3 Soil Investigation Pontiac MI
 Client RACER Trust
 Contractor Mannik & Smith

File No. 37147-028
 Sheet No. 1 of 1
 Start October 27, 2014
 Finish October 27, 2014
 Driller R. Schippert
 H&A Rep. E. Shirley

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type		S	--	Rig Make & Model: Geoprobe
Inside Diameter (in.)		1 3/8	--	Bit Type:
Hammer Weight (lb)		140	-	Drill Mud:
Hammer Fall (in.)		30	-	Casing:
				Hoist/Hammer:
				PID Make & Model: MiniRAE 2000

Elevation
 Datum
 Location See Plan

Depth (ft)	Sample No. & Rec. (in.)	Sample Depth (ft)	PID (PPM)	Elev/Depth (ft)	Well Diagram	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	Gravel		Sand		Field Test						
								% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength	
0	S-1 40	0.0					- CONCRETE TO 16.0 INCHES -											
			0	1.3		SP	Loose yellow-brown poorly-graded SAND mps = 3.0 mm, no odor, moist.				10	90						
			0	2.0		SP	Loose dark brown poorly-graded SAND mps = 20.0 mm, no odor, moist. Looks like foundry sand.				5	95						
			0															
5	S-2 34	5.0	0															
			0															
			0															
			0															
			0															
10	S-3 60	10.0	0	10.5		SM	Loose dark brown clayey SAND mps = 1.0 mm, no odor, wet.				5	75	20					
			0	11.5		CL	Soft tan lean CLAY mps = 1.0 mm, no odor, wet.				5	95		N	M	M	H	
			0															
			0															
			0	14.0		SW	Medium dense light brown well-graded SAND mps = 10.0 mm, no odor, wet.	5	30	35	30							
15				15.0			- END OF BORING 15.0 FEET - Sample: SB9-102714-1400 at 8-10 ft.											

Water Level Data						Sample ID		Well Diagram		Summary	
Date	Time	Elapsed Time (hr.)	Depth (ft) to:			O	Open End Rod		Riser Pipe	Overburden (ft) Rock Cored (ft) Samples SB-9	
			Bottom of Casing	Bottom of Hole	Water	T	Thin Wall Tube		Screen		
						U	Undisturbed Sample		Filter Sand		
						S	Split Spoon Sample		Cuttings		
						G	Geoprobe		Grout		
									Concrete		
									Bentonite Seal		

Field Tests: Dilatancy: R - Rapid S - Slow N - None Plasticity: N - Nonplastic L - Low M - Medium H - High
 Toughness: L - Low M - Medium H - High Dry Strength: N - None L - Low M - Medium H - High V - Very High

*Note: Maximum particle size is determined by direct observation within the limitations of sampler size.

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

BORING REPORT

Boring No. SB-10

Project ACC Penske-2014 Task 3 Soil Investigation Pontiac MI
 Client RACER Trust
 Contractor Mannik & Smith

File No. 37147-028
 Sheet No. 1 of 1
 Start October 28, 2014
 Finish October 28, 2014
 Driller R. Schippert
 H&A Rep. E. Shirley

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type		S	--	Rig Make & Model: Geoprobe
Inside Diameter (in.)		1 3/8	--	Bit Type:
Hammer Weight (lb)		140	-	Drill Mud:
Hammer Fall (in.)		30	-	Casing:
				Hoist/Hammer:
				PID Make & Model: MiniRAE 2000

Elevation
 Datum
 Location See Plan

Depth (ft)	Sample No. & Rec. (in.)	Sample Depth (ft)	PID (PPM)	Elev/Depth (ft)	Well Diagram	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	Gravel		Sand		Field Test			
								% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness
0	S-1 0	0.0					- CONCRETE TO 16.5 INCHES -								
				1.3		SP	Yellow-brown poorly-graded SAND, no odor.								
				2.0			- CONCRETE -								
				3.0			Yellow-brown poorly-graded SAND, no odor.								
				4.5		SP	Loose dark brown/black poorly-graded SAND mps = 6.0 mm, no odor, moist. Like foundry sand.			5	95				
5	S-2 37	5.0	0												
			0												
			0												
			0												
			0	9.5		MH	Soft dark brown elastic SILT mps = 0.5 mm, no odor, moist. Organic material observed.						100	N	L
10	S-3 26	10.0	0	10.0		CL	Soft tan lean CLAY mps = 1.0 mm, no odor, wet. Wet at 11.0 feet.			5	95		95	N	M
			0												
			0												
			0	13.0		SW	Medium dense light brown well-graded SAND mps = 2.0 mm, no odor, wet.			25	35	35	5		
			0												
15			0	15.0			NOTES: 0-5 sample = no recovery. Depths based on driller's observations. Sample liner stuck in core barrel. - END OF BORING 15.0 FEET - Sample: SB10-102814-1335 at 8-10 ft. MS/MD								

Water Level Data						Sample ID		Well Diagram		Summary	
Date	Time	Elapsed Time (hr.)	Depth (ft) to:			O	T	U	S	G	Overburden (ft)
			Bottom of Casing	Bottom of Hole	Water						
											Rock Cored (ft)
											Samples SB-10
											Boring No. SB-10

Field Tests: Dilatancy: R - Rapid S - Slow N - None Plasticity: N - Nonplastic L - Low M - Medium H - High
 Toughness: L - Low M - Medium H - High Dry Strength: N - None L - Low M - Medium H - High V - Very High

*Note: Maximum particle size is determined by direct observation within the limitations of sampler size.

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

BORING REPORT

Boring No. SB-11

Project ACC Penske-2014 Task 3 Soil Investigation Pontiac MI
 Client RACER Trust
 Contractor Mannik & Smith

File No. 37147-028
 Sheet No. 1 of 1
 Start October 27, 2014
 Finish October 27, 2014
 Driller R. Schippert
 H&A Rep. E. Shirley

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type		S	--	Rig Make & Model: Geoprobe
Inside Diameter (in.)		1 3/8	--	Bit Type:
Hammer Weight (lb)		140	-	Drill Mud:
Hammer Fall (in.)		30	-	Casing:
				Hoist/Hammer:
				PID Make & Model: MiniRAE 2000

Elevation
 Datum
 Location See Plan

Depth (ft)	Sample No. & Rec. (in.)	Sample Depth (ft)	PID (PPM)	Elev/Depth (ft)	Well Diagram	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	Gravel		Sand		Fines		Field Test			
								% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength
0	S-1 51	0.0					- CONCRETE TO 16.0 INCHES -										
				1.3		SP	Loose dark brown/black poorly-graded SAND mps = 45.0 mm, no odor, moist. Like foundry sand.			5	95						
			0														
			0														
			0														
5	S-2 43	5.0															
				9.5		CL	Soft tan mottled yellow-brown lean CLAY mps = 1.0 mm, no odor, moist.				5	95	N	M	M	H	
10	S-3 40	10.0															
				12.0			Medium dense light brown well-graded SAND mps = 5.0 mm, no odor, wet.	5	30	30	30	5					
15				15.0			- END OF BORING 15.0 FEET -										
							Sample: SB11-102714-1235 at 10-12 ft.										

Water Level Data						Sample ID		Well Diagram		Summary	
Date	Time	Elapsed Time (hr.)	Depth (ft) to:			O	T	U	S	G	Overburden (ft)
			Bottom of Casing	Bottom of Hole	Water						
											Rock Cored (ft)
											Samples SB-11
											Boring No. SB-11

Field Tests: Dilatancy: R - Rapid S - Slow N - None Plasticity: N - Nonplastic L - Low M - Medium H - High
 Toughness: L - Low M - Medium H - High Dry Strength: N - None L - Low M - Medium H - High V - Very High

*Note: Maximum particle size is determined by direct observation within the limitations of sampler size.

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

BORING REPORT

Boring No. SB-12

Project ACC Penske-2014 Task 3 Soil Investigation Pontiac MI
 Client RACER Trust
 Contractor Mannik & Smith

File No. 37147-028
 Sheet No. 1 of 1
 Start October 27, 2014
 Finish October 27, 2014
 Driller R. Schippert
 H&A Rep. E. Shirley

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type		S	--	Rig Make & Model: Geoprobe
Inside Diameter (in.)		1 3/8	--	Bit Type:
Hammer Weight (lb)		140	-	Drill Mud:
Hammer Fall (in.)		30	-	Casing:
				Hoist/Hammer:
				PID Make & Model: MiniRAE 2000

Elevation
 Datum
 Location See Plan

Depth (ft)	Sample No. & Rec. (in.)	Sample Depth (ft)	PID (PPM)	Elev/Depth (ft)	Well Diagram	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	Gravel		Sand			Field Test				
								% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength
0	S-1 40	0.0					- CONCRETE TO 15.5 INCHES -										
				1.3		SP	Loose light brown poorly-graded SAND mps = 2.0 mm, no odor, moist.					5	95				
			0	2.0		SP	Loose dark brown/black poorly-graded SAND mps - 5.0 mm, no odor, moist. Like foundry sand.					5	95				
			0														
			0														
5	S-2 43	5.0															
			0														
			0														
			0														
			0	8.5		CL	Soft dark brown to tan lean CLAY mps = 1.0 mm, no odor, moist.						5	95	N	M	H
			0														
10	S-3 41	10.0															
			0														
			0														
			0	12.5			Medium dense light brown well-graded SAND mps = 10.0 mm, no odor, wet.			30	35	35					
			0														
15				15.0			- END OF BORING 15.0 FEET - Sample:SB12-102714-1455 at 10-12 ft.										

Water Level Data						Sample ID		Well Diagram		Summary	
Date	Time	Elapsed Time (hr.)	Depth (ft) to:			O	Open End Rod		Riser Pipe	Overburden (ft)	Rock Cored (ft)
			Bottom of Casing	Bottom of Hole	Water						
						T	Thin Wall Tube		Screen		
						U	Undisturbed Sample		Filter Sand		
						S	Split Spoon Sample		Cuttings		
						G	Geoprobe		Grout		
									Concrete		
									Bentonite Seal		

Boring No. SB-12

Field Tests: Dilatancy: R - Rapid S - Slow N - None Plasticity: N - Nonplastic L - Low M - Medium H - High
 Toughness: L - Low M - Medium H - High Dry Strength: N - None L - Low M - Medium H - High V - Very High

*Note: Maximum particle size is determined by direct observation within the limitations of sampler size.

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

BORING REPORT

Boring No. SB-13

Project ACC Penske-2014 Task 3 Soil Investigation Pontiac MI
 Client RACER Trust
 Contractor Mannik & Smith

File No. 37147-028
 Sheet No. 1 of 1
 Start October 27, 2014
 Finish October 27, 2014
 Driller R. Schippert
 H&A Rep. E. Shirley

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type		S	--	Rig Make & Model: Geoprobe
Inside Diameter (in.)		1 3/8	--	Bit Type:
Hammer Weight (lb)		140	-	Drill Mud:
Hammer Fall (in.)		30	-	Casing:
				Hoist/Hammer:
				PID Make & Model: MiniRAE 2000

Elevation
 Datum
 Location See Plan

Depth (ft)	Sample No. & Rec. (in.)	Sample Depth (ft)	PID (PPM)	Elev/Depth (ft)	Well Diagram	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	Gravel		Sand		Field Test						
								% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength	
0	S-1 52	0.0					- CONCRETE TO 18.0 INCHES -											
			0	1.5		SP	Loose light brown poorly-graded SAND mps = 1.0 mm, no odor, moist.				5	95						
			0	2.0		SP	Loose dark brown/black poorly-graded SAND mps = 35 mm, no odor, moist. Like foundry sand.				5	95						
			0															
			0															
5	S-2 44	5.0	0															
			0															
			0															
			0															
			0	9.5		CL	Soft tan mottled brown lean CLAY mps = 1.0 mm, no odor, moist.					5	95	N	M	M	H	
10	S-3 50	10.0	0															
			0				Grades wet.											
			0	13.0			Medium dense light brown well-graded SAND mps = 2 mm, no odor, wet.			30	30	35	5					
			0															
15				15.0			- END OF BORING 15.0 FEET -											
							Sample: SB13-102714-1315 at 10-12 ft.											

Water Level Data						Sample ID		Well Diagram		Summary	
Date	Time	Elapsed Time (hr.)	Depth (ft) to:			O	Open End Rod		Riser Pipe	Overburden (ft) Rock Cored (ft) Samples SB-13	
			Bottom of Casing	Bottom of Hole	Water	T	Thin Wall Tube		Screen		
						U	Undisturbed Sample		Filter Sand		
						S	Split Spoon Sample		Cuttings		
						G	Geoprobe		Grout		
									Concrete		
									Bentonite Seal		

Field Tests: Dilatancy: R - Rapid S - Slow N - None Plasticity: N - Nonplastic L - Low M - Medium H - High
 Toughness: L - Low M - Medium H - High Dry Strength: N - None L - Low M - Medium H - High V - Very High

*Note: Maximum particle size is determined by direct observation within the limitations of sampler size.

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

BORING REPORT

Boring No. SB-14

Project ACC Penske-2014 Task 3 Soil Investigation Pontiac MI
 Client RACER Trust
 Contractor Mannik & Smith

File No. 37147-028
 Sheet No. 1 of 1
 Start October 27, 2014
 Finish October 27, 2014
 Driller R. Schippert
 H&A Rep. E. Shirley

	Casing	Sampler	Barrel	Drilling Equipment and Procedures
Type		S	--	Rig Make & Model: Geoprobe
Inside Diameter (in.)		1 3/8	--	Bit Type:
Hammer Weight (lb)		140	-	Drill Mud:
Hammer Fall (in.)		30	-	Casing:
				Hoist/Hammer:
				PID Make & Model: MiniRAE 2000

Elevation
 Datum
 Location See Plan

Depth (ft)	Sample No. & Rec. (in.)	Sample Depth (ft)	PID (PPM)	Elev/Depth (ft)	Well Diagram	USCS Symbol	VISUAL-MANUAL IDENTIFICATION AND DESCRIPTION (Color, GROUP NAME, max. particle size*, structure, odor, moisture, optional descriptions GEOLOGIC INTERPRETATION)	Gravel		Sand		Fines		Field Test			
								% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength
0	S-1 50	0.0					- CONCRETE SLAB TO 15.0 INCHES -										
				1.3		SP	Loose yellow-brown poorly-graded SAND mps = 1.0 mm, no odor, moist.					5	95				
				1.5		SP	Loose dark brown/black poorly-graded SAND mps = 35 mm, no odor, moist. Like foundry sand.					5	95				
			0														
			0														
			0														
5	S-2 35	5.0															
			0														
			0														
			0														
			0														
			0	9.5		CL	Soft tan mottled yellow-brown lean CLAY mps = 2.0 mm, no odor, moist.					5	95	N	M	M	H
10	S-3 45	10.0		10.0		SP	Loose dark brown/black poorly-graded SAND mps = 1.0 mm, no odor, moist. Like foundry sand.										
			0														
			0	11.0		SW	Medium dense light brown well-graded SAND mps = 5.0 mm, no odor, wet.					5	95				
			0														
			0														
			0														
			0	14.5		GW	Medium dense light brown well-graded GRAVEL WITH SAND mps = 15.0 mm, no odor, wet.	20	30	30	10	5	5				
15				15.0			- END OF BORING 15.0 FEET -										
							Sample:SB14-102714-1152 at 10-12 ft.										

Water Level Data						Sample ID		Well Diagram		Summary	
Date	Time	Elapsed Time (hr.)	Depth (ft) to:			O	T	U	S	G	Overburden (ft)
			Bottom of Casing	Bottom of Hole	Water						
											Rock Cored (ft)
											Samples SB-14
											Boring No. SB-14

Field Tests: Dilatancy: R - Rapid S - Slow N - None Plasticity: N - Nonplastic L - Low M - Medium H - High
 Toughness: L - Low M - Medium H - High Dry Strength: N - None L - Low M - Medium H - High V - Very High

*Note: Maximum particle size is determined by direct observation within the limitations of sampler size.

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

APPENDIX D

Analytical Reports



Analytical Laboratory Report

Report ID: S63382.01(01)
Generated on 11/07/2014

Report to

Attention: Ban Aragona
Haley & Aldrich, Inc.
455 Eisenhower Parkway
Suite 210
Ann Arbor, MI 48108

Phone: 734-887-8410 FAX:
Email: baragona@haleyaldrich.com

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Kevin George (kgeorge@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S63382.01-S63382.17
Project: Pontiac RACER
Collected Date: 10/27/2014 - 10/28/2014
Submitted Date/Time: 10/30/2014 15:00
Sampled by: Eric Shirley
P.O. #: 37147-028

A handwritten signature in black ink, reading "Maya Murshak".

Maya Murshak
Technical Director



Analytical Laboratory Report

General Report Notes

Results relate only to items tested as received by laboratory.

Methods may be modified for improved performance.

Results reported on a dry weight basis were applicable.

'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).

40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.

QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.

Full accreditation certificates are available upon request.

Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.

Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.

Report Narrative

There is no additional narrative for this analytical report



Analytical Laboratory Report

Laboratory Certifications

Authority	Certification ID
Michigan DEQ	#9956
DOD ELAP/ISO 17025	#69699
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702

Qualifier Descriptions

Qualifier	Description
!	Result is outside of stated limit criteria
B	Compound also found in associated method blank
E	Concentration exceeds calibration range
F	Analysis run outside of holding time
G	Estimated result due to extraction run outside of holding time
H	Sample submitted and run outside of holding time
I	Matrix interference with internal standard
J	Estimated value less than reporting limit, but greater than MDL
L	Elevated reporting limit due to low sample amount
M	Result reported to MDL not RDL
O	Analysis performed by outside laboratory. See attached report.
R	Preliminary result
S	Surrogate recovery outside of control limits
T	No correction for total solids
X	Elevated reporting limit due to matrix interference
Y	Elevated reporting limit due to high target concentration
b	Value detected less than reporting limit, but greater than MDL
e	Reported value estimated due to interference
j	Analyte also found in associated method blank
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
x	Preserved from bulk sample

Glossary of Abbreviations

Abbreviation	Description
RL/RDL	Reporting Limit
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
SW	EPA SW 846 (Soil and Wastewater) Methods
E	EPA Methods
SM	Standard Methods



Analytical Laboratory Report

Method Summary

Method	Version
SM2540B	Standard Method 2540 B 20th Edition
SW3050B	SW 846 Method 3050B Revision 2 December 1996
SW3550C	SW 846 Method 3550C Revision 3 February 2007
SW5035A/8260C	SW 846 Method 8260C Revision 3 August 2006 / 5035A Revision 1 July 2002
SW6020A	SW 846 Method 6020A Revision 1 February 2007
SW7471B	SW 846 Method 7471B Revision 2 February 2007
SW8015M	SW 846 Method 8015C Revision 3 February 2007 Modified
SW8082A	SW 846 Method 8082A Revision 1 February 2007
SW8270D	SW 846 Method 8270D Revision 4 February 2007



Analytical Laboratory Report

Sample Summary (17 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S63382.01	SB14-102714-1152	Soil	10/27/2014 11:52
S63382.02	SB11-102714-1235	Soil	10/27/2014 12:35
S63382.03	SB13-102714-1315	Soil	10/27/2014 13:15
S63382.04	SB9-102714-1400	Soil	10/27/2014 14:00
S63382.05	SB12-102714-1455	Soil	10/27/2014 14:55
S63382.06	SB7-102714-1600	Soil	10/27/2014 16:00
S63382.07	4226-102814-0001	Soil	10/28/2014 00:01
S63382.08	SB8-102814-0835	Soil	10/28/2014 08:35
S63382.09	SB6-102814-0925	Soil	10/28/2014 09:25
S63382.10	SB5-102814-1010	Soil	10/28/2014 10:10
S63382.11	SB4-102814-1045	Soil	10/28/2014 10:45
S63382.12	SB2-102814-1130	Soil	10/28/2014 11:30
S63382.13	SB3-102814-1205	Soil	10/28/2014 12:05
S63382.14	SB1-102814-1245	Soil	10/28/2014 12:45
S63382.15	SB10-102814-1335	Soil	10/28/2014 13:35
S63382.16	SB10-102814-1335 MS	Soil	10/28/2014 13:35
S63382.17	SB10-102814-1335 MSD	Soil	10/28/2014 13:35



Analytical Laboratory Report

Lab Sample ID: S63382.01
Sample Tag: SB14-102714-1152
Collected Date/Time: 10/27/2014 11:52
Matrix: Soil
COC Reference: 87579

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	5.2	IR
1	40ml Glass	MeOH	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
----------	---------	-------	----	--------	---------------	---------	-------	-------

Extraction / Prep.

DRO Extraction	Completed			SW3550C	11/03/14 12:26	EMR		
Extraction, PCB	Completed			SW3550C	10/31/14 10:00	RGS		
Mercury Digestion	Completed			SW7471B	11/04/14 11:15	CCM		
Metal Digestion	Completed			SW3050B	11/03/14 12:00	CCM		
PNA Extraction	Completed			SW3550C	11/03/14 12:28	EMR		

Inorganics

Total Solids	95	%	1	SM2540B	10/30/14 18:30	BJB		
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Metals

Arsenic	1.28	mg/kg	0.20	SW6020A	11/04/14 11:18	PER	7440-38-2	
Barium	28.2	mg/kg	1.0	SW6020A	11/04/14 11:18	PER	7440-39-3	
Cadmium	0.22	mg/kg	0.20	SW6020A	11/03/14 15:06	CCM	7440-43-9	
Chromium	10.8	mg/kg	0.50	SW6020A	11/03/14 15:06	CCM	7440-47-3	
Copper	15.4	mg/kg	0.50	SW6020A	11/04/14 11:18	PER	7440-50-8	
Lead	20.5	mg/kg	0.30	SW6020A	11/03/14 15:06	CCM	7439-92-1	
Manganese	392	mg/kg	0.5	SW6020A	11/04/14 11:18	PER	7439-96-5	
Mercury	Not detected	mg/kg	0.050	SW7471B	11/04/14 16:08	CCM	7439-97-6	
Selenium	Not detected	mg/kg	0.40	SW6020A	11/04/14 11:18	PER	7782-49-2	
Silver	Not detected	mg/kg	0.20	SW6020A	11/04/14 11:18	PER	7440-22-4	
Zinc	17.8	mg/kg	0.50	SW6020A	11/04/14 11:18	PER	7440-66-6	

Organics - PCBs/Pesticides

PCB List

PCB-1016	Not detected	ug/kg	330	SW8082A	10/31/14 13:17	JAN	12674-11-2	
PCB-1242	Not detected	ug/kg	330	SW8082A	10/31/14 13:17	JAN	53469-21-9	
PCB-1221	Not detected	ug/kg	330	SW8082A	10/31/14 13:17	JAN	11104-28-2	
PCB-1232	Not detected	ug/kg	330	SW8082A	10/31/14 13:17	JAN	11141-16-5	
PCB-1248	Not detected	ug/kg	330	SW8082A	10/31/14 13:17	JAN	12672-29-6	
PCB-1254	Not detected	ug/kg	330	SW8082A	10/31/14 13:17	JAN	11097-69-1	
PCB-1260	Not detected	ug/kg	330	SW8082A	10/31/14 13:17	JAN	11096-82-5	

Organics - Semi-Volatiles

TPH DRO (C10-C28)	10,000	ug/kg	4,000	SW8015M	11/05/14 17:37	PL		
TPH ORO (C28-C36)	6,000	ug/kg	4,000	SW8015M	11/05/14 17:37	PL		

Polynuclear Aromatics

Acenaphthene	Not detected	ug/kg	300	SW8270D	11/05/14 17:37	PL	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	SW8270D	11/05/14 17:37	PL	208-96-8	
Anthracene	Not detected	ug/kg	300	SW8270D	11/05/14 17:37	PL	120-12-7	
Benzo(a)anthracene	Not detected	ug/kg	300	SW8270D	11/05/14 17:37	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/kg	300	SW8270D	11/05/14 17:37	PL	50-32-8	



Analytical Laboratory Report

Lab Sample ID: S63382.01 (continued)

Sample Tag: SB14-102714-1152

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatics (continued)								
Benzo(b)fluoranthene	Not detected	ug/kg	300	SW8270D	11/05/14 17:37	PL	205-99-2	
Benzo(k)fluoranthene	Not detected	ug/kg	300	SW8270D	11/05/14 17:37	PL	207-08-9	
Benzo(ghi)perylene	Not detected	ug/kg	300	SW8270D	11/05/14 17:37	PL	191-24-2	
Chrysene	Not detected	ug/kg	300	SW8270D	11/05/14 17:37	PL	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	SW8270D	11/05/14 17:37	PL	53-70-3	
Fluoranthene	Not detected	ug/kg	300	SW8270D	11/05/14 17:37	PL	206-44-0	
Fluorene	Not detected	ug/kg	300	SW8270D	11/05/14 17:37	PL	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	300	SW8270D	11/05/14 17:37	PL	193-39-5	
Naphthalene	Not detected	ug/kg	300	SW8270D	11/05/14 17:37	PL	91-20-3	
Phenanthrene	Not detected	ug/kg	300	SW8270D	11/05/14 17:37	PL	85-01-8	
Pyrene	Not detected	ug/kg	300	SW8270D	11/05/14 17:37	PL	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	SW8270D	11/05/14 17:37	PL	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	SW8270D	11/05/14 17:37	PL	90-12-0	
Organics - Volatiles								
TPH GRO (C6-C10)	Not detected	ug/kg	5,000	SW8015M	11/03/14 17:07	WAT		
TCL Volatile Organics HighLevel 5035/8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 15:28	WAT	76-13-1	
Acetone	Not detected	ug/kg	810	SW5035A/8260C	11/04/14 15:28	WAT	67-64-1	
Carbon disulfide	Not detected	ug/kg	300	SW5035A/8260C	11/04/14 15:28	WAT	75-15-0	
Methyl Acetate	Not detected	ug/kg	3,000	SW5035A/8260C	11/04/14 15:28	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/kg	300	SW5035A/8260C	11/04/14 15:28	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/kg	810	SW5035A/8260C	11/04/14 15:28	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/kg	50	SW5035A/8260C	11/04/14 15:28	WAT	75-71-8	
Chloromethane	Not detected	ug/kg	300	SW5035A/8260C	11/04/14 15:28	WAT	74-87-3	
Vinyl chloride	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 15:28	WAT	75-01-4	
Bromomethane	Not detected	ug/kg	300	SW5035A/8260C	11/04/14 15:28	WAT	74-83-9	
Chloroethane	Not detected	ug/kg	300	SW5035A/8260C	11/04/14 15:28	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 15:28	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/kg	50	SW5035A/8260C	11/04/14 15:28	WAT	75-35-4	
Methylene chloride	Not detected	ug/kg	300	SW5035A/8260C	11/04/14 15:28	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/kg	50	SW5035A/8260C	11/04/14 15:28	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/kg	50	SW5035A/8260C	11/04/14 15:28	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/kg	50	SW5035A/8260C	11/04/14 15:28	WAT	156-59-2	
Chloroform	Not detected	ug/kg	50	SW5035A/8260C	11/04/14 15:28	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/kg	50	SW5035A/8260C	11/04/14 15:28	WAT	71-55-6	
Cyclohexane	Not detected	ug/kg	50	SW5035A/8260C	11/04/14 15:28	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	3,000	SW5035A/8260C	11/04/14 15:28	WAT	108-10-1	
2-Hexanone	Not detected	ug/kg	3,000	SW5035A/8260C	11/04/14 15:28	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/kg	50	SW5035A/8260C	11/04/14 15:28	WAT	56-23-5	
Benzene	Not detected	ug/kg	50	SW5035A/8260C	11/04/14 15:28	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/kg	50	SW5035A/8260C	11/04/14 15:28	WAT	107-06-2	
Trichloroethene	Not detected	ug/kg	50	SW5035A/8260C	11/04/14 15:28	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/kg	50	SW5035A/8260C	11/04/14 15:28	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/kg	50	SW5035A/8260C	11/04/14 15:28	WAT	75-27-4	
Methyl cyclohexane	50	ug/kg	50	SW5035A/8260C	11/04/14 15:28	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/kg	50	SW5035A/8260C	11/04/14 15:28	WAT	10061-01-5	
Toluene	Not detected	ug/kg	50	SW5035A/8260C	11/04/14 15:28	WAT	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S63382.01 (continued)

Sample Tag: SB14-102714-1152

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics HighLevel 5035/8260 (continued)								
trans-1,3-Dichloropropene	Not detected	ug/kg	50	SW5035A/8260C	11/04/14 15:28	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/kg	50	SW5035A/8260C	11/04/14 15:28	WAT	79-00-5	
Tetrachloroethene	210	ug/kg	50	SW5035A/8260C	11/04/14 15:28	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/kg	50	SW5035A/8260C	11/04/14 15:28	WAT	124-48-1	
1,2-Dibromoethane	Not detected	ug/kg	50	SW5035A/8260C	11/04/14 15:28	WAT	106-93-4	
Chlorobenzene	Not detected	ug/kg	50	SW5035A/8260C	11/04/14 15:28	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/kg	50	SW5035A/8260C	11/04/14 15:28	WAT	79-34-5	
Ethylbenzene	Not detected	ug/kg	50	SW5035A/8260C	11/04/14 15:28	WAT	100-41-4	
p,m-Xylene	100	ug/kg	100	SW5035A/8260C	11/04/14 15:28	WAT		
o-Xylene	Not detected	ug/kg	50	SW5035A/8260C	11/04/14 15:28	WAT	95-47-6	
Styrene	Not detected	ug/kg	50	SW5035A/8260C	11/04/14 15:28	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/kg	50	SW5035A/8260C	11/04/14 15:28	WAT	98-82-8	
Bromoform	Not detected	ug/kg	50	SW5035A/8260C	11/04/14 15:28	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/kg	50	SW5035A/8260C	11/04/14 15:28	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	50	SW5035A/8260C	11/04/14 15:28	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/kg	50	SW5035A/8260C	11/04/14 15:28	WAT	95-50-1	
1,2-Dibromo-3-chloropropane	Not detected	ug/kg	50	SW5035A/8260C	11/04/14 15:28	WAT	96-12-8	
1,2,4-Trichlorobenzene	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 15:28	WAT	120-82-1	



Analytical Laboratory Report

Lab Sample ID: S63382.02
Sample Tag: SB11-102714-1235
Collected Date/Time: 10/27/2014 12:35
Matrix: Soil
COC Reference: 87579

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	5.2	IR
1	40ml Glass	MeOH	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

DRO Extraction	Completed			SW3550C	11/03/14 12:26	EMR		
Extraction, PCB	Completed			SW3550C	10/31/14 10:00	RGS		
Mercury Digestion	Completed			SW7471B	11/04/14 11:15	CCM		
Metal Digestion	Completed			SW3050B	11/03/14 12:00	CCM		
PNA Extraction	Completed			SW3550C	11/03/14 12:28	EMR		

Inorganics

Total Solids	87	%	1	SM2540B	10/30/14 18:30	BJB		
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Metals

Arsenic	0.80	mg/kg	0.20	SW6020A	11/04/14 11:20	PER	7440-38-2	
Barium	9.34	mg/kg	1.0	SW6020A	11/04/14 11:20	PER	7440-39-3	
Cadmium	Not detected	mg/kg	0.20	SW6020A	11/03/14 15:08	CCM	7440-43-9	
Chromium	6.79	mg/kg	0.50	SW6020A	11/03/14 15:08	CCM	7440-47-3	
Copper	5.92	mg/kg	0.50	SW6020A	11/04/14 11:20	PER	7440-50-8	
Lead	3.80	mg/kg	0.30	SW6020A	11/03/14 15:08	CCM	7439-92-1	
Manganese	81.3	mg/kg	0.5	SW6020A	11/04/14 11:20	PER	7439-96-5	
Mercury	0.062	mg/kg	0.050	SW7471B	11/04/14 16:10	CCM	7439-97-6	
Selenium	Not detected	mg/kg	0.40	SW6020A	11/04/14 11:20	PER	7782-49-2	
Silver	Not detected	mg/kg	0.20	SW6020A	11/04/14 11:20	PER	7440-22-4	
Zinc	3.59	mg/kg	0.50	SW6020A	11/04/14 11:20	PER	7440-66-6	

Organics - PCBs/Pesticides

PCB List

PCB-1016	Not detected	ug/kg	330	SW8082A	10/31/14 13:28	JAN	12674-11-2	
PCB-1242	Not detected	ug/kg	330	SW8082A	10/31/14 13:28	JAN	53469-21-9	
PCB-1221	Not detected	ug/kg	330	SW8082A	10/31/14 13:28	JAN	11104-28-2	
PCB-1232	Not detected	ug/kg	330	SW8082A	10/31/14 13:28	JAN	11141-16-5	
PCB-1248	Not detected	ug/kg	330	SW8082A	10/31/14 13:28	JAN	12672-29-6	
PCB-1254	Not detected	ug/kg	330	SW8082A	10/31/14 13:28	JAN	11097-69-1	
PCB-1260	Not detected	ug/kg	330	SW8082A	10/31/14 13:28	JAN	11096-82-5	

Organics - Semi-Volatiles

TPH DRO (C10-C28)	27,000	ug/kg	4,000	SW8015M	11/05/14 18:01	PL		
TPH ORO (C28-C36)	16,000	ug/kg	4,000	SW8015M	11/05/14 18:01	PL		

Polynuclear Aromatics

Acenaphthene	Not detected	ug/kg	300	SW8270D	11/05/14 18:01	PL	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	SW8270D	11/05/14 18:01	PL	208-96-8	
Anthracene	Not detected	ug/kg	300	SW8270D	11/05/14 18:01	PL	120-12-7	
Benzo(a)anthracene	Not detected	ug/kg	300	SW8270D	11/05/14 18:01	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/kg	300	SW8270D	11/05/14 18:01	PL	50-32-8	



Analytical Laboratory Report

Lab Sample ID: S63382.02 (continued)

Sample Tag: SB11-102714-1235

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatics (continued)								
Benzo(b)fluoranthene	Not detected	ug/kg	300	SW8270D	11/05/14 18:01	PL	205-99-2	
Benzo(k)fluoranthene	Not detected	ug/kg	300	SW8270D	11/05/14 18:01	PL	207-08-9	
Benzo(ghi)perylene	Not detected	ug/kg	300	SW8270D	11/05/14 18:01	PL	191-24-2	
Chrysene	Not detected	ug/kg	300	SW8270D	11/05/14 18:01	PL	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	SW8270D	11/05/14 18:01	PL	53-70-3	
Fluoranthene	Not detected	ug/kg	300	SW8270D	11/05/14 18:01	PL	206-44-0	
Fluorene	Not detected	ug/kg	300	SW8270D	11/05/14 18:01	PL	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	300	SW8270D	11/05/14 18:01	PL	193-39-5	
Naphthalene	Not detected	ug/kg	300	SW8270D	11/05/14 18:01	PL	91-20-3	
Phenanthrene	Not detected	ug/kg	300	SW8270D	11/05/14 18:01	PL	85-01-8	
Pyrene	Not detected	ug/kg	300	SW8270D	11/05/14 18:01	PL	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	SW8270D	11/05/14 18:01	PL	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	SW8270D	11/05/14 18:01	PL	90-12-0	
Organics - Volatiles								
TPH GRO (C6-C10)	Not detected	ug/kg	7,000	SW8015M	11/03/14 17:26	WAT		
TCL Volatile Organics HighLevel 5035/8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 15:48	WAT	76-13-1	
Acetone	Not detected	ug/kg	980	SW5035A/8260C	11/04/14 15:48	WAT	67-64-1	
Carbon disulfide	Not detected	ug/kg	300	SW5035A/8260C	11/04/14 15:48	WAT	75-15-0	
Methyl Acetate	Not detected	ug/kg	3,000	SW5035A/8260C	11/04/14 15:48	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/kg	300	SW5035A/8260C	11/04/14 15:48	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/kg	980	SW5035A/8260C	11/04/14 15:48	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 15:48	WAT	75-71-8	
Chloromethane	Not detected	ug/kg	300	SW5035A/8260C	11/04/14 15:48	WAT	74-87-3	
Vinyl chloride	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 15:48	WAT	75-01-4	
Bromomethane	Not detected	ug/kg	300	SW5035A/8260C	11/04/14 15:48	WAT	74-83-9	
Chloroethane	Not detected	ug/kg	300	SW5035A/8260C	11/04/14 15:48	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 15:48	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 15:48	WAT	75-35-4	
Methylene chloride	Not detected	ug/kg	300	SW5035A/8260C	11/04/14 15:48	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 15:48	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 15:48	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 15:48	WAT	156-59-2	
Chloroform	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 15:48	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 15:48	WAT	71-55-6	
Cyclohexane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 15:48	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	3,000	SW5035A/8260C	11/04/14 15:48	WAT	108-10-1	
2-Hexanone	Not detected	ug/kg	3,000	SW5035A/8260C	11/04/14 15:48	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 15:48	WAT	56-23-5	
Benzene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 15:48	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 15:48	WAT	107-06-2	
Trichloroethene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 15:48	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 15:48	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 15:48	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 15:48	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 15:48	WAT	10061-01-5	
Toluene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 15:48	WAT	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S63382.02 (continued)

Sample Tag: SB11-102714-1235

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics HighLevel 5035/8260 (continued)								
trans-1,3-Dichloropropene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 15:48	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 15:48	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 15:48	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 15:48	WAT	124-48-1	
1,2-Dibromoethane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 15:48	WAT	106-93-4	
Chlorobenzene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 15:48	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 15:48	WAT	79-34-5	
Ethylbenzene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 15:48	WAT	100-41-4	
p,m-Xylene	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 15:48	WAT		
o-Xylene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 15:48	WAT	95-47-6	
Styrene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 15:48	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 15:48	WAT	98-82-8	
Bromoform	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 15:48	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 15:48	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 15:48	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 15:48	WAT	95-50-1	
1,2-Dibromo-3-chloropropane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 15:48	WAT	96-12-8	
1,2,4-Trichlorobenzene	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 15:48	WAT	120-82-1	



Analytical Laboratory Report

Lab Sample ID: S63382.03
Sample Tag: SB13-102714-1315
Collected Date/Time: 10/27/2014 13:15
Matrix: Soil
COC Reference: 87579

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	5.2	IR
1	40ml Glass	MeOH	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

DRO Extraction	Completed			SW3550C	11/03/14 12:26	EMR		
Extraction, PCB	Completed			SW3550C	10/31/14 10:00	RGS		
Mercury Digestion	Completed			SW7471B	11/04/14 11:15	CCM		
Metal Digestion	Completed			SW3050B	11/03/14 12:00	CCM		
PNA Extraction	Completed			SW3550C	11/03/14 12:28	EMR		

Inorganics

Total Solids	80	%	1	SM2540B	10/30/14 18:30	BJB		
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Metals

Arsenic	2.22	mg/kg	0.20	SW6020A	11/04/14 11:23	PER	7440-38-2	
Barium	54.8	mg/kg	1.0	SW6020A	11/04/14 11:23	PER	7440-39-3	
Cadmium	Not detected	mg/kg	0.20	SW6020A	11/03/14 15:25	CCM	7440-43-9	
Chromium	7.09	mg/kg	0.50	SW6020A	11/03/14 15:25	CCM	7440-47-3	
Copper	12.7	mg/kg	0.50	SW6020A	11/04/14 11:23	PER	7440-50-8	
Lead	4.93	mg/kg	0.30	SW6020A	11/03/14 15:25	CCM	7439-92-1	
Manganese	142	mg/kg	0.5	SW6020A	11/04/14 11:23	PER	7439-96-5	
Mercury	Not detected	mg/kg	0.050	SW7471B	11/04/14 16:12	CCM	7439-97-6	
Selenium	Not detected	mg/kg	0.40	SW6020A	11/04/14 11:23	PER	7782-49-2	
Silver	Not detected	mg/kg	0.20	SW6020A	11/04/14 11:23	PER	7440-22-4	
Zinc	9.09	mg/kg	0.50	SW6020A	11/04/14 11:23	PER	7440-66-6	

Organics - PCBs/Pesticides

PCB List

PCB-1016	Not detected	ug/kg	330	SW8082A	10/31/14 13:38	JAN	12674-11-2	
PCB-1242	Not detected	ug/kg	330	SW8082A	10/31/14 13:38	JAN	53469-21-9	
PCB-1221	Not detected	ug/kg	330	SW8082A	10/31/14 13:38	JAN	11104-28-2	
PCB-1232	Not detected	ug/kg	330	SW8082A	10/31/14 13:38	JAN	11141-16-5	
PCB-1248	Not detected	ug/kg	330	SW8082A	10/31/14 13:38	JAN	12672-29-6	
PCB-1254	Not detected	ug/kg	330	SW8082A	10/31/14 13:38	JAN	11097-69-1	
PCB-1260	Not detected	ug/kg	330	SW8082A	10/31/14 13:38	JAN	11096-82-5	

Organics - Semi-Volatiles

TPH DRO (C10-C28)	9,000	ug/kg	4,000	SW8015M	11/05/14 18:26	PL		
TPH ORO (C28-C36)	7,000	ug/kg	4,000	SW8015M	11/05/14 18:26	PL		

Polynuclear Aromatics

Acenaphthene	Not detected	ug/kg	300	SW8270D	11/05/14 18:26	PL	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	SW8270D	11/05/14 18:26	PL	208-96-8	
Anthracene	Not detected	ug/kg	300	SW8270D	11/05/14 18:26	PL	120-12-7	
Benzo(a)anthracene	Not detected	ug/kg	300	SW8270D	11/05/14 18:26	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/kg	300	SW8270D	11/05/14 18:26	PL	50-32-8	



Analytical Laboratory Report

Lab Sample ID: S63382.03 (continued)

Sample Tag: SB13-102714-1315

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatics (continued)								
Benzo(b)fluoranthene	Not detected	ug/kg	300	SW8270D	11/05/14 18:26	PL	205-99-2	
Benzo(k)fluoranthene	Not detected	ug/kg	300	SW8270D	11/05/14 18:26	PL	207-08-9	
Benzo(ghi)perylene	Not detected	ug/kg	300	SW8270D	11/05/14 18:26	PL	191-24-2	
Chrysene	Not detected	ug/kg	300	SW8270D	11/05/14 18:26	PL	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	SW8270D	11/05/14 18:26	PL	53-70-3	
Fluoranthene	Not detected	ug/kg	300	SW8270D	11/05/14 18:26	PL	206-44-0	
Fluorene	Not detected	ug/kg	300	SW8270D	11/05/14 18:26	PL	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	300	SW8270D	11/05/14 18:26	PL	193-39-5	
Naphthalene	Not detected	ug/kg	300	SW8270D	11/05/14 18:26	PL	91-20-3	
Phenanthrene	Not detected	ug/kg	300	SW8270D	11/05/14 18:26	PL	85-01-8	
Pyrene	Not detected	ug/kg	300	SW8270D	11/05/14 18:26	PL	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	SW8270D	11/05/14 18:26	PL	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	SW8270D	11/05/14 18:26	PL	90-12-0	
Organics - Volatiles								
TPH GRO (C6-C10)	Not detected	ug/kg	7,000	SW8015M	11/03/14 17:44	WAT		
TCL Volatile Organics HighLevel 5035/8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 16:09	WAT	76-13-1	
Acetone	Not detected	ug/kg	1,100	SW5035A/8260C	11/04/14 16:09	WAT	67-64-1	
Carbon disulfide	Not detected	ug/kg	400	SW5035A/8260C	11/04/14 16:09	WAT	75-15-0	
Methyl Acetate	Not detected	ug/kg	4,000	SW5035A/8260C	11/04/14 16:09	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/kg	400	SW5035A/8260C	11/04/14 16:09	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/kg	1,100	SW5035A/8260C	11/04/14 16:09	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 16:09	WAT	75-71-8	
Chloromethane	Not detected	ug/kg	400	SW5035A/8260C	11/04/14 16:09	WAT	74-87-3	
Vinyl chloride	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 16:09	WAT	75-01-4	
Bromomethane	Not detected	ug/kg	400	SW5035A/8260C	11/04/14 16:09	WAT	74-83-9	
Chloroethane	Not detected	ug/kg	400	SW5035A/8260C	11/04/14 16:09	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 16:09	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 16:09	WAT	75-35-4	
Methylene chloride	Not detected	ug/kg	400	SW5035A/8260C	11/04/14 16:09	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 16:09	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 16:09	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 16:09	WAT	156-59-2	
Chloroform	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 16:09	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 16:09	WAT	71-55-6	
Cyclohexane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 16:09	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	4,000	SW5035A/8260C	11/04/14 16:09	WAT	108-10-1	
2-Hexanone	Not detected	ug/kg	4,000	SW5035A/8260C	11/04/14 16:09	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 16:09	WAT	56-23-5	
Benzene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 16:09	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 16:09	WAT	107-06-2	
Trichloroethene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 16:09	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 16:09	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 16:09	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 16:09	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 16:09	WAT	10061-01-5	
Toluene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 16:09	WAT	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S63382.03 (continued)

Sample Tag: SB13-102714-1315

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics HighLevel 5035/8260 (continued)								
trans-1,3-Dichloropropene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 16:09	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 16:09	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 16:09	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 16:09	WAT	124-48-1	
1,2-Dibromoethane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 16:09	WAT	106-93-4	
Chlorobenzene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 16:09	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 16:09	WAT	79-34-5	
Ethylbenzene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 16:09	WAT	100-41-4	
p,m-Xylene	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 16:09	WAT		
o-Xylene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 16:09	WAT	95-47-6	
Styrene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 16:09	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 16:09	WAT	98-82-8	
Bromoform	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 16:09	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 16:09	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 16:09	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 16:09	WAT	95-50-1	
1,2-Dibromo-3-chloropropane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 16:09	WAT	96-12-8	
1,2,4-Trichlorobenzene	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 16:09	WAT	120-82-1	



Analytical Laboratory Report

Lab Sample ID: S63382.04
Sample Tag: SB9-102714-1400
Collected Date/Time: 10/27/2014 14:00
Matrix: Soil
COC Reference: 87579

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	5.2	IR
1	40ml Glass	MeOH	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

DRO Extraction	Completed			SW3550C	11/03/14 12:26	EMR		
Extraction, PCB	Completed			SW3550C	10/31/14 10:00	RGS		
Mercury Digestion	Completed			SW7471B	11/04/14 11:15	CCM		
Metal Digestion	Completed			SW3050B	11/03/14 12:00	CCM		
PNA Extraction	Completed			SW3550C	11/03/14 12:28	EMR		

Inorganics

Total Solids	88	%	1	SM2540B	10/30/14 18:30	BJB		
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Metals

Arsenic	1.14	mg/kg	0.20	SW6020A	11/04/14 11:25	PER	7440-38-2	
Barium	55.7	mg/kg	1.0	SW6020A	11/04/14 11:25	PER	7440-39-3	
Cadmium	Not detected	mg/kg	0.20	SW6020A	11/03/14 15:28	CCM	7440-43-9	
Chromium	6.55	mg/kg	0.50	SW6020A	11/03/14 15:28	CCM	7440-47-3	
Copper	10.1	mg/kg	0.50	SW6020A	11/04/14 11:25	PER	7440-50-8	
Lead	6.26	mg/kg	0.30	SW6020A	11/03/14 15:28	CCM	7439-92-1	
Manganese	98.9	mg/kg	0.5	SW6020A	11/04/14 11:25	PER	7439-96-5	
Mercury	Not detected	mg/kg	0.050	SW7471B	11/04/14 16:14	CCM	7439-97-6	
Selenium	Not detected	mg/kg	0.40	SW6020A	11/04/14 11:25	PER	7782-49-2	
Silver	Not detected	mg/kg	0.20	SW6020A	11/04/14 11:25	PER	7440-22-4	
Zinc	3.88	mg/kg	0.50	SW6020A	11/04/14 11:25	PER	7440-66-6	

Organics - PCBs/Pesticides

PCB List

PCB-1016	Not detected	ug/kg	330	SW8082A	10/31/14 13:49	JAN	12674-11-2	
PCB-1242	Not detected	ug/kg	330	SW8082A	10/31/14 13:49	JAN	53469-21-9	
PCB-1221	Not detected	ug/kg	330	SW8082A	10/31/14 13:49	JAN	11104-28-2	
PCB-1232	Not detected	ug/kg	330	SW8082A	10/31/14 13:49	JAN	11141-16-5	
PCB-1248	Not detected	ug/kg	330	SW8082A	10/31/14 13:49	JAN	12672-29-6	
PCB-1254	Not detected	ug/kg	330	SW8082A	10/31/14 13:49	JAN	11097-69-1	
PCB-1260	Not detected	ug/kg	330	SW8082A	10/31/14 13:49	JAN	11096-82-5	

Organics - Semi-Volatiles

TPH DRO (C10-C28)	13,000	ug/kg	4,000	SW8015M	11/05/14 18:50	PL		
TPH ORO (C28-C36)	5,000	ug/kg	4,000	SW8015M	11/05/14 18:50	PL		

Polynuclear Aromatics

Acenaphthene	Not detected	ug/kg	300	SW8270D	11/05/14 18:50	PL	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	SW8270D	11/05/14 18:50	PL	208-96-8	
Anthracene	Not detected	ug/kg	300	SW8270D	11/05/14 18:50	PL	120-12-7	
Benzo(a)anthracene	Not detected	ug/kg	300	SW8270D	11/05/14 18:50	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/kg	300	SW8270D	11/05/14 18:50	PL	50-32-8	



Analytical Laboratory Report

Lab Sample ID: S63382.04 (continued)

Sample Tag: SB9-102714-1400

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatics (continued)								
Benzo(b)fluoranthene	Not detected	ug/kg	300	SW8270D	11/05/14 18:50	PL	205-99-2	
Benzo(k)fluoranthene	Not detected	ug/kg	300	SW8270D	11/05/14 18:50	PL	207-08-9	
Benzo(ghi)perylene	Not detected	ug/kg	300	SW8270D	11/05/14 18:50	PL	191-24-2	
Chrysene	Not detected	ug/kg	300	SW8270D	11/05/14 18:50	PL	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	SW8270D	11/05/14 18:50	PL	53-70-3	
Fluoranthene	Not detected	ug/kg	300	SW8270D	11/05/14 18:50	PL	206-44-0	
Fluorene	Not detected	ug/kg	300	SW8270D	11/05/14 18:50	PL	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	300	SW8270D	11/05/14 18:50	PL	193-39-5	
Naphthalene	Not detected	ug/kg	300	SW8270D	11/05/14 18:50	PL	91-20-3	
Phenanthrene	Not detected	ug/kg	300	SW8270D	11/05/14 18:50	PL	85-01-8	
Pyrene	Not detected	ug/kg	300	SW8270D	11/05/14 18:50	PL	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	SW8270D	11/05/14 18:50	PL	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	SW8270D	11/05/14 18:50	PL	90-12-0	
Organics - Volatiles								
TPH GRO (C6-C10)	Not detected	ug/kg	6,000	SW8015M	11/03/14 18:02	WAT		
TCL Volatile Organics HighLevel 5035/8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 16:29	WAT	76-13-1	
Acetone	Not detected	ug/kg	940	SW5035A/8260C	11/04/14 16:29	WAT	67-64-1	
Carbon disulfide	Not detected	ug/kg	300	SW5035A/8260C	11/04/14 16:29	WAT	75-15-0	
Methyl Acetate	Not detected	ug/kg	3,000	SW5035A/8260C	11/04/14 16:29	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/kg	300	SW5035A/8260C	11/04/14 16:29	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/kg	940	SW5035A/8260C	11/04/14 16:29	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 16:29	WAT	75-71-8	
Chloromethane	Not detected	ug/kg	300	SW5035A/8260C	11/04/14 16:29	WAT	74-87-3	
Vinyl chloride	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 16:29	WAT	75-01-4	
Bromomethane	Not detected	ug/kg	300	SW5035A/8260C	11/04/14 16:29	WAT	74-83-9	
Chloroethane	Not detected	ug/kg	300	SW5035A/8260C	11/04/14 16:29	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 16:29	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 16:29	WAT	75-35-4	
Methylene chloride	Not detected	ug/kg	300	SW5035A/8260C	11/04/14 16:29	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 16:29	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 16:29	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 16:29	WAT	156-59-2	
Chloroform	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 16:29	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 16:29	WAT	71-55-6	
Cyclohexane	370	ug/kg	60	SW5035A/8260C	11/04/14 16:29	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	3,000	SW5035A/8260C	11/04/14 16:29	WAT	108-10-1	
2-Hexanone	Not detected	ug/kg	3,000	SW5035A/8260C	11/04/14 16:29	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 16:29	WAT	56-23-5	
Benzene	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 16:29	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 16:29	WAT	107-06-2	
Trichloroethene	160	ug/kg	60	SW5035A/8260C	11/04/14 16:29	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 16:29	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 16:29	WAT	75-27-4	
Methyl cyclohexane	950	ug/kg	60	SW5035A/8260C	11/04/14 16:29	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 16:29	WAT	10061-01-5	
Toluene	140	ug/kg	60	SW5035A/8260C	11/04/14 16:29	WAT	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S63382.04 (continued)

Sample Tag: SB9-102714-1400

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics HighLevel 5035/8260 (continued)								
trans-1,3-Dichloropropene	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 16:29	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 16:29	WAT	79-00-5	
Tetrachloroethene	690	ug/kg	60	SW5035A/8260C	11/04/14 16:29	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 16:29	WAT	124-48-1	
1,2-Dibromoethane	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 16:29	WAT	106-93-4	
Chlorobenzene	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 16:29	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 16:29	WAT	79-34-5	
Ethylbenzene	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 16:29	WAT	100-41-4	
p,m-Xylene	300	ug/kg	100	SW5035A/8260C	11/04/14 16:29	WAT		
o-Xylene	230	ug/kg	60	SW5035A/8260C	11/04/14 16:29	WAT	95-47-6	
Styrene	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 16:29	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 16:29	WAT	98-82-8	
Bromoform	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 16:29	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 16:29	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 16:29	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 16:29	WAT	95-50-1	
1,2-Dibromo-3-chloropropane	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 16:29	WAT	96-12-8	
1,2,4-Trichlorobenzene	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 16:29	WAT	120-82-1	



Analytical Laboratory Report

Lab Sample ID: S63382.05
Sample Tag: SB12-102714-1455
Collected Date/Time: 10/27/2014 14:55
Matrix: Soil
COC Reference: 87579

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	5.2	IR
1	40ml Glass	MeOH	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

DRO Extraction	Completed			SW3550C	11/03/14 12:26	EMR		
Extraction, PCB	Completed			SW3550C	10/31/14 10:00	RGS		
Mercury Digestion	Completed			SW7471B	11/04/14 11:15	CCM		
Metal Digestion	Completed			SW3050B	11/03/14 12:00	CCM		
PNA Extraction	Completed			SW3550C	11/03/14 12:28	EMR		

Inorganics

Total Solids	70	%	1	SM2540B	10/30/14 18:30	BJB		
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Metals

Arsenic	1.91	mg/kg	0.20	SW6020A	11/04/14 11:27	PER	7440-38-2	
Barium	27.6	mg/kg	1.0	SW6020A	11/04/14 11:27	PER	7440-39-3	
Cadmium	0.22	mg/kg	0.20	SW6020A	11/03/14 15:30	CCM	7440-43-9	
Chromium	30.7	mg/kg	0.50	SW6020A	11/03/14 15:30	CCM	7440-47-3	
Copper	14.0	mg/kg	0.50	SW6020A	11/04/14 11:27	PER	7440-50-8	
Lead	9.60	mg/kg	0.30	SW6020A	11/03/14 15:30	CCM	7439-92-1	
Manganese	103	mg/kg	0.5	SW6020A	11/04/14 11:27	PER	7439-96-5	
Mercury	Not detected	mg/kg	0.050	SW7471B	11/04/14 16:16	CCM	7439-97-6	
Selenium	0.71	mg/kg	0.40	SW6020A	11/04/14 11:27	PER	7782-49-2	
Silver	Not detected	mg/kg	0.20	SW6020A	11/04/14 11:27	PER	7440-22-4	
Zinc	10.1	mg/kg	0.50	SW6020A	11/04/14 11:27	PER	7440-66-6	

Organics - PCBs/Pesticides

PCB List

PCB-1016	Not detected	ug/kg	330	SW8082A	10/31/14 14:00	JAN	12674-11-2	
PCB-1242	Not detected	ug/kg	330	SW8082A	10/31/14 14:00	JAN	53469-21-9	
PCB-1221	Not detected	ug/kg	330	SW8082A	10/31/14 14:00	JAN	11104-28-2	
PCB-1232	Not detected	ug/kg	330	SW8082A	10/31/14 14:00	JAN	11141-16-5	
PCB-1248	Not detected	ug/kg	330	SW8082A	10/31/14 14:00	JAN	12672-29-6	
PCB-1254	Not detected	ug/kg	330	SW8082A	10/31/14 14:00	JAN	11097-69-1	
PCB-1260	Not detected	ug/kg	330	SW8082A	10/31/14 14:00	JAN	11096-82-5	

Organics - Semi-Volatiles

TPH DRO (C10-C28)	18,000	ug/kg	4,000	SW8015M	11/05/14 19:15	PL		
TPH ORO (C28-C36)	8,000	ug/kg	4,000	SW8015M	11/05/14 19:15	PL		

Polynuclear Aromatics

Acenaphthene	Not detected	ug/kg	300	SW8270D	11/05/14 19:15	PL	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	SW8270D	11/05/14 19:15	PL	208-96-8	
Anthracene	Not detected	ug/kg	300	SW8270D	11/05/14 19:15	PL	120-12-7	
Benzo(a)anthracene	Not detected	ug/kg	300	SW8270D	11/05/14 19:15	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/kg	300	SW8270D	11/05/14 19:15	PL	50-32-8	



Analytical Laboratory Report

Lab Sample ID: S63382.05 (continued)

Sample Tag: SB12-102714-1455

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatics (continued)								
Benzo(b)fluoranthene	Not detected	ug/kg	300	SW8270D	11/05/14 19:15	PL	205-99-2	
Benzo(k)fluoranthene	Not detected	ug/kg	300	SW8270D	11/05/14 19:15	PL	207-08-9	
Benzo(ghi)perylene	Not detected	ug/kg	300	SW8270D	11/05/14 19:15	PL	191-24-2	
Chrysene	Not detected	ug/kg	300	SW8270D	11/05/14 19:15	PL	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	SW8270D	11/05/14 19:15	PL	53-70-3	
Fluoranthene	Not detected	ug/kg	300	SW8270D	11/05/14 19:15	PL	206-44-0	
Fluorene	Not detected	ug/kg	300	SW8270D	11/05/14 19:15	PL	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	300	SW8270D	11/05/14 19:15	PL	193-39-5	
Naphthalene	Not detected	ug/kg	300	SW8270D	11/05/14 19:15	PL	91-20-3	
Phenanthrene	Not detected	ug/kg	300	SW8270D	11/05/14 19:15	PL	85-01-8	
Pyrene	Not detected	ug/kg	300	SW8270D	11/05/14 19:15	PL	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	SW8270D	11/05/14 19:15	PL	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	SW8270D	11/05/14 19:15	PL	90-12-0	
Organics - Volatiles								
TPH GRO (C6-C10)	Not detected	ug/kg	9,000	SW8015M	11/03/14 18:20	WAT		
TCL Volatile Organics HighLevel 5035/8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 16:49	WAT	76-13-1	
Acetone	Not detected	ug/kg	1,400	SW5035A/8260C	11/04/14 16:49	WAT	67-64-1	
Carbon disulfide	Not detected	ug/kg	500	SW5035A/8260C	11/04/14 16:49	WAT	75-15-0	
Methyl Acetate	Not detected	ug/kg	5,000	SW5035A/8260C	11/04/14 16:49	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/kg	500	SW5035A/8260C	11/04/14 16:49	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/kg	1,400	SW5035A/8260C	11/04/14 16:49	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 16:49	WAT	75-71-8	
Chloromethane	Not detected	ug/kg	500	SW5035A/8260C	11/04/14 16:49	WAT	74-87-3	
Vinyl chloride	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 16:49	WAT	75-01-4	
Bromomethane	Not detected	ug/kg	500	SW5035A/8260C	11/04/14 16:49	WAT	74-83-9	
Chloroethane	Not detected	ug/kg	500	SW5035A/8260C	11/04/14 16:49	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 16:49	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 16:49	WAT	75-35-4	
Methylene chloride	Not detected	ug/kg	500	SW5035A/8260C	11/04/14 16:49	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 16:49	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 16:49	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 16:49	WAT	156-59-2	
Chloroform	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 16:49	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 16:49	WAT	71-55-6	
Cyclohexane	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 16:49	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	5,000	SW5035A/8260C	11/04/14 16:49	WAT	108-10-1	
2-Hexanone	Not detected	ug/kg	5,000	SW5035A/8260C	11/04/14 16:49	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 16:49	WAT	56-23-5	
Benzene	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 16:49	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 16:49	WAT	107-06-2	
Trichloroethene	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 16:49	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 16:49	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 16:49	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 16:49	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 16:49	WAT	10061-01-5	
Toluene	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 16:49	WAT	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S63382.05 (continued)

Sample Tag: SB12-102714-1455

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics HighLevel 5035/8260 (continued)								
trans-1,3-Dichloropropene	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 16:49	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 16:49	WAT	79-00-5	
Tetrachloroethene	160	ug/kg	90	SW5035A/8260C	11/04/14 16:49	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 16:49	WAT	124-48-1	
1,2-Dibromoethane	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 16:49	WAT	106-93-4	
Chlorobenzene	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 16:49	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 16:49	WAT	79-34-5	
Ethylbenzene	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 16:49	WAT	100-41-4	
p,m-Xylene	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 16:49	WAT		
o-Xylene	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 16:49	WAT	95-47-6	
Styrene	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 16:49	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 16:49	WAT	98-82-8	
Bromoform	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 16:49	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 16:49	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 16:49	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 16:49	WAT	95-50-1	
1,2-Dibromo-3-chloropropane	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 16:49	WAT	96-12-8	
1,2,4-Trichlorobenzene	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 16:49	WAT	120-82-1	



Analytical Laboratory Report

Lab Sample ID: S63382.06
Sample Tag: SB7-102714-1600
Collected Date/Time: 10/27/2014 16:00
Matrix: Soil
COC Reference: 87579

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	5.2	IR
1	40ml Glass	MeOH	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

DRO Extraction	Completed			SW3550C	11/03/14 12:26	EMR		
Extraction, PCB	Completed			SW3550C	10/31/14 10:00	RGS		
Mercury Digestion	Completed			SW7471B	11/04/14 11:15	CCM		
Metal Digestion	Completed			SW3050B	11/03/14 12:00	CCM		
PNA Extraction	Completed			SW3550C	11/03/14 12:28	EMR		

Inorganics

Total Solids	75	%	1	SM2540B	10/30/14 18:30	BJB		
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Metals

Arsenic	2.35	mg/kg	0.20	SW6020A	11/04/14 11:29	PER	7440-38-2	
Barium	79.9	mg/kg	1.0	SW6020A	11/04/14 11:29	PER	7440-39-3	
Cadmium	Not detected	mg/kg	0.20	SW6020A	11/03/14 15:32	CCM	7440-43-9	
Chromium	13.6	mg/kg	0.50	SW6020A	11/03/14 15:32	CCM	7440-47-3	
Copper	42.2	mg/kg	0.50	SW6020A	11/04/14 11:29	PER	7440-50-8	
Lead	8.33	mg/kg	0.30	SW6020A	11/03/14 15:32	CCM	7439-92-1	
Manganese	72.0	mg/kg	0.5	SW6020A	11/04/14 11:29	PER	7439-96-5	
Mercury	Not detected	mg/kg	0.050	SW7471B	11/04/14 16:18	CCM	7439-97-6	
Selenium	0.54	mg/kg	0.40	SW6020A	11/04/14 11:29	PER	7782-49-2	
Silver	Not detected	mg/kg	0.20	SW6020A	11/04/14 11:29	PER	7440-22-4	
Zinc	7.75	mg/kg	0.50	SW6020A	11/04/14 11:29	PER	7440-66-6	

Organics - PCBs/Pesticides

PCB List

PCB-1016	Not detected	ug/kg	330	SW8082A	10/31/14 14:49	JAN	12674-11-2	
PCB-1242	Not detected	ug/kg	330	SW8082A	10/31/14 14:49	JAN	53469-21-9	
PCB-1221	Not detected	ug/kg	330	SW8082A	10/31/14 14:49	JAN	11104-28-2	
PCB-1232	Not detected	ug/kg	330	SW8082A	10/31/14 14:49	JAN	11141-16-5	
PCB-1248	Not detected	ug/kg	330	SW8082A	10/31/14 14:49	JAN	12672-29-6	
PCB-1254	Not detected	ug/kg	330	SW8082A	10/31/14 14:49	JAN	11097-69-1	
PCB-1260	Not detected	ug/kg	330	SW8082A	10/31/14 14:49	JAN	11096-82-5	

Organics - Semi-Volatiles

TPH DRO (C10-C28)	512,000	ug/kg	67,000	SW8015M	11/05/14 23:40	PL		Y
TPH ORO (C28-C36)	657,000	ug/kg	67,000	SW8015M	11/05/14 23:40	PL		Y

Polynuclear Aromatics

Acenaphthene	Not detected	ug/kg	700	SW8270D	11/05/14 23:40	PL	83-32-9	X
Acenaphthylene	Not detected	ug/kg	700	SW8270D	11/05/14 23:40	PL	208-96-8	X
Anthracene	Not detected	ug/kg	700	SW8270D	11/05/14 23:40	PL	120-12-7	X

Y-Elevated reporting limit due to high target concentration

X-Elevated reporting limit due to matrix interference



Analytical Laboratory Report

Lab Sample ID: S63382.06 (continued)

Sample Tag: SB7-102714-1600

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatics (continued)								
Benzo(a)anthracene	Not detected	ug/kg	700	SW8270D	11/05/14 23:40	PL	56-55-3	X
Benzo(a)pyrene	Not detected	ug/kg	700	SW8270D	11/05/14 23:40	PL	50-32-8	X
Benzo(b)fluoranthene	Not detected	ug/kg	700	SW8270D	11/05/14 23:40	PL	205-99-2	X
Benzo(k)fluoranthene	Not detected	ug/kg	700	SW8270D	11/05/14 23:40	PL	207-08-9	X
Benzo(ghi)perylene	Not detected	ug/kg	700	SW8270D	11/05/14 23:40	PL	191-24-2	X
Chrysene	Not detected	ug/kg	700	SW8270D	11/05/14 23:40	PL	218-01-9	X
Dibenzo(ah)anthracene	Not detected	ug/kg	700	SW8270D	11/05/14 23:40	PL	53-70-3	X
Fluoranthene	Not detected	ug/kg	700	SW8270D	11/05/14 23:40	PL	206-44-0	X
Fluorene	Not detected	ug/kg	700	SW8270D	11/05/14 23:40	PL	86-73-7	X
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	700	SW8270D	11/05/14 23:40	PL	193-39-5	X
Naphthalene	Not detected	ug/kg	700	SW8270D	11/05/14 23:40	PL	91-20-3	X
Phenanthrene	Not detected	ug/kg	700	SW8270D	11/05/14 23:40	PL	85-01-8	X
Pyrene	Not detected	ug/kg	700	SW8270D	11/05/14 23:40	PL	129-00-0	X
2-Methylnaphthalene	Not detected	ug/kg	700	SW8270D	11/05/14 23:40	PL	91-57-6	X
1-Methylnaphthalene	Not detected	ug/kg	700	SW8270D	11/05/14 23:40	PL	90-12-0	X
Organics - Volatiles								
TPH GRO (C6-C10)	Not detected	ug/kg	8,000	SW8015M	11/03/14 18:38	WAT		
TCL Volatile Organics HighLevel 5035/8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:08	WAT	76-13-1	
Acetone	1,300	ug/kg	1,200	SW5035A/8260C	11/04/14 17:08	WAT	67-64-1	
Carbon disulfide	Not detected	ug/kg	400	SW5035A/8260C	11/04/14 17:08	WAT	75-15-0	
Methyl Acetate	Not detected	ug/kg	4,000	SW5035A/8260C	11/04/14 17:08	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/kg	400	SW5035A/8260C	11/04/14 17:08	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/kg	1,200	SW5035A/8260C	11/04/14 17:08	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/kg	80	SW5035A/8260C	11/04/14 17:08	WAT	75-71-8	
Chloromethane	Not detected	ug/kg	400	SW5035A/8260C	11/04/14 17:08	WAT	74-87-3	
Vinyl chloride	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:08	WAT	75-01-4	
Bromomethane	Not detected	ug/kg	400	SW5035A/8260C	11/04/14 17:08	WAT	74-83-9	
Chloroethane	Not detected	ug/kg	400	SW5035A/8260C	11/04/14 17:08	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:08	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/kg	80	SW5035A/8260C	11/04/14 17:08	WAT	75-35-4	
Methylene chloride	Not detected	ug/kg	400	SW5035A/8260C	11/04/14 17:08	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/kg	80	SW5035A/8260C	11/04/14 17:08	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/kg	80	SW5035A/8260C	11/04/14 17:08	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/kg	80	SW5035A/8260C	11/04/14 17:08	WAT	156-59-2	
Chloroform	Not detected	ug/kg	80	SW5035A/8260C	11/04/14 17:08	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/kg	80	SW5035A/8260C	11/04/14 17:08	WAT	71-55-6	
Cyclohexane	Not detected	ug/kg	80	SW5035A/8260C	11/04/14 17:08	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	4,000	SW5035A/8260C	11/04/14 17:08	WAT	108-10-1	
2-Hexanone	Not detected	ug/kg	4,000	SW5035A/8260C	11/04/14 17:08	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/kg	80	SW5035A/8260C	11/04/14 17:08	WAT	56-23-5	
Benzene	Not detected	ug/kg	80	SW5035A/8260C	11/04/14 17:08	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/kg	80	SW5035A/8260C	11/04/14 17:08	WAT	107-06-2	
Trichloroethene	Not detected	ug/kg	80	SW5035A/8260C	11/04/14 17:08	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/kg	80	SW5035A/8260C	11/04/14 17:08	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/kg	80	SW5035A/8260C	11/04/14 17:08	WAT	75-27-4	

X-Elevated reporting limit due to matrix interference



Analytical Laboratory Report

Lab Sample ID: S63382.06 (continued)

Sample Tag: SB7-102714-1600

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics HighLevel 5035/8260 (continued)								
Methyl cyclohexane	Not detected	ug/kg	80	SW5035A/8260C	11/04/14 17:08	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/kg	80	SW5035A/8260C	11/04/14 17:08	WAT	10061-01-5	
Toluene	Not detected	ug/kg	80	SW5035A/8260C	11/04/14 17:08	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/kg	80	SW5035A/8260C	11/04/14 17:08	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/kg	80	SW5035A/8260C	11/04/14 17:08	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/kg	80	SW5035A/8260C	11/04/14 17:08	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/kg	80	SW5035A/8260C	11/04/14 17:08	WAT	124-48-1	
1,2-Dibromoethane	Not detected	ug/kg	80	SW5035A/8260C	11/04/14 17:08	WAT	106-93-4	
Chlorobenzene	Not detected	ug/kg	80	SW5035A/8260C	11/04/14 17:08	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/kg	80	SW5035A/8260C	11/04/14 17:08	WAT	79-34-5	
Ethylbenzene	Not detected	ug/kg	80	SW5035A/8260C	11/04/14 17:08	WAT	100-41-4	
p,m-Xylene	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:08	WAT		
o-Xylene	Not detected	ug/kg	80	SW5035A/8260C	11/04/14 17:08	WAT	95-47-6	
Styrene	Not detected	ug/kg	80	SW5035A/8260C	11/04/14 17:08	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/kg	80	SW5035A/8260C	11/04/14 17:08	WAT	98-82-8	
Bromoform	Not detected	ug/kg	80	SW5035A/8260C	11/04/14 17:08	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/kg	80	SW5035A/8260C	11/04/14 17:08	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	80	SW5035A/8260C	11/04/14 17:08	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/kg	80	SW5035A/8260C	11/04/14 17:08	WAT	95-50-1	
1,2-Dibromo-3-chloropropane	Not detected	ug/kg	80	SW5035A/8260C	11/04/14 17:08	WAT	96-12-8	
1,2,4-Trichlorobenzene	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:08	WAT	120-82-1	



Analytical Laboratory Report

Lab Sample ID: S63382.07
Sample Tag: 4226-102814-0001
Collected Date/Time: 10/28/2014 00:01
Matrix: Soil
COC Reference: 87579

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	5.2	IR
1	40ml Glass	MeOH	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

DRO Extraction	Completed			SW3550C	11/03/14 12:26	EMR		
Extraction, PCB	Completed			SW3550C	10/31/14 10:00	RGS		
Mercury Digestion	Completed			SW7471B	11/04/14 11:15	CCM		
Metal Digestion	Completed			SW3050B	11/03/14 12:00	CCM		
PNA Extraction	Completed			SW3550C	11/03/14 12:28	EMR		

Inorganics

Total Solids	39	%	1	SM2540B	10/30/14 18:30	BJB		
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Metals

Arsenic	5.45	mg/kg	0.20	SW6020A	11/04/14 11:31	PER	7440-38-2	
Barium	63.2	mg/kg	1.0	SW6020A	11/04/14 11:31	PER	7440-39-3	
Cadmium	1.15	mg/kg	0.20	SW6020A	11/03/14 15:35	CCM	7440-43-9	
Chromium	19.3	mg/kg	0.50	SW6020A	11/03/14 15:35	CCM	7440-47-3	
Copper	38.7	mg/kg	0.50	SW6020A	11/04/14 11:31	PER	7440-50-8	
Lead	25.8	mg/kg	0.30	SW6020A	11/03/14 15:35	CCM	7439-92-1	
Manganese	310	mg/kg	0.5	SW6020A	11/04/14 11:31	PER	7439-96-5	
Mercury	0.063	mg/kg	0.050	SW7471B	11/04/14 16:20	CCM	7439-97-6	
Selenium	2.68	mg/kg	0.40	SW6020A	11/04/14 11:31	PER	7782-49-2	
Silver	0.26	mg/kg	0.20	SW6020A	11/04/14 11:31	PER	7440-22-4	
Zinc	24.6	mg/kg	0.50	SW6020A	11/04/14 11:31	PER	7440-66-6	

Organics - PCBs/Pesticides

PCB List

PCB-1016	Not detected	ug/kg	330	SW8082A	10/31/14 14:36	JAN	12674-11-2	
PCB-1242	Not detected	ug/kg	330	SW8082A	10/31/14 14:36	JAN	53469-21-9	
PCB-1221	Not detected	ug/kg	330	SW8082A	10/31/14 14:36	JAN	11104-28-2	
PCB-1232	Not detected	ug/kg	330	SW8082A	10/31/14 14:36	JAN	11141-16-5	
PCB-1248	Not detected	ug/kg	330	SW8082A	10/31/14 14:36	JAN	12672-29-6	
PCB-1254	Not detected	ug/kg	330	SW8082A	10/31/14 14:36	JAN	11097-69-1	
PCB-1260	Not detected	ug/kg	330	SW8082A	10/31/14 14:36	JAN	11096-82-5	

Organics - Semi-Volatiles

TPH DRO (C10-C28)	89,000	ug/kg	68,000	SW8015M	11/06/14 00:54	PL		X
TPH ORO (C28-C36)	128,000	ug/kg	68,000	SW8015M	11/06/14 00:54	PL		X

Polynuclear Aromatics

Acenaphthene	Not detected	ug/kg	700	SW8270D	11/06/14 00:54	PL	83-32-9	K
Acenaphthylene	Not detected	ug/kg	700	SW8270D	11/06/14 00:54	PL	208-96-8	K
Anthracene	Not detected	ug/kg	700	SW8270D	11/06/14 00:54	PL	120-12-7	K

X-Elevated reporting limit due to matrix interference

K-Elevated reporting limit due to low total solids



Analytical Laboratory Report

Lab Sample ID: S63382.07 (continued)

Sample Tag: 4226-102814-0001

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatics (continued)								
Benzo(a)anthracene	Not detected	ug/kg	700	SW8270D	11/06/14 00:54	PL	56-55-3	K
Benzo(a)pyrene	Not detected	ug/kg	700	SW8270D	11/06/14 00:54	PL	50-32-8	K
Benzo(b)fluoranthene	Not detected	ug/kg	700	SW8270D	11/06/14 00:54	PL	205-99-2	K
Benzo(k)fluoranthene	Not detected	ug/kg	700	SW8270D	11/06/14 00:54	PL	207-08-9	K
Benzo(ghi)perylene	Not detected	ug/kg	700	SW8270D	11/06/14 00:54	PL	191-24-2	K
Chrysene	Not detected	ug/kg	700	SW8270D	11/06/14 00:54	PL	218-01-9	K
Dibenzo(ah)anthracene	Not detected	ug/kg	700	SW8270D	11/06/14 00:54	PL	53-70-3	K
Fluoranthene	Not detected	ug/kg	700	SW8270D	11/06/14 00:54	PL	206-44-0	K
Fluorene	Not detected	ug/kg	700	SW8270D	11/06/14 00:54	PL	86-73-7	K
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	700	SW8270D	11/06/14 00:54	PL	193-39-5	K
Naphthalene	Not detected	ug/kg	700	SW8270D	11/06/14 00:54	PL	91-20-3	K
Phenanthrene	Not detected	ug/kg	700	SW8270D	11/06/14 00:54	PL	85-01-8	K
Pyrene	Not detected	ug/kg	700	SW8270D	11/06/14 00:54	PL	129-00-0	K
2-Methylnaphthalene	Not detected	ug/kg	700	SW8270D	11/06/14 00:54	PL	91-57-6	K
1-Methylnaphthalene	Not detected	ug/kg	700	SW8270D	11/06/14 00:54	PL	90-12-0	K
Organics - Volatiles								
TPH GRO (C6-C10)	Not detected	ug/kg	20,000	SW8015M	11/03/14 18:56	WAT		
TCL Volatile Organics HighLevel 5035/8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/kg	400	SW5035A/8260C	11/04/14 17:29	WAT	76-13-1	
Acetone	Not detected	ug/kg	3,000	SW5035A/8260C	11/04/14 17:29	WAT	67-64-1	
Carbon disulfide	Not detected	ug/kg	1,000	SW5035A/8260C	11/04/14 17:29	WAT	75-15-0	
Methyl Acetate	Not detected	ug/kg	10,000	SW5035A/8260C	11/04/14 17:29	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/kg	1,000	SW5035A/8260C	11/04/14 17:29	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/kg	3,000	SW5035A/8260C	11/04/14 17:29	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:29	WAT	75-71-8	
Chloromethane	Not detected	ug/kg	1,000	SW5035A/8260C	11/04/14 17:29	WAT	74-87-3	
Vinyl chloride	Not detected	ug/kg	400	SW5035A/8260C	11/04/14 17:29	WAT	75-01-4	
Bromomethane	Not detected	ug/kg	1,000	SW5035A/8260C	11/04/14 17:29	WAT	74-83-9	
Chloroethane	Not detected	ug/kg	1,000	SW5035A/8260C	11/04/14 17:29	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/kg	400	SW5035A/8260C	11/04/14 17:29	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:29	WAT	75-35-4	
Methylene chloride	Not detected	ug/kg	1,000	SW5035A/8260C	11/04/14 17:29	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:29	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:29	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:29	WAT	156-59-2	
Chloroform	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:29	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:29	WAT	71-55-6	
Cyclohexane	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:29	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	10,000	SW5035A/8260C	11/04/14 17:29	WAT	108-10-1	
2-Hexanone	Not detected	ug/kg	10,000	SW5035A/8260C	11/04/14 17:29	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:29	WAT	56-23-5	
Benzene	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:29	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:29	WAT	107-06-2	
Trichloroethene	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:29	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:29	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:29	WAT	75-27-4	

K-Elevated reporting limit due to low total solids



Analytical Laboratory Report

Lab Sample ID: S63382.07 (continued)

Sample Tag: 4226-102814-0001

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics HighLevel 5035/8260 (continued)								
Methyl cyclohexane	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:29	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:29	WAT	10061-01-5	
Toluene	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:29	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:29	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:29	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:29	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:29	WAT	124-48-1	
1,2-Dibromoethane	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:29	WAT	106-93-4	
Chlorobenzene	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:29	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:29	WAT	79-34-5	
Ethylbenzene	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:29	WAT	100-41-4	
p,m-Xylene	Not detected	ug/kg	400	SW5035A/8260C	11/04/14 17:29	WAT		
o-Xylene	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:29	WAT	95-47-6	
Styrene	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:29	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:29	WAT	98-82-8	
Bromoform	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:29	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:29	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:29	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:29	WAT	95-50-1	
1,2-Dibromo-3-chloropropane	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:29	WAT	96-12-8	
1,2,4-Trichlorobenzene	Not detected	ug/kg	400	SW5035A/8260C	11/04/14 17:29	WAT	120-82-1	



Analytical Laboratory Report

Lab Sample ID: S63382.08
Sample Tag: SB8-102814-0835
Collected Date/Time: 10/28/2014 08:35
Matrix: Soil
COC Reference: 87579

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	5.2	IR
1	40ml Glass	MeOH	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

DRO Extraction	Completed			SW3550C	11/03/14 12:26	EMR		
Extraction, PCB	Completed			SW3550C	10/31/14 10:00	RGS		
Mercury Digestion	Completed			SW7471B	11/04/14 11:15	CCM		
Metal Digestion	Completed			SW3050B	11/03/14 12:00	CCM		
PNA Extraction	Completed			SW3550C	11/03/14 12:28	EMR		

Inorganics

Total Solids	38	%	1	SM2540B	10/30/14 18:30	BJB		
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Metals

Arsenic	6.27	mg/kg	0.20	SW6020A	11/04/14 11:33	PER	7440-38-2	
Barium	182	mg/kg	1.0	SW6020A	11/04/14 11:33	PER	7440-39-3	
Cadmium	2.40	mg/kg	0.20	SW6020A	11/03/14 15:37	CCM	7440-43-9	
Chromium	32.1	mg/kg	0.50	SW6020A	11/03/14 15:37	CCM	7440-47-3	
Copper	215	mg/kg	0.50	SW6020A	11/04/14 11:33	PER	7440-50-8	
Lead	31.1	mg/kg	0.30	SW6020A	11/03/14 15:37	CCM	7439-92-1	
Manganese	155	mg/kg	0.5	SW6020A	11/04/14 11:33	PER	7439-96-5	
Mercury	0.277	mg/kg	0.050	SW7471B	11/04/14 16:22	CCM	7439-97-6	
Selenium	4.92	mg/kg	0.40	SW6020A	11/04/14 11:33	PER	7782-49-2	
Silver	Not detected	mg/kg	0.20	SW6020A	11/04/14 11:33	PER	7440-22-4	
Zinc	48.3	mg/kg	0.50	SW6020A	11/04/14 11:33	PER	7440-66-6	

Organics - PCBs/Pesticides

PCB List

PCB-1016	Not detected	ug/kg	330	SW8082A	10/31/14 14:10	JAN	12674-11-2	
PCB-1242	Not detected	ug/kg	330	SW8082A	10/31/14 14:10	JAN	53469-21-9	
PCB-1221	Not detected	ug/kg	330	SW8082A	10/31/14 14:10	JAN	11104-28-2	
PCB-1232	Not detected	ug/kg	330	SW8082A	10/31/14 14:10	JAN	11141-16-5	
PCB-1248	Not detected	ug/kg	330	SW8082A	10/31/14 14:10	JAN	12672-29-6	
PCB-1254	Not detected	ug/kg	330	SW8082A	10/31/14 14:10	JAN	11097-69-1	
PCB-1260	Not detected	ug/kg	330	SW8082A	10/31/14 14:10	JAN	11096-82-5	

Organics - Semi-Volatiles

TPH DRO (C10-C28)	83,000	ug/kg	4,000	SW8015M	11/05/14 19:40	PL		
TPH ORO (C28-C36)	54,000	ug/kg	4,000	SW8015M	11/05/14 19:40	PL		

Polynuclear Aromatics

Acenaphthene	Not detected	ug/kg	300	SW8270D	11/05/14 19:40	PL	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	SW8270D	11/05/14 19:40	PL	208-96-8	
Anthracene	Not detected	ug/kg	300	SW8270D	11/05/14 19:40	PL	120-12-7	
Benzo(a)anthracene	Not detected	ug/kg	300	SW8270D	11/05/14 19:40	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/kg	300	SW8270D	11/05/14 19:40	PL	50-32-8	



Analytical Laboratory Report

Lab Sample ID: S63382.08 (continued)

Sample Tag: SB8-102814-0835

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatics (continued)								
Benzo(b)fluoranthene	Not detected	ug/kg	300	SW8270D	11/05/14 19:40	PL	205-99-2	
Benzo(k)fluoranthene	Not detected	ug/kg	300	SW8270D	11/05/14 19:40	PL	207-08-9	
Benzo(ghi)perylene	Not detected	ug/kg	300	SW8270D	11/05/14 19:40	PL	191-24-2	
Chrysene	Not detected	ug/kg	300	SW8270D	11/05/14 19:40	PL	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	SW8270D	11/05/14 19:40	PL	53-70-3	
Fluoranthene	Not detected	ug/kg	300	SW8270D	11/05/14 19:40	PL	206-44-0	
Fluorene	Not detected	ug/kg	300	SW8270D	11/05/14 19:40	PL	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	300	SW8270D	11/05/14 19:40	PL	193-39-5	
Naphthalene	Not detected	ug/kg	300	SW8270D	11/05/14 19:40	PL	91-20-3	
Phenanthrene	Not detected	ug/kg	300	SW8270D	11/05/14 19:40	PL	85-01-8	
Pyrene	Not detected	ug/kg	300	SW8270D	11/05/14 19:40	PL	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	SW8270D	11/05/14 19:40	PL	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	SW8270D	11/05/14 19:40	PL	90-12-0	
Organics - Volatiles								
TPH GRO (C6-C10)	Not detected	ug/kg	20,000	SW8015M	11/03/14 19:14	WAT		
TCL Volatile Organics HighLevel 5035/8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/kg	400	SW5035A/8260C	11/04/14 17:49	WAT	76-13-1	
Acetone	Not detected	ug/kg	3,300	SW5035A/8260C	11/04/14 17:49	WAT	67-64-1	
Carbon disulfide	Not detected	ug/kg	1,000	SW5035A/8260C	11/04/14 17:49	WAT	75-15-0	
Methyl Acetate	Not detected	ug/kg	10,000	SW5035A/8260C	11/04/14 17:49	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/kg	1,000	SW5035A/8260C	11/04/14 17:49	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/kg	3,300	SW5035A/8260C	11/04/14 17:49	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:49	WAT	75-71-8	
Chloromethane	Not detected	ug/kg	1,000	SW5035A/8260C	11/04/14 17:49	WAT	74-87-3	
Vinyl chloride	Not detected	ug/kg	400	SW5035A/8260C	11/04/14 17:49	WAT	75-01-4	
Bromomethane	Not detected	ug/kg	1,000	SW5035A/8260C	11/04/14 17:49	WAT	74-83-9	
Chloroethane	Not detected	ug/kg	1,000	SW5035A/8260C	11/04/14 17:49	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/kg	400	SW5035A/8260C	11/04/14 17:49	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:49	WAT	75-35-4	
Methylene chloride	Not detected	ug/kg	1,000	SW5035A/8260C	11/04/14 17:49	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:49	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:49	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:49	WAT	156-59-2	
Chloroform	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:49	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:49	WAT	71-55-6	
Cyclohexane	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:49	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	10,000	SW5035A/8260C	11/04/14 17:49	WAT	108-10-1	
2-Hexanone	Not detected	ug/kg	10,000	SW5035A/8260C	11/04/14 17:49	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:49	WAT	56-23-5	
Benzene	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:49	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:49	WAT	107-06-2	
Trichloroethene	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:49	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:49	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:49	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:49	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:49	WAT	10061-01-5	
Toluene	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:49	WAT	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S63382.08 (continued)

Sample Tag: SB8-102814-0835

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics HighLevel 5035/8260 (continued)								
trans-1,3-Dichloropropene	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:49	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:49	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:49	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:49	WAT	124-48-1	
1,2-Dibromoethane	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:49	WAT	106-93-4	
Chlorobenzene	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:49	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:49	WAT	79-34-5	
Ethylbenzene	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:49	WAT	100-41-4	
p,m-Xylene	Not detected	ug/kg	400	SW5035A/8260C	11/04/14 17:49	WAT		
o-Xylene	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:49	WAT	95-47-6	
Styrene	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:49	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:49	WAT	98-82-8	
Bromoform	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:49	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:49	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:49	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:49	WAT	95-50-1	
1,2-Dibromo-3-chloropropane	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 17:49	WAT	96-12-8	
1,2,4-Trichlorobenzene	Not detected	ug/kg	400	SW5035A/8260C	11/04/14 17:49	WAT	120-82-1	



Analytical Laboratory Report

Lab Sample ID: S63382.09
Sample Tag: SB6-102814-0925
Collected Date/Time: 10/28/2014 09:25
Matrix: Soil
COC Reference: 87579

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	5.2	IR
1	40ml Glass	MeOH	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

DRO Extraction	Completed			SW3550C	11/03/14 12:26	EMR		
Extraction, PCB	Completed			SW3550C	11/03/14 08:00	RGS		
Mercury Digestion	Completed			SW7471B	11/04/14 11:15	CCM		
Metal Digestion	Completed			SW3050B	11/03/14 12:00	CCM		
PNA Extraction	Completed			SW3550C	11/03/14 12:28	EMR		

Inorganics

Total Solids	85	%	1	SM2540B	10/30/14 18:30	BJB		
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Metals

Arsenic	0.81	mg/kg	0.20	SW6020A	11/04/14 11:35	PER	7440-38-2	
Barium	146	mg/kg	1.0	SW6020A	11/04/14 11:35	PER	7440-39-3	
Cadmium	0.65	mg/kg	0.20	SW6020A	11/03/14 15:39	CCM	7440-43-9	
Chromium	10.7	mg/kg	0.50	SW6020A	11/03/14 15:39	CCM	7440-47-3	
Copper	355	mg/kg	0.50	SW6020A	11/04/14 11:35	PER	7440-50-8	
Lead	50.2	mg/kg	0.30	SW6020A	11/03/14 15:39	CCM	7439-92-1	
Manganese	284	mg/kg	0.5	SW6020A	11/04/14 11:35	PER	7439-96-5	
Mercury	0.066	mg/kg	0.050	SW7471B	11/04/14 16:24	CCM	7439-97-6	
Selenium	Not detected	mg/kg	0.40	SW6020A	11/04/14 11:35	PER	7782-49-2	
Silver	Not detected	mg/kg	0.20	SW6020A	11/04/14 11:35	PER	7440-22-4	
Zinc	55.9	mg/kg	0.50	SW6020A	11/04/14 11:35	PER	7440-66-6	

Organics - PCBs/Pesticides

PCB List

PCB-1016	Not detected	ug/kg	330	SW8082A	11/03/14 14:52	JAN	12674-11-2	
PCB-1242	Not detected	ug/kg	330	SW8082A	11/03/14 14:52	JAN	53469-21-9	
PCB-1221	Not detected	ug/kg	330	SW8082A	11/03/14 14:52	JAN	11104-28-2	
PCB-1232	Not detected	ug/kg	330	SW8082A	11/03/14 14:52	JAN	11141-16-5	
PCB-1248	Not detected	ug/kg	330	SW8082A	11/03/14 14:52	JAN	12672-29-6	
PCB-1254	Not detected	ug/kg	330	SW8082A	11/03/14 14:52	JAN	11097-69-1	
PCB-1260	Not detected	ug/kg	330	SW8082A	11/03/14 14:52	JAN	11096-82-5	

Organics - Semi-Volatiles

TPH DRO (C10-C28)	14,000	ug/kg	4,000	SW8015M	11/05/14 20:04	PL		
TPH ORO (C28-C36)	7,000	ug/kg	4,000	SW8015M	11/05/14 20:04	PL		

Polynuclear Aromatics

Acenaphthene	Not detected	ug/kg	300	SW8270D	11/05/14 20:04	PL	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	SW8270D	11/05/14 20:04	PL	208-96-8	
Anthracene	Not detected	ug/kg	300	SW8270D	11/05/14 20:04	PL	120-12-7	
Benzo(a)anthracene	Not detected	ug/kg	300	SW8270D	11/05/14 20:04	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/kg	300	SW8270D	11/05/14 20:04	PL	50-32-8	



Analytical Laboratory Report

Lab Sample ID: S63382.09 (continued)

Sample Tag: SB6-102814-0925

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatics (continued)								
Benzo(b)fluoranthene	Not detected	ug/kg	300	SW8270D	11/05/14 20:04	PL	205-99-2	
Benzo(k)fluoranthene	Not detected	ug/kg	300	SW8270D	11/05/14 20:04	PL	207-08-9	
Benzo(ghi)perylene	Not detected	ug/kg	300	SW8270D	11/05/14 20:04	PL	191-24-2	
Chrysene	Not detected	ug/kg	300	SW8270D	11/05/14 20:04	PL	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	SW8270D	11/05/14 20:04	PL	53-70-3	
Fluoranthene	Not detected	ug/kg	300	SW8270D	11/05/14 20:04	PL	206-44-0	
Fluorene	Not detected	ug/kg	300	SW8270D	11/05/14 20:04	PL	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	300	SW8270D	11/05/14 20:04	PL	193-39-5	
Naphthalene	Not detected	ug/kg	300	SW8270D	11/05/14 20:04	PL	91-20-3	
Phenanthrene	Not detected	ug/kg	300	SW8270D	11/05/14 20:04	PL	85-01-8	
Pyrene	Not detected	ug/kg	300	SW8270D	11/05/14 20:04	PL	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	SW8270D	11/05/14 20:04	PL	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	SW8270D	11/05/14 20:04	PL	90-12-0	
Organics - Volatiles								
TPH GRO (C6-C10)	Not detected	ug/kg	7,000	SW8015M	11/03/14 19:33	WAT		
TCL Volatile Organics HighLevel 5035/8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 18:09	WAT	76-13-1	
Acetone	Not detected	ug/kg	1,000	SW5035A/8260C	11/04/14 18:09	WAT	67-64-1	
Carbon disulfide	Not detected	ug/kg	300	SW5035A/8260C	11/04/14 18:09	WAT	75-15-0	
Methyl Acetate	Not detected	ug/kg	3,000	SW5035A/8260C	11/04/14 18:09	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/kg	300	SW5035A/8260C	11/04/14 18:09	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/kg	1,000	SW5035A/8260C	11/04/14 18:09	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 18:09	WAT	75-71-8	
Chloromethane	Not detected	ug/kg	300	SW5035A/8260C	11/04/14 18:09	WAT	74-87-3	
Vinyl chloride	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 18:09	WAT	75-01-4	
Bromomethane	Not detected	ug/kg	300	SW5035A/8260C	11/04/14 18:09	WAT	74-83-9	
Chloroethane	Not detected	ug/kg	300	SW5035A/8260C	11/04/14 18:09	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 18:09	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 18:09	WAT	75-35-4	
Methylene chloride	Not detected	ug/kg	300	SW5035A/8260C	11/04/14 18:09	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 18:09	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 18:09	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 18:09	WAT	156-59-2	
Chloroform	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 18:09	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 18:09	WAT	71-55-6	
Cyclohexane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 18:09	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	3,000	SW5035A/8260C	11/04/14 18:09	WAT	108-10-1	
2-Hexanone	Not detected	ug/kg	3,000	SW5035A/8260C	11/04/14 18:09	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 18:09	WAT	56-23-5	
Benzene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 18:09	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 18:09	WAT	107-06-2	
Trichloroethene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 18:09	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 18:09	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 18:09	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 18:09	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 18:09	WAT	10061-01-5	
Toluene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 18:09	WAT	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S63382.09 (continued)

Sample Tag: SB6-102814-0925

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics HighLevel 5035/8260 (continued)								
trans-1,3-Dichloropropene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 18:09	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 18:09	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 18:09	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 18:09	WAT	124-48-1	
1,2-Dibromoethane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 18:09	WAT	106-93-4	
Chlorobenzene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 18:09	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 18:09	WAT	79-34-5	
Ethylbenzene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 18:09	WAT	100-41-4	
p,m-Xylene	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 18:09	WAT		
o-Xylene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 18:09	WAT	95-47-6	
Styrene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 18:09	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 18:09	WAT	98-82-8	
Bromoform	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 18:09	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 18:09	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 18:09	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 18:09	WAT	95-50-1	
1,2-Dibromo-3-chloropropane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 18:09	WAT	96-12-8	
1,2,4-Trichlorobenzene	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 18:09	WAT	120-82-1	



Analytical Laboratory Report

Lab Sample ID: S63382.10
Sample Tag: SB5-102814-1010
Collected Date/Time: 10/28/2014 10:10
Matrix: Soil
COC Reference: 87579

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	5.2	IR
1	40ml Glass	MeOH	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

DRO Extraction	Completed			SW3550C	11/03/14 12:26	EMR		
Extraction, PCB	Completed			SW3550C	11/03/14 08:00	RGS		
Mercury Digestion	Completed			SW7471B	11/04/14 11:15	CCM		
Metal Digestion	Completed			SW3050B	11/03/14 12:00	CCM		
PNA Extraction	Completed			SW3550C	11/03/14 12:28	EMR		

Inorganics

Total Solids	89	%	1	SM2540B	10/30/14 18:30	BJB		
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Metals

Arsenic	1.62	mg/kg	0.20	SW6020A	11/04/14 11:38	PER	7440-38-2	
Barium	109	mg/kg	1.0	SW6020A	11/04/14 11:38	PER	7440-39-3	
Cadmium	0.65	mg/kg	0.20	SW6020A	11/03/14 15:42	CCM	7440-43-9	
Chromium	12.6	mg/kg	0.50	SW6020A	11/03/14 15:42	CCM	7440-47-3	
Copper	179	mg/kg	0.50	SW6020A	11/04/14 11:38	PER	7440-50-8	
Lead	130	mg/kg	0.30	SW6020A	11/03/14 15:42	CCM	7439-92-1	
Manganese	381	mg/kg	0.5	SW6020A	11/04/14 11:38	PER	7439-96-5	
Mercury	0.376	mg/kg	0.050	SW7471B	11/04/14 16:36	CCM	7439-97-6	
Selenium	Not detected	mg/kg	0.40	SW6020A	11/04/14 11:38	PER	7782-49-2	
Silver	Not detected	mg/kg	0.20	SW6020A	11/04/14 11:38	PER	7440-22-4	
Zinc	60.8	mg/kg	0.50	SW6020A	11/04/14 11:38	PER	7440-66-6	

Organics - PCBs/Pesticides

PCB List

PCB-1016	Not detected	ug/kg	330	SW8082A	11/03/14 15:02	JAN	12674-11-2	
PCB-1242	Not detected	ug/kg	330	SW8082A	11/03/14 15:02	JAN	53469-21-9	
PCB-1221	Not detected	ug/kg	330	SW8082A	11/03/14 15:02	JAN	11104-28-2	
PCB-1232	Not detected	ug/kg	330	SW8082A	11/03/14 15:02	JAN	11141-16-5	
PCB-1248	Not detected	ug/kg	330	SW8082A	11/03/14 15:02	JAN	12672-29-6	
PCB-1254	Not detected	ug/kg	330	SW8082A	11/03/14 15:02	JAN	11097-69-1	
PCB-1260	Not detected	ug/kg	330	SW8082A	11/03/14 15:02	JAN	11096-82-5	

Organics - Semi-Volatiles

TPH DRO (C10-C28)	50,000	ug/kg	30,000	SW8015M	11/06/14 00:05	PL		X
TPH ORO (C28-C36)	50,000	ug/kg	30,000	SW8015M	11/06/14 00:05	PL		X

Polynuclear Aromatics

Acenaphthene	Not detected	ug/kg	300	SW8270D	11/06/14 00:05	PL	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	SW8270D	11/06/14 00:05	PL	208-96-8	
Anthracene	Not detected	ug/kg	300	SW8270D	11/06/14 00:05	PL	120-12-7	
Benzo(a)anthracene	Not detected	ug/kg	300	SW8270D	11/06/14 00:05	PL	56-55-3	

X-Elevated reporting limit due to matrix interference



Analytical Laboratory Report

Lab Sample ID: S63382.10 (continued)

Sample Tag: SB5-102814-1010

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatics (continued)								
Benzo(a)pyrene	Not detected	ug/kg	300	SW8270D	11/06/14 00:05	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/kg	300	SW8270D	11/06/14 00:05	PL	205-99-2	
Benzo(k)fluoranthene	Not detected	ug/kg	300	SW8270D	11/06/14 00:05	PL	207-08-9	
Benzo(ghi)perylene	Not detected	ug/kg	300	SW8270D	11/06/14 00:05	PL	191-24-2	
Chrysene	Not detected	ug/kg	300	SW8270D	11/06/14 00:05	PL	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	SW8270D	11/06/14 00:05	PL	53-70-3	
Fluoranthene	Not detected	ug/kg	300	SW8270D	11/06/14 00:05	PL	206-44-0	
Fluorene	Not detected	ug/kg	300	SW8270D	11/06/14 00:05	PL	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	300	SW8270D	11/06/14 00:05	PL	193-39-5	
Naphthalene	Not detected	ug/kg	300	SW8270D	11/06/14 00:05	PL	91-20-3	
Phenanthrene	Not detected	ug/kg	300	SW8270D	11/06/14 00:05	PL	85-01-8	
Pyrene	Not detected	ug/kg	300	SW8270D	11/06/14 00:05	PL	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	SW8270D	11/06/14 00:05	PL	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	SW8270D	11/06/14 00:05	PL	90-12-0	
Organics - Volatiles								
TPH GRO (C6-C10)	Not detected	ug/kg	6,000	SW8015M	11/03/14 19:51	WAT		
TCL Volatile Organics HighLevel 5035/8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 18:29	WAT	76-13-1	
Acetone	Not detected	ug/kg	910	SW5035A/8260C	11/04/14 18:29	WAT	67-64-1	
Carbon disulfide	Not detected	ug/kg	300	SW5035A/8260C	11/04/14 18:29	WAT	75-15-0	
Methyl Acetate	Not detected	ug/kg	3,000	SW5035A/8260C	11/04/14 18:29	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/kg	300	SW5035A/8260C	11/04/14 18:29	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/kg	910	SW5035A/8260C	11/04/14 18:29	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 18:29	WAT	75-71-8	
Chloromethane	Not detected	ug/kg	300	SW5035A/8260C	11/04/14 18:29	WAT	74-87-3	
Vinyl chloride	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 18:29	WAT	75-01-4	
Bromomethane	Not detected	ug/kg	300	SW5035A/8260C	11/04/14 18:29	WAT	74-83-9	
Chloroethane	Not detected	ug/kg	300	SW5035A/8260C	11/04/14 18:29	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 18:29	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 18:29	WAT	75-35-4	
Methylene chloride	Not detected	ug/kg	300	SW5035A/8260C	11/04/14 18:29	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 18:29	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 18:29	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 18:29	WAT	156-59-2	
Chloroform	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 18:29	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 18:29	WAT	71-55-6	
Cyclohexane	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 18:29	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	3,000	SW5035A/8260C	11/04/14 18:29	WAT	108-10-1	
2-Hexanone	Not detected	ug/kg	3,000	SW5035A/8260C	11/04/14 18:29	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 18:29	WAT	56-23-5	
Benzene	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 18:29	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 18:29	WAT	107-06-2	
Trichloroethene	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 18:29	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 18:29	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 18:29	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 18:29	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 18:29	WAT	10061-01-5	



Analytical Laboratory Report

Lab Sample ID: S63382.10 (continued)

Sample Tag: SB5-102814-1010

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics HighLevel 5035/8260 (continued)								
Toluene	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 18:29	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 18:29	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 18:29	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 18:29	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 18:29	WAT	124-48-1	
1,2-Dibromoethane	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 18:29	WAT	106-93-4	
Chlorobenzene	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 18:29	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 18:29	WAT	79-34-5	
Ethylbenzene	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 18:29	WAT	100-41-4	
p,m-Xylene	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 18:29	WAT		
o-Xylene	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 18:29	WAT	95-47-6	
Styrene	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 18:29	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 18:29	WAT	98-82-8	
Bromoform	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 18:29	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 18:29	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 18:29	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 18:29	WAT	95-50-1	
1,2-Dibromo-3-chloropropane	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 18:29	WAT	96-12-8	
1,2,4-Trichlorobenzene	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 18:29	WAT	120-82-1	



Analytical Laboratory Report

Lab Sample ID: S63382.11
Sample Tag: SB4-102814-1045
Collected Date/Time: 10/28/2014 10:45
Matrix: Soil
COC Reference: 87579

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	5.2	IR
1	40ml Glass	MeOH	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

DRO Extraction	Completed			SW3550C	11/03/14 12:26	EMR		
Extraction, PCB	Completed			SW3550C	11/03/14 08:00	RGS		
Mercury Digestion	Completed			SW7471B	11/04/14 11:15	CCM		
Metal Digestion	Completed			SW3050B	11/03/14 12:00	CCM		
PNA Extraction	Completed			SW3550C	11/03/14 12:28	EMR		

Inorganics

Total Solids	61	%	1	SM2540B	10/30/14 18:30	BJB		
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Metals

Arsenic	2.73	mg/kg	0.20	SW6020A	11/04/14 11:52	PER	7440-38-2	
Barium	37.0	mg/kg	1.0	SW6020A	11/04/14 11:52	PER	7440-39-3	
Cadmium	0.68	mg/kg	0.20	SW6020A	11/03/14 15:44	CCM	7440-43-9	
Chromium	8.56	mg/kg	0.50	SW6020A	11/03/14 15:44	CCM	7440-47-3	
Copper	15.4	mg/kg	0.50	SW6020A	11/04/14 11:52	PER	7440-50-8	
Lead	7.98	mg/kg	0.30	SW6020A	11/03/14 15:44	CCM	7439-92-1	
Manganese	98.4	mg/kg	0.5	SW6020A	11/04/14 11:52	PER	7439-96-5	
Mercury	Not detected	mg/kg	0.050	SW7471B	11/04/14 16:40	CCM	7439-97-6	
Selenium	2.24	mg/kg	0.40	SW6020A	11/04/14 11:52	PER	7782-49-2	
Silver	Not detected	mg/kg	0.20	SW6020A	11/04/14 11:52	PER	7440-22-4	
Zinc	7.35	mg/kg	0.50	SW6020A	11/04/14 11:52	PER	7440-66-6	

Organics - PCBs/Pesticides

PCB List

PCB-1016	Not detected	ug/kg	330	SW8082A	11/04/14 10:19	JAN	12674-11-2	
PCB-1242	Not detected	ug/kg	330	SW8082A	11/04/14 10:19	JAN	53469-21-9	
PCB-1221	Not detected	ug/kg	330	SW8082A	11/04/14 10:19	JAN	11104-28-2	
PCB-1232	Not detected	ug/kg	330	SW8082A	11/04/14 10:19	JAN	11141-16-5	
PCB-1248	Not detected	ug/kg	330	SW8082A	11/04/14 10:19	JAN	12672-29-6	
PCB-1254	Not detected	ug/kg	330	SW8082A	11/04/14 10:19	JAN	11097-69-1	
PCB-1260	Not detected	ug/kg	330	SW8082A	11/04/14 10:19	JAN	11096-82-5	

Organics - Semi-Volatiles

TPH DRO (C10-C28)	58,000	ug/kg	44,000	SW8015M	11/06/14 00:29	PL		X
TPH ORO (C28-C36)	108,000	ug/kg	44,000	SW8015M	11/06/14 00:29	PL		X

Polynuclear Aromatics

Acenaphthene	Not detected	ug/kg	400	SW8270D	11/06/14 00:29	PL	83-32-9	K
Acenaphthylene	Not detected	ug/kg	400	SW8270D	11/06/14 00:29	PL	208-96-8	K
Anthracene	Not detected	ug/kg	400	SW8270D	11/06/14 00:29	PL	120-12-7	K

X-Elevated reporting limit due to matrix interference

K-Elevated reporting limit due to low total solids



Analytical Laboratory Report

Lab Sample ID: S63382.11 (continued)

Sample Tag: SB4-102814-1045

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatics (continued)								
Benzo(a)anthracene	Not detected	ug/kg	400	SW8270D	11/06/14 00:29	PL	56-55-3	K
Benzo(a)pyrene	Not detected	ug/kg	400	SW8270D	11/06/14 00:29	PL	50-32-8	K
Benzo(b)fluoranthene	Not detected	ug/kg	400	SW8270D	11/06/14 00:29	PL	205-99-2	K
Benzo(k)fluoranthene	Not detected	ug/kg	400	SW8270D	11/06/14 00:29	PL	207-08-9	K
Benzo(ghi)perylene	Not detected	ug/kg	400	SW8270D	11/06/14 00:29	PL	191-24-2	K
Chrysene	Not detected	ug/kg	400	SW8270D	11/06/14 00:29	PL	218-01-9	K
Dibenzo(ah)anthracene	Not detected	ug/kg	400	SW8270D	11/06/14 00:29	PL	53-70-3	K
Fluoranthene	Not detected	ug/kg	400	SW8270D	11/06/14 00:29	PL	206-44-0	K
Fluorene	Not detected	ug/kg	400	SW8270D	11/06/14 00:29	PL	86-73-7	K
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	400	SW8270D	11/06/14 00:29	PL	193-39-5	K
Naphthalene	Not detected	ug/kg	400	SW8270D	11/06/14 00:29	PL	91-20-3	K
Phenanthrene	Not detected	ug/kg	400	SW8270D	11/06/14 00:29	PL	85-01-8	K
Pyrene	Not detected	ug/kg	400	SW8270D	11/06/14 00:29	PL	129-00-0	K
2-Methylnaphthalene	Not detected	ug/kg	400	SW8270D	11/06/14 00:29	PL	91-57-6	K
1-Methylnaphthalene	Not detected	ug/kg	400	SW8270D	11/06/14 00:29	PL	90-12-0	K
Organics - Volatiles								
TPH GRO (C6-C10)	Not detected	ug/kg	10,000	SW8015M	11/03/14 20:09	WAT		
TCL Volatile Organics HighLevel 5035/8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 18:50	WAT	76-13-1	
Acetone	Not detected	ug/kg	1,800	SW5035A/8260C	11/04/14 18:50	WAT	67-64-1	
Carbon disulfide	Not detected	ug/kg	600	SW5035A/8260C	11/04/14 18:50	WAT	75-15-0	
Methyl Acetate	Not detected	ug/kg	6,000	SW5035A/8260C	11/04/14 18:50	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/kg	600	SW5035A/8260C	11/04/14 18:50	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/kg	1,800	SW5035A/8260C	11/04/14 18:50	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 18:50	WAT	75-71-8	
Chloromethane	Not detected	ug/kg	600	SW5035A/8260C	11/04/14 18:50	WAT	74-87-3	
Vinyl chloride	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 18:50	WAT	75-01-4	
Bromomethane	Not detected	ug/kg	600	SW5035A/8260C	11/04/14 18:50	WAT	74-83-9	
Chloroethane	Not detected	ug/kg	600	SW5035A/8260C	11/04/14 18:50	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 18:50	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 18:50	WAT	75-35-4	
Methylene chloride	Not detected	ug/kg	600	SW5035A/8260C	11/04/14 18:50	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 18:50	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 18:50	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 18:50	WAT	156-59-2	
Chloroform	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 18:50	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 18:50	WAT	71-55-6	
Cyclohexane	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 18:50	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	6,000	SW5035A/8260C	11/04/14 18:50	WAT	108-10-1	
2-Hexanone	Not detected	ug/kg	6,000	SW5035A/8260C	11/04/14 18:50	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 18:50	WAT	56-23-5	
Benzene	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 18:50	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 18:50	WAT	107-06-2	
Trichloroethene	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 18:50	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 18:50	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 18:50	WAT	75-27-4	

K-Elevated reporting limit due to low total solids



Analytical Laboratory Report

Lab Sample ID: S63382.11 (continued)

Sample Tag: SB4-102814-1045

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics HighLevel 5035/8260 (continued)								
Methyl cyclohexane	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 18:50	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 18:50	WAT	10061-01-5	
Toluene	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 18:50	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 18:50	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 18:50	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 18:50	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 18:50	WAT	124-48-1	
1,2-Dibromoethane	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 18:50	WAT	106-93-4	
Chlorobenzene	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 18:50	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 18:50	WAT	79-34-5	
Ethylbenzene	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 18:50	WAT	100-41-4	
p,m-Xylene	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 18:50	WAT		
o-Xylene	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 18:50	WAT	95-47-6	
Styrene	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 18:50	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 18:50	WAT	98-82-8	
Bromoform	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 18:50	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 18:50	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 18:50	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 18:50	WAT	95-50-1	
1,2-Dibromo-3-chloropropane	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 18:50	WAT	96-12-8	
1,2,4-Trichlorobenzene	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 18:50	WAT	120-82-1	



Analytical Laboratory Report

Lab Sample ID: S63382.12
Sample Tag: SB2-102814-1130
Collected Date/Time: 10/28/2014 11:30
Matrix: Soil
COC Reference: 87579

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	5.2	IR
1	40ml Glass	MeOH	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

DRO Extraction	Completed			SW3550C	11/03/14 12:26	EMR		
Extraction, PCB	Completed			SW3550C	11/03/14 08:00	RGS		
Mercury Digestion	Completed			SW7471B	11/04/14 11:15	CCM		
Metal Digestion	Completed			SW3050B	11/03/14 12:00	CCM		
PNA Extraction	Completed			SW3550C	11/03/14 12:28	EMR		

Inorganics

Total Solids	83	%	1	SM2540B	10/30/14 18:30	BJB		
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Metals

Arsenic	3.51	mg/kg	0.20	SW6020A	11/04/14 11:54	PER	7440-38-2	
Barium	28.0	mg/kg	1.0	SW6020A	11/04/14 11:54	PER	7440-39-3	
Cadmium	0.59	mg/kg	0.20	SW6020A	11/03/14 15:46	CCM	7440-43-9	
Chromium	28.2	mg/kg	0.50	SW6020A	11/03/14 15:46	CCM	7440-47-3	
Copper	17.0	mg/kg	0.50	SW6020A	11/04/14 11:54	PER	7440-50-8	
Lead	18.0	mg/kg	0.30	SW6020A	11/03/14 15:46	CCM	7439-92-1	
Manganese	52.0	mg/kg	0.5	SW6020A	11/04/14 11:54	PER	7439-96-5	
Mercury	0.056	mg/kg	0.050	SW7471B	11/04/14 16:42	CCM	7439-97-6	
Selenium	1.79	mg/kg	0.40	SW6020A	11/04/14 11:54	PER	7782-49-2	
Silver	Not detected	mg/kg	0.20	SW6020A	11/04/14 11:54	PER	7440-22-4	
Zinc	22.9	mg/kg	0.50	SW6020A	11/04/14 11:54	PER	7440-66-6	

Organics - PCBs/Pesticides

PCB List

PCB-1016	Not detected	ug/kg	330	SW8082A	11/04/14 10:30	JAN	12674-11-2	
PCB-1242	Not detected	ug/kg	330	SW8082A	11/04/14 10:30	JAN	53469-21-9	
PCB-1221	Not detected	ug/kg	330	SW8082A	11/04/14 10:30	JAN	11104-28-2	
PCB-1232	Not detected	ug/kg	330	SW8082A	11/04/14 10:30	JAN	11141-16-5	
PCB-1248	Not detected	ug/kg	330	SW8082A	11/04/14 10:30	JAN	12672-29-6	
PCB-1254	Not detected	ug/kg	330	SW8082A	11/04/14 10:30	JAN	11097-69-1	
PCB-1260	Not detected	ug/kg	330	SW8082A	11/04/14 10:30	JAN	11096-82-5	

Organics - Semi-Volatiles

TPH DRO (C10-C28)	8,000	ug/kg	4,000	SW8015M	11/05/14 20:29	PL		
TPH ORO (C28-C36)	6,000	ug/kg	4,000	SW8015M	11/05/14 20:29	PL		

Polynuclear Aromatics

Acenaphthene	Not detected	ug/kg	300	SW8270D	11/05/14 20:29	PL	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	SW8270D	11/05/14 20:29	PL	208-96-8	
Anthracene	Not detected	ug/kg	300	SW8270D	11/05/14 20:29	PL	120-12-7	
Benzo(a)anthracene	Not detected	ug/kg	300	SW8270D	11/05/14 20:29	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/kg	300	SW8270D	11/05/14 20:29	PL	50-32-8	



Analytical Laboratory Report

Lab Sample ID: S63382.12 (continued)

Sample Tag: SB2-102814-1130

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatics (continued)								
Benzo(b)fluoranthene	Not detected	ug/kg	300	SW8270D	11/05/14 20:29	PL	205-99-2	
Benzo(k)fluoranthene	Not detected	ug/kg	300	SW8270D	11/05/14 20:29	PL	207-08-9	
Benzo(ghi)perylene	Not detected	ug/kg	300	SW8270D	11/05/14 20:29	PL	191-24-2	
Chrysene	Not detected	ug/kg	300	SW8270D	11/05/14 20:29	PL	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	SW8270D	11/05/14 20:29	PL	53-70-3	
Fluoranthene	Not detected	ug/kg	300	SW8270D	11/05/14 20:29	PL	206-44-0	
Fluorene	Not detected	ug/kg	300	SW8270D	11/05/14 20:29	PL	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	300	SW8270D	11/05/14 20:29	PL	193-39-5	
Naphthalene	Not detected	ug/kg	300	SW8270D	11/05/14 20:29	PL	91-20-3	
Phenanthrene	Not detected	ug/kg	300	SW8270D	11/05/14 20:29	PL	85-01-8	
Pyrene	Not detected	ug/kg	300	SW8270D	11/05/14 20:29	PL	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	SW8270D	11/05/14 20:29	PL	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	SW8270D	11/05/14 20:29	PL	90-12-0	
Organics - Volatiles								
TPH GRO (C6-C10)	Not detected	ug/kg	7,000	SW8015M	11/03/14 20:27	WAT		
TCL Volatile Organics HighLevel 5035/8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 19:10	WAT	76-13-1	
Acetone	Not detected	ug/kg	1,100	SW5035A/8260C	11/04/14 19:10	WAT	67-64-1	
Carbon disulfide	Not detected	ug/kg	400	SW5035A/8260C	11/04/14 19:10	WAT	75-15-0	
Methyl Acetate	Not detected	ug/kg	4,000	SW5035A/8260C	11/04/14 19:10	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/kg	400	SW5035A/8260C	11/04/14 19:10	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/kg	1,100	SW5035A/8260C	11/04/14 19:10	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:10	WAT	75-71-8	
Chloromethane	Not detected	ug/kg	400	SW5035A/8260C	11/04/14 19:10	WAT	74-87-3	
Vinyl chloride	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 19:10	WAT	75-01-4	
Bromomethane	Not detected	ug/kg	400	SW5035A/8260C	11/04/14 19:10	WAT	74-83-9	
Chloroethane	Not detected	ug/kg	400	SW5035A/8260C	11/04/14 19:10	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 19:10	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:10	WAT	75-35-4	
Methylene chloride	Not detected	ug/kg	400	SW5035A/8260C	11/04/14 19:10	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:10	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:10	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:10	WAT	156-59-2	
Chloroform	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:10	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:10	WAT	71-55-6	
Cyclohexane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:10	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	4,000	SW5035A/8260C	11/04/14 19:10	WAT	108-10-1	
2-Hexanone	Not detected	ug/kg	4,000	SW5035A/8260C	11/04/14 19:10	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:10	WAT	56-23-5	
Benzene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:10	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:10	WAT	107-06-2	
Trichloroethene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:10	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:10	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:10	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:10	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:10	WAT	10061-01-5	
Toluene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:10	WAT	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S63382.12 (continued)

Sample Tag: SB2-102814-1130

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics HighLevel 5035/8260 (continued)								
trans-1,3-Dichloropropene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:10	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:10	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:10	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:10	WAT	124-48-1	
1,2-Dibromoethane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:10	WAT	106-93-4	
Chlorobenzene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:10	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:10	WAT	79-34-5	
Ethylbenzene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:10	WAT	100-41-4	
p,m-Xylene	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 19:10	WAT		
o-Xylene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:10	WAT	95-47-6	
Styrene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:10	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:10	WAT	98-82-8	
Bromoform	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:10	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:10	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:10	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:10	WAT	95-50-1	
1,2-Dibromo-3-chloropropane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:10	WAT	96-12-8	
1,2,4-Trichlorobenzene	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 19:10	WAT	120-82-1	



Analytical Laboratory Report

Lab Sample ID: S63382.13
Sample Tag: SB3-102814-1205
Collected Date/Time: 10/28/2014 12:05
Matrix: Soil
COC Reference: 87580

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	5.2	IR
1	40ml Glass	MeOH	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

DRO Extraction	Completed			SW3550C	11/03/14 12:26	EMR		
Extraction, PCB	Completed			SW3550C	11/03/14 08:00	RGS		
Mercury Digestion	Completed			SW7471B	11/04/14 11:15	CCM		
Metal Digestion	Completed			SW3050B	11/03/14 12:00	CCM		
PNA Extraction	Completed			SW3550C	11/03/14 12:28	EMR		

Inorganics

Total Solids	84	%	1	SM2540B	10/30/14 18:30	BJB		
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Metals

Arsenic	2.38	mg/kg	0.20	SW6020A	11/04/14 11:56	PER	7440-38-2	
Barium	27.5	mg/kg	1.0	SW6020A	11/04/14 11:56	PER	7440-39-3	
Cadmium	0.45	mg/kg	0.20	SW6020A	11/03/14 16:06	CCM	7440-43-9	
Chromium	6.04	mg/kg	0.50	SW6020A	11/03/14 16:06	CCM	7440-47-3	
Copper	9.65	mg/kg	0.50	SW6020A	11/04/14 11:56	PER	7440-50-8	
Lead	7.67	mg/kg	0.30	SW6020A	11/03/14 16:06	CCM	7439-92-1	
Manganese	47.8	mg/kg	0.5	SW6020A	11/04/14 11:56	PER	7439-96-5	
Mercury	Not detected	mg/kg	0.050	SW7471B	11/04/14 16:44	CCM	7439-97-6	
Selenium	1.85	mg/kg	0.40	SW6020A	11/04/14 11:56	PER	7782-49-2	
Silver	Not detected	mg/kg	0.20	SW6020A	11/04/14 11:56	PER	7440-22-4	
Zinc	9.81	mg/kg	0.50	SW6020A	11/04/14 11:56	PER	7440-66-6	

Organics - PCBs/Pesticides

PCB List

PCB-1016	Not detected	ug/kg	330	SW8082A	11/04/14 10:41	JAN	12674-11-2	
PCB-1242	Not detected	ug/kg	330	SW8082A	11/04/14 10:41	JAN	53469-21-9	
PCB-1221	Not detected	ug/kg	330	SW8082A	11/04/14 10:41	JAN	11104-28-2	
PCB-1232	Not detected	ug/kg	330	SW8082A	11/04/14 10:41	JAN	11141-16-5	
PCB-1248	Not detected	ug/kg	330	SW8082A	11/04/14 10:41	JAN	12672-29-6	
PCB-1254	Not detected	ug/kg	330	SW8082A	11/04/14 10:41	JAN	11097-69-1	
PCB-1260	Not detected	ug/kg	330	SW8082A	11/04/14 10:41	JAN	11096-82-5	

Organics - Semi-Volatiles

TPH DRO (C10-C28)	11,000	ug/kg	4,000	SW8015M	11/05/14 20:53	PL		
TPH ORO (C28-C36)	5,000	ug/kg	4,000	SW8015M	11/05/14 20:53	PL		

Polynuclear Aromatics

Acenaphthene	Not detected	ug/kg	300	SW8270D	11/05/14 20:53	PL	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	SW8270D	11/05/14 20:53	PL	208-96-8	
Anthracene	Not detected	ug/kg	300	SW8270D	11/05/14 20:53	PL	120-12-7	
Benzo(a)anthracene	Not detected	ug/kg	300	SW8270D	11/05/14 20:53	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/kg	300	SW8270D	11/05/14 20:53	PL	50-32-8	



Analytical Laboratory Report

Lab Sample ID: S63382.13 (continued)

Sample Tag: SB3-102814-1205

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatics (continued)								
Benzo(b)fluoranthene	Not detected	ug/kg	300	SW8270D	11/05/14 20:53	PL	205-99-2	
Benzo(k)fluoranthene	Not detected	ug/kg	300	SW8270D	11/05/14 20:53	PL	207-08-9	
Benzo(ghi)perylene	Not detected	ug/kg	300	SW8270D	11/05/14 20:53	PL	191-24-2	
Chrysene	Not detected	ug/kg	300	SW8270D	11/05/14 20:53	PL	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	SW8270D	11/05/14 20:53	PL	53-70-3	
Fluoranthene	Not detected	ug/kg	300	SW8270D	11/05/14 20:53	PL	206-44-0	
Fluorene	Not detected	ug/kg	300	SW8270D	11/05/14 20:53	PL	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	300	SW8270D	11/05/14 20:53	PL	193-39-5	
Naphthalene	Not detected	ug/kg	300	SW8270D	11/05/14 20:53	PL	91-20-3	
Phenanthrene	Not detected	ug/kg	300	SW8270D	11/05/14 20:53	PL	85-01-8	
Pyrene	Not detected	ug/kg	300	SW8270D	11/05/14 20:53	PL	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	SW8270D	11/05/14 20:53	PL	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	SW8270D	11/05/14 20:53	PL	90-12-0	
Organics - Volatiles								
TPH GRO (C6-C10)	Not detected	ug/kg	7,000	SW8015M	11/03/14 20:45	WAT		
TCL Volatile Organics HighLevel 5035/8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 19:31	WAT	76-13-1	
Acetone	Not detected	ug/kg	1,000	SW5035A/8260C	11/04/14 19:31	WAT	67-64-1	
Carbon disulfide	Not detected	ug/kg	300	SW5035A/8260C	11/04/14 19:31	WAT	75-15-0	
Methyl Acetate	Not detected	ug/kg	3,000	SW5035A/8260C	11/04/14 19:31	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/kg	300	SW5035A/8260C	11/04/14 19:31	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/kg	1,000	SW5035A/8260C	11/04/14 19:31	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:31	WAT	75-71-8	
Chloromethane	Not detected	ug/kg	300	SW5035A/8260C	11/04/14 19:31	WAT	74-87-3	
Vinyl chloride	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 19:31	WAT	75-01-4	
Bromomethane	Not detected	ug/kg	300	SW5035A/8260C	11/04/14 19:31	WAT	74-83-9	
Chloroethane	Not detected	ug/kg	300	SW5035A/8260C	11/04/14 19:31	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 19:31	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:31	WAT	75-35-4	
Methylene chloride	Not detected	ug/kg	300	SW5035A/8260C	11/04/14 19:31	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:31	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:31	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:31	WAT	156-59-2	
Chloroform	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:31	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:31	WAT	71-55-6	
Cyclohexane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:31	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	3,000	SW5035A/8260C	11/04/14 19:31	WAT	108-10-1	
2-Hexanone	Not detected	ug/kg	3,000	SW5035A/8260C	11/04/14 19:31	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:31	WAT	56-23-5	
Benzene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:31	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:31	WAT	107-06-2	
Trichloroethene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:31	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:31	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:31	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:31	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:31	WAT	10061-01-5	
Toluene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:31	WAT	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S63382.13 (continued)

Sample Tag: SB3-102814-1205

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics HighLevel 5035/8260 (continued)								
trans-1,3-Dichloropropene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:31	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:31	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:31	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:31	WAT	124-48-1	
1,2-Dibromoethane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:31	WAT	106-93-4	
Chlorobenzene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:31	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:31	WAT	79-34-5	
Ethylbenzene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:31	WAT	100-41-4	
p,m-Xylene	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 19:31	WAT		
o-Xylene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:31	WAT	95-47-6	
Styrene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:31	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:31	WAT	98-82-8	
Bromoform	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:31	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:31	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:31	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:31	WAT	95-50-1	
1,2-Dibromo-3-chloropropane	Not detected	ug/kg	70	SW5035A/8260C	11/04/14 19:31	WAT	96-12-8	
1,2,4-Trichlorobenzene	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 19:31	WAT	120-82-1	



Analytical Laboratory Report

Lab Sample ID: S63382.14
Sample Tag: SB1-102814-1245
Collected Date/Time: 10/28/2014 12:45
Matrix: Soil
COC Reference: 87580

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	5.2	IR
1	40ml Glass	MeOH	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

DRO Extraction	Completed			SW3550C	11/03/14 12:26	EMR		
Extraction, PCB	Completed			SW3550C	11/06/14 08:00	RGS		
Mercury Digestion	Completed			SW7471B	11/04/14 11:15	CCM		
Metal Digestion	Completed			SW3050B	11/03/14 12:00	CCM		
PNA Extraction	Completed			SW3550C	11/03/14 12:28	EMR		

Inorganics

Total Solids	70	%	1	SM2540B	10/31/14 10:20	BJB		
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Metals

Arsenic	2.26	mg/kg	0.20	SW6020A	11/04/14 11:59	PER	7440-38-2	
Barium	18.2	mg/kg	1.0	SW6020A	11/04/14 11:59	PER	7440-39-3	
Cadmium	0.25	mg/kg	0.20	SW6020A	11/03/14 16:08	CCM	7440-43-9	
Chromium	7.39	mg/kg	0.50	SW6020A	11/03/14 16:08	CCM	7440-47-3	
Copper	14.7	mg/kg	0.50	SW6020A	11/04/14 11:59	PER	7440-50-8	
Lead	14.7	mg/kg	0.30	SW6020A	11/03/14 16:08	CCM	7439-92-1	
Manganese	65.0	mg/kg	0.5	SW6020A	11/04/14 11:59	PER	7439-96-5	
Mercury	Not detected	mg/kg	0.050	SW7471B	11/04/14 16:46	CCM	7439-97-6	
Selenium	1.26	mg/kg	0.40	SW6020A	11/04/14 11:59	PER	7782-49-2	
Silver	Not detected	mg/kg	0.20	SW6020A	11/04/14 11:59	PER	7440-22-4	
Zinc	8.28	mg/kg	0.50	SW6020A	11/04/14 11:59	PER	7440-66-6	

Organics - PCBs/Pesticides

PCB List

PCB-1016	Not detected	ug/kg	330	SW8082A	11/06/14 09:59	ADB	12674-11-2	
PCB-1242	Not detected	ug/kg	330	SW8082A	11/06/14 09:59	ADB	53469-21-9	
PCB-1221	Not detected	ug/kg	330	SW8082A	11/06/14 09:59	ADB	11104-28-2	
PCB-1232	Not detected	ug/kg	330	SW8082A	11/06/14 09:59	ADB	11141-16-5	
PCB-1248	Not detected	ug/kg	330	SW8082A	11/06/14 09:59	ADB	12672-29-6	
PCB-1254	Not detected	ug/kg	330	SW8082A	11/06/14 09:59	ADB	11097-69-1	
PCB-1260	Not detected	ug/kg	330	SW8082A	11/06/14 09:59	ADB	11096-82-5	

Organics - Semi-Volatiles

TPH DRO (C10-C28)	28,000	ug/kg	4,000	SW8015M	11/05/14 21:17	PL		
TPH ORO (C28-C36)	10,000	ug/kg	4,000	SW8015M	11/05/14 21:17	PL		

Polynuclear Aromatics

Acenaphthene	Not detected	ug/kg	300	SW8270D	11/05/14 21:17	PL	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	SW8270D	11/05/14 21:17	PL	208-96-8	
Anthracene	Not detected	ug/kg	300	SW8270D	11/05/14 21:17	PL	120-12-7	
Benzo(a)anthracene	Not detected	ug/kg	300	SW8270D	11/05/14 21:17	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/kg	300	SW8270D	11/05/14 21:17	PL	50-32-8	



Analytical Laboratory Report

Lab Sample ID: S63382.14 (continued)

Sample Tag: SB1-102814-1245

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatics (continued)								
Benzo(b)fluoranthene	Not detected	ug/kg	300	SW8270D	11/05/14 21:17	PL	205-99-2	
Benzo(k)fluoranthene	Not detected	ug/kg	300	SW8270D	11/05/14 21:17	PL	207-08-9	
Benzo(ghi)perylene	Not detected	ug/kg	300	SW8270D	11/05/14 21:17	PL	191-24-2	
Chrysene	Not detected	ug/kg	300	SW8270D	11/05/14 21:17	PL	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	SW8270D	11/05/14 21:17	PL	53-70-3	
Fluoranthene	Not detected	ug/kg	300	SW8270D	11/05/14 21:17	PL	206-44-0	
Fluorene	Not detected	ug/kg	300	SW8270D	11/05/14 21:17	PL	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	300	SW8270D	11/05/14 21:17	PL	193-39-5	
Naphthalene	Not detected	ug/kg	300	SW8270D	11/05/14 21:17	PL	91-20-3	
Phenanthrene	Not detected	ug/kg	300	SW8270D	11/05/14 21:17	PL	85-01-8	
Pyrene	Not detected	ug/kg	300	SW8270D	11/05/14 21:17	PL	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	SW8270D	11/05/14 21:17	PL	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	SW8270D	11/05/14 21:17	PL	90-12-0	
Organics - Volatiles								
TPH GRO (C6-C10)	Not detected	ug/kg	9,000	SW8015M	11/03/14 21:03	WAT		
TCL Volatile Organics HighLevel 5035/8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 19:51	WAT	76-13-1	
Acetone	Not detected	ug/kg	1,400	SW5035A/8260C	11/04/14 19:51	WAT	67-64-1	
Carbon disulfide	Not detected	ug/kg	500	SW5035A/8260C	11/04/14 19:51	WAT	75-15-0	
Methyl Acetate	Not detected	ug/kg	5,000	SW5035A/8260C	11/04/14 19:51	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/kg	500	SW5035A/8260C	11/04/14 19:51	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/kg	1,400	SW5035A/8260C	11/04/14 19:51	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 19:51	WAT	75-71-8	
Chloromethane	Not detected	ug/kg	500	SW5035A/8260C	11/04/14 19:51	WAT	74-87-3	
Vinyl chloride	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 19:51	WAT	75-01-4	
Bromomethane	Not detected	ug/kg	500	SW5035A/8260C	11/04/14 19:51	WAT	74-83-9	
Chloroethane	Not detected	ug/kg	500	SW5035A/8260C	11/04/14 19:51	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 19:51	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 19:51	WAT	75-35-4	
Methylene chloride	Not detected	ug/kg	500	SW5035A/8260C	11/04/14 19:51	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 19:51	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 19:51	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 19:51	WAT	156-59-2	
Chloroform	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 19:51	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 19:51	WAT	71-55-6	
Cyclohexane	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 19:51	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	5,000	SW5035A/8260C	11/04/14 19:51	WAT	108-10-1	
2-Hexanone	Not detected	ug/kg	5,000	SW5035A/8260C	11/04/14 19:51	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 19:51	WAT	56-23-5	
Benzene	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 19:51	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 19:51	WAT	107-06-2	
Trichloroethene	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 19:51	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 19:51	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 19:51	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 19:51	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 19:51	WAT	10061-01-5	
Toluene	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 19:51	WAT	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S63382.14 (continued)

Sample Tag: SB1-102814-1245

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics HighLevel 5035/8260 (continued)								
trans-1,3-Dichloropropene	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 19:51	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 19:51	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 19:51	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 19:51	WAT	124-48-1	
1,2-Dibromoethane	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 19:51	WAT	106-93-4	
Chlorobenzene	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 19:51	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 19:51	WAT	79-34-5	
Ethylbenzene	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 19:51	WAT	100-41-4	
p,m-Xylene	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 19:51	WAT		
o-Xylene	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 19:51	WAT	95-47-6	
Styrene	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 19:51	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 19:51	WAT	98-82-8	
Bromoform	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 19:51	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 19:51	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 19:51	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 19:51	WAT	95-50-1	
1,2-Dibromo-3-chloropropane	Not detected	ug/kg	90	SW5035A/8260C	11/04/14 19:51	WAT	96-12-8	
1,2,4-Trichlorobenzene	Not detected	ug/kg	200	SW5035A/8260C	11/04/14 19:51	WAT	120-82-1	



Analytical Laboratory Report

Lab Sample ID: S63382.15
Sample Tag: SB10-102814-1335
Collected Date/Time: 10/28/2014 13:35
Matrix: Soil
COC Reference: 87580

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	5.2	IR
1	40ml Glass	MeOH	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

DRO Extraction	Completed			SW3550C	11/03/14 12:26	EMR		
Extraction, PCB	Completed			SW3550C	10/31/14 10:00	RGS		
Mercury Digestion	Completed			SW7471B	11/04/14 11:15	CCM		
Metal Digestion	Completed			SW3050B	11/03/14 12:00	CCM		
PNA Extraction	Completed			SW3550C	11/03/14 12:28	EMR		

Inorganics

Total Solids	90	%	1	SM2540B	10/31/14 10:20	BJB		
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Metals

Arsenic	1.71	mg/kg	0.20	SW6020A	11/04/14 12:01	PER	7440-38-2	
Barium	36.9	mg/kg	1.0	SW6020A	11/04/14 12:01	PER	7440-39-3	
Cadmium	0.21	mg/kg	0.20	SW6020A	11/03/14 16:14	CCM	7440-43-9	
Chromium	5.65	mg/kg	0.50	SW6020A	11/03/14 16:14	CCM	7440-47-3	
Copper	8.30	mg/kg	0.50	SW6020A	11/04/14 12:01	PER	7440-50-8	
Lead	7.94	mg/kg	0.30	SW6020A	11/03/14 16:14	CCM	7439-92-1	
Manganese	41.0	mg/kg	0.5	SW6020A	11/04/14 12:01	PER	7439-96-5	
Mercury	Not detected	mg/kg	0.050	SW7471B	11/04/14 16:25	CCM	7439-97-6	
Selenium	0.90	mg/kg	0.40	SW6020A	11/04/14 12:01	PER	7782-49-2	
Silver	Not detected	mg/kg	0.20	SW6020A	11/04/14 12:01	PER	7440-22-4	
Zinc	9.11	mg/kg	0.50	SW6020A	11/04/14 12:01	PER	7440-66-6	

Organics - PCBs/Pesticides

PCB List

PCB-1016	Not detected	ug/kg	330	SW8082A	10/31/14 12:11	JAN	12674-11-2	
PCB-1242	Not detected	ug/kg	330	SW8082A	10/31/14 12:11	JAN	53469-21-9	
PCB-1221	Not detected	ug/kg	330	SW8082A	10/31/14 12:11	JAN	11104-28-2	
PCB-1232	Not detected	ug/kg	330	SW8082A	10/31/14 12:11	JAN	11141-16-5	
PCB-1248	Not detected	ug/kg	330	SW8082A	10/31/14 12:11	JAN	12672-29-6	
PCB-1254	Not detected	ug/kg	330	SW8082A	10/31/14 12:11	JAN	11097-69-1	
PCB-1260	Not detected	ug/kg	330	SW8082A	10/31/14 12:11	JAN	11096-82-5	

Organics - Semi-Volatiles

TPH DRO (C10-C28)	7,000	ug/kg	4,000	SW8015M	11/05/14 21:42	PL		
TPH ORO (C28-C36)	Not detected	ug/kg	4,000	SW8015M	11/05/14 21:42	PL		

Polynuclear Aromatics

Acenaphthene	Not detected	ug/kg	300	SW8270D	11/05/14 21:42	PL	83-32-9	
Acenaphthylene	Not detected	ug/kg	300	SW8270D	11/05/14 21:42	PL	208-96-8	
Anthracene	Not detected	ug/kg	300	SW8270D	11/05/14 21:42	PL	120-12-7	
Benzo(a)anthracene	Not detected	ug/kg	300	SW8270D	11/05/14 21:42	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/kg	300	SW8270D	11/05/14 21:42	PL	50-32-8	



Analytical Laboratory Report

Lab Sample ID: S63382.15 (continued)

Sample Tag: SB10-102814-1335

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatics (continued)								
Benzo(b)fluoranthene	Not detected	ug/kg	300	SW8270D	11/05/14 21:42	PL	205-99-2	
Benzo(k)fluoranthene	Not detected	ug/kg	300	SW8270D	11/05/14 21:42	PL	207-08-9	
Benzo(ghi)perylene	Not detected	ug/kg	300	SW8270D	11/05/14 21:42	PL	191-24-2	
Chrysene	Not detected	ug/kg	300	SW8270D	11/05/14 21:42	PL	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/kg	300	SW8270D	11/05/14 21:42	PL	53-70-3	
Fluoranthene	Not detected	ug/kg	300	SW8270D	11/05/14 21:42	PL	206-44-0	
Fluorene	Not detected	ug/kg	300	SW8270D	11/05/14 21:42	PL	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/kg	300	SW8270D	11/05/14 21:42	PL	193-39-5	
Naphthalene	Not detected	ug/kg	300	SW8270D	11/05/14 21:42	PL	91-20-3	
Phenanthrene	Not detected	ug/kg	300	SW8270D	11/05/14 21:42	PL	85-01-8	
Pyrene	Not detected	ug/kg	300	SW8270D	11/05/14 21:42	PL	129-00-0	
2-Methylnaphthalene	Not detected	ug/kg	300	SW8270D	11/05/14 21:42	PL	91-57-6	
1-Methylnaphthalene	Not detected	ug/kg	300	SW8270D	11/05/14 21:42	PL	90-12-0	
Organics - Volatiles								
TPH GRO (C6-C10)	Not detected	ug/kg	6,000	SW8015M	11/03/14 21:22	WAT		
TCL Volatile Organics HighLevel 5035/8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 20:11	WAT	76-13-1	
Acetone	Not detected	ug/kg	890	SW5035A/8260C	11/04/14 20:11	WAT	67-64-1	
Carbon disulfide	Not detected	ug/kg	300	SW5035A/8260C	11/04/14 20:11	WAT	75-15-0	
Methyl Acetate	Not detected	ug/kg	3,000	SW5035A/8260C	11/04/14 20:11	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/kg	300	SW5035A/8260C	11/04/14 20:11	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/kg	890	SW5035A/8260C	11/04/14 20:11	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 20:11	WAT	75-71-8	
Chloromethane	Not detected	ug/kg	300	SW5035A/8260C	11/04/14 20:11	WAT	74-87-3	
Vinyl chloride	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 20:11	WAT	75-01-4	
Bromomethane	Not detected	ug/kg	300	SW5035A/8260C	11/04/14 20:11	WAT	74-83-9	
Chloroethane	Not detected	ug/kg	300	SW5035A/8260C	11/04/14 20:11	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 20:11	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 20:11	WAT	75-35-4	
Methylene chloride	Not detected	ug/kg	300	SW5035A/8260C	11/04/14 20:11	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 20:11	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 20:11	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 20:11	WAT	156-59-2	
Chloroform	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 20:11	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 20:11	WAT	71-55-6	
Cyclohexane	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 20:11	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	3,000	SW5035A/8260C	11/04/14 20:11	WAT	108-10-1	
2-Hexanone	Not detected	ug/kg	3,000	SW5035A/8260C	11/04/14 20:11	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 20:11	WAT	56-23-5	
Benzene	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 20:11	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 20:11	WAT	107-06-2	
Trichloroethene	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 20:11	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 20:11	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 20:11	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 20:11	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 20:11	WAT	10061-01-5	
Toluene	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 20:11	WAT	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S63382.15 (continued)

Sample Tag: SB10-102814-1335

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics HighLevel 5035/8260 (continued)								
trans-1,3-Dichloropropene	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 20:11	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 20:11	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 20:11	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 20:11	WAT	124-48-1	
1,2-Dibromoethane	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 20:11	WAT	106-93-4	
Chlorobenzene	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 20:11	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 20:11	WAT	79-34-5	
Ethylbenzene	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 20:11	WAT	100-41-4	
p,m-Xylene	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 20:11	WAT		
o-Xylene	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 20:11	WAT	95-47-6	
Styrene	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 20:11	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 20:11	WAT	98-82-8	
Bromoform	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 20:11	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 20:11	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 20:11	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 20:11	WAT	95-50-1	
1,2-Dibromo-3-chloropropane	Not detected	ug/kg	60	SW5035A/8260C	11/04/14 20:11	WAT	96-12-8	
1,2,4-Trichlorobenzene	Not detected	ug/kg	100	SW5035A/8260C	11/04/14 20:11	WAT	120-82-1	



Analytical Laboratory Report

Lab Sample ID: S63382.16
Sample Tag: SB10-102814-1335 MS
Collected Date/Time: 10/28/2014 13:35
Matrix: Soil
COC Reference: 87580

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	5.2	IR
1	40ml Glass	MeOH	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

DRO Extraction	Completed			SW3550C	11/03/14 12:26	EMR		
Extraction, PCB	Completed			SW3550C	10/31/14 10:00	RGS		
Mercury Digestion	Completed			SW7471B	11/04/14 11:15	CCM		
Metal Digestion	Completed			SW3050B	11/03/14 12:00	CCM		
PNA Extraction	Completed			SW3550C	11/03/14 12:28	EMR		

Inorganics

Total Solids	92	%	1	SM2540B	10/31/14 10:20	BJB		
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Metals

Arsenic	22.9	mg/kg	0.20	SW6020A	11/04/14 12:07	PER	7440-38-2	
Barium	55.6	mg/kg	1.0	SW6020A	11/04/14 12:07	PER	7440-39-3	
Cadmium	19.41	mg/kg	0.20	SW6020A	11/03/14 16:16	CCM	7440-43-9	
Chromium	27.0	mg/kg	0.50	SW6020A	11/03/14 16:16	CCM	7440-47-3	
Copper	28.6	mg/kg	0.50	SW6020A	11/04/14 12:07	PER	7440-50-8	
Lead	26.4	mg/kg	0.30	SW6020A	11/03/14 16:16	CCM	7439-92-1	
Manganese	59.5	mg/kg	0.5	SW6020A	11/04/14 12:07	PER	7439-96-5	
Mercury	0.114	mg/kg	0.050	SW7471B	11/04/14 16:27	CCM	7439-97-6	
Selenium	21.8	mg/kg	0.40	SW6020A	11/04/14 12:07	PER	7782-49-2	
Silver	19.6	mg/kg	0.20	SW6020A	11/04/14 12:07	PER	7440-22-4	
Zinc	29.1	mg/kg	0.50	SW6020A	11/04/14 12:07	PER	7440-66-6	

Organics - PCBs/Pesticides

PCB List

PCB-1016	30	ug/kg	330	SW8082A	10/31/14 12:39	JAN	12674-11-2	
PCB-1242	Not detected	ug/kg	330	SW8082A	10/31/14 12:39	JAN	53469-21-9	
PCB-1221	Not detected	ug/kg	330	SW8082A	10/31/14 12:39	JAN	11104-28-2	
PCB-1232	Not detected	ug/kg	330	SW8082A	10/31/14 12:39	JAN	11141-16-5	
PCB-1248	Not detected	ug/kg	330	SW8082A	10/31/14 12:39	JAN	12672-29-6	
PCB-1254	Not detected	ug/kg	330	SW8082A	10/31/14 12:39	JAN	11097-69-1	
PCB-1260	20	ug/kg	330	SW8082A	10/31/14 12:39	JAN	11096-82-5	

Organics - Semi-Volatiles

TPH DRO (C10-C28)	17,000	ug/kg	4,000	SW8015M	11/05/14 22:07	PL		1
TPH ORO (C28-C36)	17,000	ug/kg	4,000	SW8015M	11/05/14 22:07	PL		1

Polynuclear Aromatics

Acenaphthene	1,000	ug/kg	300	SW8270D	11/05/14 22:07	PL	83-32-9	2
Acenaphthylene	1,000	ug/kg	300	SW8270D	11/05/14 22:07	PL	208-96-8	2
Anthracene	1,100	ug/kg	300	SW8270D	11/05/14 22:07	PL	120-12-7	2

1-Sample spiked at 13 mg/kg
2-Sample spiked at 1.7 mg/kg



Analytical Laboratory Report

Lab Sample ID: S63382.16 (continued)

Sample Tag: SB10-102814-1335 MS

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatics (continued)								
Benzo(a)anthracene	1,100	ug/kg	300	SW8270D	11/05/14 22:07	PL	56-55-3	1
Benzo(a)pyrene	1,100	ug/kg	300	SW8270D	11/05/14 22:07	PL	50-32-8	1
Benzo(b)fluoranthene	1,200	ug/kg	300	SW8270D	11/05/14 22:07	PL	205-99-2	1
Benzo(k)fluoranthene	1,200	ug/kg	300	SW8270D	11/05/14 22:07	PL	207-08-9	1
Benzo(ghi)perylene	600	ug/kg	300	SW8270D	11/05/14 22:07	PL	191-24-2	1
Chrysene	1,100	ug/kg	300	SW8270D	11/05/14 22:07	PL	218-01-9	1
Dibenzo(ah)anthracene	800	ug/kg	300	SW8270D	11/05/14 22:07	PL	53-70-3	1
Fluoranthene	1,200	ug/kg	300	SW8270D	11/05/14 22:07	PL	206-44-0	1
Fluorene	1,100	ug/kg	300	SW8270D	11/05/14 22:07	PL	86-73-7	1
Indeno(1,2,3-cd)pyrene	800	ug/kg	300	SW8270D	11/05/14 22:07	PL	193-39-5	1
Naphthalene	1,000	ug/kg	300	SW8270D	11/05/14 22:07	PL	91-20-3	1
Phenanthrene	1,100	ug/kg	300	SW8270D	11/05/14 22:07	PL	85-01-8	1
Pyrene	1,100	ug/kg	300	SW8270D	11/05/14 22:07	PL	129-00-0	1
2-Methylnaphthalene	1,100	ug/kg	300	SW8270D	11/05/14 22:07	PL	91-57-6	1
1-Methylnaphthalene	1,100	ug/kg	300	SW8270D	11/05/14 22:07	PL	90-12-0	1
Organics - Volatiles								
TPH GRO (C6-C10)	63,000	ug/kg	6,000	SW8015M	11/03/14 21:40	WAT		2
TCL Volatile Organics HighLevel 5035/8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	2,500	ug/kg	100	SW5035A/8260C	11/04/14 21:33	WAT	76-13-1	3
Acetone	2,760	ug/kg	880	SW5035A/8260C	11/04/14 21:33	WAT	67-64-1	3
Carbon disulfide	2,200	ug/kg	300	SW5035A/8260C	11/04/14 21:33	WAT	75-15-0	3
Methyl Acetate	Not detected	ug/kg	3,000	SW5035A/8260C	11/04/14 21:33	WAT	79-20-9	3
tert-Methyl butyl ether (MTBE)	2,700	ug/kg	300	SW5035A/8260C	11/04/14 21:33	WAT	1634-04-4	3
2-Butanone (MEK)	2,420	ug/kg	880	SW5035A/8260C	11/04/14 21:33	WAT	78-93-3	3
Dichlorodifluoromethane	2,770	ug/kg	60	SW5035A/8260C	11/04/14 21:33	WAT	75-71-8	3
Chloromethane	2,400	ug/kg	300	SW5035A/8260C	11/04/14 21:33	WAT	74-87-3	3
Vinyl chloride	2,500	ug/kg	100	SW5035A/8260C	11/04/14 21:33	WAT	75-01-4	3
Bromomethane	2,700	ug/kg	300	SW5035A/8260C	11/04/14 21:33	WAT	74-83-9	3
Chloroethane	2,800	ug/kg	300	SW5035A/8260C	11/04/14 21:33	WAT	75-00-3	3
Trichlorofluoromethane	2,800	ug/kg	100	SW5035A/8260C	11/04/14 21:33	WAT	75-69-4	3
1,1-Dichloroethene	2,630	ug/kg	60	SW5035A/8260C	11/04/14 21:33	WAT	75-35-4	3
Methylene chloride	2,500	ug/kg	300	SW5035A/8260C	11/04/14 21:33	WAT	75-09-2	3
trans-1,2-Dichloroethene	2,580	ug/kg	60	SW5035A/8260C	11/04/14 21:33	WAT	156-60-5	3
1,1-Dichloroethane	2,530	ug/kg	60	SW5035A/8260C	11/04/14 21:33	WAT	75-34-3	3
cis-1,2-Dichloroethene	2,610	ug/kg	60	SW5035A/8260C	11/04/14 21:33	WAT	156-59-2	3
Chloroform	2,610	ug/kg	60	SW5035A/8260C	11/04/14 21:33	WAT	67-66-3	3
1,1,1-Trichloroethane	2,670	ug/kg	60	SW5035A/8260C	11/04/14 21:33	WAT	71-55-6	3
Cyclohexane	2,310	ug/kg	60	SW5035A/8260C	11/04/14 21:33	WAT	110-82-7	3
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	3,000	SW5035A/8260C	11/04/14 21:33	WAT	108-10-1	3
2-Hexanone	Not detected	ug/kg	3,000	SW5035A/8260C	11/04/14 21:33	WAT	591-78-6	3
Carbon tetrachloride	2,830	ug/kg	60	SW5035A/8260C	11/04/14 21:33	WAT	56-23-5	3
Benzene	2,620	ug/kg	60	SW5035A/8260C	11/04/14 21:33	WAT	71-43-2	3
1,2-Dichloroethane	2,750	ug/kg	60	SW5035A/8260C	11/04/14 21:33	WAT	107-06-2	3
Trichloroethene	2,820	ug/kg	60	SW5035A/8260C	11/04/14 21:33	WAT	79-01-6	3

1-Sample spiked at 1.7 mg/kg

2-Spiked at 58.5mg/kg

3-Spiked at 2.93mg/kg



Analytical Laboratory Report

Lab Sample ID: S63382.16 (continued)

Sample Tag: SB10-102814-1335 MS

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics HighLevel 5035/8260 (continued)								
1,2-Dichloropropane	2,640	ug/kg	60	SW5035A/8260C	11/04/14 21:33	WAT	78-87-5	1
Bromodichloromethane	2,700	ug/kg	60	SW5035A/8260C	11/04/14 21:33	WAT	75-27-4	1
Methyl cyclohexane	2,640	ug/kg	60	SW5035A/8260C	11/04/14 21:33	WAT	108-87-2	1
cis-1,3-Dichloropropene	2,660	ug/kg	60	SW5035A/8260C	11/04/14 21:33	WAT	10061-01-5	1
Toluene	2,720	ug/kg	60	SW5035A/8260C	11/04/14 21:33	WAT	108-88-3	1
trans-1,3-Dichloropropene	2,690	ug/kg	60	SW5035A/8260C	11/04/14 21:33	WAT	10061-02-6	1
1,1,2-Trichloroethane	2,830	ug/kg	60	SW5035A/8260C	11/04/14 21:33	WAT	79-00-5	1
Tetrachloroethene	3,120	ug/kg	60	SW5035A/8260C	11/04/14 21:33	WAT	127-18-4	1
Dibromochloromethane	2,960	ug/kg	60	SW5035A/8260C	11/04/14 21:33	WAT	124-48-1	1
1,2-Dibromoethane	3,170	ug/kg	60	SW5035A/8260C	11/04/14 21:33	WAT	106-93-4	1
Chlorobenzene	2,890	ug/kg	60	SW5035A/8260C	11/04/14 21:33	WAT	108-90-7	1
1,1,2,2-Tetrachloroethane	3,100	ug/kg	60	SW5035A/8260C	11/04/14 21:33	WAT	79-34-5	1
Ethylbenzene	2,850	ug/kg	60	SW5035A/8260C	11/04/14 21:33	WAT	100-41-4	1
p,m-Xylene	6,000	ug/kg	100	SW5035A/8260C	11/04/14 21:33	WAT		1
o-Xylene	2,900	ug/kg	60	SW5035A/8260C	11/04/14 21:33	WAT	95-47-6	1
Styrene	3,000	ug/kg	60	SW5035A/8260C	11/04/14 21:33	WAT	100-42-5	1
Isopropylbenzene	2,980	ug/kg	60	SW5035A/8260C	11/04/14 21:33	WAT	98-82-8	1
Bromoform	3,070	ug/kg	60	SW5035A/8260C	11/04/14 21:33	WAT	75-25-2	1
1,3-Dichlorobenzene	2,810	ug/kg	60	SW5035A/8260C	11/04/14 21:33	WAT	541-73-1	1
1,4-Dichlorobenzene	2,790	ug/kg	60	SW5035A/8260C	11/04/14 21:33	WAT	106-46-7	1
1,2-Dichlorobenzene	2,810	ug/kg	60	SW5035A/8260C	11/04/14 21:33	WAT	95-50-1	1
1,2-Dibromo-3-chloropropane	2,990	ug/kg	60	SW5035A/8260C	11/04/14 21:33	WAT	96-12-8	1
1,2,4-Trichlorobenzene	3,000	ug/kg	100	SW5035A/8260C	11/04/14 21:33	WAT	120-82-1	1

1-Spiked at 2.93mg/kg



Analytical Laboratory Report

Lab Sample ID: S63382.17
Sample Tag: SB10-102814-1335 MSD
Collected Date/Time: 10/28/2014 13:35
Matrix: Soil
COC Reference: 87580

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	5.2	IR
1	40ml Glass	MeOH	Yes	5.2	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

DRO Extraction	Completed			SW3550C	11/03/14 12:26	EMR		
Extraction, PCB	Completed			SW3550C	10/31/14 10:00	RGS		
Mercury Digestion	Completed			SW7471B	11/04/14 11:15	CCM		
Metal Digestion	Completed			SW3050B	11/03/14 12:00	CCM		
PNA Extraction	Completed			SW3550C	11/03/14 12:28	EMR		

Inorganics

Total Solids	84	%	1	SM2540B	10/31/14 10:20	BJB		
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Metals

Arsenic	24.3	mg/kg	0.20	SW6020A	11/04/14 12:13	PER	7440-38-2	
Barium	59.3	mg/kg	1.0	SW6020A	11/04/14 12:13	PER	7440-39-3	
Cadmium	22.74	mg/kg	0.20	SW6020A	11/03/14 16:19	CCM	7440-43-9	
Chromium	26.9	mg/kg	0.50	SW6020A	11/03/14 16:19	CCM	7440-47-3	
Copper	29.9	mg/kg	0.50	SW6020A	11/04/14 12:13	PER	7440-50-8	
Lead	29.1	mg/kg	0.30	SW6020A	11/03/14 16:19	CCM	7439-92-1	
Manganese	63.5	mg/kg	0.5	SW6020A	11/04/14 12:13	PER	7439-96-5	
Mercury	0.124	mg/kg	0.050	SW7471B	11/04/14 16:29	CCM	7439-97-6	
Selenium	25.2	mg/kg	0.40	SW6020A	11/04/14 12:13	PER	7782-49-2	
Silver	21.3	mg/kg	0.20	SW6020A	11/04/14 12:13	PER	7440-22-4	
Zinc	30.7	mg/kg	0.50	SW6020A	11/04/14 12:13	PER	7440-66-6	

Organics - PCBs/Pesticides

PCB List

PCB-1016	30	ug/kg	330	SW8082A	10/31/14 12:53	JAN	12674-11-2	
PCB-1242	Not detected	ug/kg	330	SW8082A	10/31/14 12:53	JAN	53469-21-9	
PCB-1221	Not detected	ug/kg	330	SW8082A	10/31/14 12:53	JAN	11104-28-2	
PCB-1232	Not detected	ug/kg	330	SW8082A	10/31/14 12:53	JAN	11141-16-5	
PCB-1248	Not detected	ug/kg	330	SW8082A	10/31/14 12:53	JAN	12672-29-6	
PCB-1254	Not detected	ug/kg	330	SW8082A	10/31/14 12:53	JAN	11097-69-1	
PCB-1260	30	ug/kg	330	SW8082A	10/31/14 12:53	JAN	11096-82-5	

Organics - Semi-Volatiles

TPH DRO (C10-C28)	20,000	ug/kg	4,000	SW8015M	11/05/14 22:31	PL		1
TPH ORO (C28-C36)	20,000	ug/kg	4,000	SW8015M	11/05/14 22:31	PL		1

Polynuclear Aromatics

Acenaphthene	1,500	ug/kg	300	SW8270D	11/05/14 22:31	PL	83-32-9	2
Acenaphthylene	1,500	ug/kg	300	SW8270D	11/05/14 22:31	PL	208-96-8	2
Anthracene	1,500	ug/kg	300	SW8270D	11/05/14 22:31	PL	120-12-7	2

1-Sample spiked at 13 mg/kg
2-Sample spiked at 1.7 mg/kg



Analytical Laboratory Report

Lab Sample ID: S63382.17 (continued)

Sample Tag: SB10-102814-1335 MSD

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatics (continued)								
Benzo(a)anthracene	1,400	ug/kg	300	SW8270D	11/05/14 22:31	PL	56-55-3	1
Benzo(a)pyrene	1,400	ug/kg	300	SW8270D	11/05/14 22:31	PL	50-32-8	1
Benzo(b)fluoranthene	1,600	ug/kg	300	SW8270D	11/05/14 22:31	PL	205-99-2	1
Benzo(k)fluoranthene	1,600	ug/kg	300	SW8270D	11/05/14 22:31	PL	207-08-9	1
Benzo(ghi)perylene	800	ug/kg	300	SW8270D	11/05/14 22:31	PL	191-24-2	1
Chrysene	1,500	ug/kg	300	SW8270D	11/05/14 22:31	PL	218-01-9	1
Dibenzo(ah)anthracene	1,100	ug/kg	300	SW8270D	11/05/14 22:31	PL	53-70-3	1
Fluoranthene	1,600	ug/kg	300	SW8270D	11/05/14 22:31	PL	206-44-0	1
Fluorene	1,600	ug/kg	300	SW8270D	11/05/14 22:31	PL	86-73-7	1
Indeno(1,2,3-cd)pyrene	1,000	ug/kg	300	SW8270D	11/05/14 22:31	PL	193-39-5	1
Naphthalene	1,400	ug/kg	300	SW8270D	11/05/14 22:31	PL	91-20-3	1
Phenanthrene	1,600	ug/kg	300	SW8270D	11/05/14 22:31	PL	85-01-8	1
Pyrene	1,500	ug/kg	300	SW8270D	11/05/14 22:31	PL	129-00-0	1
2-Methylnaphthalene	1,600	ug/kg	300	SW8270D	11/05/14 22:31	PL	91-57-6	1
1-Methylnaphthalene	1,600	ug/kg	300	SW8270D	11/05/14 22:31	PL	90-12-0	1
Organics - Volatiles								
TPH GRO (C6-C10)	70,000	ug/kg	7,000	SW8015M	11/03/14 21:58	WAT		2
TCL Volatile Organics HighLevel 5035/8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	2,900	ug/kg	100	SW5035A/8260C	11/04/14 21:53	WAT	76-13-1	3
Acetone	3,490	ug/kg	1,000	SW5035A/8260C	11/04/14 21:53	WAT	67-64-1	3
Carbon disulfide	2,600	ug/kg	300	SW5035A/8260C	11/04/14 21:53	WAT	75-15-0	3
Methyl Acetate	Not detected	ug/kg	3,000	SW5035A/8260C	11/04/14 21:53	WAT	79-20-9	3
tert-Methyl butyl ether (MTBE)	3,100	ug/kg	300	SW5035A/8260C	11/04/14 21:53	WAT	1634-04-4	3
2-Butanone (MEK)	2,680	ug/kg	1,000	SW5035A/8260C	11/04/14 21:53	WAT	78-93-3	3
Dichlorodifluoromethane	3,110	ug/kg	70	SW5035A/8260C	11/04/14 21:53	WAT	75-71-8	3
Chloromethane	2,800	ug/kg	300	SW5035A/8260C	11/04/14 21:53	WAT	74-87-3	3
Vinyl chloride	2,900	ug/kg	100	SW5035A/8260C	11/04/14 21:53	WAT	75-01-4	3
Bromomethane	3,300	ug/kg	300	SW5035A/8260C	11/04/14 21:53	WAT	74-83-9	3
Chloroethane	3,200	ug/kg	300	SW5035A/8260C	11/04/14 21:53	WAT	75-00-3	3
Trichlorofluoromethane	3,400	ug/kg	100	SW5035A/8260C	11/04/14 21:53	WAT	75-69-4	3
1,1-Dichloroethene	2,950	ug/kg	70	SW5035A/8260C	11/04/14 21:53	WAT	75-35-4	3
Methylene chloride	2,800	ug/kg	300	SW5035A/8260C	11/04/14 21:53	WAT	75-09-2	3
trans-1,2-Dichloroethene	2,920	ug/kg	70	SW5035A/8260C	11/04/14 21:53	WAT	156-60-5	3
1,1-Dichloroethane	2,890	ug/kg	70	SW5035A/8260C	11/04/14 21:53	WAT	75-34-3	3
cis-1,2-Dichloroethene	2,990	ug/kg	70	SW5035A/8260C	11/04/14 21:53	WAT	156-59-2	3
Chloroform	3,010	ug/kg	70	SW5035A/8260C	11/04/14 21:53	WAT	67-66-3	3
1,1,1-Trichloroethane	3,100	ug/kg	70	SW5035A/8260C	11/04/14 21:53	WAT	71-55-6	3
Cyclohexane	2,590	ug/kg	70	SW5035A/8260C	11/04/14 21:53	WAT	110-82-7	3
4-Methyl-2-pentanone (MIBK)	Not detected	ug/kg	3,000	SW5035A/8260C	11/04/14 21:53	WAT	108-10-1	3
2-Hexanone	Not detected	ug/kg	3,000	SW5035A/8260C	11/04/14 21:53	WAT	591-78-6	3
Carbon tetrachloride	3,260	ug/kg	70	SW5035A/8260C	11/04/14 21:53	WAT	56-23-5	3
Benzene	2,950	ug/kg	70	SW5035A/8260C	11/04/14 21:53	WAT	71-43-2	3
1,2-Dichloroethane	3,070	ug/kg	70	SW5035A/8260C	11/04/14 21:53	WAT	107-06-2	3
Trichloroethene	3,160	ug/kg	70	SW5035A/8260C	11/04/14 21:53	WAT	79-01-6	3

1-Sample spiked at 1.7 mg/kg

2-Spiked at 66.6mg/kg

3-Spiked at 3.33mg/kg



Analytical Laboratory Report

Lab Sample ID: S63382.17 (continued)

Sample Tag: SB10-102814-1335 MSD

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics HighLevel 5035/8260 (continued)								
1,2-Dichloropropane	2,980	ug/kg	70	SW5035A/8260C	11/04/14 21:53	WAT	78-87-5	1
Bromodichloromethane	3,090	ug/kg	70	SW5035A/8260C	11/04/14 21:53	WAT	75-27-4	1
Methyl cyclohexane	2,920	ug/kg	70	SW5035A/8260C	11/04/14 21:53	WAT	108-87-2	1
cis-1,3-Dichloropropene	3,040	ug/kg	70	SW5035A/8260C	11/04/14 21:53	WAT	10061-01-5	1
Toluene	3,070	ug/kg	70	SW5035A/8260C	11/04/14 21:53	WAT	108-88-3	1
trans-1,3-Dichloropropene	3,120	ug/kg	70	SW5035A/8260C	11/04/14 21:53	WAT	10061-02-6	1
1,1,2-Trichloroethane	3,160	ug/kg	70	SW5035A/8260C	11/04/14 21:53	WAT	79-00-5	1
Tetrachloroethene	3,420	ug/kg	70	SW5035A/8260C	11/04/14 21:53	WAT	127-18-4	1
Dibromochloromethane	3,370	ug/kg	70	SW5035A/8260C	11/04/14 21:53	WAT	124-48-1	1
1,2-Dibromoethane	3,500	ug/kg	70	SW5035A/8260C	11/04/14 21:53	WAT	106-93-4	1
Chlorobenzene	3,250	ug/kg	70	SW5035A/8260C	11/04/14 21:53	WAT	108-90-7	1
1,1,2,2-Tetrachloroethane	3,410	ug/kg	70	SW5035A/8260C	11/04/14 21:53	WAT	79-34-5	1
Ethylbenzene	3,180	ug/kg	70	SW5035A/8260C	11/04/14 21:53	WAT	100-41-4	1
p,m-Xylene	6,600	ug/kg	100	SW5035A/8260C	11/04/14 21:53	WAT		1
o-Xylene	3,230	ug/kg	70	SW5035A/8260C	11/04/14 21:53	WAT	95-47-6	1
Styrene	3,390	ug/kg	70	SW5035A/8260C	11/04/14 21:53	WAT	100-42-5	1
Isopropylbenzene	3,330	ug/kg	70	SW5035A/8260C	11/04/14 21:53	WAT	98-82-8	1
Bromoform	3,480	ug/kg	70	SW5035A/8260C	11/04/14 21:53	WAT	75-25-2	1
1,3-Dichlorobenzene	3,180	ug/kg	70	SW5035A/8260C	11/04/14 21:53	WAT	541-73-1	1
1,4-Dichlorobenzene	3,170	ug/kg	70	SW5035A/8260C	11/04/14 21:53	WAT	106-46-7	1
1,2-Dichlorobenzene	3,180	ug/kg	70	SW5035A/8260C	11/04/14 21:53	WAT	95-50-1	1
1,2-Dibromo-3-chloropropane	3,280	ug/kg	70	SW5035A/8260C	11/04/14 21:53	WAT	96-12-8	1
1,2,4-Trichlorobenzene	3,400	ug/kg	100	SW5035A/8260C	11/04/14 21:53	WAT	120-82-1	1

1-Spiked at 3.33mg/kg



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C.O.C. PAGE # 1 OF 2

87579

REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME Ban Aragona			
COMPANY Haley & Aldrich			
ADDRESS 455 Eisenhower Parkway Suite 210			
CITY Ann Arbor	STATE MI	ZIP CODE 48108	
PHONE NO. 734-887-8410	FAX NO.	P.O. NO. 37147-028	
E-MAIL ADDRESS baragona@haleyaldrich.com		QUOTE NO.	

CONTACT NAME X SAME	
COMPANY	
ADDRESS	
CITY	STATE ZIP CODE
PHONE NO.	E-MAIL ADDRESS

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

PROJECT NO./NAME 37147-028 Pontiac RACER	SAMPLER(S) - PLEASE PRINT/SIGN NAME Eric Shirley
TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER	
DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER	

MATRIX CODE:	GW=GROUNDWATER SL=SLUDGE	WW=WASTEWATER DW=DRINKING WATER	S=SOIL O=OIL	L=LIQUID WP=WIPES	SD=SOLID A=AIR	W=WASTE
--------------	-----------------------------	------------------------------------	-----------------	----------------------	-------------------	---------

Containers & Preservatives

MERIT LAB NO. FOR LAB USE ONLY	YEAR		SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	NONE	HCl	HNO ₃	H ₂ SO ₄	NaOH	MeOH	OTHER	TCL VOCs 8260	TCL PAHs	TCL PCBs	Cadmium	Chromium	Lead	Geo	DRO	ORO	Certifications ☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES Project Locations ☐ Detroit ☐ New York ☒ Other PONTIAC Special Instructions
	DATE	TIME																				
03382.01	10/27/14	1152	SB14-102714-1152	S	2	1					1		X	X	X	X	X	X	X	X	X	
02		1235	SB11-102714-1235		2	1					1		X	X	X	X	X	X	X	X	X	
03		1315	SB13-102714-1315		2	1					1		X	X	X	X	X	X	X	X	X	
04		1420	SB9-102714-1420		2	1					1		X	X	X	X	X	X	X	X	X	
05		1455	SB12-102714-1455		2	1					1		X	X	X	X	X	X	X	X	X	
06		1600	SB7-102714-1600		2	1					1		X	X	X	X	X	X	X	X	X	
07	10/28/14	0001	4226-102814-0001		2	1					1		X	X	X	X	X	X	X	X	X	FD
08		0835	SB8-102814-0835		2	1					1		X	X	X	X	X	X	X	X	X	
09		0925	SB6-102814-0925		2	1					1		X	X	X	X	X	X	X	X	X	
10		1010	SB5-102814-1010		2	1					1		X	X	X	X	X	X	X	X	X	
11		1045	SB4-102814-1045		2	1					1		X	X	X	X	X	X	X	X	X	
12		1130	SB2-102814-1130		2	1					1		X	X	X	X	X	X	X	X	X	

RELINQUISHED BY: SIGNATURE/ORGANIZATION Eric Shirley H&A	☒ Sampler	DATE 10/27/14	TIME 0955
RECEIVED BY: SIGNATURE/ORGANIZATION Cheryl		DATE 10/30/14	TIME 0935
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION Cheryl	DATE 10-27-14	TIME 1500
RECEIVED BY: SIGNATURE/ORGANIZATION Kevin George	DATE 10/30/14	TIME 1500
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS
NOTES:		TEMP. ON ARRIVAL 57.2

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE



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C.O.C. PAGE # 2 OF 2

87580

REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME Ban Aragona			
COMPANY Haley & Aldrich			
ADDRESS 455 Eisenhower Parkway, Suite 210			
CITY Ann Arbor	STATE MI	ZIP CODE 48108	
PHONE NO. 734-887-8410	FAX NO.	P.O. NO. 37147-028	
E-MAIL ADDRESS baragona@haleyaldrich.com		QUOTE NO.	

CONTACT NAME SAME	
COMPANY	
ADDRESS	
CITY	STATE ZIP CODE
PHONE NO.	E-MAIL ADDRESS

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

PROJECT NO./NAME Pontiac RACER	SAMPLER(S) - PLEASE PRINT/SIGN NAME Eric Shirley
TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER	
DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER	

MATRIX CODE:	GW=GROUNDWATER SL=SLUDGE	WW=WASTEWATER DW=DRINKING WATER	S=SOIL O=OIL	L=LIQUID WP=WIPE	SD=SOLID A=AIR	W=WASTE
--------------	-----------------------------	------------------------------------	-----------------	---------------------	-------------------	---------

# Containers & Preservatives		TCL VOCs 8260	TCL PAHs	TCL PCBs	Cadmium	Chromium	Lead	Geo	DRO	ORO	Certifications
MATRIX	# OF BOTTLES										☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES
SB3-102814-1205	2										Project Locations ☐ Detroit ☐ New York ☒ Other PONTIAC Special Instructions
SB1-102814-1245	2										
SB10-102814-1335	3										

MERIT LAB NO. FOR LAB USE ONLY	YEAR		SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	NONE	HCl	HNO ₃	H ₂ SO ₄	NaOH	MeOH	OTHER
	DATE	TIME										
63382.13	10/28/14	1205	SB3-102814-1205	S	2	1						
.14	↓	1245	SB1-102814-1245	↓	2	1						
.15/16/17	↓	1335	SB10-102814-1335	↓	3	3						

RELINQUISHED BY: SIGNATURE/ORGANIZATION	HSB	DATE 10/30/14	TIME 0955
RECEIVED BY: SIGNATURE/ORGANIZATION	mt	DATE 10-30-14	TIME 0855
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE	TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION	mt	DATE 10-30-14	TIME 1500
RECEIVED BY: SIGNATURE/ORGANIZATION	mt	DATE 10/30/14	TIME 1500
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL 57.2
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	



Analytical Laboratory Report

Report ID: S63405.01(01)
Generated on 11/06/2014

Report to

Attention: Ban Aragona
Haley & Aldrich, Inc.
455 Eisenhower Parkway
Suite 210
Ann Arbor, MI 48108

Phone: 734-887-8410 FAX:
Email: baragona@haleyaldrich.com

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
Kevin George (kgeorge@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S63405.01-S63405.06
Project: Pontiac RACER
Collected Date: 10/29/2014 - 10/30/2014
Submitted Date/Time: 10/31/2014 10:35
Sampled by: Eric Shirley
P.O. #: 37147-028

A handwritten signature in black ink, reading "Maya Murshak".

Maya Murshak
Technical Director



Analytical Laboratory Report

General Report Notes

Results relate only to items tested as received by laboratory.

Methods may be modified for improved performance.

Results reported on a dry weight basis were applicable.

'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).

40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.

QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.

Full accreditation certificates are available upon request.

Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.

Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.

Report Narrative

There is no additional narrative for this analytical report



Analytical Laboratory Report

Laboratory Certifications

Authority	Certification ID
Michigan DEQ	#9956
DOD ELAP/ISO 17025	#69699
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702

Qualifier Descriptions

Qualifier	Description
!	Result is outside of stated limit criteria
B	Compound also found in associated method blank
E	Concentration exceeds calibration range
F	Analysis run outside of holding time
G	Estimated result due to extraction run outside of holding time
H	Sample submitted and run outside of holding time
I	Matrix interference with internal standard
J	Estimated value less than reporting limit, but greater than MDL
L	Elevated reporting limit due to low sample amount
M	Result reported to MDL not RDL
O	Analysis performed by outside laboratory. See attached report.
R	Preliminary result
S	Surrogate recovery outside of control limits
T	No correction for total solids
X	Elevated reporting limit due to matrix interference
Y	Elevated reporting limit due to high target concentration
b	Value detected less than reporting limit, but greater than MDL
e	Reported value estimated due to interference
j	Analyte also found in associated method blank
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
x	Preserved from bulk sample

Glossary of Abbreviations

Abbreviation	Description
RL/RDL	Reporting Limit
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
SW	EPA SW 846 (Soil and Wastewater) Methods
E	EPA Methods
SM	Standard Methods



Analytical Laboratory Report

Method Summary

Method	Version
E200.8	EPA Method 200.8 Revision 5.4
E245.1	EPA Method 245.1 Revision 3.0
N/A	Not Applicable
SW3015A	SW 846 Method 3015A Revision 1 February 2007
SW3510C	SW 846 Method 3510C Revision 3 December 1996
SW8260C	SW 846 Method 8260C Revision 3 August 2006
SW8270D	SW 846 Method 8270D Revision 4 February 2007



Analytical Laboratory Report

Sample Summary (6 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S63405.01	TW14-102914-1510	Groundwater	10/29/2014 15:10
S63405.02	TW13-102914-1610	Groundwater	10/29/2014 16:10
S63405.03	TW12-103014-0820	Groundwater	10/30/2014 08:20
S63405.04	TW6-103014-0930	Groundwater	10/30/2014 09:30
S63405.05	TW1-103014-1050	Groundwater	10/30/2014 10:50
S63405.06	TW8-103014-1210	Groundwater	10/30/2014 12:10



Analytical Laboratory Report

Lab Sample ID: S63405.01
Sample Tag: TW14-102914-1510
Collected Date/Time: 10/29/2014 15:10
Matrix: Groundwater
COC Reference: 87581

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1L Amber	None	Yes	2.4	IR
3	40ml Glass	HCL	Yes	2.4	IR
2	125ml Plastic	HNO3	Yes	2.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
----------	---------	-------	----	--------	---------------	---------	-------	-------

Extraction / Prep.

Mercury Digestion	Completed			E245.1	11/05/14 11:00	CCM		
Mercury Digestion	Completed			E245.1	11/05/14 11:00	CCM		
Metal Digestion	Completed			SW3015A	11/05/14 10:30	JRH		
Metal Digestion	Completed			SW3015A	11/05/14 10:30	JRH		
pH check for VOCs	<2	STD Units		N/A	11/03/14 10:32	LBR		
PNA Extraction	Completed			SW3510C	11/03/14 15:03	EMR		

Metals

Arsenic, Dissolved	0.003	mg/L	0.002	E200.8	11/05/14 15:31	JRH	7440-38-2	
Arsenic	0.007	mg/L	0.002	E200.8	11/05/14 15:27	JRH	7440-38-2	
Barium, Dissolved	0.116	mg/L	0.005	E200.8	11/05/14 15:31	JRH	7440-39-3	
Barium	0.132	mg/L	0.005	E200.8	11/05/14 15:27	JRH	7440-39-3	
Cadmium, Dissolved	Not detected	mg/L	0.0005	E200.8	11/05/14 15:31	JRH	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	E200.8	11/05/14 15:27	JRH	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	E200.8	11/05/14 15:31	JRH	7440-47-3	
Chromium	Not detected	mg/L	0.005	E200.8	11/05/14 15:27	JRH	7440-47-3	
Copper, Dissolved	Not detected	mg/L	0.005	E200.8	11/05/14 15:31	JRH	7440-50-8	
Copper	0.006	mg/L	0.005	E200.8	11/05/14 15:27	JRH	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	E200.8	11/05/14 15:31	JRH	7439-92-1	
Lead	Not detected	mg/L	0.003	E200.8	11/05/14 15:27	JRH	7439-92-1	
Manganese, Dissolved	0.192	mg/L	0.005	E200.8	11/05/14 15:31	JRH	7439-96-5	
Manganese	0.201	mg/L	0.005	E200.8	11/05/14 15:27	JRH	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0002	E245.1	11/05/14 14:29	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0002	E245.1	11/05/14 14:23	CCM	7439-97-6	
Selenium, Dissolved	Not detected	mg/L	0.005	E200.8	11/05/14 15:31	JRH	7782-49-2	
Selenium	Not detected	mg/L	0.005	E200.8	11/05/14 15:27	JRH	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	E200.8	11/05/14 15:31	JRH	7440-22-4	
Silver	0.0011	mg/L	0.0005	E200.8	11/05/14 15:27	JRH	7440-22-4	
Zinc, Dissolved	0.014	mg/L	0.005	E200.8	11/05/14 15:31	JRH	7440-66-6	
Zinc	0.014	mg/L	0.005	E200.8	11/05/14 15:27	JRH	7440-66-6	

Organics - Semi-Volatiles

Polynuclear Aromatic Hydrocarbon

Acenaphthene	Not detected	ug/L	5	SW8270D	11/05/14 00:40	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	5	SW8270D	11/05/14 00:40	PL	208-96-8	
Anthracene	Not detected	ug/L	5	SW8270D	11/05/14 00:40	PL	120-12-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/05/14 00:40	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/05/14 00:40	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/05/14 00:40	PL	205-99-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/05/14 00:40	PL	207-08-9	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/05/14 00:40	PL	191-24-2	



Analytical Laboratory Report

Lab Sample ID: S63405.01 (continued)

Sample Tag: TW14-102914-1510

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatic Hydrocarbon (continued)								
Chrysene	Not detected	ug/L	1	SW8270D	11/05/14 00:40	PL	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/05/14 00:40	PL	53-70-3	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/05/14 00:40	PL	206-44-0	
Fluorene	Not detected	ug/L	5	SW8270D	11/05/14 00:40	PL	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	2	SW8270D	11/05/14 00:40	PL	193-39-5	
Naphthalene	Not detected	ug/L	5	SW8270D	11/05/14 00:40	PL	91-20-3	
Phenanthrene	Not detected	ug/L	2	SW8270D	11/05/14 00:40	PL	85-01-8	
Pyrene	Not detected	ug/L	5	SW8270D	11/05/14 00:40	PL	129-00-0	
2-Methylnaphthalene	Not detected	ug/L	5	SW8270D	11/05/14 00:40	PL	91-57-6	
1-Methylnaphthalene	Not detected	ug/L	5	SW8270D	11/05/14 00:40	PL	90-12-0	
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	30	SW8260C	10/31/14 15:59	WAT	76-13-1	
Acetone	Not detected	ug/L	20	SW8260C	10/31/14 15:59	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	5	SW8260C	10/31/14 15:59	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	10/31/14 15:59	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	5	SW8260C	10/31/14 15:59	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	20	SW8260C	10/31/14 15:59	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	10/31/14 15:59	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	10/31/14 15:59	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	10/31/14 15:59	WAT	75-01-4	
Bromomethane	Not detected	ug/L	2	SW8260C	10/31/14 15:59	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	10/31/14 15:59	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	10/31/14 15:59	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	10/31/14 15:59	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	5	SW8260C	10/31/14 15:59	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	10/31/14 15:59	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	10/31/14 15:59	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	10/31/14 15:59	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	10/31/14 15:59	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	10/31/14 15:59	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	10/31/14 15:59	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	10/31/14 15:59	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	50	SW8260C	10/31/14 15:59	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	10/31/14 15:59	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	10/31/14 15:59	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	10/31/14 15:59	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	10/31/14 15:59	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	10/31/14 15:59	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	10/31/14 15:59	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	20	SW8260C	10/31/14 15:59	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	10/31/14 15:59	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	10/31/14 15:59	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	10/31/14 15:59	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	10/31/14 15:59	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	10/31/14 15:59	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	10/31/14 15:59	WAT	124-48-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	10/31/14 15:59	WAT	106-93-4	



Analytical Laboratory Report

Lab Sample ID: S63405.01 (continued)

Sample Tag: TW14-102914-1510

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Chlorobenzene	Not detected	ug/L	1	SW8260C	10/31/14 15:59	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	10/31/14 15:59	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	10/31/14 15:59	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	10/31/14 15:59	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	10/31/14 15:59	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	10/31/14 15:59	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	10/31/14 15:59	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	10/31/14 15:59	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	10/31/14 15:59	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	10/31/14 15:59	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	10/31/14 15:59	WAT	95-50-1	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	10/31/14 15:59	WAT	96-12-8	
1,2,4-Trichlorobenzene	Not detected	ug/L	2	SW8260C	10/31/14 15:59	WAT	120-82-1	



Analytical Laboratory Report

Lab Sample ID: S63405.02
Sample Tag: TW13-102914-1610
Collected Date/Time: 10/29/2014 16:10
Matrix: Groundwater
COC Reference: 87581

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1L Amber	None	Yes	2.4	IR
3	40ml Glass	HCL	Yes	2.4	IR
2	125ml Plastic	HNO3	Yes	2.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

Mercury Digestion	Completed			E245.1	11/05/14 11:00	CCM		
Mercury Digestion	Completed			E245.1	11/05/14 11:00	CCM		
Metal Digestion	Completed			SW3015A	11/05/14 10:30	JRH		
Metal Digestion	Completed			SW3015A	11/05/14 10:30	JRH		
pH check for VOCs	<2	STD Units		N/A	11/03/14 10:32	LBR		
PNA Extraction	Completed			SW3510C	11/03/14 15:03	EMR		

Metals

Arsenic, Dissolved	0.011	mg/L	0.002	E200.8	11/05/14 15:38	JRH	7440-38-2	
Arsenic	0.053	mg/L	0.002	E200.8	11/05/14 15:35	JRH	7440-38-2	
Barium, Dissolved	0.180	mg/L	0.005	E200.8	11/05/14 15:38	JRH	7440-39-3	
Barium	0.227	mg/L	0.005	E200.8	11/05/14 15:35	JRH	7440-39-3	
Cadmium, Dissolved	Not detected	mg/L	0.0005	E200.8	11/05/14 15:38	JRH	7440-43-9	
Cadmium	0.0009	mg/L	0.0005	E200.8	11/05/14 15:35	JRH	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	E200.8	11/05/14 15:38	JRH	7440-47-3	
Chromium	Not detected	mg/L	0.005	E200.8	11/05/14 15:35	JRH	7440-47-3	
Copper, Dissolved	Not detected	mg/L	0.005	E200.8	11/05/14 15:38	JRH	7440-50-8	
Copper	0.007	mg/L	0.005	E200.8	11/05/14 15:35	JRH	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	E200.8	11/05/14 15:38	JRH	7439-92-1	
Lead	0.004	mg/L	0.003	E200.8	11/05/14 15:35	JRH	7439-92-1	
Manganese, Dissolved	0.319	mg/L	0.005	E200.8	11/05/14 15:38	JRH	7439-96-5	
Manganese	0.373	mg/L	0.005	E200.8	11/05/14 15:35	JRH	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0002	E245.1	11/05/14 14:33	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0002	E245.1	11/05/14 14:31	CCM	7439-97-6	
Selenium, Dissolved	Not detected	mg/L	0.005	E200.8	11/05/14 15:38	JRH	7782-49-2	
Selenium	Not detected	mg/L	0.005	E200.8	11/05/14 15:35	JRH	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	E200.8	11/05/14 15:38	JRH	7440-22-4	
Silver	0.0014	mg/L	0.0005	E200.8	11/05/14 15:35	JRH	7440-22-4	
Zinc, Dissolved	0.015	mg/L	0.005	E200.8	11/05/14 15:38	JRH	7440-66-6	
Zinc	0.015	mg/L	0.005	E200.8	11/05/14 15:35	JRH	7440-66-6	

Organics - Semi-Volatiles

Polynuclear Aromatic Hydrocarbon

Acenaphthene	Not detected	ug/L	5	SW8270D	11/05/14 01:02	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	5	SW8270D	11/05/14 01:02	PL	208-96-8	
Anthracene	Not detected	ug/L	5	SW8270D	11/05/14 01:02	PL	120-12-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/05/14 01:02	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/05/14 01:02	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/05/14 01:02	PL	205-99-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/05/14 01:02	PL	207-08-9	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/05/14 01:02	PL	191-24-2	



Analytical Laboratory Report

Lab Sample ID: S63405.02 (continued)

Sample Tag: TW13-102914-1610

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatic Hydrocarbon (continued)								
Chrysene	Not detected	ug/L	1	SW8270D	11/05/14 01:02	PL	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/05/14 01:02	PL	53-70-3	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/05/14 01:02	PL	206-44-0	
Fluorene	Not detected	ug/L	5	SW8270D	11/05/14 01:02	PL	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	2	SW8270D	11/05/14 01:02	PL	193-39-5	
Naphthalene	Not detected	ug/L	5	SW8270D	11/05/14 01:02	PL	91-20-3	
Phenanthrene	Not detected	ug/L	2	SW8270D	11/05/14 01:02	PL	85-01-8	
Pyrene	Not detected	ug/L	5	SW8270D	11/05/14 01:02	PL	129-00-0	
2-Methylnaphthalene	Not detected	ug/L	5	SW8270D	11/05/14 01:02	PL	91-57-6	
1-Methylnaphthalene	Not detected	ug/L	5	SW8270D	11/05/14 01:02	PL	90-12-0	
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	30	SW8260C	10/31/14 16:19	WAT	76-13-1	
Acetone	Not detected	ug/L	20	SW8260C	10/31/14 16:19	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	5	SW8260C	10/31/14 16:19	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	10/31/14 16:19	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	5	SW8260C	10/31/14 16:19	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	20	SW8260C	10/31/14 16:19	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	10/31/14 16:19	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	10/31/14 16:19	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	10/31/14 16:19	WAT	75-01-4	
Bromomethane	Not detected	ug/L	2	SW8260C	10/31/14 16:19	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	10/31/14 16:19	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	10/31/14 16:19	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	10/31/14 16:19	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	5	SW8260C	10/31/14 16:19	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	10/31/14 16:19	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	10/31/14 16:19	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	10/31/14 16:19	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	10/31/14 16:19	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	10/31/14 16:19	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	10/31/14 16:19	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	10/31/14 16:19	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	50	SW8260C	10/31/14 16:19	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	10/31/14 16:19	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	10/31/14 16:19	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	10/31/14 16:19	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	10/31/14 16:19	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	10/31/14 16:19	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	10/31/14 16:19	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	20	SW8260C	10/31/14 16:19	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	10/31/14 16:19	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	10/31/14 16:19	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	10/31/14 16:19	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	10/31/14 16:19	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	10/31/14 16:19	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	10/31/14 16:19	WAT	124-48-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	10/31/14 16:19	WAT	106-93-4	



Analytical Laboratory Report

Lab Sample ID: S63405.02 (continued)

Sample Tag: TW13-102914-1610

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Chlorobenzene	Not detected	ug/L	1	SW8260C	10/31/14 16:19	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	10/31/14 16:19	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	10/31/14 16:19	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	10/31/14 16:19	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	10/31/14 16:19	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	10/31/14 16:19	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	10/31/14 16:19	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	10/31/14 16:19	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	10/31/14 16:19	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	10/31/14 16:19	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	10/31/14 16:19	WAT	95-50-1	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	10/31/14 16:19	WAT	96-12-8	
1,2,4-Trichlorobenzene	Not detected	ug/L	2	SW8260C	10/31/14 16:19	WAT	120-82-1	



Analytical Laboratory Report

Lab Sample ID: S63405.03
Sample Tag: TW12-103014-0820
Collected Date/Time: 10/30/2014 08:20
Matrix: Groundwater
COC Reference: 87581

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1L Amber	None	Yes	2.4	IR
3	40ml Glass	HCL	Yes	2.4	IR
2	125ml Plastic	HNO3	Yes	2.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

Mercury Digestion	Completed			E245.1	11/05/14 11:00	CCM		
Mercury Digestion	Completed			E245.1	11/05/14 11:00	CCM		
Metal Digestion	Completed			SW3015A	11/05/14 10:30	JRH		
Metal Digestion	Completed			SW3015A	11/05/14 10:30	JRH		
pH check for VOCs	<2	STD Units		N/A	11/03/14 10:32	LBR		
PNA Extraction	Completed			SW3510C	11/03/14 15:03	EMR		

Metals

Arsenic, Dissolved	0.006	mg/L	0.002	E200.8	11/05/14 15:46	JRH	7440-38-2	
Arsenic	0.028	mg/L	0.002	E200.8	11/05/14 15:42	JRH	7440-38-2	
Barium, Dissolved	0.122	mg/L	0.005	E200.8	11/05/14 15:46	JRH	7440-39-3	
Barium	0.155	mg/L	0.005	E200.8	11/05/14 15:42	JRH	7440-39-3	
Cadmium, Dissolved	Not detected	mg/L	0.0005	E200.8	11/05/14 15:46	JRH	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	E200.8	11/05/14 15:42	JRH	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	E200.8	11/05/14 15:46	JRH	7440-47-3	
Chromium	Not detected	mg/L	0.005	E200.8	11/05/14 15:42	JRH	7440-47-3	
Copper, Dissolved	Not detected	mg/L	0.005	E200.8	11/05/14 15:46	JRH	7440-50-8	
Copper	Not detected	mg/L	0.005	E200.8	11/05/14 15:42	JRH	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	E200.8	11/05/14 15:46	JRH	7439-92-1	
Lead	Not detected	mg/L	0.003	E200.8	11/05/14 15:42	JRH	7439-92-1	
Manganese, Dissolved	0.131	mg/L	0.005	E200.8	11/05/14 15:46	JRH	7439-96-5	
Manganese	0.131	mg/L	0.005	E200.8	11/05/14 15:42	JRH	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0002	E245.1	11/05/14 14:37	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0002	E245.1	11/05/14 14:35	CCM	7439-97-6	
Selenium, Dissolved	Not detected	mg/L	0.005	E200.8	11/05/14 15:46	JRH	7782-49-2	
Selenium	Not detected	mg/L	0.005	E200.8	11/05/14 15:42	JRH	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	E200.8	11/05/14 15:46	JRH	7440-22-4	
Silver	0.0012	mg/L	0.0005	E200.8	11/05/14 15:42	JRH	7440-22-4	
Zinc, Dissolved	0.009	mg/L	0.005	E200.8	11/05/14 15:46	JRH	7440-66-6	
Zinc	0.009	mg/L	0.005	E200.8	11/05/14 15:42	JRH	7440-66-6	

Organics - Semi-Volatiles

Polynuclear Aromatic Hydrocarbon

Acenaphthene	Not detected	ug/L	5	SW8270D	11/05/14 01:25	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	5	SW8270D	11/05/14 01:25	PL	208-96-8	
Anthracene	Not detected	ug/L	5	SW8270D	11/05/14 01:25	PL	120-12-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/05/14 01:25	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/05/14 01:25	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/05/14 01:25	PL	205-99-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/05/14 01:25	PL	207-08-9	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/05/14 01:25	PL	191-24-2	



Analytical Laboratory Report

Lab Sample ID: S63405.03 (continued)

Sample Tag: TW12-103014-0820

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatic Hydrocarbon (continued)								
Chrysene	Not detected	ug/L	1	SW8270D	11/05/14 01:25	PL	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/05/14 01:25	PL	53-70-3	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/05/14 01:25	PL	206-44-0	
Fluorene	Not detected	ug/L	5	SW8270D	11/05/14 01:25	PL	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	2	SW8270D	11/05/14 01:25	PL	193-39-5	
Naphthalene	Not detected	ug/L	5	SW8270D	11/05/14 01:25	PL	91-20-3	
Phenanthrene	Not detected	ug/L	2	SW8270D	11/05/14 01:25	PL	85-01-8	
Pyrene	Not detected	ug/L	5	SW8270D	11/05/14 01:25	PL	129-00-0	
2-Methylnaphthalene	Not detected	ug/L	5	SW8270D	11/05/14 01:25	PL	91-57-6	
1-Methylnaphthalene	Not detected	ug/L	5	SW8270D	11/05/14 01:25	PL	90-12-0	
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	30	SW8260C	10/31/14 16:39	WAT	76-13-1	
Acetone	Not detected	ug/L	20	SW8260C	10/31/14 16:39	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	5	SW8260C	10/31/14 16:39	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	10/31/14 16:39	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	5	SW8260C	10/31/14 16:39	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	20	SW8260C	10/31/14 16:39	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	10/31/14 16:39	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	10/31/14 16:39	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	10/31/14 16:39	WAT	75-01-4	
Bromomethane	Not detected	ug/L	2	SW8260C	10/31/14 16:39	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	10/31/14 16:39	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	10/31/14 16:39	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	10/31/14 16:39	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	5	SW8260C	10/31/14 16:39	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	10/31/14 16:39	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	10/31/14 16:39	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	10/31/14 16:39	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	10/31/14 16:39	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	10/31/14 16:39	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	10/31/14 16:39	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	10/31/14 16:39	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	50	SW8260C	10/31/14 16:39	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	10/31/14 16:39	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	10/31/14 16:39	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	10/31/14 16:39	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	10/31/14 16:39	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	10/31/14 16:39	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	10/31/14 16:39	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	20	SW8260C	10/31/14 16:39	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	10/31/14 16:39	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	10/31/14 16:39	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	10/31/14 16:39	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	10/31/14 16:39	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	10/31/14 16:39	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	10/31/14 16:39	WAT	124-48-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	10/31/14 16:39	WAT	106-93-4	



Analytical Laboratory Report

Lab Sample ID: S63405.03 (continued)

Sample Tag: TW12-103014-0820

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Chlorobenzene	Not detected	ug/L	1	SW8260C	10/31/14 16:39	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	10/31/14 16:39	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	10/31/14 16:39	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	10/31/14 16:39	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	10/31/14 16:39	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	10/31/14 16:39	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	10/31/14 16:39	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	10/31/14 16:39	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	10/31/14 16:39	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	10/31/14 16:39	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	10/31/14 16:39	WAT	95-50-1	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	10/31/14 16:39	WAT	96-12-8	
1,2,4-Trichlorobenzene	Not detected	ug/L	2	SW8260C	10/31/14 16:39	WAT	120-82-1	



Analytical Laboratory Report

Lab Sample ID: S63405.04
Sample Tag: TW6-103014-0930
Collected Date/Time: 10/30/2014 09:30
Matrix: Groundwater
COC Reference: 87581

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1L Amber	None	Yes	2.4	IR
3	40ml Glass	HCL	Yes	2.4	IR
2	125ml Plastic	HNO3	Yes	2.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

Mercury Digestion	Completed			E245.1	11/05/14 11:00	CCM		
Mercury Digestion	Completed			E245.1	11/05/14 11:00	CCM		
Metal Digestion	Completed			SW3015A	11/05/14 10:30	JRH		
Metal Digestion	Completed			SW3015A	11/05/14 10:30	JRH		
pH check for VOCs	<2	STD Units		N/A	11/03/14 10:32	LBR		
PNA Extraction	Completed			SW3510C	11/03/14 15:03	EMR		

Metals

Arsenic, Dissolved	0.005	mg/L	0.002	E200.8	11/05/14 15:53	JRH	7440-38-2	
Arsenic	0.029	mg/L	0.002	E200.8	11/05/14 15:49	JRH	7440-38-2	
Barium, Dissolved	0.417	mg/L	0.005	E200.8	11/05/14 15:53	JRH	7440-39-3	
Barium	0.489	mg/L	0.005	E200.8	11/05/14 15:49	JRH	7440-39-3	
Cadmium, Dissolved	Not detected	mg/L	0.0005	E200.8	11/05/14 15:53	JRH	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	E200.8	11/05/14 15:49	JRH	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	E200.8	11/05/14 15:53	JRH	7440-47-3	
Chromium	Not detected	mg/L	0.005	E200.8	11/05/14 15:49	JRH	7440-47-3	
Copper, Dissolved	Not detected	mg/L	0.005	E200.8	11/05/14 15:53	JRH	7440-50-8	
Copper	0.005	mg/L	0.005	E200.8	11/05/14 15:49	JRH	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	E200.8	11/05/14 15:53	JRH	7439-92-1	
Lead	0.003	mg/L	0.003	E200.8	11/05/14 15:49	JRH	7439-92-1	
Manganese, Dissolved	0.500	mg/L	0.005	E200.8	11/05/14 15:53	JRH	7439-96-5	
Manganese	0.543	mg/L	0.005	E200.8	11/05/14 15:49	JRH	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0002	E245.1	11/05/14 14:51	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0002	E245.1	11/05/14 14:39	CCM	7439-97-6	
Selenium, Dissolved	Not detected	mg/L	0.005	E200.8	11/05/14 15:53	JRH	7782-49-2	
Selenium	Not detected	mg/L	0.005	E200.8	11/05/14 15:49	JRH	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	E200.8	11/05/14 15:53	JRH	7440-22-4	
Silver	0.0016	mg/L	0.0005	E200.8	11/05/14 15:49	JRH	7440-22-4	
Zinc, Dissolved	0.016	mg/L	0.005	E200.8	11/05/14 15:53	JRH	7440-66-6	
Zinc	0.016	mg/L	0.005	E200.8	11/05/14 15:49	JRH	7440-66-6	

Organics - Semi-Volatiles

Polynuclear Aromatic Hydrocarbon

Acenaphthene	Not detected	ug/L	5	SW8270D	11/05/14 01:47	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	5	SW8270D	11/05/14 01:47	PL	208-96-8	
Anthracene	Not detected	ug/L	5	SW8270D	11/05/14 01:47	PL	120-12-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/05/14 01:47	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/05/14 01:47	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/05/14 01:47	PL	205-99-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/05/14 01:47	PL	207-08-9	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/05/14 01:47	PL	191-24-2	



Analytical Laboratory Report

Lab Sample ID: S63405.04 (continued)

Sample Tag: TW6-103014-0930

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatic Hydrocarbon (continued)								
Chrysene	Not detected	ug/L	1	SW8270D	11/05/14 01:47	PL	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/05/14 01:47	PL	53-70-3	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/05/14 01:47	PL	206-44-0	
Fluorene	Not detected	ug/L	5	SW8270D	11/05/14 01:47	PL	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	2	SW8270D	11/05/14 01:47	PL	193-39-5	
Naphthalene	Not detected	ug/L	5	SW8270D	11/05/14 01:47	PL	91-20-3	
Phenanthrene	Not detected	ug/L	2	SW8270D	11/05/14 01:47	PL	85-01-8	
Pyrene	Not detected	ug/L	5	SW8270D	11/05/14 01:47	PL	129-00-0	
2-Methylnaphthalene	Not detected	ug/L	5	SW8270D	11/05/14 01:47	PL	91-57-6	
1-Methylnaphthalene	Not detected	ug/L	5	SW8270D	11/05/14 01:47	PL	90-12-0	
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	30	SW8260C	10/31/14 16:59	WAT	76-13-1	
Acetone	Not detected	ug/L	20	SW8260C	10/31/14 16:59	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	5	SW8260C	10/31/14 16:59	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	10/31/14 16:59	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	5	SW8260C	10/31/14 16:59	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	20	SW8260C	10/31/14 16:59	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	10/31/14 16:59	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	10/31/14 16:59	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	10/31/14 16:59	WAT	75-01-4	
Bromomethane	Not detected	ug/L	2	SW8260C	10/31/14 16:59	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	10/31/14 16:59	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	10/31/14 16:59	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	10/31/14 16:59	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	5	SW8260C	10/31/14 16:59	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	10/31/14 16:59	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	10/31/14 16:59	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	10/31/14 16:59	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	10/31/14 16:59	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	10/31/14 16:59	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	10/31/14 16:59	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	10/31/14 16:59	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	50	SW8260C	10/31/14 16:59	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	10/31/14 16:59	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	10/31/14 16:59	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	10/31/14 16:59	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	10/31/14 16:59	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	10/31/14 16:59	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	10/31/14 16:59	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	20	SW8260C	10/31/14 16:59	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	10/31/14 16:59	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	10/31/14 16:59	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	10/31/14 16:59	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	10/31/14 16:59	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	10/31/14 16:59	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	10/31/14 16:59	WAT	124-48-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	10/31/14 16:59	WAT	106-93-4	



Analytical Laboratory Report

Lab Sample ID: S63405.04 (continued)

Sample Tag: TW6-103014-0930

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Chlorobenzene	Not detected	ug/L	1	SW8260C	10/31/14 16:59	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	10/31/14 16:59	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	10/31/14 16:59	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	10/31/14 16:59	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	10/31/14 16:59	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	10/31/14 16:59	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	10/31/14 16:59	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	10/31/14 16:59	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	10/31/14 16:59	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	10/31/14 16:59	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	10/31/14 16:59	WAT	95-50-1	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	10/31/14 16:59	WAT	96-12-8	
1,2,4-Trichlorobenzene	Not detected	ug/L	2	SW8260C	10/31/14 16:59	WAT	120-82-1	



Analytical Laboratory Report

Lab Sample ID: S63405.05
Sample Tag: TW1-103014-1050
Collected Date/Time: 10/30/2014 10:50
Matrix: Groundwater
COC Reference: 87581

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1L Amber	None	Yes	2.4	IR
3	40ml Glass	HCL	Yes	2.4	IR
2	125ml Plastic	HNO3	Yes	2.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

Mercury Digestion	Completed			E245.1	11/05/14 11:00	CCM		
Mercury Digestion	Completed			E245.1	11/05/14 11:00	CCM		
Metal Digestion	Completed			SW3015A	11/05/14 10:30	JRH		
Metal Digestion	Completed			SW3015A	11/05/14 10:30	JRH		
pH check for VOCs	<2	STD Units		N/A	11/03/14 10:32	LBR		
PNA Extraction	Completed			SW3510C	11/03/14 15:03	EMR		

Metals

Arsenic, Dissolved	0.007	mg/L	0.002	E200.8	11/05/14 16:00	JRH	7440-38-2	
Arsenic	0.025	mg/L	0.002	E200.8	11/05/14 15:57	JRH	7440-38-2	
Barium, Dissolved	0.223	mg/L	0.005	E200.8	11/05/14 16:00	JRH	7440-39-3	
Barium	0.256	mg/L	0.005	E200.8	11/05/14 15:57	JRH	7440-39-3	
Cadmium, Dissolved	Not detected	mg/L	0.0005	E200.8	11/05/14 16:00	JRH	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	E200.8	11/05/14 15:57	JRH	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	E200.8	11/05/14 16:00	JRH	7440-47-3	
Chromium	Not detected	mg/L	0.005	E200.8	11/05/14 15:57	JRH	7440-47-3	
Copper, Dissolved	Not detected	mg/L	0.005	E200.8	11/05/14 16:00	JRH	7440-50-8	
Copper	0.010	mg/L	0.005	E200.8	11/05/14 15:57	JRH	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	E200.8	11/05/14 16:00	JRH	7439-92-1	
Lead	0.006	mg/L	0.003	E200.8	11/05/14 15:57	JRH	7439-92-1	
Manganese, Dissolved	0.825	mg/L	0.005	E200.8	11/05/14 16:00	JRH	7439-96-5	
Manganese	0.892	mg/L	0.005	E200.8	11/05/14 15:57	JRH	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0002	E245.1	11/05/14 14:55	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0002	E245.1	11/05/14 14:53	CCM	7439-97-6	
Selenium, Dissolved	0.006	mg/L	0.005	E200.8	11/05/14 16:00	JRH	7782-49-2	
Selenium	0.006	mg/L	0.005	E200.8	11/05/14 15:57	JRH	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	E200.8	11/05/14 16:00	JRH	7440-22-4	
Silver	0.0012	mg/L	0.0005	E200.8	11/05/14 15:57	JRH	7440-22-4	
Zinc, Dissolved	0.008	mg/L	0.005	E200.8	11/05/14 16:00	JRH	7440-66-6	
Zinc	0.023	mg/L	0.005	E200.8	11/05/14 15:57	JRH	7440-66-6	

Organics - Semi-Volatiles

Polynuclear Aromatic Hydrocarbon

Acenaphthene	Not detected	ug/L	5	SW8270D	11/05/14 02:09	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	5	SW8270D	11/05/14 02:09	PL	208-96-8	
Anthracene	Not detected	ug/L	5	SW8270D	11/05/14 02:09	PL	120-12-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/05/14 02:09	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/05/14 02:09	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/05/14 02:09	PL	205-99-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/05/14 02:09	PL	207-08-9	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/05/14 02:09	PL	191-24-2	



Analytical Laboratory Report

Lab Sample ID: S63405.05 (continued)

Sample Tag: TW1-103014-1050

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatic Hydrocarbon (continued)								
Chrysene	Not detected	ug/L	1	SW8270D	11/05/14 02:09	PL	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/05/14 02:09	PL	53-70-3	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/05/14 02:09	PL	206-44-0	
Fluorene	Not detected	ug/L	5	SW8270D	11/05/14 02:09	PL	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	2	SW8270D	11/05/14 02:09	PL	193-39-5	
Naphthalene	Not detected	ug/L	5	SW8270D	11/05/14 02:09	PL	91-20-3	
Phenanthrene	Not detected	ug/L	2	SW8270D	11/05/14 02:09	PL	85-01-8	
Pyrene	Not detected	ug/L	5	SW8270D	11/05/14 02:09	PL	129-00-0	
2-Methylnaphthalene	Not detected	ug/L	5	SW8270D	11/05/14 02:09	PL	91-57-6	
1-Methylnaphthalene	Not detected	ug/L	5	SW8270D	11/05/14 02:09	PL	90-12-0	
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	30	SW8260C	10/31/14 17:19	WAT	76-13-1	
Acetone	Not detected	ug/L	20	SW8260C	10/31/14 17:19	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	5	SW8260C	10/31/14 17:19	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	10/31/14 17:19	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	5	SW8260C	10/31/14 17:19	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	20	SW8260C	10/31/14 17:19	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	10/31/14 17:19	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	10/31/14 17:19	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	10/31/14 17:19	WAT	75-01-4	
Bromomethane	Not detected	ug/L	2	SW8260C	10/31/14 17:19	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	10/31/14 17:19	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	10/31/14 17:19	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	10/31/14 17:19	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	5	SW8260C	10/31/14 17:19	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	10/31/14 17:19	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	10/31/14 17:19	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	10/31/14 17:19	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	10/31/14 17:19	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	10/31/14 17:19	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	10/31/14 17:19	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	10/31/14 17:19	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	50	SW8260C	10/31/14 17:19	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	10/31/14 17:19	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	10/31/14 17:19	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	10/31/14 17:19	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	10/31/14 17:19	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	10/31/14 17:19	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	10/31/14 17:19	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	20	SW8260C	10/31/14 17:19	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	10/31/14 17:19	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	10/31/14 17:19	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	10/31/14 17:19	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	10/31/14 17:19	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	10/31/14 17:19	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	10/31/14 17:19	WAT	124-48-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	10/31/14 17:19	WAT	106-93-4	



Analytical Laboratory Report

Lab Sample ID: S63405.05 (continued)

Sample Tag: TW1-103014-1050

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Chlorobenzene	Not detected	ug/L	1	SW8260C	10/31/14 17:19	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	10/31/14 17:19	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	10/31/14 17:19	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	10/31/14 17:19	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	10/31/14 17:19	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	10/31/14 17:19	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	10/31/14 17:19	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	10/31/14 17:19	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	10/31/14 17:19	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	10/31/14 17:19	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	10/31/14 17:19	WAT	95-50-1	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	10/31/14 17:19	WAT	96-12-8	
1,2,4-Trichlorobenzene	Not detected	ug/L	2	SW8260C	10/31/14 17:19	WAT	120-82-1	



Analytical Laboratory Report

Lab Sample ID: S63405.06
Sample Tag: TW8-103014-1210
Collected Date/Time: 10/30/2014 12:10
Matrix: Groundwater
COC Reference: 87581

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1L Amber	None	Yes	2.4	IR
3	40ml Glass	HCL	Yes	2.4	IR
2	125ml Plastic	HNO3	Yes	2.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
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Extraction / Prep.

Mercury Digestion	Completed			E245.1	11/05/14 11:00	CCM		
Mercury Digestion	Completed			E245.1	11/05/14 11:00	CCM		
Metal Digestion	Completed			SW3015A	11/05/14 10:30	JRH		
Metal Digestion	Completed			SW3015A	11/05/14 10:30	JRH		
pH check for VOCs	<2	STD Units		N/A	11/03/14 10:35	LBR		
PNA Extraction	Completed			SW3510C	11/03/14 15:03	EMR		

Metals

Arsenic, Dissolved	0.007	mg/L	0.002	E200.8	11/05/14 16:30	JRH	7440-38-2	
Arsenic	0.056	mg/L	0.002	E200.8	11/05/14 16:27	JRH	7440-38-2	
Barium, Dissolved	0.178	mg/L	0.005	E200.8	11/05/14 16:30	JRH	7440-39-3	
Barium	0.209	mg/L	0.005	E200.8	11/05/14 16:27	JRH	7440-39-3	
Cadmium, Dissolved	Not detected	mg/L	0.0005	E200.8	11/05/14 16:30	JRH	7440-43-9	
Cadmium	Not detected	mg/L	0.0005	E200.8	11/05/14 16:27	JRH	7440-43-9	
Chromium, Dissolved	Not detected	mg/L	0.005	E200.8	11/05/14 16:30	JRH	7440-47-3	
Chromium	Not detected	mg/L	0.005	E200.8	11/05/14 16:27	JRH	7440-47-3	
Copper, Dissolved	Not detected	mg/L	0.005	E200.8	11/05/14 16:30	JRH	7440-50-8	
Copper	Not detected	mg/L	0.005	E200.8	11/05/14 16:27	JRH	7440-50-8	
Lead, Dissolved	Not detected	mg/L	0.003	E200.8	11/05/14 16:30	JRH	7439-92-1	
Lead	0.003	mg/L	0.003	E200.8	11/05/14 16:27	JRH	7439-92-1	
Manganese, Dissolved	0.179	mg/L	0.005	E200.8	11/05/14 16:30	JRH	7439-96-5	
Manganese	0.179	mg/L	0.005	E200.8	11/05/14 16:27	JRH	7439-96-5	
Mercury, Dissolved	Not detected	mg/L	0.0002	E245.1	11/05/14 14:59	CCM	7439-97-6	
Mercury	Not detected	mg/L	0.0002	E245.1	11/05/14 14:57	CCM	7439-97-6	
Selenium, Dissolved	Not detected	mg/L	0.005	E200.8	11/05/14 16:30	JRH	7782-49-2	
Selenium	Not detected	mg/L	0.005	E200.8	11/05/14 16:27	JRH	7782-49-2	
Silver, Dissolved	Not detected	mg/L	0.0005	E200.8	11/05/14 16:30	JRH	7440-22-4	
Silver	0.0015	mg/L	0.0005	E200.8	11/05/14 16:27	JRH	7440-22-4	
Zinc, Dissolved	0.005	mg/L	0.005	E200.8	11/05/14 16:30	JRH	7440-66-6	
Zinc	0.005	mg/L	0.005	E200.8	11/05/14 16:27	JRH	7440-66-6	

Organics - Semi-Volatiles

Polynuclear Aromatic Hydrocarbon

Acenaphthene	Not detected	ug/L	5	SW8270D	11/05/14 02:32	PL	83-32-9	
Acenaphthylene	Not detected	ug/L	5	SW8270D	11/05/14 02:32	PL	208-96-8	
Anthracene	Not detected	ug/L	5	SW8270D	11/05/14 02:32	PL	120-12-7	
Benzo(a)anthracene	Not detected	ug/L	1	SW8270D	11/05/14 02:32	PL	56-55-3	
Benzo(a)pyrene	Not detected	ug/L	1	SW8270D	11/05/14 02:32	PL	50-32-8	
Benzo(b)fluoranthene	Not detected	ug/L	1	SW8270D	11/05/14 02:32	PL	205-99-2	
Benzo(k)fluoranthene	Not detected	ug/L	1	SW8270D	11/05/14 02:32	PL	207-08-9	
Benzo(ghi)perylene	Not detected	ug/L	1	SW8270D	11/05/14 02:32	PL	191-24-2	



Analytical Laboratory Report

Lab Sample ID: S63405.06 (continued)

Sample Tag: TW8-103014-1210

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Semi-Volatiles (continued)								
Polynuclear Aromatic Hydrocarbon (continued)								
Chrysene	Not detected	ug/L	1	SW8270D	11/05/14 02:32	PL	218-01-9	
Dibenzo(ah)anthracene	Not detected	ug/L	2	SW8270D	11/05/14 02:32	PL	53-70-3	
Fluoranthene	Not detected	ug/L	1	SW8270D	11/05/14 02:32	PL	206-44-0	
Fluorene	Not detected	ug/L	5	SW8270D	11/05/14 02:32	PL	86-73-7	
Indeno(1,2,3-cd)pyrene	Not detected	ug/L	2	SW8270D	11/05/14 02:32	PL	193-39-5	
Naphthalene	Not detected	ug/L	5	SW8270D	11/05/14 02:32	PL	91-20-3	
Phenanthrene	Not detected	ug/L	2	SW8270D	11/05/14 02:32	PL	85-01-8	
Pyrene	Not detected	ug/L	5	SW8270D	11/05/14 02:32	PL	129-00-0	
2-Methylnaphthalene	Not detected	ug/L	5	SW8270D	11/05/14 02:32	PL	91-57-6	
1-Methylnaphthalene	Not detected	ug/L	5	SW8270D	11/05/14 02:32	PL	90-12-0	
Organics - Volatiles								
TCL Volatile Organics 8260								
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	ug/L	30	SW8260C	10/31/14 17:40	WAT	76-13-1	
Acetone	Not detected	ug/L	20	SW8260C	10/31/14 17:40	WAT	67-64-1	
Carbon disulfide	Not detected	ug/L	5	SW8260C	10/31/14 17:40	WAT	75-15-0	
Methyl Acetate	Not detected	ug/L	10	SW8260C	10/31/14 17:40	WAT	79-20-9	
tert-Methyl butyl ether (MTBE)	Not detected	ug/L	5	SW8260C	10/31/14 17:40	WAT	1634-04-4	
2-Butanone (MEK)	Not detected	ug/L	20	SW8260C	10/31/14 17:40	WAT	78-93-3	
Dichlorodifluoromethane	Not detected	ug/L	1	SW8260C	10/31/14 17:40	WAT	75-71-8	
Chloromethane	Not detected	ug/L	1	SW8260C	10/31/14 17:40	WAT	74-87-3	
Vinyl chloride	Not detected	ug/L	1	SW8260C	10/31/14 17:40	WAT	75-01-4	
Bromomethane	Not detected	ug/L	2	SW8260C	10/31/14 17:40	WAT	74-83-9	
Chloroethane	Not detected	ug/L	1	SW8260C	10/31/14 17:40	WAT	75-00-3	
Trichlorofluoromethane	Not detected	ug/L	1	SW8260C	10/31/14 17:40	WAT	75-69-4	
1,1-Dichloroethene	Not detected	ug/L	1	SW8260C	10/31/14 17:40	WAT	75-35-4	
Methylene chloride	Not detected	ug/L	5	SW8260C	10/31/14 17:40	WAT	75-09-2	
trans-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	10/31/14 17:40	WAT	156-60-5	
1,1-Dichloroethane	Not detected	ug/L	1	SW8260C	10/31/14 17:40	WAT	75-34-3	
cis-1,2-Dichloroethene	Not detected	ug/L	1	SW8260C	10/31/14 17:40	WAT	156-59-2	
Chloroform	Not detected	ug/L	1	SW8260C	10/31/14 17:40	WAT	67-66-3	
1,1,1-Trichloroethane	Not detected	ug/L	1	SW8260C	10/31/14 17:40	WAT	71-55-6	
Cyclohexane	Not detected	ug/L	1	SW8260C	10/31/14 17:40	WAT	110-82-7	
4-Methyl-2-pentanone (MIBK)	Not detected	ug/L	10	SW8260C	10/31/14 17:40	WAT	108-10-1	
2-Hexanone	Not detected	ug/L	50	SW8260C	10/31/14 17:40	WAT	591-78-6	
Carbon tetrachloride	Not detected	ug/L	1	SW8260C	10/31/14 17:40	WAT	56-23-5	
Benzene	Not detected	ug/L	1	SW8260C	10/31/14 17:40	WAT	71-43-2	
1,2-Dichloroethane	Not detected	ug/L	1	SW8260C	10/31/14 17:40	WAT	107-06-2	
Trichloroethene	Not detected	ug/L	1	SW8260C	10/31/14 17:40	WAT	79-01-6	
1,2-Dichloropropane	Not detected	ug/L	1	SW8260C	10/31/14 17:40	WAT	78-87-5	
Bromodichloromethane	Not detected	ug/L	1	SW8260C	10/31/14 17:40	WAT	75-27-4	
Methyl cyclohexane	Not detected	ug/L	20	SW8260C	10/31/14 17:40	WAT	108-87-2	
cis-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	10/31/14 17:40	WAT	10061-01-5	
Toluene	Not detected	ug/L	1	SW8260C	10/31/14 17:40	WAT	108-88-3	
trans-1,3-Dichloropropene	Not detected	ug/L	1	SW8260C	10/31/14 17:40	WAT	10061-02-6	
1,1,2-Trichloroethane	Not detected	ug/L	1	SW8260C	10/31/14 17:40	WAT	79-00-5	
Tetrachloroethene	Not detected	ug/L	1	SW8260C	10/31/14 17:40	WAT	127-18-4	
Dibromochloromethane	Not detected	ug/L	1	SW8260C	10/31/14 17:40	WAT	124-48-1	
1,2-Dibromoethane	Not detected	ug/L	1	SW8260C	10/31/14 17:40	WAT	106-93-4	



Analytical Laboratory Report

Lab Sample ID: S63405.06 (continued)

Sample Tag: TW8-103014-1210

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	CAS #	Flags
Organics - Volatiles (continued)								
TCL Volatile Organics 8260 (continued)								
Chlorobenzene	Not detected	ug/L	1	SW8260C	10/31/14 17:40	WAT	108-90-7	
1,1,2,2-Tetrachloroethane	Not detected	ug/L	1	SW8260C	10/31/14 17:40	WAT	79-34-5	
Ethylbenzene	Not detected	ug/L	1	SW8260C	10/31/14 17:40	WAT	100-41-4	
p,m-Xylene	Not detected	ug/L	2	SW8260C	10/31/14 17:40	WAT		
o-Xylene	Not detected	ug/L	1	SW8260C	10/31/14 17:40	WAT	95-47-6	
Styrene	Not detected	ug/L	1	SW8260C	10/31/14 17:40	WAT	100-42-5	
Isopropylbenzene	Not detected	ug/L	1	SW8260C	10/31/14 17:40	WAT	98-82-8	
Bromoform	Not detected	ug/L	1	SW8260C	10/31/14 17:40	WAT	75-25-2	
1,3-Dichlorobenzene	Not detected	ug/L	1	SW8260C	10/31/14 17:40	WAT	541-73-1	
1,4-Dichlorobenzene	Not detected	ug/L	1	SW8260C	10/31/14 17:40	WAT	106-46-7	
1,2-Dichlorobenzene	Not detected	ug/L	1	SW8260C	10/31/14 17:40	WAT	95-50-1	
1,2-Dibromo-3-chloropropane	Not detected	ug/L	1	SW8260C	10/31/14 17:40	WAT	96-12-8	
1,2,4-Trichlorobenzene	Not detected	ug/L	2	SW8260C	10/31/14 17:40	WAT	120-82-1	



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www.meritlabs.com

C.O.C. PAGE # 1 OF 1

87581

REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME BAN AZAGONA			
COMPANY HALEY & ALDRICH			
ADDRESS 455 EISENHOWER PARKWAY, SUITE 210			
CITY ANN ARBOR	STATE MI	ZIP CODE 48108	
PHONE NO. 734-887-8410	FAX NO.	P.O. NO. 37147-028	
E-MAIL ADDRESS baragona@haleyaldrich.com		QUOTE NO.	

CONTACT NAME ☒ SAME	
COMPANY	
ADDRESS	
CITY	STATE ZIP CODE
PHONE NO.	E-MAIL ADDRESS

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

PROJECT NO./NAME PONTIAC RACE	SAMPLER(S) - PLEASE PRINT/SIGN NAME Eric Shirley
TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER	
DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER	

MATRIX CODE:	GW=GROUNDWATER SL=SLUDGE	WW=WASTEWATER DW=DRINKING WATER	S=SOIL O=OIL	L=LIQUID WP=WIPE	SD=SOLID A=AIR	W=WASTE
--------------	-----------------------------	------------------------------------	-----------------	---------------------	-------------------	---------

Containers & Preservatives

MERIT LAB NO. FOR LAB USE ONLY	YEAR		SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives										TCL VOCs	TCL SVOCs	TCL PCBs	Cadmium	Chromium	Lead	GRO	DRO	ORD	TCL Metals	☒ Other <u>PONTIAC</u> Special Instructions
	DATE	TIME				NONE	HCl	HNO ₃	H ₂ SO ₄	NaOH	MeOH	OTHER														
63405.01	10/29/14	1510	TW14-102914-1510	GW	7	2	3	2							X	X		X	X	X						
.02	↓	1610	TW13-102914-1610	↓	↓	2	3	2							X	X		X	X	X						
.03	10/30/14	0820	TW12-103014-0820	↓	↓	2	3	2							X	X		X	X	X						
.04	↓	0930	TW6-103014-0930	↓	↓	2	3	2							X	X		X	X	X						
.05	↓	1050	TW1-103014-1050	↓	↓	2	3	2							X	X		X	X	X						
.06	↓	1210	TW8-103014-1210	↓	↓	2	3	2							X	X		X	X	X						
63406.01	↓	1300	DM01-103014-1300	SW	2	1					1				X	X	X				X	X	X	X	* 3 Day TAT *	
.02	↓	1315	DM02-103014-1315	WW	6	2	3	1							X	X							X	* 3 Day TAT *		

RELINQUISHED BY: SIGNATURE/ORGANIZATION E. Shirley	DATE 10/30/14	TIME 1515
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME
RELINQUISHED BY: SIGNATURE/ORGANIZATION	DATE	TIME
RECEIVED BY: SIGNATURE/ORGANIZATION	DATE	TIME

RELINQUISHED BY: SIGNATURE/ORGANIZATION FedEx	DATE 10/31/14	TIME 1035
RECEIVED BY: SIGNATURE/ORGANIZATION Thermin	DATE 10/31/14	TIME 1035
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS
NOTES:		TEMP ON ARRIVAL 2.4



Analytical Laboratory Report

Report ID: S63406.01(01)
Generated on 11/06/2014

Report to

Attention: Ban Aragona
Haley & Aldrich, Inc.
455 Eisenhower Parkway
Suite 210
Ann Arbor, MI 48108

Phone: 734-887-8410 FAX:
Email: baragona@haleyaldrich.com

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Kevin George (kgeorge@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S63406.01-S63406.02
Project: Pontiac RACER
Collected Date: 10/30/2014
Submitted Date/Time: 10/31/2014 10:35
Sampled by: Eric Shirley
P.O. #: 37147-028

A handwritten signature in black ink, reading "Maya Murshak".

Maya Murshak
Technical Director



Analytical Laboratory Report

General Report Notes

Results relate only to items tested as received by laboratory.

Methods may be modified for improved performance.

Results reported on a dry weight basis were applicable.

'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).

40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.

QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.

Full accreditation certificates are available upon request.

Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.

Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.

Report Narrative

There is no additional narrative for this analytical report



Analytical Laboratory Report

Laboratory Certifications

Authority	Certification ID
Michigan DEQ	#9956
DOD ELAP/ISO 17025	#69699
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702

Qualifier Descriptions

Qualifier	Description
!	Result is outside of stated limit criteria
B	Compound also found in associated method blank
E	Concentration exceeds calibration range
F	Analysis run outside of holding time
G	Estimated result due to extraction run outside of holding time
H	Sample submitted and run outside of holding time
I	Matrix interference with internal standard
J	Estimated value less than reporting limit, but greater than MDL
L	Elevated reporting limit due to low sample amount
M	Result reported to MDL not RDL
O	Analysis performed by outside laboratory. See attached report.
R	Preliminary result
S	Surrogate recovery outside of control limits
T	No correction for total solids
X	Elevated reporting limit due to matrix interference
Y	Elevated reporting limit due to high target concentration
b	Value detected less than reporting limit, but greater than MDL
e	Reported value estimated due to interference
j	Analyte also found in associated method blank
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
x	Preserved from bulk sample

Glossary of Abbreviations

Abbreviation	Description
RL/RDL	Reporting Limit
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
SW	EPA SW 846 (Soil and Wastewater) Methods
E	EPA Methods
SM	Standard Methods



Analytical Laboratory Report

Method Summary

Method	Version
E608	EPA Method 608
SM2540B	Standard Method 2540 B 20th Edition
SW1311	SW 846 Method 1311 Revision 0 July 1992
SW3015A	SW 846 Method 3015A Revision 1 February 2007
SW3510C	SW 846 Method 3510C Revision 3 December 1996
SW3550C	SW 846 Method 3550C Revision 3 February 2007
SW6020A	SW 846 Method 6020A Revision 1 February 2007
SW7471B	SW 846 Method 7471B Revision 2 February 2007
SW8082A	SW 846 Method 8082A Revision 1 February 2007
SW8260C	SW 846 Method 8260C Revision 3 August 2006
SW8270D	SW 846 Method 8270D Revision 4 February 2007



Analytical Laboratory Report

Sample Summary (2 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S63406.01	DM01-103014-1300	Soil	10/30/2014 13:00
S63406.02	DM02-103014-1315	Wastewater	10/30/2014 13:15



Analytical Laboratory Report

Lab Sample ID: S63406.01
Sample Tag: DM01-103014-1300
Collected Date/Time: 10/30/2014 13:00
Matrix: Soil
COC Reference: 87581

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	2.4	IR
1	40ml Glass	MeOH	Yes	2.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	Limits	Flags
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Extraction / Prep.

DRO Extraction	Completed			SW3550C	10/31/14 12:38	EMR		
Extraction, PCB	Completed			SW3550C	11/03/14 08:00	RGS		
Mercury Digestion	Completed			SW7471B	11/05/14 11:00	CCM		
Metal Digestion	Completed			SW3015A	11/05/14 10:30	JRH		
PNA Extraction	Completed			SW3550C	10/31/14 12:34	EMR		
TCLP Zero Headspace Ext.	Completed			SW1311	11/03/14 19:30	WAR		
TCLP/SPLP BNA Extraction	Completed			SW3510C	11/04/14 14:10	EMR		

TCLP Extraction

Initial Sample pH	11.14			SW1311	11/03/14 19:30-11/04/14	WAR		
pH after 3.5 ml HCl	2.57			SW1311	11/03/14 19:30-11/04/14	WAR		
% Solids	100			SW1311	11/03/14 19:30-11/04/14	WAR		
Sample Used g	100			SW1311	11/03/14 19:30-11/04/14	WAR		
Final Volume mL	2,000			SW1311	11/03/14 19:30-11/04/14	WAR		
TCLP Extraction Fluid	1			SW1311	11/03/14 19:30-11/04/14	WAR		
Final Extract pH	7.10			SW1311	11/03/14 19:30-11/04/14	WAR		

Inorganics

Total Solids	88	%	1	SM2540B	11/02/14 14:15	ASB		
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Metals

Arsenic, TCLP	Not detected	mg/L	0.02	SW6020A	11/05/14 13:32	JRH	5.0	
Barium, TCLP	0.49	mg/L	0.05	SW6020A	11/05/14 13:32	JRH	100.0	
Cadmium, TCLP	Not detected	mg/L	0.005	SW6020A	11/05/14 13:32	JRH	1.0	
Chromium, TCLP	Not detected	mg/L	0.05	SW6020A	11/05/14 13:32	JRH	5.0	
Lead, TCLP	Not detected	mg/L	0.03	SW6020A	11/05/14 13:32	JRH	5.0	
Mercury, TCLP	Not detected	mg/L	0.0002	SW7471B	11/05/14 15:01	CCM	0.2	
Selenium, TCLP	Not detected	mg/L	0.05	SW6020A	11/05/14 13:32	JRH	1.0	
Silver, TCLP	Not detected	mg/L	0.005	SW6020A	11/05/14 13:32	JRH	5.0	

Organics - PCBs/Pesticides

PCB List

PCB-1016	Not detected	ug/kg	330	SW8082A	11/03/14 14:58	JAN		
PCB-1242	Not detected	ug/kg	330	SW8082A	11/03/14 14:58	JAN		
PCB-1221	Not detected	ug/kg	330	SW8082A	11/03/14 14:58	JAN		
PCB-1232	Not detected	ug/kg	330	SW8082A	11/03/14 14:58	JAN		
PCB-1248	Not detected	ug/kg	330	SW8082A	11/03/14 14:58	JAN		
PCB-1254	Not detected	ug/kg	330	SW8082A	11/03/14 14:58	JAN		
PCB-1260	Not detected	ug/kg	330	SW8082A	11/03/14 14:58	JAN		



Analytical Laboratory Report

Lab Sample ID: S63406.01 (continued)

Sample Tag: DM01-103014-1300

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	Limits	Flags
Organics - Semi-Volatiles								
TCLP Semi Volatiles								
o-Cresol	Not detected	ug/L	1,000	SW8270D	11/05/14 02:12	PL	200,000	
p,m-Cresol	Not detected	ug/L	1,000	SW8270D	11/05/14 02:12	PL	200,000	
Pentachlorophenol	Not detected	ug/L	1,000	SW8270D	11/05/14 02:12	PL	100,000	
2,4,5-Trichlorophenol	Not detected	ug/L	1,000	SW8270D	11/05/14 02:12	PL	400,000	
2,4,6-Trichlorophenol	Not detected	ug/L	1,000	SW8270D	11/05/14 02:12	PL	2,000	
2,4-Dinitrotoluene	Not detected	ug/L	90	SW8270D	11/05/14 02:12	PL	130	
Hexachlorobenzene	Not detected	ug/L	90	SW8270D	11/05/14 02:12	PL	130	
Hexachlorobutadiene	Not detected	ug/L	100	SW8270D	11/05/14 02:12	PL	500	
Hexachloroethane	Not detected	ug/L	100	SW8270D	11/05/14 02:12	PL	3,000	
Nitrobenzene	Not detected	ug/L	100	SW8270D	11/05/14 02:12	PL	2,000	
Pyridine	Not detected	ug/L	100	SW8270D	11/05/14 02:12	PL	5,000	
Organics - Volatiles								
TCLP Volatiles								
Benzene	Not detected	ug/L	100	SW8260C	11/04/14 17:34	WAT	500	
Carbon tetrachloride	Not detected	ug/L	100	SW8260C	11/04/14 17:34	WAT	500	
Chlorobenzene	Not detected	ug/L	100	SW8260C	11/04/14 17:34	WAT	100,000	
Chloroform	Not detected	ug/L	100	SW8260C	11/04/14 17:34	WAT	6,000	
1,4-Dichlorobenzene	Not detected	ug/L	100	SW8260C	11/04/14 17:34	WAT	7,500	
1,2-Dichloroethane	Not detected	ug/L	100	SW8260C	11/04/14 17:34	WAT	500	
1,1-Dichloroethene	Not detected	ug/L	100	SW8260C	11/04/14 17:34	WAT	700	
2-Butanone (MEK)	Not detected	ug/L	1,000	SW8260C	11/04/14 17:34	WAT	200,000	
Tetrachloroethene	Not detected	ug/L	100	SW8260C	11/04/14 17:34	WAT	700	
Trichloroethene	Not detected	ug/L	100	SW8260C	11/04/14 17:34	WAT	500	
Vinyl chloride	Not detected	ug/L	100	SW8260C	11/04/14 17:34	WAT	200	



Analytical Laboratory Report

Lab Sample ID: S63406.02
Sample Tag: DM02-103014-1315
Collected Date/Time: 10/30/2014 13:15
Matrix: Wastewater
COC Reference: 87581

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	1L Amber	None	Yes	2.4	IR
3	40ml Glass	MeOH	Yes	2.4	IR
1	125ml Plastic	HNO3	Yes	2.4	IR

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	Limits	Flags
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Extraction / Prep.

Extraction, PCB	Completed			SW3510C	11/03/14 08:00	RGS		
Mercury Digestion	Completed			SW7471B	11/05/14 11:00	CCM		
Metal Digestion	Completed			SW3015A	11/05/14 10:30	JRH		
TCLP Zero Headspace Ext.	<0.5%			SW1311	11/03/14 19:30	WAR		
TCLP/SPLP BNA Extraction	Completed			SW3510C	11/04/14 14:10	EMR		

TCLP Extraction

Initial Sample pH	<0.5%			SW1311	11/03/14 19:30-11/04/14	WAR		
pH after 3.5 ml HCl	<0.5%			SW1311	11/03/14 19:30-11/04/14	WAR		
% Solids	<0.5%			SW1311	11/03/14 19:30-11/04/14	WAR		
Sample Used g	<0.5%			SW1311	11/03/14 19:30-11/04/14	WAR		
Final Volume mL	<0.5%			SW1311	11/03/14 19:30-11/04/14	WAR		
TCLP Extraction Fluid	<0.5%			SW1311	11/03/14 19:30-11/04/14	WAR		
Final Extract pH	<0.5%			SW1311	11/03/14 19:30-11/04/14	WAR		

Metals

Arsenic, TCLP	Not detected	mg/L	0.02	SW6020A	11/05/14 13:36	JRH	5.0	
Barium, TCLP	0.59	mg/L	0.05	SW6020A	11/05/14 13:36	JRH	100.0	
Cadmium, TCLP	Not detected	mg/L	0.005	SW6020A	11/05/14 13:36	JRH	1.0	
Chromium, TCLP	0.05	mg/L	0.05	SW6020A	11/05/14 13:36	JRH	5.0	
Lead, TCLP	Not detected	mg/L	0.03	SW6020A	11/05/14 13:36	JRH	5.0	
Mercury, TCLP	Not detected	mg/L	0.0002	SW7471B	11/05/14 15:03	CCM	0.2	
Selenium, TCLP	Not detected	mg/L	0.05	SW6020A	11/05/14 13:36	JRH	1.0	
Silver, TCLP	Not detected	mg/L	0.005	SW6020A	11/05/14 13:36	JRH	5.0	

Organics - PCBs/Pesticides

PCB

PCB-1016	Not detected	ug/L	0.1	E608	11/03/14 13:55	JAN		
PCB-1221	Not detected	ug/L	0.1	E608	11/03/14 13:55	JAN		
PCB-1232	Not detected	ug/L	0.1	E608	11/03/14 13:55	JAN		
PCB-1242	Not detected	ug/L	0.1	E608	11/03/14 13:55	JAN		
PCB-1248	Not detected	ug/L	0.1	E608	11/03/14 13:55	JAN		
PCB-1254	Not detected	ug/L	0.1	E608	11/03/14 13:55	JAN		
PCB-1260	Not detected	ug/L	0.1	E608	11/03/14 13:55	JAN		
PCB, Total	Not detected	ug/L	0.1	E608	11/03/14 13:55	JAN		

Organics - Semi-Volatiles

TCLP Semi Volatiles

o-Cresol	Not detected	ug/L	1,000	SW8270D	11/05/14 02:36	PL	200,000	
p,m-Cresol	Not detected	ug/L	1,000	SW8270D	11/05/14 02:36	PL	200,000	
Pentachlorophenol	Not detected	ug/L	1,000	SW8270D	11/05/14 02:36	PL	100,000	



Analytical Laboratory Report

Lab Sample ID: S63406.02 (continued)

Sample Tag: DM02-103014-1315

Analysis	Results	Units	RL	Method	Run Date/Time	Analyst	Limits	Flags
Organics - Semi-Volatiles (continued)								
TCLP Semi Volatiles (continued)								
2,4,5-Trichlorophenol	Not detected	ug/L	1,000	SW8270D	11/05/14 02:36	PL	400,000	
2,4,6-Trichlorophenol	Not detected	ug/L	1,000	SW8270D	11/05/14 02:36	PL	2,000	
2,4-Dinitrotoluene	Not detected	ug/L	90	SW8270D	11/05/14 02:36	PL	130	
Hexachlorobenzene	Not detected	ug/L	90	SW8270D	11/05/14 02:36	PL	130	
Hexachlorobutadiene	Not detected	ug/L	100	SW8270D	11/05/14 02:36	PL	500	
Hexachloroethane	Not detected	ug/L	100	SW8270D	11/05/14 02:36	PL	3,000	
Nitrobenzene	Not detected	ug/L	100	SW8270D	11/05/14 02:36	PL	2,000	
Pyridine	Not detected	ug/L	100	SW8270D	11/05/14 02:36	PL	5,000	
Organics - Volatiles								
TCLP Volatiles								
Benzene	Not detected	ug/L	100	SW8260C	11/04/14 17:56	WAT	500	
Carbon tetrachloride	Not detected	ug/L	100	SW8260C	11/04/14 17:56	WAT	500	
Chlorobenzene	Not detected	ug/L	100	SW8260C	11/04/14 17:56	WAT	100,000	
Chloroform	Not detected	ug/L	100	SW8260C	11/04/14 17:56	WAT	6,000	
1,4-Dichlorobenzene	Not detected	ug/L	100	SW8260C	11/04/14 17:56	WAT	7,500	
1,2-Dichloroethane	Not detected	ug/L	100	SW8260C	11/04/14 17:56	WAT	500	
1,1-Dichloroethene	Not detected	ug/L	100	SW8260C	11/04/14 17:56	WAT	700	
2-Butanone (MEK)	Not detected	ug/L	1,000	SW8260C	11/04/14 17:56	WAT	200,000	
Tetrachloroethene	Not detected	ug/L	100	SW8260C	11/04/14 17:56	WAT	700	
Trichloroethene	Not detected	ug/L	100	SW8260C	11/04/14 17:56	WAT	500	
Vinyl chloride	Not detected	ug/L	100	SW8260C	11/04/14 17:56	WAT	200	



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C.O.C. PAGE # 1 OF 1

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Rev. 5.18.12



APPENDIX E

Waste Disposal Documents

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number MID049263601	2. Page 1 of 1	3. Emergency Response Phone 800-498-8647	4. Manifest Tracking Number 007104696 FLE		
5. Generator's Name and Mailing Address 500 Woodward Avenue, Suite 1510 Detroit, MI 48226 734-387-3100		Generator's Site Address (if different than mailing address) 675 Cesar E. Chavez Avenue Pontiac, MI 48340-2459					
Generator's Phone:					U.S. EPA ID Number MI0106809506		
6. Transporter 1 Company Name Young's Environmental Cleanup Inc					U.S. EPA ID Number		
7. Transporter 2 Company Name					U.S. EPA ID Number		
8. Designated Facility Name and Site Address EQ Detroit, Inc 1973 Frederick Street Detroit, MI 48211 313-823-0080					U.S. EPA ID Number MID080491506		
Facility's Phone:							
9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No. Type		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes	
1.	RCRA Non-hazardous and Non-DOT Regulated Liquid	003	64	180	6	100%	
2.	Non-Regulated Solid/Non-Hazardous Solid	201	64	65	1	NONE	
3.							
4.							
14. Special Handling Instructions and Additional Information 6b. 1) Non-Hazardous Waste Approval: 148104DET 2) Non-Hazardous Soil Approval: 148105DET If spilled, dikes are, contain in drums.							
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.							
Generator's/Offor's Printed/Typed Name JOHN E. HARRIS		Signature [Signature]		Month Day Year 12 13 11			
16. International Shipments ☐ Import to U.S. ☐ Export from U.S.		Port of entry/exit: Date leaving U.S.:					
Transporter signature (for exports only):							
17. Transporter Acknowledgment of Receipt of Materials							
Transporter 1 Printed/Typed Name John Harris		Signature [Signature]		Month Day Year 12 13 11			
Transporter 2 Printed/Typed Name		Signature		Month Day Year			
18. Discrepancy							
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection							
Manifest Reference Number:							
18b. Alternate Facility (or Generator)		U.S. EPA ID Number					
Facility's Phone:							
18c. Signature of Alternate Facility (or Generator)		Month Day Year					
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)							
1.	2.	3.	4.				
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a							
Printed/Typed Name		Signature		Month Day Year			