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Subject:

Supplemental Site Characterization Summary
RACER Pontiac North Campus, Pontiac, Michigan

INTRODUCTION

Arcadis has prepared this Supplemental Site Characterization Summary report on behalf of Revitalizing Auto Communities Environmental Response Trust (RACER) for the Pontiac North Campus Site (Site) located in Pontiac, Michigan (**Figure 1**). The objective of the characterization activity was to further refine the Conceptual Site Model (CSM) with respect to the following:

- Vapor intrusion potential adjacent to the U. S. Postal Service (USPS) distribution facility (methane and other volatile organic compounds [VOCs]).
- Current dissolved-phase VOC concentrations in groundwater in and adjacent to LNAPL Areas Nos. 1/7, 2A, 2B, 3, 5, 9/10, 11, and M-2.
- Current LNAPL characterization information.

These data will be used to update the CSM for the Site in support of evaluating potential exposure pathways and subsequent development and evaluation of corrective measures for the Corrective Measures Study (CMS).

Soil Gas Characterization

Soil Gas Survey

Initial soil gas sampling was conducted in 2005 and 2006 concurrent with Multi Phase Extraction (MPE) implementation and prior to construction of the existing USPS distribution facility. To gain a better understanding of current conditions, a series of soil gas samples was collected north and west of the USPS distribution facility on May 3 and 4, 2016, as shown on **Figure 2**. Final locations were determined based on the presence of utilities at the proposed locations. The scope of work was generally consistent with the proposed scope of work (Arcadis 2016), with the exception that seven near-slab soil gas samples were collected rather than eight; three additional locations were attempted, but water entrainment and a tight formation prevented collection of soil gas at the eighth location.

The seven soil gas samples were collected via a Geoprobe® post-run tubing (PRT) system at a depth of approximately 5 feet below ground surface. Field measurements of carbon dioxide (CO₂), oxygen (O₂), and methane gas (CH₄) were obtained with a Landtec GEM 2000 hand held meter. A photoionization detector (PID) was used to measure total organic vapors. Leak testing was performed for each sampling location to demonstrate the integrity of the PRT installation. Laboratory-grade helium was applied to a sampling shroud surrounding each soil gas sampling location, and helium concentrations in the purge vapor were measured with a Radiodetection MGD-2002 Multi-Gas leak locator. After purging, soil gas samples were collected and submitted for laboratory analysis of VOCs by U.S. Environmental Protection Agency (USEPA) Method TO-15 and atmospheric gases (methane, carbon dioxide, helium, nitrogen, and oxygen) by Modified ASTM Method D1946. Soil gas purging and sampling details are shown on the sampling form included as **Attachment 1**. Upon completion of sampling, soil gas locations were properly abandoned, and the ground surface was restored to pre-drilling condition. The ground surface coordinates for each location were surveyed on May 9, 2016.

Non-residential Vapor Intrusion Shallow Soil Gas Screening Values from Appendix D.2 of the Michigan Department of Environmental Quality (MDEQ) May 2013 Guidance Document for the Vapor Intrusion Pathway were used to evaluate the VOC and methane results. Results were also compared to the draft Vapor Intrusion (VI) Tier I Groundwater, Soil, and Vapor Screening Levels in Table 4 of the MDEQ 2016 Proposed Clean Up Criteria Requirements. The draft proposed screening levels are only presented as residential criteria with a default attenuation factor of 0.03. Non-residential criteria were calculated (based on the method described in the MDEQ Proposed Clean Up Criteria Requirements) as shown in **Table 1** for constituents where the measured concentration or reporting limit exceeded the residential criteria.

In addition, methane results were compared to MDEQ Part 115, Act 451 Rule 299.4433 related to explosive gas control from Type II landfills. This rule states that methane concentrations must remain below 25% of the lower explosive limit (LEL). The LEL for methane is 5% by volume; therefore, the screening criterion for this evaluation is 1.25% by volume of methane.

Results

As shown in **Table 2**, soil gas analytical concentrations are lower than the existing Non-residential Vapor Intrusion Shallow Soil Gas Screening Values. In comparison to the draft proposed residential screening levels, two soil gas sample detections (SG-05 and SG-06) exceed for benzene; and the reporting limits for chlorodibromomethane, 1,2-dibromoethane, 1,4-dichlorobenzene, hexachloro-1,3-butadiene, 1,1,2,2-tetrachloroethane, 1,2,4-trichlorobenzene, and 1,1,2-trichloroethane in select non-detect samples exceed. In comparison to the calculated non-residential screening level for benzene, based on the method described in the MDEQ Proposed Clean Up Criteria Requirements (**Table 1**), the only detection that

exceeds is benzene in SG-05; and reporting limits for 1,2-dibromoethane, 1,4-dichlorobenzene, hexachloro-1,3-butadiene in select non-detect samples exceed. Soil gas analytical laboratory reports are included in **Attachment 2**.

Helium leak tests were performed on each of the PRT installations before and after collection of the soil gas sample. Prior to sampling, helium was introduced to the atmosphere immediately surrounding the borehole using a shroud. The port was then purged and the purged air screened for helium using a helium detector. None of the PRT installations indicated significant leakage. Helium was maintained in the shroud during the collection of the soil gas sample. At the completion of soil gas sampling, another aliquot of air was then purged from the PRT installation and again field-screened for helium. The post sampling helium leak test also indicated that no unacceptable leakage had occurred during sample collection. The field screening results suggested that representative soil gas samples had been collected. The field screening forms are provided as **Attachment 1**.

Each of the soil gas samples were also analyzed for helium in the laboratory as indicated above. Three of the soil gas samples were reported as having helium percentages above the industry standard acceptable percent leakage (< 10%). SG-03 and SG-05 were reported with helium percentages of 16% and 12%, respectively. The soil gas results from these locations may still be considered relatively representative. Soil gas sample SG-04, however, was reported with a helium percentage of 40%. This would suggest that significant leakage occurred from the atmosphere immediately surrounding the borehole within the shroud and the soil gas sample may not be representative of subsurface conditions.

Dissolved Phase Characterization

Groundwater Sampling

Arcadis evaluated current dissolved phase constituent concentrations in groundwater adjacent to and in LNAPL Areas Nos. 1/7, 2A, 2B, 3, 5, 9/10, 11, and M-2. The scope of work was generally consistent with the proposed scope of work (Arcadis 2016), with the following exceptions:

- Groundwater was sampled from MWW10-09 instead of MWW10-07 because MWW10-07 had LNAPL in 2015.
- Groundwater was sampled from MWM16-19 instead of MWM16-03 because MWM16-03 could not be located.
- Groundwater samples from MWW9-01 and MWD5 were not collected because these wells had previously been abandoned.
- The volume of LNAPL produced from MWM4-06R, TW-09-01, RWW8-129, TW11-02, and MWW8-65 was insufficient to fill the sample jars; therefore, the analyses were prioritized by VOCs/polychlorinated biphenyls (PCBs), metals, and semi-volatile organic compounds (SVOCs).

Depth-to-water measurements were collected at each well prior to sampling, and groundwater elevations are shown on **Table 3**. Groundwater samples were collected from 13 existing monitoring wells, as shown on **Figure 3**. Groundwater samples were analyzed for one or more of the following: VOCs, SVOCs, metals, and/or PCBs.

In addition, historical data were reviewed to identify locations where 1,1,1-trichloroethane (1,1,1-TCA) had been detected on site in groundwater or LNAPL. Groundwater samples were collected from six existing monitoring wells adjacent to the historical 1,1,1-TCA detections to determine if 1,4-dioxane is present. Results were compared to the 2013 MDEQ Part 201 Generic Cleanup Criteria, as well as the DRAFT

2016 MDEQ Part 201 Generic Cleanup Criteria or Screening Levels including residential and non-residential drinking water (RDW, NRDW) criteria, vapor intrusion groundwater not in contact (VI) screening levels, and groundwater-surface water interface (GSI) criteria.

Results

Three of the samples analyzed for 1,4-dioxane exceeded RDW and/or NRDW draft criteria. One sample analyzed for vinyl chloride exceeded the VI screening levels. No other VOC detections exceeded applicable criteria. Two samples (MWM16-19 and SB-62-14) exceeded one or more applicable criteria for SVOCs. One groundwater sample (SB-62-14) exceeded GSI criteria for PCBs; specifically, Aroclor-1248. Seven groundwater samples exceeded one or more applicable criteria for various metals.

Groundwater analytical results and the comparison criteria are provided in **Table 4**. Laboratory analytical reports are provided in **Attachment 3**.

LNAPL Characterization

Well Installation

One new groundwater monitoring well (TW-03-01) was installed on May 9, 2016. The scope of work was generally consistent with the proposed scope of work (Arcadis 2016). The new well was installed in the former LNAPL Area No. 3 north of the USPS facility and adjacent to historical well RWW8-79, which contained measurable LNAPL, as shown on **Figure 3**. Soil samples were collected at an approximate rate of one every 5 feet and analyzed for PCBs. The analytical results are shown in **Table 5**, and the laboratory analytical report is included in **Attachment 4**. TW-03-01 was gauged on May 18, 2016 to check for LNAPL; however, no LNAPL had accumulated. It will be monitored in the future for LNAPL accumulation; and if LNAPL accumulates to a sufficient quantity, a sample will be collected and analyzed as described below. Groundwater from TW-03-01 was also sampled and results are provided in **Table 4**, as described in the previous section. The boring and well construction log for TW-03-01 is included as **Attachment 5**.

LNAPL Sampling

Characterization samples from all known LNAPL areas on site have been collected previously when sufficient accumulation has occurred. However, to gain a better understanding of current conditions, 12 LNAPL samples were collected from groundwater monitoring wells and temporary wells within LNAPL Area Nos. 1/7, 2, 5, 9/10, 11, and M-2, as shown on **Figure 2**. LNAPL samples were analyzed for one or more of the following: VOCs, SVOCs, metals, and PCBs.

Results

Soil results from TW-03-01 contain PCB detections at several depth intervals, and the highest concentrations are present within the top 10 feet below ground surface. Total PCB concentrations ranged from non-detect to 0.79 parts per million (ppm).

The 12 LNAPL samples contained one or more detections of VOCs, SVOCs, PCBs, and/or metals. Total PCB concentrations ranged from non-detect to 1,800 ppm. LNAPL analytical results are included in **Table 6**, and laboratory analytical reports are included as **Attachment 6**.

CONCLUSIONS AND RECOMMENDATIONS

Soil Gas Characterization

Previous investigation and remediation completed in LNAPL Area No. 3 is outlined on Cross Section J-J', which is included in **Attachment 7**. Based on the soil gas characterization activities, one soil gas sample (SG-05) was found to exceed the non-residential screening level for benzene that was calculated following the method described in the MDEQ Proposed Cleanup Criteria Requirements. The screening level, however, does not account for biodegradation, which is an important mechanism in the fate and transport of vapor-phase benzene. An alternate model that includes biodegradation (e.g., BioVapor Model) will be used to evaluate the benzene exceedance further. Results will be submitted upon completion.

The existing passive vapor mitigation system installed during construction of the USPS distribution facility and owned and operated by USPS, appears to have the capability to mitigate any potential benzene vapor issue associated with this exceedance.

Dissolved-Phase Characterization

Groundwater results yielded several exceedances of 2013 and 2016 draft proposed criteria for SVOCs and metals as well as 1,4-dioxane. Arcadis recommends additional sampling and analysis to delineate the 1,4-dioxane exceedances. The proposed initial scope of work includes sampling additional monitoring wells near to and downgradient of monitoring wells with 1,4-dioxane exceedances. Sampling of the 16 monitoring well locations identified below are proposed, provided LNAPL is not observed at the time of sampling:

- Former Fiero Powerhouse – MWF1, MWF12-02, MWF7-02, MWF7-03, MWF16-13, and MWF16-15;
- USPS Distribution Center Property – MWW5-01, RWW8-29, TW-10-01, TW-01-03, MWW10-SEN02, MWW10-SEN03, and MWW10-SEN04;
- Down-gradient off-site – MWOS-01, MWOS-02, MWOS-03.

Groundwater will be collected from each location and analyzed for VOCs by Method 8260 and 1,4-dioxane utilizing method 8260B SIM. The results from this sampling will be summarized and submitted to USEPA and a recommendation of whether or not additional activities are necessary will be included in the submittal. The sampling can be scheduled and completed within approximately 4 weeks after receipt of USEPA approval to proceed. Laboratory electronic data deliverables (EDDs) will be received approximately 3 weeks after completion of sampling, and a summary memo will be submitted to USEPA approximately 3 weeks after receipt of the laboratory EDDs.

LNAPL Characterization

LNAPL sampling results contained PCBs ranging from non-detect to 1,800 ppm. These results do not change the general extents of LNAPL impacted with PCBs greater than 100 ppm, which was outlined in the 2014-2015 PCB Investigation Summary (Arcadis 2015). Further LNAPL transmissivity testing is planned should adequate LNAPL accumulate ($> 0.5'$) in the new well in LNAPL Area No. 3.

CMS Update

Due to the need for further characterization of 1,4-dioxane, the planned update to the CMS will need to be delayed until that work is completed.

References

Arcadis. 2015. 2014-2015 PCB Investigation Summary. RACER Pontiac North Campus. August 17.

Arcadis. 2016. Supplemental Site Characterization Scope of Work. RACER Pontiac North Campus. April 6.

Tables

Table 1. Summary of Proposed Non-Residential Acceptable Air Values

Table 2. Summary of Soil Gas Analytical Results

Table 3. Groundwater Elevation Summary, May 2016

Table 4. Summary of Groundwater Analytical Results

Table 5. Summary of Soil Analytical Results

Table 6. Summary of LNAPL Analytical Results

Figures

Figure 1. Site Location

Figure 2. Soil Gas Sampling Locations and Field Monitoring Results

Figure 3. Groundwater and LNAPL Sampling Locations

Attachments

- 1 Soil Gas Sampling Forms
- 2 Soil Gas Laboratory Analytical Reports
- 3 Groundwater Laboratory Analytical Reports
- 4 Soil Laboratory Analytical Reports
- 5 Soil Boring and Well Construction Log
- 6 LNAPL Laboratory Analytical Reports
- 7 Cross Section J-J'

Tables



Table 1
Summary of Non-Residential Acceptable Air Values
RACER Trust Pontiac North Campus
Pontiac, Michigan

Parameter Symbol	Parameter Definition	Units	Proposed Value	Reference (Notes)
Air				
AAV	Acceptable Air Value	$\mu\text{g}/\text{m}^3$	Chemical-specific	MDEQ 2016
TR	Target risk level	unitless	10^{-5}	MDEQ 2016
THQ	Target hazard quotient	unitless	1	MDEQ 2016
AT_{ca}	Averaging time - carcinogenic	days	28,470	MDEQ 2016
AT_{nr}	Averaging time - noncarcinogenic	days	7,300	MDEQ 2016
IURF	Inhalation unit risk factor	$(\mu\text{g}/\text{m}^3)^{-1}$	Chemical-specific	MDEQ 2016
RfC	Reference concentration	$\mu\text{g}/\text{m}^3$	Chemical-specific	MDEQ 2016
RSC	Relative source contribution	unitless	1 or chemical-specific	MDEQ 2016
ED_{nr}	Exposure Duration - Non-Residential	years	20	MDEQ 2016
EF_{nr}	Exposure Frequency - Non-Residential	days/year	238	MDEQ 2016

Reference

MDEQ 2016 MDEQ. 2016. 2015-094 EQ. Remediation and Redevelopment Division. Environmental Contamination Response Activity. Cleanup Criteria Requirements for Response Activity. Office of Regulatory Reinvention. Proposed rule revisions dated April 27, 2016. Available online at:

Definitions

$\mu\text{g}/\text{m}^3$ microgram per cubic meter MDEQ - Michigan Department of Environmental Quality
 $(\mu\text{g}/\text{m}^3)^{-1}$ inverse microgram per cubic meter

Calculations

$$AAV_{ca} = \frac{TR \times AT_{ca}}{IURF \times ED_{nr} \times EF_{nr}}$$

$$AAV_{nc} = \frac{THQ \times AT_{nr} \times RfC \times RSC}{EF_{nr} \times ED_{nr}}$$

$$SGvalue = AAV/0.03$$

Calculated Non-residential Acceptable Air Values

Benzene	256 $\mu\text{g}/\text{m}^3$
Chlorodibromomethane	83 $\mu\text{g}/\text{m}^3$
1,2-Dibromoethane	3.3 $\mu\text{g}/\text{m}^3$
1,4-Dichlorobenzene	4.2 $\mu\text{g}/\text{m}^3$
Hexachloro-1,3-butadiene	91 $\mu\text{g}/\text{m}^3$
1,1,2,2-Tetrachloroethane	34 $\mu\text{g}/\text{m}^3$
1,2,4-Trichlorobenzene	102 $\mu\text{g}/\text{m}^3$
1,1,2-Trichloroethane	0.010 $\mu\text{g}/\text{m}^3$

Table 2
Summary of Soil Gas Analytical Results
RACER Trust Pontiac North Campus
Pontiac, Michigan

Location ID: Date Collected:				SG-01 05/03/16	SG-02 05/03/16	SG-03 05/03/16	SG-04 05/03/16	SG-05 05/04/16	SG-06 05/04/16	SG-07 05/04/16
Sample Name:	MDEQ VI Shallow Soil Gas ¹	Proposed MDEQ Vapor Values ²	Units	SG-01(5')-050316	SG-02(5')-050316	SG-03(5')-050316	SG-04(5')-050316	SG-05(5')-050416	SG-06(5')-050416	SG-07(5')-050416
Gases										
Carbon Dioxide	--		%	2.3	0.028	0.025 U	0.026	0.025 U	0.025 U	0.026 U [0.038]
Oxygen	--		%	5.4	5.3	17	12	17	17	16 [19]
Helium	--		%	0.12 U	0.12 U	16	40	12	0.13 U	0.13 U [0.13 U]
Methane	1.25 (g)	1.25 (GG)	%	0.00025	0.35	0.012	0.059	0.16	0.71	0.38 [0.14]
Nitrogen	--		%	92	94	67	48	71	82	84 [81]
Volatile Organic Compounds										
1,2-Dichloro-1,1,2,2-tetrafluoroethane	--	--	µg/m ³	11 U	17 U	8.6 U	8.4 U	23 U	22 U	18 U [9 U]
1,3-Butadiene	--	--	µg/m ³	3.4 U	5.5 U	15	2.7 U	40	40	27 [2.8 U]
2,2,4-Trimethylpentane	2,000,000	123,000	µg/m ³	7.3 U	12 U	5.8 U	5.6 U	15 U	15 U	12 U [6 U]
3-Chloropropene	--	--	µg/m ³	19 U	31 U	15 U	15 U	41 U	40 U	32 U [16 U]
4-Ethyltoluene	--	--	µg/m ³	12	14	15	10	16 U	16 U	13 U [6.7]
Benzyl Chloride	370	17	µg/m ³	8.0 U	13 U	6.4 U	6.3 U	17 U	16 U	13 U [6.7 U]
N-Heptane	2,000,000	123,000	µg/m ³	620	190	91	59	550	1,400	480 [320]
n-Hexane	410,000	24,300	µg/m ³	970	560	210	100	1,600	2,000	1,200 [790]
Tetrahydrofuran	11,000	70,000	µg/m ³	4.6 U	7.3 U	3.6 U	3.6 U	9.7 U	9.3 U	7.6 U [3.8 U]
Acetone	3,400,000	1,070,000	µg/m ³	41	96	100	120	200	180	210 [140]
Benzene	2,200	110	µg/m ³	29	71	100	65	500	200	110 [87]
Bromodichloromethane	1,000	47	µg/m ³	10 U	16 U	8.3 U	8.1 U	22 U	21 U	17 U [8.6 U]
Bromoform	17,000	770	µg/m ³	16 U	26 U	13 U	12 U	34 U	33 U	27 U [13 U]
Bromomethane	2,900	330	µg/m ³	60 U	96 U	48 U	47 U	130 U	120 U	100 U [50 U]
2-Butanone	2,900,000	1.67E+05 (DD)	µg/m ³	18 U	29 U	20	17	44	41	39 [28]
Carbon Disulfide	410,000	24,300	µg/m ³	69	110	190	37	62	42	70 [52]
Carbon Tetrachloride	3,000	150	µg/m ³	9.8 U	16 U	7.8 U	7.6 U	21 U	20 U	16 U [8.1 U]
CFC-11	33,000,000	14,000	µg/m ³	17	14 U	6.9 U	6.8 U	18 U	18 U	14 U [7.2 U]
CFC-12	29,000,000	11,300	µg/m ³	7.7 U	12 U	6.1 U	6.0 U	16 U	16 U	13 U [6.4 U]
Chlorobenzene	41,000	1,730	µg/m ³	7.2 U	11 U	5.7 U	5.6 U	15 U	14 U	12 U [5.9 U]
Chlorodibromomethane	740	14 (MM)	µg/m ³	13 U	21 U	10 U	10 U	28 U	27 U	22 U [11 U]
Chloroethane	5,800,000	140,000	µg/m ³	16 U	26 U	13 U	13 U	35 U	33 U	27 U [14 U]
Chloroform	7,600	37	µg/m ³	7.6 U	12 U	6.0 U	5.9 U	16 U	15 U	12 U [6.3 U]
Chloromethane	29,000	3,130	µg/m ³	32 U	51 U	26 U	25 U	68 U	65 U	53 U [27 U]
Cyclohexane	3,500,000	210,000	µg/m ³	5.4 U	74	120	100	360	190	140 [96]
1,2-Dibromoethane	30	1.4	µg/m ³	12 U	19 U	9.5 U	9.3 U	25 U	24 U	20 U [9.9 U]
1,2-Dichlorobenzene	180,000	10,300	µg/m ³	9.3 U	15 U	7.4 U	7.3 U	20 U	19 U	16 U [7.8 U]
1,3-Dichlorobenzene	1,800	100	µg/m ³	9.3 U	15 U	7.4 U	7.3 U	20 U	19 U	16 U [7.8 U]
1,4-Dichlorobenzene	2,600	1.8	µg/m ³	9.3 U	15 U	7.4 U	7.3 U	20 U	19 U	16 U [7.8 U]
1,1-Dichloroethane	290,000	17,300	µg/m ³	6.3 U	10 U	5.0 U	4.9 U	22	13 U	10 U [6.4]
1,2-Dichloroethane	700	33	µg/m ³	6.3 U	10 U	5.0 U	4.9 U	13 U	13 U	10 U [5.2 U]
1,1-Dichloroethene	120,000	7,000	µg/m ³	6.2 U	9.8 U	4.9 U	4.8 U	13 U	12 U	10 U [5.1 U]
cis-1,2-Dichloroethene	4,100	280	µg/m ³	6.2 U	9.8 U	4.9 U	4.8 U	13 U	12 U	10 U [5.1 U]
trans-1,2-Dichloroethene	41,000	2,770	µg/m ³	6.2 U	9.8 U	4.9 U	4.8 U	13 U	12 U	10 U [5.1 U]
Dichloromethane	39,000	21,000	µg/m ³	54 U	86 U	43 U	42 U	110 U	110 U	90 U [45 U]
1,2-Dichloropropane	2,300	140	µg/m ³	7.2 U	11 U	5.7 U	5.6 U	15 U	14 U	12 U [6 U]

Table 2
Summary of Soil Gas Analytical Results
RACER Trust Pontiac North Campus
Pontiac, Michigan

Location ID: Date Collected:				SG-01 05/03/16	SG-02 05/03/16	SG-03 05/03/16	SG-04 05/03/16	SG-05 05/04/16	SG-06 05/04/16	SG-07 05/04/16
Sample Name:	MDEQ VI Shallow Soil Gas ¹	Proposed MDEQ Vapor Values ²	Units	SG-01(5')-050316	SG-02(5')-050316	SG-03(5')-050316	SG-04(5')-050316	SG-05(5')-050416	SG-06(5')-050416	SG-07(5')-050416
Volatile Organic Compounds										
cis-1,3-Dichloropropene	--	--	µg/m ³	7.0 U	11 U	5.6 U	5.5 U	15 U	14 U	12 U [5.8 U]
trans-1,3-Dichloropropene	--	--	µg/m ³	7.0 U	11 U	5.6 U	5.5 U	15 U	14 U	12 U [5.8 U]
1,4-Dioxane	--	170	µg/m ³	22 U	36 U	18 U	17 U	48 U	45 U	37 U [18 U]
Ethylbenzene	59,000	330	µg/m ³	22	31	34	26	76	32	30 [19]
Hexachloro-1,3-Butadiene	830	40	µg/m ³	66 U	100 U	53 U	52 U	140 U	130 U	110 U [55 U]
Isopropylbenzene	1,700	80	µg/m ³	7.6 U	12 U	6.1 U	5.9 U	16 U	16 U	13 U [6.3 U]
Methyl N-Butyl Ketone	18,000	1,030	µg/m ³	25 U	40 U	20 U	20 U	54 U	52 U	42 U [21 U]
Methylcyclohexane	--	--	µg/m ³	52	130	68	41	430	270	250 [180]
4-Methyl-2-pentanone	1,800,000	1.00E+05 (DD)	µg/m ³	6.4 U	10 U	7.7	5.0 U	26	13 U	10 U [5.3 U]
Methyl tert-butyl ether	1,800,000	103,000	µg/m ³	5.6 U	8.9 U	4.4 U	4.4 U	12 U	11 U	9.3 U [4.6 U]
n-Propylbenzene	12,000	33,300 (DD)	µg/m ³	7.6 U	12 U	6.1 U	5.9 U	16 U	16 U	13 U [6.3 U]
Styrene	32,000	1,500	µg/m ³	6.6 U	11	12	15	14 U	16	11 U [5.5 U]
1,1,2,2-Tetrachloroethane	310	15	µg/m ³	11 U	17 U	8.5 U	8.3 U	23 U	22 U	18 U [8.8 U]
Tetrachloroethene	23,000	1,400	µg/m ³	26	42	42	39	90	43	20 [12]
Toluene	2,900,000	173,000	µg/m ³	160	300	300	540	720	420	230 [160]
1,2,4-Trichlorobenzene	2,300	70	µg/m ³	46 U	73 U	37 U	36 U	98 U	94 U	76 U [38 U]
1,1,1-Trichloroethane	3,500,000	173,000	µg/m ³	120	14 U	6.7 U	6.6 U	18 U	17 U	14 [11]
1,1,2-Trichloroethane	1,100	0.007	µg/m ³	8.5 U	14 U	6.7 U	6.6 U	18 U	17 U	14 U [7 U]
Trichloroethene	1,200	67 (DD)	µg/m ³	8.4 U	13 U	6.6 U	6.5 U	23	17 U	14 U [6.9 U]
1,1,2-trichloro-1,2,2-trifluoroethane	11,000,000	667,000	µg/m ³	12 U	19 U	9.5 U	9.3 U	25 U	24 U	20 U [9.9 U]
1,2,4-Trimethylbenzene	130,000	240	µg/m ³	7.6 U	12 U	11	9.3	16 U	16 U	13 U [6.3 U]
1,3,5-Trimethylbenzene	130,000	1,730	µg/m ³	7.6 U	12 U	6.1 U	5.9 U	16 U	16 U	13 U [6.3 U]
Vinyl Chloride	4,100	80	µg/m ³	4.0 U	6.3 U	3.2 U	3.1 U	8.4 U	8.1 U	6.6 U [3.3 U]
o-Xylene	--	--	µg/m ³	20	32	33	24	47	32	28 [18]
m&p-Xylene	--	--	µg/m ³	82	110	120	96	150	93	82 [54]
Total Xylenes ³	58,000	7,670	µg/m ³	102	142	153	120	197	125	110 [72]
Ethanol	--	667,000	µg/m ³	25	70	40	55	220	81	21 [20]
Isopropyl alcohol	--	7,000	µg/m ³	51	56	12 U	42	32 U	31 U	25 U [13 U]

Notes:

Shaded values exceed one or more applicable screening levels/values
Highlighted values have a reporting limit which exceed one or more applicable screening levels/values
Duplicate analyses are presented in brackets

Footnotes:

1. Criteria listed are from the Michigan Department of Environmental Quality (MDEQ) Guidance Document for the Vapor Intrusion (VI) Pathway, Appendix D.2 Nonresidential Vapor Intrusion Shallow Soil Gas Screening Values, May 2013
2. Criteria listed are from the Draft Proposed Michigan Department of Environmental Quality (MDEQ) Clean Up Criteria Requirements Table 4 VI Tier I Groundwater, Soil and Vapor Screening levels, April 27, 2016.
3. Results for total xylenes are the summation of o,m, and p-xylenes.

Abbreviations:

SG = soil gas

$\mu\text{g}/\text{m}^3$ = micrograms per cubic meter

% = percent

DD = Hazardous substance causes developmental effects.

GG = Risk-based criteria are not available for methane due to insufficient toxicity data. An acceptable soil gas concentration (presented for both residential and nonresidential land uses) was derived using 25 percent of the lower explosive level for methane. This equates to 1.25 percent or $8.4\text{E}+6 \mu\text{g}/\text{m}^3$.

g = Risk-based criteria are not available for methane due to insufficient toxicity data. An acceptable soil gas concentration (presented for both residential and nonresidential land uses) was derived using 25 percent of the lower explosive level for methane. This equates to 1.25 percent or $8.4\text{E}+6 \mu\text{g}/\text{m}^3$.

MM = Hazardous substance is a carcinogen with a mutagenic mode of action.

U = Compound analyzed for but not detected above the detection limit.

Table 3
Groundwater Elevation Summary, May 2016
RACER Trust Pontiac North Campus
Pontiac, Michigan

Well ID	Well Elevation ¹	Depth to Water (ft)	Depth to LNAPL (ft)	Groundwater Elevation	LNAPL Thickness (ft)	Equivalent Groundwater Elevation ²
LNAPL Area No. 1/7						
MWW10-SEN03	981.67	38.52	--	943.15	--	--
MWW10-SEN04	971.12	27.41	--	943.71	--	--
SB-62-14	974.51	26.84	--	--	--	--
SB-46-14	972.89	27.15	19.47	--	7.68	--
SB-43-14	969.90	21.11	20.39	--	0.72	--
LNAPL Area No. 2A						
MWW10-04	961.49	8.18	--	--	--	--
MWW10-09	966.81	6.32	--	960.49	--	--
MWW10-01	963.75	--	8.94	--	--	--
MWW10-08	967.01	8.92	7.42	958.09	1.50	958.39
LNAPL Area No. 2B						
MWW10-SEN01	967.31	17.85	--	949.46	--	--
TW-01-01	972.95	29.75	26.11	943.20	3.64	943.93
LNAPL Area No. 5						
MWM16-19	985.21	26.78	--	--	--	--
MWM4-06R	961.10	24.04	23.85	937.06	0.19	937.10
LNAPL Area No. 9/10						
MWW5-01	970.57	15.03	--	--	--	--
TW-10-02	971.83	18.63	--	953.20	--	--
TW-09-01	970.01	16.87	16.85	953.14	0.02	953.14
RWW8-129	966.71	17.37	17.10	949.34	0.27	949.39
LNAPL Area No. 11						
TW11-02	970.38	11.05	10.65	959.33	0.40	959.41
MWW8-65	969.62	35.00	34.70	934.62	0.30	934.68
LNAPL Area M-2						
MWM2-04	967.68	17.06	--	950.62	--	--
MWM2-29	967.63	18.89	16.46	948.74	2.43	949.23
TWM2-07	967.59	17.50	15.10	950.09	2.40	950.57
Downgradient of USPS Building						
MWD4	dry	--	--	--	--	--
Fiero						
MWF7-01	970.30	21.40	--	948.90	--	--
MWF12-01	965.39	18.03	--	947.36	--	--
LNAPL Area No. 3						
TW-03-01	970.48	21.10	--	--	--	--

Notes:

All water levels collected on May 18, 2016.

-- = not applicable

LNAPL = light non-aqueous phase liquid

ft = feet

USPS = U.S. Postal Service

Footnotes:

1 - Top of Casing Elevation is in feet National Vertical Geodetic Datum (1988)

2 - The equivalent groundwater (GW) elevation is calculated where LNAPL is present using the LNAPL surface elevation, the thickness of LNAPL and the approximate specific density of the LNAPL (0.8). The calculation is as follows:

Equivalent GW elevation = LNAPL surface elevation - ((1-specific density of the LNAPL) x LNAPL thickness)

Table 4
Summary of Groundwater Analytical Results
RACER Trust Pontiac North Campus
Pontiac, Michigan

Location ID: Date Collected:										
Sample Name:	Units	Residential Drinking Water (shaded)	MDEQ 2016 DRAFT Res DW (shaded)	Non-Residential Drinking Water (bold)	MDEQ 2016 DRAFT Non-Res DW (bold)	Groundwater Surface Water Interface (italics)	MDEQ 2016 DRAFT GSI (italics)	VI Groundwater Not In Contact SLs 2013 (shaded/outline)	MDEQ 2016 DRAFT Tier 1 VI Groundwater Not In Contact SLs (shaded/outline)	MWF7-01 05/19/16 MWF7-01-GW-051916
PCBs										
Aroclor-1016	µg/L	0.5	0.5	0.5	0.5	0.2	0.2	--	--	NA
Aroclor-1221	µg/L	0.5	0.5	0.5	0.5	0.2	0.2	--	--	NA
Aroclor-1232	µg/L	0.5	0.5	0.5	0.5	0.2	0.2	--	--	NA
Aroclor-1242	µg/L	0.5	0.5	0.5	0.5	0.2	0.2	--	--	NA
Aroclor-1248	µg/L	0.5	0.5	0.5	0.5	0.2	0.2	--	--	NA
Aroclor-1254	µg/L	0.5	0.5	0.5	0.5	0.2	0.2	--	--	NA
Aroclor-1260	µg/L	0.5	0.5	0.5	0.5	0.2	0.2	--	--	NA
Volatile Organic Compounds										
Acetone	µg/L	730	5,300	2,100	17,000	1,700	1,700	--	--	NA
Benzene	µg/L	5	5	5	5	200	200	27	17	NA
Bromodichloromethane	µg/L	80	80	80	80	--	--	--	--	NA
Bromoform	µg/L	80	80	80	80	--	--	--	--	NA
Bromomethane	µg/L	10	120	29	380	35	5	--	--	NA
2-Butanone	µg/L	13,000	2,400	38,000	11,000	2,200	2,200	--	--	NA
Carbon Disulfide	µg/L	800	440	2,300	1,800	--	--	--	--	NA
Carbon Tetrachloride	µg/L	5	5	5	5	45	38	--	--	NA
CFC-11	µg/L	2,600	1,800	7,300	5,700	--	--	--	--	NA
CFC-12	µg/L	1,700	30	4,800	94	--	--	--	--	NA
Chlorobenzene	µg/L	100	100	100	100	25	25	--	--	NA
Chlorodibromomethane	µg/L	80	80	80	80	--	--	--	--	NA
Chloroethane	µg/L	430	240	1,700	760	1,100	1,100	--	--	NA
Chloroform	µg/L	80	80	80	80	350	350	--	--	NA
Chloromethane	µg/L	260	220	1,100	1,100	--	--	--	--	NA
Cyclohexane	µg/L	--	--	--	--	--	--	--	--	NA
1,2-Dibromo-3-chloropropane	µg/L	0.2	0.2	0.2	0.2	--	--	--	--	NA
1,2-Dibromoethane	µg/L	0.05	0.05	0.05	0.05	5.7	5.7	--	--	NA
1,2-Dichlorobenzene	µg/L	600	600	600	600	13	13	--	--	NA
1,3-Dichlorobenzene	µg/L	6.6	12	19	38	28	28	--	--	NA
1,4-Dichlorobenzene	µg/L	75	75	75	75	17	17	--	--	NA
1,1-Dichloroethane	µg/L	880	1,200	2,500	3,800	740	740	--	--	NA
1,2-Dichloroethane	µg/L	5	5	5	5	360	360	--	--	NA
1,1-Dichloroethene	µg/L	7	7	7	7	130	130	--	--	NA
cis-1,2-Dichloroethene	µg/L	70	70	70	70	620	620	83	55	NA
trans-1,2-Dichloroethene	µg/L	100	100	100	100	1,500	1,500	360	230	NA
Dichloromethane	µg/L	5	5	5	5	1,500	1,500	--	--	NA
1,2-Dichloropropane	µg/L	5	5	5	5	230	230	--	--	NA
cis-1,3-Dichloropropene	µg/L	--	--	--	--	--	--	--	--	NA
trans-1,3-Dichloropropene	µg/L	--	--	--	--	--	--	--	--	NA
1,4-Dioxane	µg/L	85	7.2	350	37	2,800	2,800	NA	18,000	22 [29]
Ethylbenzene	µg/L	74	66	74	74	18	18	700	50	NA
Isopropylbenzene	µg/L	800	590	2,300	1,900	28	28	--	--	NA
Methyl acetate	µg/L	--	--	--	--	--	--	--	--	NA
Methyl N-Butyl Ketone	µg/L	1,000	50	2,900	94	--	--	--	--	NA
Methylcyclohexane	µg/L	--	--	--	--	--	--	--	--	NA
4-Methyl-2-pentanone	µg/L	1,800	300	5,200	940	--	--	--	--	NA
Methyl tert-butyl ether	µg/L	40	40	40	40	7,100	7,100	--	--	NA
Styrene	µg/L	100	100	100	100	80	80	--	--	NA
1,1,2,2-Tetrachloroethane	µg/L	8.5	3.6	35	18	78	78	--	--	NA
Tetrachloroethene	µg/L	5	5	5	5	60	60	94	110	NA
Toluene	µg/L	790	470	790	790	270	270	36,000	26,000	NA
1,2,4-Trichlorobenzene	µg/L	70	70	70	70	99	99	140	110	NA
1,1,1-Trichloroethane	µg/L	200	200	200	200	89	89	17,000	10,000	NA
1,1,2-Trichloroethane	µg/L	5	5	5	5	330	330	--	--	NA
Trichloroethene	µg/L	5	5	5	5	200	200	9.8	7	NA
1,1,2-trichloro-1,2,2-trifluoroethane	µg/L	170,000	160,000	170,000	170,000	32	32	--	--	NA
Vinyl Chloride	µg/L	2	2	2	2	13	13	2.8	1.7	NA
Total Xylenes	µg/L	280	280	280	280	41	41	10,000	1,400	NA

Table 4
Summary of Groundwater Analytical Results
RACER Trust Pontiac North Campus
Pontiac, Michigan

Location ID: Date Collected:										
Sample Name:	Units	Residential Drinking Water (shaded)	MDEQ 2016 DRAFT Res DW (shaded)	Non-Residential Drinking Water (bold)	MDEQ 2016 DRAFT Non-Res DW (bold)	Groundwater Surface Water Interface (italics)	MDEQ 2016 DRAFT GSI (italics)	VI Groundwater Not In Contact SLs 2013 (shaded/outline)	MDEQ 2016 DRAFT Tier 1 VI Groundwater Not In Contact SLs (shaded/outline)	MWF7-01 05/19/16 MWF7-01-GW-051916
Semivolatile Organic Compounds										
1,1'-Biphenyl	µg/L	--	--	--	--	--	--	--	--	NA
2,2'-Oxybis(1-Chloropropane)	µg/L	--	--	--	--	--	--	--	--	NA
2,4,5-Trichlorophenol	µg/L	730	180	2,100	570	--	--	--	--	NA
2,4,6-Trichlorophenol	µg/L	120	40	470	170	5	5	--	--	NA
2,4-Dichlorophenol	µg/L	73	80	210	330	11	11	--	--	NA
2,4-Dimethylphenol	µg/L	370	120	1,000	380	380	380	--	--	NA
2,4-Dinitrophenol	µg/L	--	12	--	38	--	19	--	--	NA
2,4-Dinitrotoluene	µg/L	7.7	1.1	32	5.5	--	--	--	--	NA
2,6-Dinitrotoluene	µg/L	--	--	--	--	--	--	--	--	NA
2-Chloronaphthalene	µg/L	1,800	470	5,200	1,500	--	--	--	--	NA
2-Chlorophenol	µg/L	45	32	130	130	18	18	--	--	NA
2-Methylnaphthalene	µg/L	260	24	750	76	19	19	--	--	NA
2-Methylphenol	µg/L	--	8,000	--	33,000	--	30	--	--	NA
2-Nitroaniline	µg/L	--	--	--	--	--	--	--	--	NA
2-Nitrophenol	µg/L	20	12	58	38	--	--	--	--	NA
3,3'-Dichlorobenzidine	µg/L	1.1	1.6	4.3	8.2	0.3	0.3	--	--	NA
3-Nitroaniline	µg/L	--	--	--	--	--	--	--	--	NA
4,6-Dinitro-2-methylphenol	µg/L	20	20	20	20	--	--	--	--	NA
4-Bromophenyl-phenylether	µg/L	--	--	--	--	--	--	--	--	NA
4-Chloro-3-Methylphenol	µg/L	150	400	420	1,700	7.4	7.4	--	--	NA
4-Chloroaniline	µg/L	--	3	--	9.4	--	--	--	--	NA
4-Chlorophenyl-phenylether	µg/L	--	--	--	--	--	--	--	--	NA
4-Methylphenol	µg/L	--	--	--	--	--	--	--	--	NA
4-Nitroaniline	µg/L	--	--	--	--	--	--	--	--	NA
4-Nitrophenol	µg/L	--	--	--	--	--	--	--	--	NA
Acenaphthene	µg/L	1,300	360	3,800	1,100	38	38	--	--	NA
Acenaphthylene	µg/L	52	360	150	1,100	--	--	--	--	NA
Acetophenone	µg/L	1,500	3,200	4,400	13,000	--	--	--	--	NA
Anthracene	µg/L	43	43	43	43	--	--	--	--	NA
Atrazine	µg/L	3	3	3	3	7.3	7.3	--	--	NA
Benzaldehyde	µg/L	--	--	--	--	--	--	--	--	NA
Benzo(a)anthracene	µg/L	2.1	--	8.5	--	--	--	--	--	NA
Benzo(a)pyrene	µg/L	5	0.2	5	0.2	--	--	--	--	NA
Benzo(b)fluoranthene	µg/L	1.5	--	1.5	--	--	--	--	--	NA
Benzo(g,h,i)perylene	µg/L	1	1	1	1	--	--	--	--	NA
Benzo(k)fluoranthene	µg/L	1	--	1	--	--	--	--	--	NA
bis(2-Chloroethoxy)methane	µg/L	--	--	--	--	--	--	--	--	NA
bis(2-Chloroethyl)ether	µg/L	2	1	8.3	3.3	1	1	--	--	NA
bis(2-Ethylhexyl)phthalate	µg/L	6	6	6	6	25	14	--	--	NA
Butylbenzylphthalate	µg/L	1,200	80	2,700	330	67	67	--	--	NA
Caprolactam	µg/L	5,800	2,000	17,000	9,400	--	--	--	--	NA
Carbazole	µg/L	85	10	350	38	10	10	--	--	NA
Chrysene	µg/L	1.6	--	1.6	--	--	--	--	--	NA
Dibenzo(a,h)anthracene	µg/L	2	--	2	--	--	--	--	--	NA
Dibenzofuran	µg/L	--	5.9	--	19	4	4	--	--	NA
Diethylphthalate	µg/L	5,500	4,700	16,000	15,000	110	110	--	--	NA
Dimethylphthalate	µg/L	73,000	590	210,000	1,900	--	--	--	--	NA
Di-n-Butylphthalate	µg/L	880	27	2,500	110	9.7	9.7	--	--	NA
Di-n-Octylphthalate	µg/L	130	22	380	22	--	--	--	--	NA
Fluoranthene	µg/L	210	240	210	260	1.6	1.6	--	--	NA
Fluorene	µg/L	880	240	2,000	760	12	12	--	--	NA

Table 4
Summary of Groundwater Analytical Results
RACER Trust Pontiac North Campus
Pontiac, Michigan

Location ID: Date Collected:		Residential Drinking Water (shaded)	MDEQ 2016 DRAFT Res DW (shaded)	Non-Residential Drinking Water (bold)	MDEQ 2016 DRAFT Non-Res DW (bold)	Groundwater Surface Water Interface (italics)	MDEQ 2016 DRAFT GSI (italics)	VI Groundwater Not In Contact SLs 2013 (shaded/outline)	MDEQ 2016 DRAFT Tier 1 VI Groundwater Not In Contact SLs (shaded/outline)	MWF7-01 05/19/16 MWF7-01-GW-051916
Sample Name:	Units									
Semivolatile Organic Compounds										
Hexachlorobenzene	µg/L	1	1	1	1	0.2	0.2	--	--	NA
Hexachlorocyclopentadiene	µg/L	50	50	50	50	--	--	--	--	NA
Hexachloroethane	µg/L	7.3	5	21	13	6.7	6.7	--	--	NA
Indeno(1,2,3-cd)pyrene	µg/L	2	--	2	--	--	--	--	--	NA
Isophorone	µg/L	770	760	3,100	3,800	1,300	1,300	--	--	NA
Nitrobenzene	µg/L	3.4	12	9.6	38	180	180	--	--	NA
N-Nitroso-di-n-propylamine	µg/L	5	5	5	5	--	--	--	--	NA
N-Nitrosodiphenylamine	µg/L	270	150	1,100	750	--	--	--	--	NA
Pentachlorophenol	µg/L	1	1	1	1	--	--	--	--	NA
Phenanthrene	µg/L	52	180	150	570	2	2	--	--	NA
Phenol	µg/L	4,400	1,200	13,000	5,700	450	450	--	--	NA
Pyrene	µg/L	140	140	140	140	--	--	--	--	NA
Hexachloro-1,3-Butadiene	µg/L	15	5.9	42	19	0.053	0.053	--	--	NA
Naphthalene	µg/L	520	590	1,500	1,900	11	11	240	84	NA
Inorganics										
Antimony	µg/L	6	6	6	6	130	130	--	--	NA
Arsenic	µg/L	10	10	10	10	10	10	--	--	NA
Barium	µg/L	2,000	2,000	2,000	2,000	--	--	--	--	NA
Beryllium	µg/L	4	4	4	4	--	--	--	--	NA
Cadmium	µg/L	5	5	5	5	--	--	--	--	NA
Chromium	µg/L	--	--	--	--	--	--	--	--	NA
Cobalt	µg/L	40	20	100	20	100	100	--	--	NA
Copper	µg/L	1,000	30	1,000	95	--	--	--	--	NA
Lead	µg/L	4	1	4	1	--	--	--	--	NA
Manganese	µg/L	50	50	50	50	--	--	--	--	NA
Mercury	µg/L	2	2	2	2	0.0013	0.0013	--	--	NA
Nickel	µg/L	100	36	100	110	--	--	--	--	NA
Selenium	µg/L	50	50	50	50	5	5	--	--	NA
Silver	µg/L	34	5.9	98	19	0.2	0.2	--	--	NA
Thallium	µg/L	2	2	2	2	3.7	3.7	--	--	NA
Vanadium	µg/L	4.5	4	62	4	27	27	--	--	NA
Zinc	µg/L	2,400	1,800	5,000	5,000	--	--	--	--	NA

Table 4
Summary of Groundwater Analytical Results
RACER Trust Pontiac North Campus
Pontiac, Michigan

Location ID: Date Collected:													
Sample Name:	Units	Residential Drinking Water (shaded)	MDEQ 2016 DRAFT Res DW (shaded)	Non-Residential Drinking Water (bold)	MDEQ 2016 DRAFT Non-Res DW (bold)	Groundwater Surface Water Interface (italics)	MDEQ 2016 DRAFT GSI (italics)	VI Groundwater Not In Contact SLs 2013 (shaded/outline)	MDEQ 2016 DRAFT Tier 1 VI Groundwater Not In Contact SLs (shaded/outline)	MWF12-01 05/19/16	MWM2-04 05/18/16	MWM10-09 05/19/16	
										MWF12-01-GW-051916	MWM2-04-GW-051816	MWM10-09-GW-051916	
PCBs													
Aroclor-1016	µg/L	0.5	0.5	0.5	0.5	0.2	0.2	--	--	NA	0.19 U	0.19 U	
Aroclor-1221	µg/L	0.5	0.5	0.5	0.5	0.2	0.2	--	--	NA	0.19 U	0.19 U	
Aroclor-1232	µg/L	0.5	0.5	0.5	0.5	0.2	0.2	--	--	NA	0.19 U	0.19 U	
Aroclor-1242	µg/L	0.5	0.5	0.5	0.5	0.2	0.2	--	--	NA	0.19 U	0.19 U	
Aroclor-1248	µg/L	0.5	0.5	0.5	0.5	0.2	0.2	--	--	NA	0.19 U	0.19 U	
Aroclor-1254	µg/L	0.5	0.5	0.5	0.5	0.2	0.2	--	--	NA	0.19 U	0.19 U	
Aroclor-1260	µg/L	0.5	0.5	0.5	0.5	0.2	0.2	--	--	NA	0.19 U	0.19 U	
Volatile Organic Compounds													
Acetone	µg/L	730	5,300	2,100	17,000	1,700	1,700	--	--	NA	14 J	18 J	
Benzene	µg/L	5	5	5	5	200	200	27	17	NA	1.0 U	1.0 U	
Bromodichloromethane	µg/L	80	80	80	80	--	--	--	--	NA	1.0 U	1.0 U	
Bromoform	µg/L	80	80	80	80	--	--	--	--	NA	1.0 U	1.0 U	
Bromomethane	µg/L	10	120	29	380	35	5	--	--	NA	1.0 U	1.0 U	
2-Butanone	µg/L	13,000	2,400	38,000	11,000	2,200	2,200	--	--	NA	25 U	0.94 J	
Carbon Disulfide	µg/L	800	440	2,300	1,800	--	--	--	--	NA	5.0 U	5.0 U	
Carbon Tetrachloride	µg/L	5	5	5	5	45	38	--	--	NA	1.0 U	1.0 U	
CFC-11	µg/L	2,600	1,800	7,300	5,700	--	--	--	--	NA	1.0 U	1.0 U	
CFC-12	µg/L	1,700	30	4,800	94	--	--	--	--	NA	1.0 U	1.0 U	
Chlorobenzene	µg/L	100	100	100	100	25	25	--	--	NA	1.0 U	1.0 U	
Chlorodibromomethane	µg/L	80	80	80	80	--	--	--	--	NA	1.0 U	1.0 U	
Chloroethane	µg/L	430	240	1,700	760	1,100	1,100	--	--	NA	1.0 U	1.0 U	
Chloroform	µg/L	80	80	80	80	350	350	--	--	NA	1.0 U	1.0 U	
Chloromethane	µg/L	260	220	1,100	1,100	--	--	--	--	NA	1.0 U	1.0 U	
Cyclohexane	µg/L	--	--	--	--	--	--	--	--	NA	1.0 U	1.0 U	
1,2-Dibromo-3-chloropropane	µg/L	0.2	0.2	0.2	0.2	--	--	--	--	NA	1.0 U	1.0 U	
1,2-Dibromoethane	µg/L	0.05	0.05	0.05	0.05	5.7	5.7	--	--	NA	1.0 U	1.0 U	
1,2-Dichlorobenzene	µg/L	600	600	600	600	13	13	--	--	NA	1.0 U	1.0 U	
1,3-Dichlorobenzene	µg/L	6.6	12	19	38	28	28	--	--	NA	1.0 U	1.0 U	
1,4-Dichlorobenzene	µg/L	75	75	75	75	17	17	--	--	NA	1.0 U	1.0 U	
1,1-Dichloroethane	µg/L	880	1,200	2,500	3,800	740	740	--	--	NA	11	1.0 U	
1,2-Dichloroethane	µg/L	5	5	5	5	360	360	--	--	NA	1.0 U	1.0 U	
1,1-Dichloroethene	µg/L	7	7	7	7	130	130	--	--	NA	2.2	1.0 U	
cis-1,2-Dichloroethene	µg/L	70	70	70	70	620	620	83	55	NA	6.4	1.0 U	
trans-1,2-Dichloroethene	µg/L	100	100	100	100	1,500	1,500	360	230	NA	1.0 U	1.0 U	
Dichloromethane	µg/L	5	5	5	5	1,500	1,500	--	--	NA	5.0 U	5.0 U	
1,2-Dichloropropane	µg/L	5	5	5	5	230	230	--	--	NA	1.0 U	1.0 U	
cis-1,3-Dichloropropene	µg/L	--	--	--	--	--	--	--	--	NA	1.0 U	1.0 U	
trans-1,3-Dichloropropene	µg/L	--	--	--	--	--	--	--	--	NA	1.0 U	1.0 U	
1,4-Dioxane	µg/L	85	7.2	350	37	2,800	2,800	NA	18,000	9.3	0.67 J	NA	
Ethylbenzene	µg/L	74	66	74	74	18	18	700	50	NA	1.0 U	1.0 U	
Isopropylbenzene	µg/L	800	590	2,300	1,900	28	28	--	--	NA	5.0 U	5.0 U	
Methyl acetate	µg/L	--	--	--	--	--	--	--	--	NA	10 U	10 U	
Methyl N-Butyl Ketone	µg/L	1,000	50	2,900	94	--	--	--	--	NA	50 U	50 U	
Methylcyclohexane	µg/L	--	--	--	--	--	--	--	--	NA	1.0 U	1.0 U	
4-Methyl-2-pentanone	µg/L	1,800	300	5,200	940	--	--	--	--	NA	3.5 J	2.4 J	
Methyl tert-butyl ether	µg/L	40	40	40	40	7,100	7,100	--	--	NA	5.0 U	5.0 U	
Styrene	µg/L	100	100	100	100	80	80	--	--	NA	1.0 U	1.0 U	
1,1,2,2-Tetrachloroethane	µg/L	8.5	3.6	35	18	78	78	--	--	NA	1.0 U	1.0 U	
Tetrachloroethene	µg/L	5	5	5	5	60	60	94	110	NA	1.0 U	1.0 U	
Toluene	µg/L	790	470	790	790	270	270	36,000	26,000	NA	1.0 U	1.0 U	
1,2,4-Trichlorobenzene	µg/L	70	70	70	70	99	99	140	110	NA	1.0 U	1.0 U	
1,1,1-Trichloroethane	µg/L	200	200	200	200	89	89	17,000	10,000	NA	17	1.0 U	
1,1,2-Trichloroethane	µg/L	5	5	5	5	330	330	--	--	NA	1.0 U	1.0 U	
Trichloroethene	µg/L	5	5	5	5	200	200	9.8	7	NA	0.68 J	1.0 U	
1,1,2-trichloro-1,2,2-trifluoroethane	µg/L	170,000	160,000	170,000	170,000	32	32	--	--	NA	1.0 U	1.0 U	
Vinyl Chloride	µg/L	2	2	2	2	13	13	2.8	1.7	NA	1.0 U	1.0 U	
Total Xylenes	µg/L	280	280	280	280	41	41	10,000	1,400	NA	2.0 U	2.0 U	

Table 4
Summary of Groundwater Analytical Results
RACER Trust Pontiac North Campus
Pontiac, Michigan

Location ID: Date Collected:		Residential Drinking Water (shaded)	MDEQ 2016 DRAFT Res DW (shaded)	Non-Residential Drinking Water (bold)	MDEQ 2016 DRAFT Non-Res DW (bold)	Groundwater Surface Water Interface (italics)	MDEQ 2016 DRAFT GSI (italics)	VI Groundwater Not In Contact SLs 2013 (shaded/outline)	MDEQ 2016 DRAFT Tier 1 VI Groundwater Not In Contact SLs (shaded/outline)	MWF12-01 05/19/16	MWM2-04 05/18/16	MWM10-09 05/19/16
Sample Name:	Units									MWF12-01-GW-051916	MWM2-04-GW-051816	MWM10-09-GW-051916
Semivolatile Organic Compounds												
1,1'-Biphenyl	µg/L	--	--	--	--	--	--	--	--	NA	1.0 U	0.96 U
2,2'-Oxybis(1-Chloropropane)	µg/L	--	--	--	--	--	--	--	--	NA	1.0 U	0.96 U
2,4,5-Trichlorophenol	µg/L	730	180	2,100	570	--	--	--	--	NA	5.2 U	4.8 U
2,4,6-Trichlorophenol	µg/L	120	40	470	170	5	5	--	--	NA	4.2 U	3.8 U
2,4-Dichlorophenol	µg/L	73	80	210	330	11	11	--	--	NA	10 U	9.6 U
2,4-Dimethylphenol	µg/L	370	120	1,000	380	380	380	--	--	NA	5.2 U	4.8 U
2,4-Dinitrophenol	µg/L	--	12	--	38	--	19	--	--	NA	21 U	19 U
2,4-Dinitrotoluene	µg/L	7.7	1.1	32	5.5	--	--	--	--	NA	5.2 U	4.8 U
2,6-Dinitrotoluene	µg/L	--	--	--	--	--	--	--	--	NA	5.2 U	4.8 U
2-Chloronaphthalene	µg/L	1,800	470	5,200	1,500	--	--	--	--	NA	5.2 U	4.8 U
2-Chlorophenol	µg/L	45	32	130	130	18	18	--	--	NA	5.2 U	4.8 U
2-Methylnaphthalene	µg/L	260	24	750	76	19	19	--	--	NA	5.2 U	4.8 U
2-Methylphenol	µg/L	--	8,000	--	33,000	--	30	--	--	NA	5.2 U	4.8 U
2-Nitroaniline	µg/L	--	--	--	--	--	--	--	--	NA	21 U	19 U
2-Nitrophenol	µg/L	20	12	58	38	--	--	--	--	NA	5.2 U	4.8 U
3,3'-Dichlorobenzidine	µg/L	1.1	1.6	4.3	8.2	0.3	0.3	--	--	NA	5.2 U	4.8 U
3-Nitroaniline	µg/L	--	--	--	--	--	--	--	--	NA	21 U	19 U
4,6-Dinitro-2-methylphenol	µg/L	20	20	20	20	--	--	--	--	NA	21 U	19 U
4-Bromophenyl-phenylether	µg/L	--	--	--	--	--	--	--	--	NA	5.2 U	4.8 U
4-Chloro-3-Methylphenol	µg/L	150	400	420	1,700	7.4	7.4	--	--	NA	5.2 U	4.8 U
4-Chloroaniline	µg/L	--	3	--	9.4	--	--	--	--	NA	2.1 U	1.9 U
4-Chlorophenyl-phenylether	µg/L	--	--	--	--	--	--	--	--	NA	5.2 U	4.8 U
4-Methylphenol	µg/L	--	--	--	--	--	--	--	--	NA	5.2 U	4.8 U
4-Nitroaniline	µg/L	--	--	--	--	--	--	--	--	NA	21 U	19 U
4-Nitrophenol	µg/L	--	--	--	--	--	--	--	--	NA	21 U	19 U
Acenaphthene	µg/L	1,300	360	3,800	1,100	38	38	--	--	NA	5.2 U	4.8 U
Acenaphthylene	µg/L	52	360	150	1,100	--	--	--	--	NA	5.2 U	4.8 U
Acetophenone	µg/L	1,500	3,200	4,400	13,000	--	--	--	--	NA	1.0 U	0.96 U
Anthracene	µg/L	43	43	43	43	--	--	--	--	NA	5.2 U	4.8 U
Atrazine	µg/L	3	3	3	3	7.3	7.3	--	--	NA	1.0 U	0.96 U
Benzaldehyde	µg/L	--	--	--	--	--	--	--	--	NA	1.0 U	0.96 U
Benzo(a)anthracene	µg/L	2.1	--	8.5	--	--	--	--	--	NA	1.0 U	0.96 U
Benzo(a)pyrene	µg/L	5	0.2	5	0.2	--	--	--	--	NA	1.0 U	0.96 U
Benzo(b)fluoranthene	µg/L	1.5	--	1.5	--	--	--	--	--	NA	1.0 U	0.96 U
Benzo(g,h,i)perylene	µg/L	1	1	1	1	--	--	--	--	NA	1.0 U	0.96 U
Benzo(k)fluoranthene	µg/L	1	--	1	--	--	--	--	--	NA	1.0 U	0.96 U
bis(2-Chloroethoxy)methane	µg/L	--	--	--	--	--	--	--	--	NA	5.2 U	4.8 U
bis(2-Chloroethyl)ether	µg/L	2	1	8.3	3.3	1	1	--	--	NA	1.0 U	0.96 U
bis(2-Ethylhexyl)phthalate	µg/L	6	6	6	6	25	14	--	--	NA	1.6 JB	1.8 JB
Butylbenzylphthalate	µg/L	1,200	80	2,700	330	67	67	--	--	NA	5.2 U	4.8 U
Caprolactam	µg/L	5,800	2,000	17,000	9,400	--	--	--	--	NA	5.2 U	4.8 U
Carbazole	µg/L	85	10	350	38	10	10	--	--	NA	10 U	9.6 U
Chrysene	µg/L	1.6	--	1.6	--	--	--	--	--	NA	1.0 U	0.96 U
Dibenzo(a,h)anthracene	µg/L	2	--	2	--	--	--	--	--	NA	2.1 U	1.9 U
Dibenzofuran	µg/L	--	5.9	--	19	4	4	--	--	NA	4.2 U	3.8 U
Diethylphthalate	µg/L	5,500	4,700	16,000	15,000	110	110	--	--	NA	5.2 U	4.8 U
Dimethylphthalate	µg/L	73,000	590	210,000	1,900	--	--	--	--	NA	5.2 U	4.8 U
Di-n-Butylphthalate	µg/L	880	27	2,500	110	9.7	9.7	--	--	NA	1.0 JB	0.81 JB
Di-n-Octylphthalate	µg/L	130	22	380	22	--	--	--	--	NA	5.2 U	4.8 U
Fluoranthene	µg/L	210	240	210	260	1.6	1.6	--	--	NA	1.0 U	0.96 U
Fluorene	µg/L	880	240	2,000	760	12	12	--	--	NA	5.2 U	4.8 U

Table 4
Summary of Groundwater Analytical Results
RACER Trust Pontiac North Campus
Pontiac, Michigan

Location ID: Date Collected:		Residential Drinking Water (shaded)	MDEQ 2016 DRAFT Res DW (shaded)	Non-Residential Drinking Water (bold)	MDEQ 2016 DRAFT Non-Res DW (bold)	Groundwater Surface Water Interface (italics)	MDEQ 2016 DRAFT GSI (italics)	VI Groundwater Not In Contact SLs 2013 (shaded/outline)	MDEQ 2016 DRAFT Tier 1 VI Groundwater Not In Contact SLs (shaded/outline)	MWF12-01 05/19/16	MWM2-04 05/18/16	MWM10-09 05/19/16
Sample Name:	Units									MWF12-01-GW-051916	MWM2-04-GW-051816	MWM10-09-GW-051916
Semivolatile Organic Compounds												
Hexachlorobenzene	µg/L	1	1	1	1	0.2	0.2	--	--	NA	0.21 U	0.19 U
Hexachlorocyclopentadiene	µg/L	50	50	50	50	--	--	--	--	NA	5.2 U	4.8 U
Hexachloroethane	µg/L	7.3	5	21	13	6.7	6.7	--	--	NA	5.2 U	4.8 U
Indeno(1,2,3-cd)pyrene	µg/L	2	--	2	--	--	--	--	--	NA	2.1 U	1.9 U
Isophorone	µg/L	770	760	3,100	3,800	1,300	1,300	--	--	NA	5.2 U	4.8 U
Nitrobenzene	µg/L	3.4	12	9.6	38	180	180	--	--	NA	3.1 U	2.9 U
N-Nitroso-di-n-propylamine	µg/L	5	5	5	5	--	--	--	--	NA	5.2 U	4.8 U
N-Nitrosodiphenylamine	µg/L	270	150	1,100	750	--	--	--	--	NA	5.2 U	4.8 U
Pentachlorophenol	µg/L	1	1	1	1	--	--	--	--	NA	5.2 U	4.8 U
Phenanthrene	µg/L	52	180	150	570	2	2	--	--	NA	2.1 U	1.9 U
Phenol	µg/L	4,400	1,200	13,000	5,700	450	450	--	--	NA	5.2 U	4.8 U
Pyrene	µg/L	140	140	140	140	--	--	--	--	NA	5.2 U	4.8 U
Hexachloro-1,3-Butadiene	µg/L	15	5.9	42	19	0.053	0.053	--	--	NA	1.0 U	0.96 U
Naphthalene	µg/L	520	590	1,500	1,900	11	11	240	84	NA	5.2 U	4.8 U
Inorganics												
Antimony	µg/L	6	6	6	6	130	130	--	--	NA	0.46 J	0.44 J
Arsenic	µg/L	10	10	10	10	10	10	--	--	NA	1.1 J	1.2 J
Barium	µg/L	2,000	2,000	2,000	2,000	--	--	--	--	NA	30 B	35 B
Beryllium	µg/L	4	4	4	4	--	--	--	--	NA	0.10 JB	0.081 JB
Cadmium	µg/L	5	5	5	5	--	--	--	--	NA	0.37 J	0.13 J
Chromium	µg/L	--	--	--	--	--	--	--	--	NA	2.0 U	2.0 U
Cobalt	µg/L	40	20	100	20	100	100	--	--	NA	1.7	0.90 J
Copper	µg/L	1,000	30	1,000	95	--	--	--	--	NA	4.5	8.9
Lead	µg/L	4	1	4	1	--	--	--	--	NA	1.6	1.4
Manganese	µg/L	50	50	50	50	--	--	--	--	NA	92	380
Mercury	µg/L	2	2	2	2	0.0013	0.0013	--	--	NA	0.20 U	0.20 U
Nickel	µg/L	100	36	100	110	--	--	--	--	NA	16 B	5.0 B
Selenium	µg/L	50	50	50	50	5	5	--	--	NA	5.0	0.89 J
Silver	µg/L	34	5.9	98	19	0.2	0.2	--	--	NA	0.20 U	0.20 U
Thallium	µg/L	2	2	2	2	3.7	3.7	--	--	NA	1.0 U	1.0 U
Vanadium	µg/L	4.5	4	62	4	27	27	--	--	NA	2.6 J	0.33 J
Zinc	µg/L	2,400	1,800	5,000	5,000	--	--	--	--	NA	17	320

Table 4
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RACER Trust Pontiac North Campus
Pontiac, Michigan

Location ID: Date Collected:		Residential Drinking Water (shaded)	MDEQ 2016 DRAFT Res DW (shaded)	Non-Residential Drinking Water (bold)	MDEQ 2016 DRAFT Non-Res DW (bold)	Groundwater Surface Water Interface (italics)	MDEQ 2016 DRAFT GSI (italics)	VI Groundwater Not In Contact SLs 2013 (shaded/outline)	MDEQ 2016 DRAFT Tier 1 VI Groundwater Not In Contact SLs (shaded/outline)	MWM16-19 05/19/16	MWW5-01 05/19/16	MWW10-04 05/18/16
Sample Name:	Units									MWM16-19-GW-051916	MWW5-01-GW-051916	MWW10-04-GW-051816
PCBs												
Aroclor-1016	µg/L	0.5	0.5	0.5	0.5	0.2	0.2	--	--	0.20 U	NA	NA
Aroclor-1221	µg/L	0.5	0.5	0.5	0.5	0.2	0.2	--	--	0.20 U	NA	NA
Aroclor-1232	µg/L	0.5	0.5	0.5	0.5	0.2	0.2	--	--	0.20 U	NA	NA
Aroclor-1242	µg/L	0.5	0.5	0.5	0.5	0.2	0.2	--	--	0.077 Jp	NA	NA
Aroclor-1248	µg/L	0.5	0.5	0.5	0.5	0.2	0.2	--	--	0.20 U	NA	NA
Aroclor-1254	µg/L	0.5	0.5	0.5	0.5	0.2	0.2	--	--	0.20 U	NA	NA
Aroclor-1260	µg/L	0.5	0.5	0.5	0.5	0.2	0.2	--	--	0.20 U	NA	NA
Volatile Organic Compounds												
Acetone	µg/L	730	5,300	2,100	17,000	1,700	1,700	--	--	15 J	15 J	13 J
Benzene	µg/L	5	5	5	5	200	200	27	17	1.0 U	1.0 U	1.0 U
Bromodichloromethane	µg/L	80	80	80	80	--	--	--	--	1.0 U	1.0 U	1.0 U
Bromoform	µg/L	80	80	80	80	--	--	--	--	1.0 U	1.0 U	1.0 U
Bromomethane	µg/L	10	120	29	380	35	5	--	--	1.0 U	1.0 U	1.0 U
2-Butanone	µg/L	13,000	2,400	38,000	11,000	2,200	2,200	--	--	25 U	25 U	25 U
Carbon Disulfide	µg/L	800	440	2,300	1,800	--	--	--	--	5.0 U	5.0 U	5.0 U
Carbon Tetrachloride	µg/L	5	5	5	5	45	38	--	--	1.0 U	1.0 U	1.0 U
CFC-11	µg/L	2,600	1,800	7,300	5,700	--	--	--	--	1.0 U	1.0 U	1.0 U
CFC-12	µg/L	1,700	30	4,800	94	--	--	--	--	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	100	100	100	100	25	25	--	--	1.0 U	1.0 U	1.0 U
Chlorodibromomethane	µg/L	80	80	80	80	--	--	--	--	1.0 U	1.0 U	1.0 U
Chloroethane	µg/L	430	240	1,700	760	1,100	1,100	--	--	1.0 U	1.0 U	1.0 U
Chloroform	µg/L	80	80	80	80	350	350	--	--	1.0 U	1.0 U	1.0 U
Chloromethane	µg/L	260	220	1,100	1,100	--	--	--	--	1.0 U	1.0 U	1.0 U
Cyclohexane	µg/L	--	--	--	--	--	--	--	--	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane	µg/L	0.2	0.2	0.2	0.2	--	--	--	--	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane	µg/L	0.05	0.05	0.05	0.05	5.7	5.7	--	--	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	600	600	600	600	13	13	--	--	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	µg/L	6.6	12	19	38	28	28	--	--	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	75	75	75	75	17	17	--	--	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	µg/L	880	1,200	2,500	3,800	740	740	--	--	0.54 J	1.0 U	1.0 U
1,2-Dichloroethane	µg/L	5	5	5	5	360	360	--	--	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	µg/L	7	7	7	7	130	130	--	--	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	70	70	70	70	620	620	83	55	0.54 J	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	100	100	100	100	1,500	1,500	360	230	1.0 U	1.0 U	1.0 U
Dichloromethane	µg/L	5	5	5	5	1,500	1,500	--	--	5.0 U	5.0 U	5.0 U
1,2-Dichloropropane	µg/L	5	5	5	5	230	230	--	--	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	µg/L	--	--	--	--	--	--	--	--	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	µg/L	--	--	--	--	--	--	--	--	1.0 U	1.0 U	1.0 U
1,4-Dioxane	µg/L	85	7.2	350	37	2,800	2,800	NA	18,000	1.3 J	NA	2.0 U
Ethylbenzene	µg/L	74	66	74	74	18	18	700	50	1.0 U	1.0 U	1.0 U
Isopropylbenzene	µg/L	800	590	2,300	1,900	28	28	--	--	5.0 U	5.0 U	5.0 U
Methyl acetate	µg/L	--	--	--	--	--	--	--	--	10 U	10 U	10 U
Methyl N-Butyl Ketone	µg/L	1,000	50	2,900	94	--	--	--	--	50 U	50 U	50 U
Methylcyclohexane	µg/L	--	--	--	--	--	--	--	--	1.0 U	1.0 U	1.0 U
4-Methyl-2-pentanone	µg/L	1,800	300	5,200	940	--	--	--	--	3.8 J	3.6 J	3.9 J
Methyl tert-butyl ether	µg/L	40	40	40	40	7,100	7,100	--	--	5.0 U	5.0 U	5.0 U
Styrene	µg/L	100	100	100	100	80	80	--	--	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	µg/L	8.5	3.6	35	18	78	78	--	--	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	5	5	5	5	60	60	94	110	1.0 U	1.0 U	1.0 U
Toluene	µg/L	790	470	790	790	270	270	36,000	26,000	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	70	70	70	70	99	99	140	110	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	µg/L	200	200	200	200	89	89	17,000	10,000	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	µg/L	5	5	5	5	330	330	--	--	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	5	5	5	5	200	200	9.8	7	1.0 U	1.0 U	1.0 U
1,1,2-trichloro-1,2,2-trifluoroethane	µg/L	170,000	160,000	170,000	170,000	32	32	--	--	1.0 U	1.0 U	1.0 U
Vinyl Chloride	µg/L	2	2	2	2	13	13	2.8	1.7	1.8	1.0 U	1.0 U
Total Xylenes	µg/L	280	280	280	280	41	41	10,000	1,400	2.0 U	2.0 U	2.0 U

Table 4
Summary of Groundwater Analytical Results
RACER Trust Pontiac North Campus
Pontiac, Michigan

Location ID: Date Collected:		Residential Drinking Water (shaded)	MDEQ 2016 DRAFT Res DW (shaded)	Non-Residential Drinking Water (bold)	MDEQ 2016 DRAFT Non-Res DW (bold)	Groundwater Surface Water Interface (italics)	MDEQ 2016 DRAFT GSI (italics)	VI Groundwater Not In Contact SLs 2013 (shaded/outline)	MDEQ 2016 DRAFT Tier 1 VI Groundwater Not In Contact SLs (shaded/outline)	MWM16-19 05/19/16 MWM16-19-GW-051916	MWW5-01 05/19/16 MWW5-01-GW-051916	MWW10-04 05/18/16 MWW10-04-GW-051816
Sample Name:	Units											
Semivolatile Organic Compounds												
1,1'-Biphenyl	µg/L	--	--	--	--	--	--	--	--	1.3	NA	NA
2,2'-Oxybis(1-Chloropropane)	µg/L	--	--	--	--	--	--	--	--	1.0 U	NA	NA
2,4,5-Trichlorophenol	µg/L	730	180	2,100	570	--	--	--	--	5.0 U	NA	NA
2,4,6-Trichlorophenol	µg/L	120	40	470	170	5	5	--	--	4.0 U	NA	NA
2,4-Dichlorophenol	µg/L	73	80	210	330	11	11	--	--	10 U	NA	NA
2,4-Dimethylphenol	µg/L	370	120	1,000	380	380	380	--	--	5.0 U	NA	NA
2,4-Dinitrophenol	µg/L	--	12	--	38	--	19	--	--	20 U	NA	NA
2,4-Dinitrotoluene	µg/L	7.7	1.1	32	5.5	--	--	--	--	5.0 U	NA	NA
2,6-Dinitrotoluene	µg/L	--	--	--	--	--	--	--	--	5.0 U	NA	NA
2-Chloronaphthalene	µg/L	1,800	470	5,200	1,500	--	--	--	--	5.0 U	NA	NA
2-Chlorophenol	µg/L	45	32	130	130	18	18	--	--	5.0 U	NA	NA
2-Methylnaphthalene	µg/L	260	24	750	76	19	19	--	--	0.33 J	NA	NA
2-Methylphenol	µg/L	--	8,000	--	33,000	--	30	--	--	5.0 U	NA	NA
2-Nitroaniline	µg/L	--	--	--	--	--	--	--	--	20 U	NA	NA
2-Nitrophenol	µg/L	20	12	58	38	--	--	--	--	5.0 U	NA	NA
3,3'-Dichlorobenzidine	µg/L	1.1	1.6	4.3	8.2	0.3	0.3	--	--	5.0 U	NA	NA
3-Nitroaniline	µg/L	--	--	--	--	--	--	--	--	20 U	NA	NA
4,6-Dinitro-2-methylphenol	µg/L	20	20	20	20	--	--	--	--	20 U	NA	NA
4-Bromophenyl-phenylether	µg/L	--	--	--	--	--	--	--	--	5.0 U	NA	NA
4-Chloro-3-Methylphenol	µg/L	150	400	420	1,700	7.4	7.4	--	--	5.0 U	NA	NA
4-Chloroaniline	µg/L	--	3	--	9.4	--	--	--	--	2.0 U	NA	NA
4-Chlorophenyl-phenylether	µg/L	--	--	--	--	--	--	--	--	5.0 U	NA	NA
4-Methylphenol	µg/L	--	--	--	--	--	--	--	--	5.0 U	NA	NA
4-Nitroaniline	µg/L	--	--	--	--	--	--	--	--	20 U	NA	NA
4-Nitrophenol	µg/L	--	--	--	--	--	--	--	--	20 U	NA	NA
Acenaphthene	µg/L	1,300	360	3,800	1,100	38	38	--	--	5.0 U	NA	NA
Acenaphthylene	µg/L	52	360	150	1,100	--	--	--	--	5.0 U	NA	NA
Acetophenone	µg/L	1,500	3,200	4,400	13,000	--	--	--	--	1.0 U	NA	NA
Anthracene	µg/L	43	43	43	43	--	--	--	--	4.5 J	NA	NA
Atrazine	µg/L	3	3	3	3	7.3	7.3	--	--	1.0 U	NA	NA
Benzaldehyde	µg/L	--	--	--	--	--	--	--	--	1.0 U	NA	NA
Benzo(a)anthracene	µg/L	2.1	--	8.5	--	--	--	--	--	1.0 U	NA	NA
Benzo(a)pyrene	µg/L	5	0.2	5	0.2	--	--	--	--	1.0 U	NA	NA
Benzo(b)fluoranthene	µg/L	1.5	--	1.5	--	--	--	--	--	1.0 U	NA	NA
Benzo(g,h,i)perylene	µg/L	1	1	1	1	--	--	--	--	1.0 U	NA	NA
Benzo(k)fluoranthene	µg/L	1	--	1	--	--	--	--	--	1.0 U	NA	NA
bis(2-Chloroethoxy)methane	µg/L	--	--	--	--	--	--	--	--	5.0 U	NA	NA
bis(2-Chloroethyl)ether	µg/L	2	1	8.3	3.3	1	1	--	--	1.0 U	NA	NA
bis(2-Ethylhexyl)phthalate	µg/L	6	6	6	6	25	14	--	--	2.8 JB	NA	NA
Butylbenzylphthalate	µg/L	1,200	80	2,700	330	67	67	--	--	5.0 U	NA	NA
Caprolactam	µg/L	5,800	2,000	17,000	9,400	--	--	--	--	5.0 U	NA	NA
Carbazole	µg/L	85	10	350	38	10	10	--	--	10 U	NA	NA
Chrysene	µg/L	1.6	--	1.6	--	--	--	--	--	1.0 U	NA	NA
Dibenzo(a,h)anthracene	µg/L	2	--	2	--	--	--	--	--	2.0 U	NA	NA
Dibenzofuran	µg/L	--	5.9	--	19	4	4	--	--	4.0 U	NA	NA
Diethylphthalate	µg/L	5,500	4,700	16,000	15,000	110	110	--	--	5.0 U	NA	NA
Dimethylphthalate	µg/L	73,000	590	210,000	1,900	--	--	--	--	5.0 U	NA	NA
Di-n-Butylphthalate	µg/L	880	27	2,500	110	9.7	9.7	--	--	5.0 U	NA	NA
Di-n-Octylphthalate	µg/L	130	22	380	22	--	--	--	--	5.0 U	NA	NA
Fluoranthene	µg/L	210	240	210	260	1.6	1.6	--	--	1.5	NA	NA
Fluorene	µg/L	880	240	2,000	760	12	12	--	--	6.6	NA	NA

Table 4
Summary of Groundwater Analytical Results
RACER Trust Pontiac North Campus
Pontiac, Michigan

Location ID: Date Collected:		Residential Drinking Water (shaded)	MDEQ 2016 DRAFT Res DW (shaded)	Non-Residential Drinking Water (bold)	MDEQ 2016 DRAFT Non-Res DW (bold)	Groundwater Surface Water Interface (italics)	MDEQ 2016 DRAFT GSI (italics)	VI Groundwater Not In Contact SLs 2013 (shaded/outline)	MDEQ 2016 DRAFT Tier 1 VI Groundwater Not In Contact SLs (shaded/outline)	MWM16-19 05/19/16 MWM16-19-GW-051916	MWW5-01 05/19/16 MWW5-01-GW-051916	MWW10-04 05/18/16 MWW10-04-GW-051816
Sample Name:	Units											
Semivolatile Organic Compounds												
Hexachlorobenzene	µg/L	1	1	1	1	0.2	0.2	--	--	0.20 U	NA	NA
Hexachlorocyclopentadiene	µg/L	50	50	50	50	--	--	--	--	5.0 U	NA	NA
Hexachloroethane	µg/L	7.3	5	21	13	6.7	6.7	--	--	5.0 U	NA	NA
Indeno(1,2,3-cd)pyrene	µg/L	2	--	2	--	--	--	--	--	2.0 U	NA	NA
Isophorone	µg/L	770	760	3,100	3,800	1,300	1,300	--	--	5.0 U	NA	NA
Nitrobenzene	µg/L	3.4	12	9.6	38	180	180	--	--	3.0 U	NA	NA
N-Nitroso-di-n-propylamine	µg/L	5	5	5	5	--	--	--	--	5.0 U	NA	NA
N-Nitrosodiphenylamine	µg/L	270	150	1,100	750	--	--	--	--	5.0 U	NA	NA
Pentachlorophenol	µg/L	1	1	1	1	--	--	--	--	5.0 U	NA	NA
Phenanthrene	µg/L	52	180	150	570	2	2	--	--	19	NA	NA
Phenol	µg/L	4,400	1,200	13,000	5,700	450	450	--	--	5.0 U	NA	NA
Pyrene	µg/L	140	140	140	140	--	--	--	--	2.5 J	NA	NA
Hexachloro-1,3-Butadiene	µg/L	15	5.9	42	19	0.053	0.053	--	--	1.0 U	NA	NA
Naphthalene	µg/L	520	590	1,500	1,900	11	11	240	84	5.0 U	NA	NA
Inorganics												
Antimony	µg/L	6	6	6	6	130	130	--	--	2.0 U	NA	NA
Arsenic	µg/L	10	10	10	10	10	10	--	--	9.4	NA	NA
Barium	µg/L	2,000	2,000	2,000	2,000	--	--	--	--	140 B	NA	NA
Beryllium	µg/L	4	4	4	4	--	--	--	--	0.11 JB	NA	NA
Cadmium	µg/L	5	5	5	5	--	--	--	--	0.50 U	NA	NA
Chromium	µg/L	--	--	--	--	--	--	--	--	1.0 J	NA	NA
Cobalt	µg/L	40	20	100	20	100	100	--	--	0.36 J	NA	NA
Copper	µg/L	1,000	30	1,000	95	--	--	--	--	2.0 U	NA	NA
Lead	µg/L	4	1	4	1	--	--	--	--	0.95 J	NA	NA
Manganese	µg/L	50	50	50	50	--	--	--	--	170	NA	NA
Mercury	µg/L	2	2	2	2	0.0013	0.0013	--	--	0.20 U	NA	NA
Nickel	µg/L	100	36	100	110	--	--	--	--	3.2 B	NA	NA
Selenium	µg/L	50	50	50	50	5	5	--	--	2.0 U	NA	NA
Silver	µg/L	34	5.9	98	19	0.2	0.2	--	--	0.20 U	NA	NA
Thallium	µg/L	2	2	2	2	3.7	3.7	--	--	1.0 U	NA	NA
Vanadium	µg/L	4.5	4	62	4	27	27	--	--	1.1 J	NA	NA
Zinc	µg/L	2,400	1,800	5,000	5,000	--	--	--	--	10 U	NA	NA

Table 4
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RACER Trust Pontiac North Campus
Pontiac, Michigan

Location ID: Date Collected:												
Sample Name:	Units	Residential Drinking Water (shaded)	MDEQ 2016 DRAFT Res DW (shaded)	Non-Residential Drinking Water (bold)	MDEQ 2016 DRAFT Non-Res DW (bold)	Groundwater Surface Water Interface (italics)	MDEQ 2016 DRAFT GSI (italics)	VI Groundwater Not In Contact SLs 2013 (shaded/outline)	MDEQ 2016 DRAFT Tier 1 VI Groundwater Not In Contact SLs (shaded/outline)	MWW10-SEN01 05/18/16	MWW10-SEN03 05/18/16	MWW10-SEN04 05/18/16
										MWW10-SEN01-GW-051816	MWW10-SEN03-GW-051816	MWW10-SEN04-GW-051816
PCBs												
Aroclor-1016	µg/L	0.5	0.5	0.5	0.5	0.2	0.2	--	--	0.19 U	NA	NA
Aroclor-1221	µg/L	0.5	0.5	0.5	0.5	0.2	0.2	--	--	0.19 U	NA	NA
Aroclor-1232	µg/L	0.5	0.5	0.5	0.5	0.2	0.2	--	--	0.19 U	NA	NA
Aroclor-1242	µg/L	0.5	0.5	0.5	0.5	0.2	0.2	--	--	0.19 U	NA	NA
Aroclor-1248	µg/L	0.5	0.5	0.5	0.5	0.2	0.2	--	--	0.19 U	NA	NA
Aroclor-1254	µg/L	0.5	0.5	0.5	0.5	0.2	0.2	--	--	0.19 U	NA	NA
Aroclor-1260	µg/L	0.5	0.5	0.5	0.5	0.2	0.2	--	--	0.19 U	NA	NA
Volatile Organic Compounds												
Acetone	µg/L	730	5,300	2,100	17,000	1,700	1,700	--	--	17 J	19 J	25
Benzene	µg/L	5	5	5	5	200	200	27	17	1.0 U	0.77 J	1.0 U
Bromodichloromethane	µg/L	80	80	80	80	--	--	--	--	1.0 U	1.0 U	1.0 U
Bromoform	µg/L	80	80	80	80	--	--	--	--	1.0 U	1.0 U	1.0 U
Bromomethane	µg/L	10	120	29	380	35	5	--	--	1.0 U	1.0 U	1.0 U
2-Butanone	µg/L	13,000	2,400	38,000	11,000	2,200	2,200	--	--	25 U	1.8 J	0.57 J
Carbon Disulfide	µg/L	800	440	2,300	1,800	--	--	--	--	5.0 U	5.0 U	5.0 U
Carbon Tetrachloride	µg/L	5	5	5	5	45	38	--	--	1.0 U	1.0 U	1.0 U
CFC-11	µg/L	2,600	1,800	7,300	5,700	--	--	--	--	1.0 U	1.0 U	1.0 U
CFC-12	µg/L	1,700	30	4,800	94	--	--	--	--	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	100	100	100	100	25	25	--	--	1.0 U	1.0 U	1.0 U
Chlorodibromomethane	µg/L	80	80	80	80	--	--	--	--	1.0 U	1.0 U	1.0 U
Chloroethane	µg/L	430	240	1,700	760	1,100	1,100	--	--	1.8	1.0 U	1.0 U
Chloroform	µg/L	80	80	80	80	350	350	--	--	1.0 U	1.0 U	1.0 U
Chloromethane	µg/L	260	220	1,100	1,100	--	--	--	--	1.0 U	1.0 U	1.0 U
Cyclohexane	µg/L	--	--	--	--	--	--	--	--	1.0 U	0.87 J	1.0 U
1,2-Dibromo-3-chloropropane	µg/L	0.2	0.2	0.2	0.2	--	--	--	--	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane	µg/L	0.05	0.05	0.05	0.05	5.7	5.7	--	--	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	600	600	600	600	13	13	--	--	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	µg/L	6.6	12	19	38	28	28	--	--	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	75	75	75	75	17	17	--	--	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	µg/L	880	1,200	2,500	3,800	740	740	--	--	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	µg/L	5	5	5	5	360	360	--	--	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	µg/L	7	7	7	7	130	130	--	--	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	70	70	70	70	620	620	83	55	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	100	100	100	100	1,500	1,500	360	230	1.0 U	1.0 U	1.0 U
Dichloromethane	µg/L	5	5	5	5	1,500	1,500	--	--	5.0 U	5.0 U	5.0 U
1,2-Dichloropropane	µg/L	5	5	5	5	230	230	--	--	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	µg/L	--	--	--	--	--	--	--	--	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	µg/L	--	--	--	--	--	--	--	--	1.0 U	1.0 U	1.0 U
1,4-Dioxane	µg/L	85	7.2	350	37	2,800	2,800	NA	18,000	NA	NA	NA
Ethylbenzene	µg/L	74	66	74	74	18	18	700	50	1.0 U	1.0 U	1.0 U
Isopropylbenzene	µg/L	800	590	2,300	1,900	28	28	--	--	5.0 U	5.0 U	5.0 U
Methyl acetate	µg/L	--	--	--	--	--	--	--	--	10 U	10 U	10 U
Methyl N-Butyl Ketone	µg/L	1,000	50	2,900	94	--	--	--	--	50 U	50 U	50 U
Methylcyclohexane	µg/L	--	--	--	--	--	--	--	--	1.0 U	1.1	1.0 U
4-Methyl-2-pentanone	µg/L	1,800	300	5,200	940	--	--	--	--	3.5 J	3.1 J	2.9 J
Methyl tert-butyl ether	µg/L	40	40	40	40	7,100	7,100	--	--	5.0 U	5.0 U	5.0 U
Styrene	µg/L	100	100	100	100	80	80	--	--	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	µg/L	8.5	3.6	35	18	78	78	--	--	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	5	5	5	5	60	60	94	110	1.0 U	1.0 U	1.0 U
Toluene	µg/L	790	470	790	790	270	270	36,000	26,000	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	70	70	70	70	99	99	140	110	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	µg/L	200	200	200	200	89	89	17,000	10,000	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	µg/L	5	5	5	5	330	330	--	--	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	5	5	5	5	200	200	9.8	7	1.0 U	1.0 U	1.0 U
1,1,2-trichloro-1,2,2-trifluoroethane	µg/L	170,000	160,000	170,000	170,000	32	32	--	--	1.0 U	1.0 U	1.0 U
Vinyl Chloride	µg/L	2	2	2	2	13	13	2.8	1.7	1.0 U	1.0 U	1.0 U
Total Xylenes	µg/L	280	280	280	280	41	41	10,000	1,400	2.0 U	2.0 U	2.0 U

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RACER Trust Pontiac North Campus
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Location ID: Date Collected:												
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										MWW10-SEN01-GW-051816	MWW10-SEN03-GW-051816	MWW10-SEN04-GW-051816
Semivolatile Organic Compounds												
1,1'-Biphenyl	µg/L	--	--	--	--	--	--	--	--	0.96 U	NA	NA
2,2'-Oxybis(1-Chloropropane)	µg/L	--	--	--	--	--	--	--	--	0.96 U	NA	NA
2,4,5-Trichlorophenol	µg/L	730	180	2,100	570	--	--	--	--	4.8 U	NA	NA
2,4,6-Trichlorophenol	µg/L	120	40	470	170	5	5	--	--	3.8 U	NA	NA
2,4-Dichlorophenol	µg/L	73	80	210	330	11	11	--	--	9.6 U	NA	NA
2,4-Dimethylphenol	µg/L	370	120	1,000	380	380	380	--	--	4.8 U	NA	NA
2,4-Dinitrophenol	µg/L	--	12	--	38	--	19	--	--	19 U	NA	NA
2,4-Dinitrotoluene	µg/L	7.7	1.1	32	5.5	--	--	--	--	4.8 U	NA	NA
2,6-Dinitrotoluene	µg/L	--	--	--	--	--	--	--	--	4.8 U	NA	NA
2-Chloronaphthalene	µg/L	1,800	470	5,200	1,500	--	--	--	--	4.8 U	NA	NA
2-Chlorophenol	µg/L	45	32	130	130	18	18	--	--	4.8 U	NA	NA
2-Methylnaphthalene	µg/L	260	24	750	76	19	19	--	--	4.8 U	NA	NA
2-Methylphenol	µg/L	--	8,000	--	33,000	--	30	--	--	4.8 U	NA	NA
2-Nitroaniline	µg/L	--	--	--	--	--	--	--	--	19 U	NA	NA
2-Nitrophenol	µg/L	20	12	58	38	--	--	--	--	4.8 U	NA	NA
3,3'-Dichlorobenzidine	µg/L	1.1	1.6	4.3	8.2	0.3	0.3	--	--	4.8 U	NA	NA
3-Nitroaniline	µg/L	--	--	--	--	--	--	--	--	19 U	NA	NA
4,6-Dinitro-2-methylphenol	µg/L	20	20	20	20	--	--	--	--	19 U	NA	NA
4-Bromophenyl-phenylether	µg/L	--	--	--	--	--	--	--	--	4.8 U	NA	NA
4-Chloro-3-Methylphenol	µg/L	150	400	420	1,700	7.4	7.4	--	--	4.8 U	NA	NA
4-Chloroaniline	µg/L	--	3	--	9.4	--	--	--	--	1.9 U	NA	NA
4-Chlorophenyl-phenylether	µg/L	--	--	--	--	--	--	--	--	4.8 U	NA	NA
4-Methylphenol	µg/L	--	--	--	--	--	--	--	--	4.8 U	NA	NA
4-Nitroaniline	µg/L	--	--	--	--	--	--	--	--	19 U	NA	NA
4-Nitrophenol	µg/L	--	--	--	--	--	--	--	--	19 U	NA	NA
Acenaphthene	µg/L	1,300	360	3,800	1,100	38	38	--	--	4.8 U	NA	NA
Acenaphthylene	µg/L	52	360	150	1,100	--	--	--	--	4.8 U	NA	NA
Acetophenone	µg/L	1,500	3,200	4,400	13,000	--	--	--	--	0.96 U	NA	NA
Anthracene	µg/L	43	43	43	43	--	--	--	--	4.8 U	NA	NA
Atrazine	µg/L	3	3	3	3	7.3	7.3	--	--	0.96 U	NA	NA
Benzaldehyde	µg/L	--	--	--	--	--	--	--	--	0.96 U	NA	NA
Benzo(a)anthracene	µg/L	2.1	--	8.5	--	--	--	--	--	0.96 U	NA	NA
Benzo(a)pyrene	µg/L	5	0.2	5	0.2	--	--	--	--	0.96 U	NA	NA
Benzo(b)fluoranthene	µg/L	1.5	--	1.5	--	--	--	--	--	0.96 U	NA	NA
Benzo(g,h,i)perylene	µg/L	1	1	1	1	--	--	--	--	0.96 U	NA	NA
Benzo(k)fluoranthene	µg/L	1	--	1	--	--	--	--	--	0.96 U	NA	NA
bis(2-Chloroethoxy)methane	µg/L	--	--	--	--	--	--	--	--	4.8 U	NA	NA
bis(2-Chloroethyl)ether	µg/L	2	1	8.3	3.3	1	1	--	--	0.96 U	NA	NA
bis(2-Ethylhexyl)phthalate	µg/L	6	6	6	6	25	14	--	--	4.8 U	NA	NA
Butylbenzylphthalate	µg/L	1,200	80	2,700	330	67	67	--	--	4.8 U	NA	NA
Caprolactam	µg/L	5,800	2,000	17,000	9,400	--	--	--	--	4.8 U	NA	NA
Carbazole	µg/L	85	10	350	38	10	10	--	--	9.6 U	NA	NA
Chrysene	µg/L	1.6	--	1.6	--	--	--	--	--	0.96 U	NA	NA
Dibenzo(a,h)anthracene	µg/L	2	--	2	--	--	--	--	--	1.9 U	NA	NA
Dibenzofuran	µg/L	--	5.9	--	19	4	4	--	--	3.8 U	NA	NA
Diethylphthalate	µg/L	5,500	4,700	16,000	15,000	110	110	--	--	4.8 U	NA	NA
Dimethylphthalate	µg/L	73,000	590	210,000	1,900	--	--	--	--	4.8 U	NA	NA
Di-n-Butylphthalate	µg/L	880	27	2,500	110	9.7	9.7	--	--	0.40 JB	NA	NA
Di-n-Octylphthalate	µg/L	130	22	380	22	--	--	--	--	4.8 U	NA	NA
Fluoranthene	µg/L	210	240	210	260	1.6	1.6	--	--	0.96 U	NA	NA
Fluorene	µg/L	880	240	2,000	760	12	12	--	--	0.25 J	NA	NA

Table 4
Summary of Groundwater Analytical Results
RACER Trust Pontiac North Campus
Pontiac, Michigan

Location ID: Date Collected:												
Sample Name:	Units	Residential Drinking Water (shaded)	MDEQ 2016 DRAFT Res DW (shaded)	Non-Residential Drinking Water (bold)	MDEQ 2016 DRAFT Non-Res DW (bold)	Groundwater Surface Water Interface (italics)	MDEQ 2016 DRAFT GSI (italics)	VI Groundwater Not In Contact SLs 2013 (shaded/outline)	MDEQ 2016 DRAFT Tier 1 VI Groundwater Not In Contact SLs (shaded/outline)	MWW10-SEN01 05/18/16 MWW10-SEN01-GW-051816	MWW10-SEN03 05/18/16 MWW10-SEN03-GW-051816	MWW10-SEN04 05/18/16 MWW10-SEN04-GW-051816
Semivolatile Organic Compounds												
Hexachlorobenzene	µg/L	1	1	1	1	0.2	0.2	--	--	0.19 U	NA	NA
Hexachlorocyclopentadiene	µg/L	50	50	50	50	--	--	--	--	4.8 U	NA	NA
Hexachloroethane	µg/L	7.3	5	21	13	6.7	6.7	--	--	4.8 U	NA	NA
Indeno(1,2,3-cd)pyrene	µg/L	2	--	2	--	--	--	--	--	1.9 U	NA	NA
Isophorone	µg/L	770	760	3,100	3,800	1,300	1,300	--	--	4.8 U	NA	NA
Nitrobenzene	µg/L	3.4	12	9.6	38	180	180	--	--	2.9 U	NA	NA
N-Nitroso-di-n-propylamine	µg/L	5	5	5	5	--	--	--	--	4.8 U	NA	NA
N-Nitrosodiphenylamine	µg/L	270	150	1,100	750	--	--	--	--	4.8 U	NA	NA
Pentachlorophenol	µg/L	1	1	1	1	--	--	--	--	4.8 U	NA	NA
Phenanthrene	µg/L	52	180	150	570	2	2	--	--	1.9 U	NA	NA
Phenol	µg/L	4,400	1,200	13,000	5,700	450	450	--	--	4.8 U	NA	NA
Pyrene	µg/L	140	140	140	140	--	--	--	--	4.8 U	NA	NA
Hexachloro-1,3-Butadiene	µg/L	15	5.9	42	19	0.053	0.053	--	--	0.96 U	NA	NA
Naphthalene	µg/L	520	590	1,500	1,900	11	11	240	84	4.8 U	NA	NA
Inorganics												
Antimony	µg/L	6	6	6	6	130	130	--	--	2.0 U	NA	NA
Arsenic	µg/L	10	10	10	10	10	10	--	--	12	NA	NA
Barium	µg/L	2,000	2,000	2,000	2,000	--	--	--	--	75 B	NA	NA
Beryllium	µg/L	4	4	4	4	--	--	--	--	0.12 JB	NA	NA
Cadmium	µg/L	5	5	5	5	--	--	--	--	0.50 U	NA	NA
Chromium	µg/L	--	--	--	--	--	--	--	--	1.5 J	NA	NA
Cobalt	µg/L	40	20	100	20	100	100	--	--	1.4	NA	NA
Copper	µg/L	1,000	30	1,000	95	--	--	--	--	2.0 U	NA	NA
Lead	µg/L	4	1	4	1	--	--	--	--	1.0 U	NA	NA
Manganese	µg/L	50	50	50	50	--	--	--	--	780	NA	NA
Mercury	µg/L	2	2	2	2	0.0013	0.0013	--	--	0.20 U	NA	NA
Nickel	µg/L	100	36	100	110	--	--	--	--	42 B	NA	NA
Selenium	µg/L	50	50	50	50	5	5	--	--	0.29 J	NA	NA
Silver	µg/L	34	5.9	98	19	0.2	0.2	--	--	0.20 U	NA	NA
Thallium	µg/L	2	2	2	2	3.7	3.7	--	--	1.0 U	NA	NA
Vanadium	µg/L	4.5	4	62	4	27	27	--	--	0.73 J	NA	NA
Zinc	µg/L	2,400	1,800	5,000	5,000	--	--	--	--	10 U	NA	NA

Table 4
Summary of Groundwater Analytical Results
RACER Trust Pontiac North Campus
Pontiac, Michigan

Location ID: Date Collected: Sample Name:			Residential Drinking Water (shaded)	MDEQ 2016 DRAFT Res DW (shaded)	Non-Residential Drinking Water (bold)	MDEQ 2016 DRAFT Non-Res DW (bold)	Groundwater Surface Water Interface (italics)	MDEQ 2016 DRAFT GSI (italics)	VI Groundwater Not In Contact SLs 2013 (shaded/outline)	MDEQ 2016 DRAFT Tier 1 VI Groundwater Not In Contact SLs (shaded/outline)	SB-62-14 05/19/16 SB-62-14-GW-051916	TW03-01 05/19/16 TW-03-01-GW-051916	TW10-02 05/18/16 TW-10-02-GW-051816
PCBs													
Aroclor-1016	µg/L		0.5	0.5	0.5	0.5	0.2	0.2	--	--	0.19 U	0.19 U	0.21 U
Aroclor-1221	µg/L		0.5	0.5	0.5	0.5	0.2	0.2	--	--	0.19 U	0.19 U	0.21 U
Aroclor-1232	µg/L		0.5	0.5	0.5	0.5	0.2	0.2	--	--	0.19 U	0.19 U	0.21 U
Aroclor-1242	µg/L		0.5	0.5	0.5	0.5	0.2	0.2	--	--	0.19 U	0.19 U	0.21 U
Aroclor-1248	µg/L		0.5	0.5	0.5	0.5	0.2	0.2	--	--	0.28	0.19 U	0.21 U
Aroclor-1254	µg/L		0.5	0.5	0.5	0.5	0.2	0.2	--	--	0.19 U	0.19 U	0.21 U
Aroclor-1260	µg/L		0.5	0.5	0.5	0.5	0.2	0.2	--	--	0.19 U	0.19 U	0.21 U
Volatile Organic Compounds													
Acetone	µg/L		730	5,300	2,100	17,000	1,700	1,700	--	--	20 J	16 J	25
Benzene	µg/L		5	5	5	5	200	200	27	17	3.7	1.0 U	0.56 J
Bromodichloromethane	µg/L		80	80	80	80	--	--	--	--	1.0 U	1.0 U	1.0 U
Bromoform	µg/L		80	80	80	80	--	--	--	--	1.0 U	1.0 U	1.0 U
Bromomethane	µg/L		10	120	29	380	35	5	--	--	1.0 U	1.0 U	1.0 U
2-Butanone	µg/L		13,000	2,400	38,000	11,000	2,200	2,200	--	--	1.8 J	25 U	0.93 J
Carbon Disulfide	µg/L		800	440	2,300	1,800	--	--	--	--	5.0 U	5.0 U	5.0 U
Carbon Tetrachloride	µg/L		5	5	5	5	45	38	--	--	1.0 U	1.0 U	1.0 U
CFC-11	µg/L		2,600	1,800	7,300	5,700	--	--	--	--	1.0 U	1.0 U	1.0 U
CFC-12	µg/L		1,700	30	4,800	94	--	--	--	--	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L		100	100	100	100	25	25	--	--	1.0 U	1.0 U	1.0 U
Chlorodibromomethane	µg/L		80	80	80	80	--	--	--	--	1.0 U	1.0 U	1.0 U
Chloroethane	µg/L		430	240	1,700	760	1,100	1,100	--	--	1.0 U	1.0 U	15
Chloroform	µg/L		80	80	80	80	350	350	--	--	1.0 U	1.0 U	1.0 U
Chloromethane	µg/L		260	220	1,100	1,100	--	--	--	--	1.0 U	1.0 U	1.0 U
Cyclohexane	µg/L		--	--	--	--	--	--	--	--	0.76 J	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane	µg/L		0.2	0.2	0.2	0.2	--	--	--	--	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane	µg/L		0.05	0.05	0.05	0.05	5.7	5.7	--	--	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L		600	600	600	600	13	13	--	--	0.84 J	1.0 U	1.0 U
1,3-Dichlorobenzene	µg/L		6.6	12	19	38	28	28	--	--	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L		75	75	75	75	17	17	--	--	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	µg/L		880	1,200	2,500	3,800	740	740	--	--	1.0 U	1.0 U	2.4
1,2-Dichloroethane	µg/L		5	5	5	5	360	360	--	--	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	µg/L		7	7	7	7	130	130	--	--	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L		70	70	70	70	620	620	83	55	0.33 J	1.0 U	0.36 J
trans-1,2-Dichloroethene	µg/L		100	100	100	100	1,500	1,500	360	230	1.0 U	1.0 U	1.0 U
Dichloromethane	µg/L		5	5	5	5	1,500	1,500	--	--	5.0 U	5.0 U	5.0 U
1,2-Dichloropropane	µg/L		5	5	5	5	230	230	--	--	1.0 U	1.0 U	1.0 U
cis-1,3-Dichloropropene	µg/L		--	--	--	--	--	--	--	--	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	µg/L		--	--	--	--	--	--	--	--	1.0 U	1.0 U	1.0 U
1,4-Dioxane	µg/L		85	7.2	350	37	2,800	2,800	NA	18,000	NA	NA	62
Ethylbenzene	µg/L		74	66	74	74	18	18	700	50	0.85 J	1.0 U	2.4
Isopropylbenzene	µg/L		800	590	2,300	1,900	28	28	--	--	0.49 J	5.0 U	0.46 J
Methyl acetate	µg/L		--	--	--	--	--	--	--	--	10 U	10 U	10 U
Methyl N-Butyl Ketone	µg/L		1,000	50	2,900	94	--	--	--	--	50 U	50 U	50 U
Methylcyclohexane	µg/L		--	--	--	--	--	--	--	--	1.0	1.0 U	1.0 U
4-Methyl-2-pentanone	µg/L		1,800	300	5,200	940	--	--	--	--	3.9 J	2.6 J	3.9 J
Methyl tert-butyl ether	µg/L		40	40	40	40	7,100	7,100	--	--	5.0 U	5.0 U	5.0 U
Styrene	µg/L		100	100	100	100	80	80	--	--	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	µg/L		8.5	3.6	35	18	78	78	--	--	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L		5	5	5	5	60	60	94	110	1.0 U	1.0 U	1.0 U
Toluene	µg/L		790	470	790	790	270	270	36,000	26,000	0.93 J	1.0 U	3.4
1,2,4-Trichlorobenzene	µg/L		70	70	70	70	99	99	140	110	1.0 U	1.0 U	1.0 U
1,1,1-Trichloroethane	µg/L		200	200	200	200	89	89	17,000	10,000	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	µg/L		5	5	5	5	330	330	--	--	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L		5	5	5	5	200	200	9.8	7	1.0 U	1.0 U	0.24 J
1,1,2-trichloro-1,2,2-trifluoroethane	µg/L		170,000	160,000	170,000	170,000	32	32	--	--	1.0 U	1.0 U	1.0 U
Vinyl Chloride	µg/L		2	2	2	2	13	13	2.8	1.7	1.0 U	1.0 U	1.0 U
Total Xylenes	µg/L		280	280	280	280	41	41	10,000	1,400	2.1	2.0 U	14

Table 4
Summary of Groundwater Analytical Results
RACER Trust Pontiac North Campus
Pontiac, Michigan

Location ID: Date Collected: Sample Name:	Units	Residential Drinking Water (shaded)	MDEQ 2016 DRAFT Res DW (shaded)	Non-Residential Drinking Water (bold)	MDEQ 2016 DRAFT Non-Res DW (bold)	Groundwater Surface Water Interface (italics)	MDEQ 2016 DRAFT GSI (italics)	VI Groundwater Not In Contact SLs 2013 (shaded/outline)	MDEQ 2016 DRAFT Tier 1 VI Groundwater Not In Contact SLs (shaded/outline)	SB-62-14 05/19/16 SB-62-14-GW-051916	TW03-01 05/19/16 TW-03-01-GW-051916	TW10-02 05/18/16 TW-10-02-GW-051816
Semivolatile Organic Compounds												
1,1'-Biphenyl	µg/L	--	--	--	--	--	--	--	--	0.96 U	0.96 U	3.7 U
2,2'-Oxybis(1-Chloropropane)	µg/L	--	--	--	--	--	--	--	--	0.96 U	0.96 U	3.7 U
2,4,5-Trichlorophenol	µg/L	730	180	2,100	570	--	--	--	--	4.8 U	4.8 U	19 U
2,4,6-Trichlorophenol	µg/L	120	40	470	170	5	5	--	--	3.8 U	3.8 U	15 U
2,4-Dichlorophenol	µg/L	73	80	210	330	11	11	--	--	9.6 U	9.6 U	37 U
2,4-Dimethylphenol	µg/L	370	120	1,000	380	380	380	--	--	4.8 U	4.8 U	19 U
2,4-Dinitrophenol	µg/L	--	12	--	38	--	19	--	--	19 U	19 U	74 U
2,4-Dinitrotoluene	µg/L	7.7	1.1	32	5.5	--	--	--	--	4.8 U	4.8 U	19 U
2,6-Dinitrotoluene	µg/L	--	--	--	--	--	--	--	--	4.8 U	4.8 U	19 U
2-Chloronaphthalene	µg/L	1,800	470	5,200	1,500	--	--	--	--	4.8 U	4.8 U	19 U
2-Chlorophenol	µg/L	45	32	130	130	18	18	--	--	4.8 U	4.8 U	19 U
2-Methylnaphthalene	µg/L	260	24	750	76	19	19	--	--	1.4 J	2.5 J	19 U
2-Methylphenol	µg/L	--	8,000	--	33,000	--	30	--	--	4.8 U	4.8 U	19 U
2-Nitroaniline	µg/L	--	--	--	--	--	--	--	--	19 U	19 U	74 U
2-Nitrophenol	µg/L	20	12	58	38	--	--	--	--	4.8 U	4.8 U	19 U
3,3'-Dichlorobenzidine	µg/L	1.1	1.6	4.3	8.2	0.3	0.3	--	--	4.8 U	4.8 U	19 U
3-Nitroaniline	µg/L	--	--	--	--	--	--	--	--	19 U	19 U	74 U
4,6-Dinitro-2-methylphenol	µg/L	20	20	20	20	--	--	--	--	19 U	19 U	74 U
4-Bromophenyl-phenylether	µg/L	--	--	--	--	--	--	--	--	4.8 U	4.8 U	19 U
4-Chloro-3-Methylphenol	µg/L	150	400	420	1,700	7.4	7.4	--	--	4.8 U	4.8 U	19 U
4-Chloroaniline	µg/L	--	3	--	9.4	--	--	--	--	1.9 U	1.9 U	7.4 U
4-Chlorophenyl-phenylether	µg/L	--	--	--	--	--	--	--	--	4.8 U	4.8 U	19 U
4-Methylphenol	µg/L	--	--	--	--	--	--	--	--	4.8 U	4.8 U	19 U
4-Nitroaniline	µg/L	--	--	--	--	--	--	--	--	19 U	19 U	74 U
4-Nitrophenol	µg/L	--	--	--	--	--	--	--	--	19 U	19 U	74 U
Acenaphthene	µg/L	1,300	360	3,800	1,100	38	38	--	--	4.8 U	4.8 U	19 U
Acenaphthylene	µg/L	52	360	150	1,100	--	--	--	--	4.8 U	4.8 U	19 U
Acetophenone	µg/L	1,500	3,200	4,400	13,000	--	--	--	--	0.96 U	0.96 U	3.7 U
Anthracene	µg/L	43	43	43	43	--	--	--	--	0.24 J	4.8 U	19 U
Atrazine	µg/L	3	3	3	3	7.3	7.3	--	--	0.96 U	0.96 U	3.7 U
Benzaldehyde	µg/L	--	--	--	--	--	--	--	--	0.96 U	0.96 U	3.7 U
Benzo(a)anthracene	µg/L	2.1	--	8.5	--	--	--	--	--	0.31 J	0.96 U	3.7 U
Benzo(a)pyrene	µg/L	5	0.2	5	0.2	--	--	--	--	0.34 J	0.96 U	3.7 U
Benzo(b)fluoranthene	µg/L	1.5	--	1.5	--	--	--	--	--	0.55 J	0.96 U	3.7 U
Benzo(g,h,i)perylene	µg/L	1	1	1	1	--	--	--	--	0.96 U	0.96 U	3.7 U
Benzo(k)fluoranthene	µg/L	1	--	1	--	--	--	--	--	0.96 U	0.96 U	3.7 U
bis(2-Chloroethoxy)methane	µg/L	--	--	--	--	--	--	--	--	4.8 U	4.8 U	19 U
bis(2-Chloroethyl)ether	µg/L	2	1	8.3	3.3	1	1	--	--	0.96 U	0.96 U	3.7 U
bis(2-Ethylhexyl)phthalate	µg/L	6	6	6	6	25	14	--	--	2.4 JB	4.8 U	19 U
Butylbenzylphthalate	µg/L	1,200	80	2,700	330	67	67	--	--	4.8 U	4.8 U	19 U
Caprolactam	µg/L	5,800	2,000	17,000	9,400	--	--	--	--	4.8 U	4.8 U	19 U
Carbazole	µg/L	85	10	350	38	10	10	--	--	9.6 U	9.6 U	37 U
Chrysene	µg/L	1.6	--	1.6	--	--	--	--	--	0.39 J	0.96 U	3.7 U
Dibenzo(a,h)anthracene	µg/L	2	--	2	--	--	--	--	--	1.9 U	1.9 U	7.4 U
Dibenzofuran	µg/L	--	5.9	--	19	4	4	--	--	3.8 U	3.8 U	15 U
Diethylphthalate	µg/L	5,500	4,700	16,000	15,000	110	110	--	--	4.8 U	4.8 U	19 U
Dimethylphthalate	µg/L	73,000	590	210,000	1,900	--	--	--	--	4.8 U	4.8 U	19 U
Di-n-Butylphthalate	µg/L	880	27	2,500	110	9.7	9.7	--	--	0.89 JB	0.80 JB	19 U
Di-n-Octylphthalate	µg/L	130	22	380	22	--	--	--	--	4.8 U	4.8 U	19 U
Fluoranthene	µg/L	210	240	210	260	1.6	1.6	--	--	0.76 J	0.96 U	3.7 U
Fluorene	µg/L	880	240	2,000	760	12	12	--	--	0.24 J	1.1 J	1.1 J

Table 4
Summary of Groundwater Analytical Results
RACER Trust Pontiac North Campus
Pontiac, Michigan

Location ID: Date Collected: Sample Name:		Residential Drinking Water (shaded)	MDEQ 2016 DRAFT Res DW (shaded)	Non-Residential Drinking Water (bold)	MDEQ 2016 DRAFT Non-Res DW (bold)	Groundwater Surface Water Interface (italics)	MDEQ 2016 DRAFT GSI (italics)	VI Groundwater Not In Contact SLs 2013 (shaded/outline)	MDEQ 2016 DRAFT Tier 1 VI Groundwater Not In Contact SLs (shaded/outline)	SB-62-14 05/19/16 SB-62-14-GW-051916	TW03-01 05/19/16 TW-03-01-GW-051916	TW10-02 05/18/16 TW-10-02-GW-051816
Semivolatile Organic Compounds												
Hexachlorobenzene	µg/L	1	1	1	1	0.2	0.2	--	--	0.19 U	0.19 U	0.74 U
Hexachlorocyclopentadiene	µg/L	50	50	50	50	--	--	--	--	4.8 U	4.8 U	19 U
Hexachloroethane	µg/L	7.3	5	21	13	6.7	6.7	--	--	4.8 U	4.8 U	19 U
Indeno(1,2,3-cd)pyrene	µg/L	2	--	2	--	--	--	--	--	1.9 U	1.9 U	7.4 U
Isophorone	µg/L	770	760	3,100	3,800	1,300	1,300	--	--	4.8 U	4.8 U	19 U
Nitrobenzene	µg/L	3.4	12	9.6	38	180	180	--	--	2.9 U	2.9 U	11 U
N-Nitroso-di-n-propylamine	µg/L	5	5	5	5	--	--	--	--	4.8 U	4.8 U	19 U
N-Nitrosodiphenylamine	µg/L	270	150	1,100	750	--	--	--	--	4.8 U	4.8 U	19 U
Pentachlorophenol	µg/L	1	1	1	1	--	--	--	--	4.8 U	4.8 U	19 U
Phenanthrene	µg/L	52	180	150	570	2	2	--	--	0.91 J	1.8 J	7.4 U
Phenol	µg/L	4,400	1,200	13,000	5,700	450	450	--	--	4.8 U	4.8 U	19 U
Pyrene	µg/L	140	140	140	140	--	--	--	--	0.86 J	4.8 U	19 U
Hexachloro-1,3-Butadiene	µg/L	15	5.9	42	19	0.053	0.053	--	--	0.96 U	0.96 U	3.7 U
Naphthalene	µg/L	520	590	1,500	1,900	11	11	240	84	1.3 J	0.81 J	3.5 J
Inorganics												
Antimony	µg/L	6	6	6	6	130	130	--	--	4.4	0.21 J	2.0 U
Arsenic	µg/L	10	10	10	10	10	10	--	--	71	1.9 J	71
Barium	µg/L	2,000	2,000	2,000	2,000	--	--	--	--	1,600 B	160 B	180 B
Beryllium	µg/L	4	4	4	4	--	--	--	--	1.9 B	0.21 JB	0.11 JB
Cadmium	µg/L	5	5	5	5	--	--	--	--	1.7	0.50 U	0.50 U
Chromium	µg/L	--	--	--	--	--	--	--	--	100	9.6	0.71 J
Cobalt	µg/L	40	20	100	20	100	100	--	--	22	2.7	7.5
Copper	µg/L	1,000	30	1,000	95	--	--	--	--	150	8.1	2.0 U
Lead	µg/L	4	1	4	1	--	--	--	--	360	0.78 J	1.0 U
Manganese	µg/L	50	50	50	50	--	--	--	--	3,200	330	490
Mercury	µg/L	2	2	2	2	0.0013	0.0013	--	--	0.48	0.20 U	0.20 U
Nickel	µg/L	100	36	100	110	--	--	--	--	85 B	56 B	18 B
Selenium	µg/L	50	50	50	50	5	5	--	--	8.3	0.42 J	0.50 J
Silver	µg/L	34	5.9	98	19	0.2	0.2	--	--	0.44	0.20 U	0.20 U
Thallium	µg/L	2	2	2	2	3.7	3.7	--	--	0.66 J	1.0 U	1.0 U
Vanadium	µg/L	4.5	4	62	4	27	27	--	--	94	1.8 J	1.5 J
Zinc	µg/L	2,400	1,800	5,000	5,000	--	--	--	--	270	9.0 J	10 U

Notes:
Shaded values exceed residential drinking water criteria
Shaded and outlined values exceed vapor intrusion groundwater not in contact screening levels
BOLD Bold values exceed nonresidential drinking water criteria
Italics Italicized values exceed groundwater surface water interface criteria
Duplicate analyses are presented in brackets

Footnotes:
1. Criteria listed are from the the Michigan Department of Environmental Quality (MDEQ) Part 201 Generic Cleanup Criteria and Screening Levels Table 1, December 30, 2013, the MDEQ Guidance Document for the Vapor Intrusion Pathway, May 2013, and the Draft Proposed MDEQ Clean Up Criteria Requirements Table 1: Groundwater: Residential and Nonresidential, Part 201 Generic Cleanup Criteria and Screening Levels, April 27, 2016.
2. All results in micrograms per liter (µg/L)
Abbreviations:
B = Analyte was also detected in the associated method blank.
DW = Drinking water
GSI = Groundwater surface water interface
J = Indicates an estimated value.
p = The relative percent difference (%RPD) between the primary and confirmation column/detector is >40%. The lower value has been reported.
U = Compound analyzed for but not detected above the detection limit.
PCBs - Polychlorinated biphenyls
NA = Not applicable
SL = Screening Levels
VI = Vapor Intrusion

Table 5
Summary of Soil Analytical Results
RACER Trust Pontiac North Campus
Pontiac, Michigan

Area of Interest: Location Code: Sample Code: Sample Date:		LNAPL Area 3 TW03-01 TW-03-01-S(1-2)-050916 05/09/16	LNAPL Area 3 TW03-01 TW-03-01-S(6-7)-050916 05/09/16	LNAPL Area 3 TW03-01 TW-03-01-S(9-10)-050916 05/09/16	LNAPL Area 3 TW03-01 TW-03-01-S(21-22)-050916 05/09/16	LNAPL Area 3 TW03-01 TW-03-01-S(23-24)-050916 05/09/16	LNAPL Area 3 TW03-01 TW-03-01-S(30-31)-050916 05/09/16	LNAPL Area 3 TW03-01 TW-03-01-S(32-33)-050916 05/09/16	LNAPL Area 3 TW03-01 TW-03-01-S(34-35)-050916 05/09/16
PCBs									
Aroclor-1016	µg/kg	210 U	190 U	190 U	46 U	40 U	42 U	37 U	36 U
Aroclor-1221	µg/kg	210 U	190 U	190 U	46 U	40 U	42 U	37 U	36 U
Aroclor-1232	µg/kg	210 U	190 U	190 U	46 U	40 U	42 U	37 U	36 U
Aroclor-1242	µg/kg	330	190 U	790	46 U	40 U	42 U	37 U	36 U
Aroclor-1248	µg/kg	210 U	340	190 U	46 U	76	42 U	54	36 U
Aroclor-1254	µg/kg	100 J	190 U	140 J	46 U	40 U	42 U	37 U	36 U
Aroclor-1260	µg/kg	210 U	190 U	190 U	46 U	40 U	42 U	37 U	36 U

Footnotes:
All result listed in micrograms per kilogram (µg/kg)
Abbreviations:
AOI = Area of Interest
J = Result is less than the Reporting Limit but greater than or equal to the Method Detection Limit and the concentration is an approximate value.
LNAPL = Light non-aqueous phase liquid
PCB = Polychlorinated biphenyl
U = The analyte was analyzed for but not detected.

Table 6
Summary of LNAPL Analytical Results
RACER Trust Pontiac North Campus
Pontiac, Michigan

Location ID: Date Collected: Sample Name:		MWM2-29 05/20/16 MWM2-29-LNAPL-052016	MWM4-06R 05/20/16 MWM4-06R-LNAPL-052016	MWW8-65 05/20/16 MWW8-65-LNAPL-052016	MWW10-01 05/20/16 MWW10-01-LNAPL-052016	MWW10-08 05/20/16 MWW10-08-LNAPL-052016	RWW8-129 05/20/16 RWW8-129-LNAPL-052016
PCBs							
Aroclor-1016	µg/kg	99,000 U	4,800 U	490 U	9,400 U	9,700 U	980 U
Aroclor-1221	µg/kg	99,000 U	4,800 U	490 U	9,400 U	9,700 U	980 U
Aroclor-1232	µg/kg	99,000 U	4,800 U	490 U	9,400 U	9,700 U	980 U
Aroclor-1242	µg/kg	1,800,000	70,000	490 U	9,400 U	9,700 U	13,000
Aroclor-1248	µg/kg	99,000 U	4,800 U	1,600	130,000	86,000	980 U
Aroclor-1254	µg/kg	99,000 U	11,000	490 U	9,400 U	9,700 U	980 U
Aroclor-1260	µg/kg	99,000 U	4,800 U	940	9,400 U	9,700 U	5,100
Volatile Organic Compounds							
Acetone	µg/kg	220 J	NA	4,700 U	4,600 UF1	4,500 U	4,800 U
Benzene	µg/kg	340 J	NA	1,200 U	1,100 UF1	1,100 U	1,200 U
Bromodichloromethane	µg/kg	1,100 U	NA	1,200 U	1,100 UF1	1,100 U	1,200 U
Bromoform	µg/kg	1,100 U	NA	1,200 U	1,100 UF1	1,100 U	1,200 U
Bromomethane	µg/kg	2,300 U	NA	2,400 U	2,300 UF1	2,200 U	2,400 U
2-Butanone	µg/kg	4,500 U	NA	4,700 U	410 JF1	450 J	4,800 U
Carbon Disulfide	µg/kg	1,100 U	NA	1,200 U	1,100 UF1	1,100 U	1,200 U
Carbon Tetrachloride	µg/kg	1,100 U	NA	1,200 U	1,100 UF1	1,100 U	1,200 U
CFC-11	µg/kg	2,300 U	NA	2,400 U	2,300 UF1	2,200 U	2,400 U
CFC-12	µg/kg	2,300 U	NA	2,400 U	2,300 UF1	2,200 U	2,400 U
Chlorobenzene	µg/kg	1,100 U	NA	1,200 U	1,100 UF1	1,100 U	1,200 U
Chlorodibromomethane	µg/kg	1,100 U	NA	1,200 U	1,100 UF1	1,100 U	1,200 U
Chloroethane	µg/kg	480 J	NA	2,400 U	2,300 UF1	2,200 U	2,400 U
Chloroform	µg/kg	1,100 U	NA	1,200 U	1,100 UF1	1,100 U	1,200 U
Chloromethane	µg/kg	2,300 U	NA	2,400 U	2,300 UF1	2,200 U	2,400 U
Cyclohexane	µg/kg	2,300 U*	NA	2,400 U*	130 JF1F2*	2,200 U*	2,400 U*
1,2-Dibromo-3-chloropropane	µg/kg	1,100 U	NA	1,200 U	1,100 UF1	1,100 U	1,200 U
1,2-Dibromoethane	µg/kg	1,100 U	NA	1,200 U	1,100 UF1	1,100 U	1,200 U
1,2-Dichlorobenzene	µg/kg	1,900	NA	1,200 U	1,100 UF1	1,100 U	1,200 U
1,3-Dichlorobenzene	µg/kg	1,100 U	NA	1,200 U	1,100 UF1	1,100 U	1,200 U
1,4-Dichlorobenzene	µg/kg	250 J	NA	1,200 U	1,100 UF1	1,100 U	1,200 U
1,1-Dichloroethane	µg/kg	23,000	NA	1,200 U	1,100 UF1	1,100 U	1,200 U
1,2-Dichloroethane	µg/kg	1,100 U	NA	1,200 U	1,100 UF1	1,100 U	1,200 U
1,1-Dichloroethene	µg/kg	1,100 U	NA	1,200 U	1,100 UF1	1,100 U	1,200 U
cis-1,2-Dichloroethene	µg/kg	1,100 U	NA	1,200 U	1,100 UF1	1,100 U	9,900
trans-1,2-Dichloroethene	µg/kg	1,100 U	NA	1,200 U	1,100 UF1	1,100 U	14,000
Dichloromethane	µg/kg	1,100 U	NA	1,200 U	1,100 UF1	1,100 U	1,200 U
1,2-Dichloropropane	µg/kg	1,100 U	NA	1,200 U	1,100 UF1	1,100 U	1,200 U
cis-1,3-Dichloropropene	µg/kg	1,100 U	NA	1,200 U	1,100 UF1	1,100 U	1,200 U
trans-1,3-Dichloropropene	µg/kg	1,100 U	NA	1,200 U	1,100 UF1	1,100 U	1,200 U
Ethylbenzene	µg/kg	5,000	NA	970 J	2,700 F1	250 J	240 J
Isopropylbenzene	µg/kg	3,800	NA	1,700	3,300 F1	660 J	1,200 U
Methyl acetate	µg/kg	2,300 U	NA	2,400 U	2,300 UF1	2,200 U	2,400 U

Table 6
Summary of LNAPL Analytical Results
RACER Trust Pontiac North Campus
Pontiac, Michigan

Location ID: Date Collected: Sample Name:		MWM2-29 05/20/16 MWM2-29-LNAPL-052016	MWM4-06R 05/20/16 MWM4-06R-LNAPL-052016	MWW8-65 05/20/16 MWW8-65-LNAPL-052016	MWW10-01 05/20/16 MWW10-01-LNAPL-052016	MWW10-08 05/20/16 MWW10-08-LNAPL-052016	RWW8-129 05/20/16 RWW8-129-LNAPL-052016
Methyl N-Butyl Ketone	µg/kg	4,500 U	NA	4,700 U	4,600 UF1	4,500 U	4,800 U
Methylcyclohexane	µg/kg	3,600	NA	1,800	2,700 F1	950 J	1,200
Styrene	µg/kg	1,100 U	NA	1,200 U	1,100 UF1	1,100 U	1,200 U
1,1,2,2-Tetrachloroethane	µg/kg	1,100 U	NA	1,200 U	1,100 UF1	1,100 U	1,200 U
Tetrachloroethene	µg/kg	2,900	NA	1,200 U	1,100 UF1	1,100 U	1,200 U
Toluene	µg/kg	8,600	NA	160 J	890 JF1	140 J	1,200 U
1,2,4-Trichlorobenzene	µg/kg	740 J	NA	1,200 U	1,100 UF1	1,100 U	1,200 U
1,1,1-Trichloroethane	µg/kg	1,100 U	NA	1,200 U	1,100 UF1	1,100 U	1,200 U
1,1,2-Trichloroethane	µg/kg	1,100 U	NA	1,200 U	1,100 UF1	1,100 U	1,200 U
Trichloroethene	µg/kg	530 J	NA	1,200 U	1,100 UF1	1,100 U	49,000
1,1,2-trichloro-1,2,2-trifluoroethane	µg/kg	17,000	NA	2,400 U	2,300 UF1	2,200 U	2,400 U
Vinyl Chloride	µg/kg	320 J	NA	2,400 U	2,300 UF1	2,200 U	1,800 J
Total Xylenes	µg/kg	21,000	NA	6,900	15,000	2,300	1,200 J
Semivolatile Organic Compounds							
1,1'-Biphenyl	µg/kg	24,000 J	NA	NA	980,000 U	990,000 U	NA
2,2'-Oxybis(1-Chloropropane)	µg/kg	490,000 U	NA	NA	980,000 U	990,000 U	NA
2,4,5-Trichlorophenol	µg/kg	490,000 U	NA	NA	980,000 U	990,000 U	NA
2,4,6-Trichlorophenol	µg/kg	490,000 U	NA	NA	980,000 U	990,000 U	NA
2,4-Dichlorophenol	µg/kg	490,000 U	NA	NA	980,000 U	990,000 U	NA
2,4-Dimethylphenol	µg/kg	490,000 U	NA	NA	980,000 U	990,000 U	NA
2,4-Dinitrophenol	µg/kg	2,400,000 U	NA	NA	4,700,000 U	4,800,000 U	NA
2,4-Dinitrotoluene	µg/kg	490,000 U	NA	NA	980,000 U	990,000 U	NA
2,6-Dinitrotoluene	µg/kg	490,000 U	NA	NA	980,000 U	990,000 U	NA
2-Chloronaphthalene	µg/kg	490,000 U	NA	NA	980,000 U	990,000 U	NA
2-Chlorophenol	µg/kg	490,000 U	NA	NA	980,000 U	990,000 U	NA
2-Methylnaphthalene	µg/kg	260,000 J	NA	NA	380,000 J	990,000 U	NA
2-Methylphenol	µg/kg	490,000 U	NA	NA	980,000 U	990,000 U	NA
2-Nitroaniline	µg/kg	2,400,000 U	NA	NA	4,700,000 U	4,800,000 U	NA
2-Nitrophenol	µg/kg	490,000 U	NA	NA	980,000 U	990,000 U	NA
3,3'-Dichlorobenzidine	µg/kg	2,400,000 U	NA	NA	4,700,000 U	4,800,000 U	NA
3-Nitroaniline	µg/kg	2,400,000 U	NA	NA	4,700,000 U	4,800,000 U	NA
4,6-Dinitro-2-methylphenol	µg/kg	2,400,000 U	NA	NA	4,700,000 U	4,800,000 U	NA
4-Bromophenyl-phenylether	µg/kg	490,000 U	NA	NA	980,000 U	990,000 U	NA
4-Chloro-3-Methylphenol	µg/kg	490,000 U	NA	NA	980,000 U	990,000 U	NA
4-Chloroaniline	µg/kg	490,000 U	NA	NA	980,000 U	990,000 U	NA
4-Chlorophenyl-phenylether	µg/kg	490,000 U	NA	NA	980,000 U	990,000 U	NA
4-Methylphenol	µg/kg	980,000 U	NA	NA	2,000,000 U	2,000,000 U	NA
4-Nitroaniline	µg/kg	2,400,000 U	NA	NA	4,700,000 U	4,800,000 U	NA
4-Nitrophenol	µg/kg	2,400,000 U	NA	NA	4,700,000 U	4,800,000 U	NA
Acenaphthene	µg/kg	490,000 U	NA	NA	980,000 U	990,000 U	NA
Acenaphthylene	µg/kg	490,000 U	NA	NA	980,000 U	990,000 U	NA
Acetophenone	µg/kg	490,000 U	NA	NA	980,000 U	990,000 U	NA
Anthracene	µg/kg	110,000 J	NA	NA	78,000 J	990,000 U	NA
Atrazine	µg/kg	490,000 U	NA	NA	980,000 U	990,000 U	NA
Benzaldehyde	µg/kg	490,000 U	NA	NA	980,000 U	990,000 U	NA
Benzo(a)anthracene	µg/kg	23,000 J	NA	NA	980,000 U	990,000 U	NA

Table 6
Summary of LNAPL Analytical Results
RACER Trust Pontiac North Campus
Pontiac, Michigan

Location ID: Date Collected: Sample Name:		MWM2-29 05/20/16 MWM2-29-LNAPL-052016	MWM4-06R 05/20/16 MWM4-06R-LNAPL-052016	MWW8-65 05/20/16 MWW8-65-LNAPL-052016	MWW10-01 05/20/16 MWW10-01-LNAPL-052016	MWW10-08 05/20/16 MWW10-08-LNAPL-052016	RWW8-129 05/20/16 RWW8-129-LNAPL-052016
Benzo(a)pyrene	µg/kg	490,000 U	NA	NA	980,000 U	990,000 U	NA
Benzo(b)fluoranthene	µg/kg	490,000 U	NA	NA	980,000 U	990,000 U	NA
Benzo(g,h,i)perylene	µg/kg	490,000 U	NA	NA	980,000 U	990,000 U	NA
Benzo(k)fluoranthene	µg/kg	490,000 U	NA	NA	980,000 U	990,000 U	NA
bis(2-Chloroethoxy)methane	µg/kg	490,000 U	NA	NA	980,000 U	990,000 U	NA
bis(2-Chloroethyl)ether	µg/kg	490,000 U	NA	NA	980,000 U	990,000 U	NA
bis(2-Ethylhexyl)phthalate	µg/kg	65,000 J	NA	NA	980,000 U	990,000 U	NA
Butylbenzylphthalate	µg/kg	490,000 U	NA	NA	980,000 U	990,000 U	NA
Caprolactam	µg/kg	490,000 U	NA	NA	980,000 U	990,000 U	NA
Carbazole	µg/kg	490,000 U	NA	NA	980,000 U	990,000 U	NA
Chrysene	µg/kg	26,000 J	NA	NA	980,000 U	990,000 U	NA
Dibenzo(a,h)anthracene	µg/kg	490,000 U	NA	NA	980,000 U	990,000 U	NA
Dibenzofuran	µg/kg	490,000 U	NA	NA	980,000 U	990,000 U	NA
Diethylphthalate	µg/kg	490,000 U	NA	NA	980,000 U	990,000 U	NA
Dimethylphthalate	µg/kg	490,000 U	NA	NA	980,000 U	990,000 U	NA
Di-n-Butylphthalate	µg/kg	490,000 U	NA	NA	980,000 U	990,000 U	NA
Di-n-Octylphthalate	µg/kg	490,000 U	NA	NA	980,000 U	990,000 U	NA
Fluoranthene	µg/kg	140,000 J	NA	NA	220,000 J	100,000 J	NA
Fluorene	µg/kg	280,000 J	NA	NA	280,000 J	170,000 J	NA
Hexachlorobenzene	µg/kg	490,000 U*	NA	NA	980,000 U*	990,000 U*	NA
Hexachlorocyclopentadiene	µg/kg	2,400,000 U	NA	NA	4,700,000 U	4,800,000 U	NA
Hexachloroethane	µg/kg	490,000 U	NA	NA	980,000 U	990,000 U	NA
Indeno(1,2,3-cd)pyrene	µg/kg	490,000 U	NA	NA	980,000 U	990,000 U	NA
Isophorone	µg/kg	490,000 U	NA	NA	980,000 U	990,000 U	NA
Nitrobenzene	µg/kg	490,000 U	NA	NA	980,000 U	990,000 U	NA
N-Nitroso-di-n-propylamine	µg/kg	490,000 U	NA	NA	980,000 U	990,000 U	NA
N-Nitrosodiphenylamine	µg/kg	490,000 U	NA	NA	980,000 U	990,000 U	NA
Pentachlorophenol	µg/kg	490,000 U	NA	NA	980,000 U	990,000 U	NA
Phenanthrene	µg/kg	760,000	NA	NA	960,000 J	210,000 J	NA
Phenol	µg/kg	490,000 U	NA	NA	980,000 U	990,000 U	NA
Pyrene	µg/kg	230,000 J	NA	NA	270,000 J	130,000 J	NA
Hexachloro-1,3-Butadiene	µg/kg	490,000 U	NA	NA	980,000 U	990,000 U	NA
Naphthalene	µg/kg	86,000 J	NA	NA	36,000 J	990,000 U	NA
Inorganics							
Antimony	mg/kg	0.87 U	NA	NA	0.99 U	0.98 U	NA
Arsenic	mg/kg	9.4	NA	NA	8.5	13	NA
Barium	mg/kg	10 J	NA	NA	2.2 J	6.2 J	NA
Beryllium	mg/kg	0.43 U	NA	NA	0.50 U	0.49 U	NA
Cadmium	mg/kg	0.12 J	NA	NA	0.024 J	0.20 U	NA
Chromium	mg/kg	4.2 B	NA	NA	3.7 B	4.6 B	NA
Cobalt	mg/kg	0.043 J	NA	NA	5.0 U	0.068 J	NA
Copper	mg/kg	14	NA	NA	1.2 J	0.49 J	NA
Lead	mg/kg	6.6	NA	NA	0.54	0.64	NA
Manganese	mg/kg	0.85 JB	NA	NA	0.22 JB	1.2 JB	NA

Table 6
Summary of LNAPL Analytical Results
RACER Trust Pontiac North Campus
Pontiac, Michigan

Location ID: Date Collected: Sample Name:	Units	MWM2-29	MWM4-06R	MWW8-65	MWW10-01	MWW10-08	RWW8-129
		05/20/16	05/20/16	05/20/16	05/20/16	05/20/16	05/20/16
		MWM2-29-LNAPL-052016	MWM4-06R-LNAPL-052016	MWW8-65-LNAPL-052016	MWW10-01-LNAPL-052016	MWW10-08-LNAPL-052016	RWW8-129-LNAPL-052016
Mercury	mg/kg	0.11 U	NA	0.024 JB	0.098 U	0.10 U	0.026 JB
Nickel	mg/kg	10	NA	NA	1.7 J	0.70 J	NA
Selenium	mg/kg	0.35 J	NA	NA	0.50 U	0.42 J	NA
Silver	mg/kg	0.43 U	NA	NA	0.50 U	0.49 U	NA
Thallium	mg/kg	0.87 U	NA	NA	0.99 U	0.98 U	NA
Vanadium	mg/kg	0.30 J	NA	NA	3.2 J	2.7 J	NA
Zinc	mg/kg	2.8	NA	NA	2.0 U	2.0 U	NA

Table 6
Summary of LNAPL Analytical Results
RACER Trust Pontiac North Campus
Pontiac, Michigan

Location ID: Date Collected: Sample Name:	Units	SB-43-14 05/20/16 SB-43-14-LNAPL-052016	SB-46-14 05/20/16 SB-46-14-LNAPL-052016	TW-01-01 05/20/16 TW-01-01-LNAPL-052016	TW09-01 05/20/16 TW-09-01-LNAPL-052016	TW11-02 05/20/16 TW11-02-LNAPL-052016	TWM2-07 05/20/16 TWM2-07-LNAPL-052016
PCBs							
Aroclor-1016	µg/kg	49,000 U	89,000 U	25,000 U	470 U	500 U	490 U
Aroclor-1221	µg/kg	49,000 U	89,000 U	25,000 U	470 U	500 U	490 U
Aroclor-1232	µg/kg	49,000 U	89,000 U	25,000 U	470 U	500 U	490 U
Aroclor-1242	µg/kg	49,000 U	89,000 U	25,000 U	470 U	500 U	490 U
Aroclor-1248	µg/kg	1,000,000	1,500,000	220,000	470 U	1,400	3,100
Aroclor-1254	µg/kg	49,000 U	89,000 U	25,000 U	470 U	500 U	490 U
Aroclor-1260	µg/kg	49,000 U	89,000 U	25,000 U	470 U	500 U	490 U
Volatile Organic Compounds							
Acetone	µg/kg	4,600 U	22,000 U	4,500 U	NA	4,600 U	4,300 U
Benzene	µg/kg	1,100	890 J	260 J	NA	1,100 U	1,100 U
Bromodichloromethane	µg/kg	1,100 U	5,600 U	1,100 U	NA	1,100 U	1,100 U
Bromoform	µg/kg	1,100 U	5,600 U	1,100 U	NA	1,100 U	1,100 U
Bromomethane	µg/kg	2,300 U	11,000 U	2,300 U	NA	2,300 U	2,200 U
2-Butanone	µg/kg	4,600 U	22,000 U	4,500 U	NA	440 J	4,300 U
Carbon Disulfide	µg/kg	1,100 U	5,600 U	1,100 U	NA	1,100 U	1,100 U
Carbon Tetrachloride	µg/kg	1,100 U	5,600 U	1,100 U	NA	1,100 U	1,100 U
CFC-11	µg/kg	2,300 U	11,000 U	2,300 U	NA	2,300 U	2,200 U
CFC-12	µg/kg	2,300 U	11,000 U	2,300 U	NA	2,300 U	2,200 U
Chlorobenzene	µg/kg	1,100 U	5,600 U	1,100 U	NA	1,100 U	1,100 U
Chlorodibromomethane	µg/kg	1,100 U	5,600 U	1,100 U	NA	1,100 U	1,100 U
Chloroethane	µg/kg	2,300 U	11,000 U	2,300 U	NA	2,300 U	2,200 U
Chloroform	µg/kg	1,100 U	5,600 U	1,100 U	NA	1,100 U	1,100 U
Chloromethane	µg/kg	2,300 U	11,000 U	2,300 U	NA	2,300 U	2,200 U
Cyclohexane	µg/kg	4,600 *	9,500 J*	2,100 J*	NA	2,300 U*	2,200 U*
1,2-Dibromo-3-chloropropane	µg/kg	1,100 U	5,600 U	1,100 U	NA	1,100 U	1,100 U
1,2-Dibromoethane	µg/kg	1,100 U	5,600 U	1,100 U	NA	1,100 U	1,100 U
1,2-Dichlorobenzene	µg/kg	1,100 U	5,600 U	1,100 U	NA	1,100 U	1,100 U
1,3-Dichlorobenzene	µg/kg	1,100 U	5,600 U	1,100 U	NA	1,100 U	1,100 U
1,4-Dichlorobenzene	µg/kg	1,100 U	5,600 U	1,100 U	NA	1,100 U	1,100 U
1,1-Dichloroethane	µg/kg	250 J	5,600 U	1,100 U	NA	1,100 U	1,100 U
1,2-Dichloroethane	µg/kg	1,100 U	5,600 U	1,100 U	NA	1,100 U	1,100 U
1,1-Dichloroethene	µg/kg	1,100 U	5,600 U	1,100 U	NA	1,100 U	1,100 U
cis-1,2-Dichloroethene	µg/kg	1,100 U	5,600 U	1,100 U	NA	1,100 U	1,100 U
trans-1,2-Dichloroethene	µg/kg	1,100 U	5,600 U	1,100 U	NA	1,100 U	1,100 U
Dichloromethane	µg/kg	1,100 U	5,600 U	1,100 U	NA	1,100 U	1,100 U
1,2-Dichloropropane	µg/kg	1,100 U	5,600 U	1,100 U	NA	1,100 U	1,100 U
cis-1,3-Dichloropropene	µg/kg	1,100 U	5,600 U	1,100 U	NA	1,100 U	1,100 U
trans-1,3-Dichloropropene	µg/kg	1,100 U	5,600 U	1,100 U	NA	1,100 U	1,100 U
Ethylbenzene	µg/kg	37,000	30,000	210 J	NA	2,700	1,100 U
Isopropylbenzene	µg/kg	9,200	16,000	7,700	NA	3,000	1,100 U
Methyl acetate	µg/kg	2,300 U	11,000 U	2,300 U	NA	2,300 U	2,200 U

Table 6
Summary of LNAPL Analytical Results
RACER Trust Pontiac North Campus
Pontiac, Michigan

Location ID: Date Collected: Sample Name:		SB-43-14 05/20/16 SB-43-14-LNAPL-052016	SB-46-14 05/20/16 SB-46-14-LNAPL-052016	TW-01-01 05/20/16 TW-01-01-LNAPL-052016	TW09-01 05/20/16 TW-09-01-LNAPL-052016	TW11-02 05/20/16 TW11-02-LNAPL-052016	TWM2-07 05/20/16 TWM2-07-LNAPL-052016
Methyl N-Butyl Ketone	µg/kg	4,600 U	22,000 U	4,500 U	NA	4,600 U	4,300 U
Methylcyclohexane	µg/kg	50,000	31,000	22,000	NA	1,500	1,100 U
Styrene	µg/kg	1,100 U	5,600 U	1,100 U	NA	1,100 U	1,100 U
1,1,2,2-Tetrachloroethane	µg/kg	1,100 U	5,600 U	1,100 U	NA	1,100 U	1,100 U
Tetrachloroethene	µg/kg	1,100 U	5,600 U	1,100 U	NA	1,100 U	620 J
Toluene	µg/kg	4,700	1,300 J	1,100 U	NA	510 J	1,100 U
1,2,4-Trichlorobenzene	µg/kg	1,100 U	5,600 U	1,100 U	NA	1,100 U	1,100 U
1,1,1-Trichloroethane	µg/kg	1,100 U	5,600 U	1,100 U	NA	1,100 U	1,100 U
1,1,2-Trichloroethane	µg/kg	1,100 U	5,600 U	1,100 U	NA	1,100 U	1,100 U
Trichloroethene	µg/kg	1,100 U	5,600 U	1,100 U	NA	1,100 U	1,100 U
1,1,2-trichloro-1,2,2-trifluoroethane	µg/kg	2,300 U	11,000 U	2,300 U	NA	2,300 U	2,200 U
Vinyl Chloride	µg/kg	2,300 U	11,000 U	2,300 U	NA	2,300 U	2,200 U
Total Xylenes	µg/kg	48,000	230,000	750 J	NA	12,000	2,200 U
Semivolatile Organic Compounds							
1,1'-Biphenyl	µg/kg	83,000 JF1	98,000 J	490,000 U	NA	NA	460,000 U
2,2'-Oxybis(1-Chloropropane)	µg/kg	500,000 U	440,000 U	490,000 U	NA	NA	460,000 U
2,4,5-Trichlorophenol	µg/kg	500,000 U	440,000 U	490,000 U	NA	NA	460,000 U
2,4,6-Trichlorophenol	µg/kg	500,000 U	440,000 U	490,000 U	NA	NA	460,000 U
2,4-Dichlorophenol	µg/kg	500,000 U	440,000 U	490,000 U	NA	NA	460,000 U
2,4-Dimethylphenol	µg/kg	500,000 UF1	440,000 U	490,000 U	NA	NA	460,000 U
2,4-Dinitrophenol	µg/kg	2,400,000 UF1	2,100,000 U	2,300,000 U	NA	NA	2,200,000 U
2,4-Dinitrotoluene	µg/kg	500,000 UF1	440,000 U	490,000 U	NA	NA	460,000 U
2,6-Dinitrotoluene	µg/kg	500,000 UF1	440,000 U	490,000 U	NA	NA	460,000 U
2-Chloronaphthalene	µg/kg	500,000 U	440,000 U	490,000 U	NA	NA	460,000 U
2-Chlorophenol	µg/kg	500,000 U	440,000 U	490,000 U	NA	NA	460,000 U
2-Methylnaphthalene	µg/kg	1,000,000	1,700,000	190,000 J	NA	NA	460,000 U
2-Methylphenol	µg/kg	500,000 U	440,000 U	490,000 U	NA	NA	460,000 U
2-Nitroaniline	µg/kg	2,400,000 UF1	2,100,000 U	2,300,000 U	NA	NA	2,200,000 U
2-Nitrophenol	µg/kg	500,000 UF1	440,000 U	490,000 U	NA	NA	460,000 U
3,3'-Dichlorobenzidine	µg/kg	2,400,000 U	2,100,000 U	2,300,000 U	NA	NA	2,200,000 U
3-Nitroaniline	µg/kg	2,400,000 UF1	2,100,000 U	2,300,000 U	NA	NA	2,200,000 U
4,6-Dinitro-2-methylphenol	µg/kg	2,400,000 UF1	2,100,000 U	2,300,000 U	NA	NA	2,200,000 U
4-Bromophenyl-phenylether	µg/kg	500,000 U	440,000 U	490,000 U	NA	NA	460,000 U
4-Chloro-3-Methylphenol	µg/kg	500,000 U	440,000 U	490,000 U	NA	NA	460,000 U
4-Chloroaniline	µg/kg	500,000 UF1F2	440,000 U	490,000 U	NA	NA	460,000 U
4-Chlorophenyl-phenylether	µg/kg	500,000 UF1F2	440,000 U	490,000 U	NA	NA	460,000 U
4-Methylphenol	µg/kg	990,000 U	880,000 U	970,000 U	NA	NA	930,000 U
4-Nitroaniline	µg/kg	2,400,000 UF1	2,100,000 U	2,300,000 U	NA	NA	2,200,000 U
4-Nitrophenol	µg/kg	2,400,000 U	2,100,000 U	2,300,000 U	NA	NA	2,200,000 U
Acenaphthene	µg/kg	71,000 J	66,000 J	490,000 U	NA	NA	460,000 U
Acenaphthylene	µg/kg	17,000 J	26,000 J	490,000 U	NA	NA	460,000 U
Acetophenone	µg/kg	500,000 UF1	440,000 U	490,000 U	NA	NA	460,000 U
Anthracene	µg/kg	36,000 J	440,000 U	490,000 U	NA	NA	460,000 U
Atrazine	µg/kg	500,000 U	440,000 U	490,000 U	NA	NA	460,000 U
Benzaldehyde	µg/kg	500,000 U	440,000 U	490,000 U	NA	NA	460,000 U
Benzo(a)anthracene	µg/kg	42,000 J	30,000 J	490,000 U	NA	NA	460,000 U

Table 6
Summary of LNAPL Analytical Results
RACER Trust Pontiac North Campus
Pontiac, Michigan

Location ID: Date Collected: Sample Name:		SB-43-14 05/20/16 SB-43-14-LNAPL-052016	SB-46-14 05/20/16 SB-46-14-LNAPL-052016	TW-01-01 05/20/16 TW-01-01-LNAPL-052016	TW09-01 05/20/16 TW-09-01-LNAPL-052016	TW11-02 05/20/16 TW11-02-LNAPL-052016	TWM2-07 05/20/16 TWM2-07-LNAPL-052016
Benzo(a)pyrene	µg/kg	36,000 J	440,000 U	490,000 U	NA	NA	460,000 U
Benzo(b)fluoranthene	µg/kg	49,000 J	22,000 J	490,000 U	NA	NA	460,000 U
Benzo(g,h,i)perylene	µg/kg	32,000 J	440,000 U	490,000 U	NA	NA	460,000 U
Benzo(k)fluoranthene	µg/kg	500,000 U	440,000 U	490,000 U	NA	NA	460,000 U
bis(2-Chloroethoxy)methane	µg/kg	500,000 UF1	440,000 U	490,000 U	NA	NA	460,000 U
bis(2-Chloroethyl)ether	µg/kg	500,000 U	440,000 U	490,000 U	NA	NA	460,000 U
bis(2-Ethylhexyl)phthalate	µg/kg	110,000 J	440,000	490,000 U	NA	NA	460,000 U
Butylbenzylphthalate	µg/kg	500,000 UF1	440,000 U	490,000 U	NA	NA	460,000 U
Caprolactam	µg/kg	500,000 UF1	440,000 U	490,000 U	NA	NA	460,000 U
Carbazole	µg/kg	500,000 UF1	440,000 U	490,000 U	NA	NA	460,000 U
Chrysene	µg/kg	72,000 J	50,000 J	490,000 U	NA	NA	460,000 U
Dibenzo(a,h)anthracene	µg/kg	500,000 U	440,000 U	490,000 U	NA	NA	460,000 U
Dibenzofuran	µg/kg	500,000 U	44,000 J	490,000 U	NA	NA	460,000 U
Diethylphthalate	µg/kg	500,000 UF1	440,000 U	490,000 U	NA	NA	460,000 U
Dimethylphthalate	µg/kg	500,000 U	440,000 U	490,000 U	NA	NA	460,000 U
Di-n-Butylphthalate	µg/kg	500,000 UF1	440,000 U	490,000 U	NA	NA	170,000 J
Di-n-Octylphthalate	µg/kg	500,000 UF2	440,000 U	490,000 U	NA	NA	460,000 U
Fluoranthene	µg/kg	150,000 J	93,000 J	93,000 J	NA	NA	460,000 U
Fluorene	µg/kg	130,000 JF1	130,000 J	110,000 J	NA	NA	460,000 U
Hexachlorobenzene	µg/kg	500,000 U*	440,000 U*	490,000 U*	NA	NA	460,000 U*
Hexachlorocyclopentadiene	µg/kg	2,400,000 UF1	2,100,000 U	2,300,000 U	NA	NA	2,200,000 U
Hexachloroethane	µg/kg	500,000 UF1	440,000 U	490,000 U	NA	NA	460,000 U
Indeno(1,2,3-cd)pyrene	µg/kg	500,000 U	440,000 U	490,000 U	NA	NA	460,000 U
Isophorone	µg/kg	500,000 UF1	440,000 U	490,000 U	NA	NA	460,000 U
Nitrobenzene	µg/kg	500,000 UF1	440,000 U	490,000 U	NA	NA	460,000 U
N-Nitroso-di-n-propylamine	µg/kg	500,000 UF1	440,000 U	490,000 U	NA	NA	460,000 U
N-Nitrosodiphenylamine	µg/kg	500,000 UF1	440,000 U	490,000 U	NA	NA	460,000 U
Pentachlorophenol	µg/kg	500,000 UF1	440,000 U	490,000 U	NA	NA	460,000 U
Phenanthrene	µg/kg	270,000 J	290,000 J	330,000 J	NA	NA	52,000 J
Phenol	µg/kg	500,000 U	440,000 U	490,000 U	NA	NA	460,000 U
Pyrene	µg/kg	200,000 J	130,000 J	110,000 J	NA	NA	460,000 U
Hexachloro-1,3-Butadiene	µg/kg	500,000 U	440,000 U	490,000 U	NA	NA	460,000 U
Naphthalene	µg/kg	220,000 J	270,000 J	490,000 U	NA	NA	460,000 U
Inorganics							
Antimony	mg/kg	0.88 U	0.98 U	0.91 U	NA	NA	0.96 U
Arsenic	mg/kg	0.48 J	3.4	9.3	NA	NA	0.47 J
Barium	mg/kg	18	12 J	12 J	NA	NA	4.7 J
Beryllium	mg/kg	0.44 U	0.49 U	0.45 U	NA	NA	0.027 J
Cadmium	mg/kg	0.037 J	0.028 J	0.18 U	NA	NA	0.080 J
Chromium	mg/kg	7.0 B	8.3 B	10 B	NA	NA	5.5 B
Cobalt	mg/kg	0.047 J	4.9 U	0.093 J	NA	NA	0.059 J
Copper	mg/kg	48	1.5 J	3.3	NA	NA	3.5
Lead	mg/kg	8.0	1.7	0.96	NA	NA	0.80
Manganese	mg/kg	3.3 B	2.2 B	1.6 B	NA	NA	9.0 B

Table 6
Summary of LNAPL Analytical Results
RACER Trust Pontiac North Campus
Pontiac, Michigan

Location ID: Date Collected: Sample Name:	Units	SB-43-14	SB-46-14	TW-01-01	TW09-01	TW11-02	TWM2-07
		05/20/16	05/20/16	05/20/16	05/20/16	05/20/16	05/20/16
		SB-43-14-LNAPL-052016	SB-46-14-LNAPL-052016	TW-01-01-LNAPL-052016	TW-09-01-LNAPL-052016	TW11-02-LNAPL-052016	TWM2-07-LNAPL-052016
Mercury	mg/kg	0.031 J	0.11 U	0.11 U	NA	0.10 U	0.10 U
Nickel	mg/kg	2.9 J	2.0 J	4.4	NA	NA	1.4 J
Selenium	mg/kg	0.44 U	0.49 U	0.57	NA	NA	0.67
Silver	mg/kg	0.44 U	0.49 U	0.45 U	NA	NA	0.48 U
Thallium	mg/kg	0.88 U	0.98 U	0.91 U	NA	NA	0.96 U
Vanadium	mg/kg	3.2 J	2.2 J	7.3	NA	NA	19
Zinc	mg/kg	2.4	2.0 U	1.8 U	NA	NA	1.1 J

Table 6
Summary of LNAPL Analytical Results
RACER Trust Pontiac North Campus
Pontiac, Michigan

Notes:
* = Laboratory control sample (LCS) or laboratory control sample duplicate (LCSD) is outside acceptance limits.

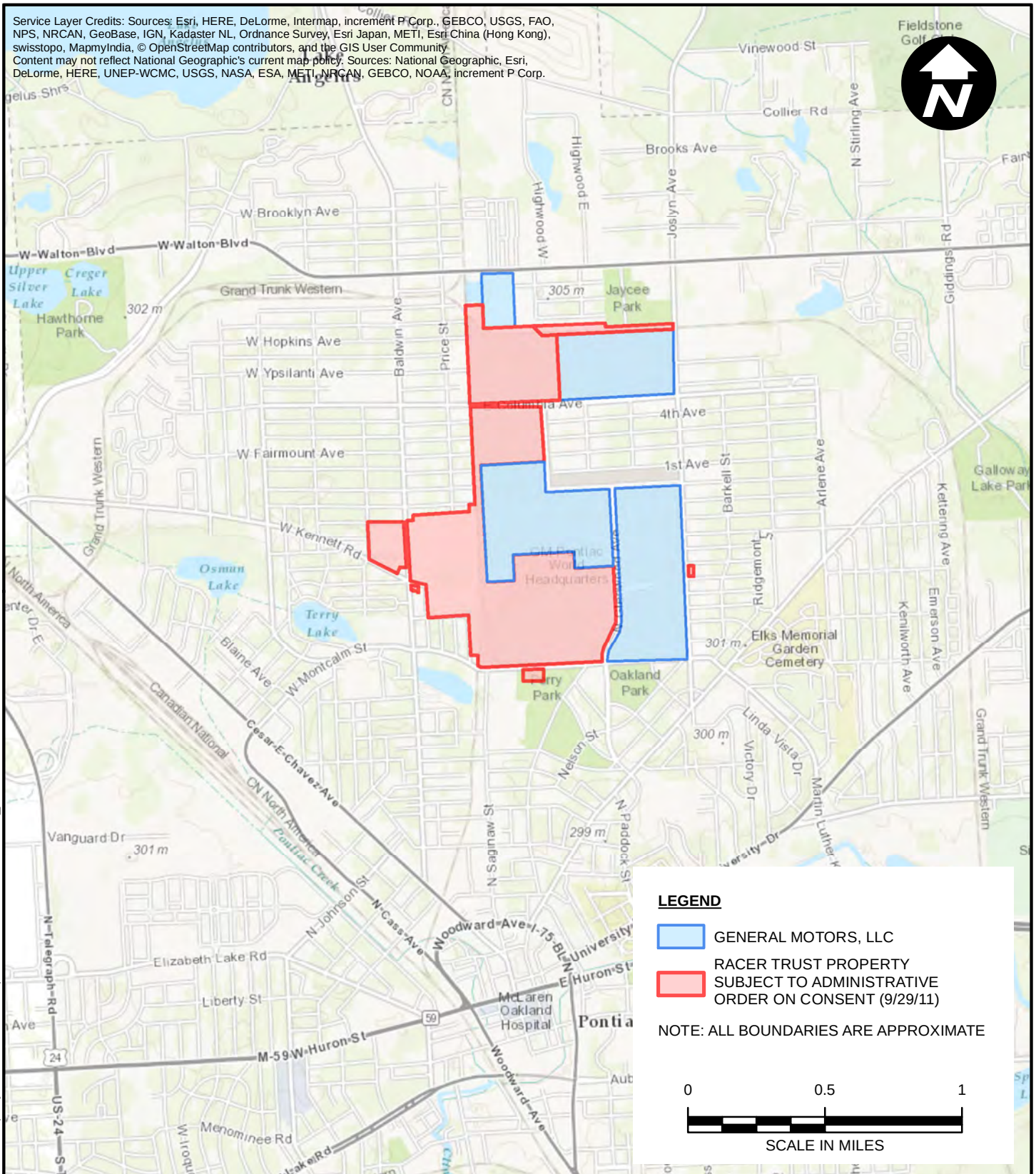
Footnotes:
1. Criteria listed are based on site specific criteria for LNAPL.
2. All results in micrograms per kilogram (µg/kg) except for metals which are in milligrams per kilogram (mg/kg).

Abbreviations:
B = Analyte was also detected in the associated method blank.
F1 = Matrix Spike (MS) and/or Matrix Spike Duplicate (MSD) Recovery is outside of acceptance limits.
F2 = MS/MSD Relative Percent Difference (RPD) exceeds control limits.
J = Indicates an estimated value.
LNAPL = Light non-aqueous phase liquid.
PCB = Polychlorinated biphenyl.
U = Compound analyzed for but not detected above the detection limit.
NA = Not analyzed.

Figures



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LEGEND

- GENERAL MOTORS, LLC
- RACER TRUST PROPERTY
- SUBJECT TO ADMINISTRATIVE ORDER ON CONSENT (9/29/11)

NOTE: ALL BOUNDARIES ARE APPROXIMATE



SCALE IN MILES



RACER TRUST
 PONTIAC NORTH CAMPUS
 PONTIAC, MICHIGAN

SITE LOCATION



FIGURE

1

ATTACHMENT 1

Soil Gas Sampling Forms



Sample ID	Location	Start Date	Lab	Canister					Flow Controller			Purging		Tedlar Bag		Leak/Tracer Test		Start Time	End Time
				No.	Size	Type	Pressure (in Hg)		No.	Type	Flow Rate (±5%)	Purge Rate	Purge Volume	Size	Fill Rate	Initial Reading	End Reading		
							Intial	Final											
SG-01(5')-050316	SG-01	5/3/16	ATL	30831	1 L	Summa	-30	-5	6342	BB	80 ml/min	200 ml/min	1.5 L	1 L	200 ml/min	0	0	0940	0952
SG-02(5')-050316	SG-02	5/3/16	ATL	20792	1 L	Summa	-26	-5	689	BB	80 ml/min	200 ml/min	1.5 L	1 L	200 ml/min	0	0	1055	1107
SG-03(5')-050316	SG-03	5/3/16	ATL	33398	1 L	Summa	-30	-5	6517	BB	80 ml/min	200 ml/min	1.5 L	1 L	200 ml/min	175 ppm	5.40%	1154	1209
SG-04(5')-050316	SG-04	5/3/16	ATL	33635	1 L	Summa	-27	-5	195	BB	80 ml/min	200 ml/min	1.5 L	1 L	200 ml/min	6.80%	2.20%	1358	1413
SG-05(5')-050416	SG-05	5/4/16	ATL	2138	1 L	Summa	-29	-5	514	BB	80 ml/min	200 ml/min	1.5 L	1 L	200 ml/min	0	125 ppm	853	959
SG-06(5')-050416	SG-06	5/4/16	ATL	37301	1 L	Summa	-29	-5	40830	BB	80 ml/min	200 ml/min	1.5 L	1 L	200 ml/min	0	0	1042	1206
SG-07(5')-050416	SG-07	5/4/16	ATL	37657	1 L	Summa	-28.5	-6	464	BB	80 ml/min	200 ml/min	1.5 L	1 L	200 ml/min	0	0	1348	1515
DUP-01	SG-07	5/4/16	ATL	34108	1 L	Summa	-29	-6.5	452	BB	80 ml/min	200 ml/min	1.5 L	1 L	200 ml/min	0	0	1348	1515
			ATL							BB									
			ATL							BB									
			ATL							BB									
			ATL							BB									
			ATL							BB									
			ATL							BB									
			ATL							BB									
			ATL							BB									

Meteorological Data								Notes
Date	Time	Temp. (°F)		Humidity (%)	Wind (mph)	Press. (in.)	Precip. (in.)	CH4 LEL at 3% on SG-02 following sample collection.
		Indoor	Outdoor					SG-07 sample stopped collection at >-5" Hg vacuum and post sample air readings not collected due to thunderstorms and potential rain damage to instruments and summa canisters.
5/3/2016	0940	--	53	71	5	29.96	0	
5/3/2016	1103	--	61	38	1	29.94	0	
5/3/2016	1200	--	64	35	4	29.93	0	
5/3/2016	1400	--	64	33	6	29.89	0	
5/3/2016	1630	--	65	36	3	29.84	0	
5/4/2016	850	--	51	87	6	29.92	0	
5/4/2016	1430	--	60	59	10	29.6	0	BB = Blue Body ATL = AirToxics, Ltd., Folsom, CA

Air Parameters									
Location ID	CH4 % before	CH4 % after	CO2 %	O2 %	CH4 LEL % before	CH4 LEL % after	PID before (ppm)	PID after (ppm)	
SG-01	0	0	3.0	6.3	0	--	2.1	--	
SG-02	0	0.1	1.6	19.0	0	--	1.8	0.8	
SG-03	0	0.1	0.1	21.1	1	2	0.7	0.8	
SG-04	0	0	0.0	20.1	1	1	0.5	0.6	
SG-05	0	0	2.1	21.3	0	0	0.2	0.3	
SG-06	0	0	0.1	21.3	0	0	0.5	0.4	
SG-07	0	0	0.0	21.4	0	--	0.3	--	

ATTACHMENT 2

Soil Gas Laboratory Analytical Reports



5/20/2016

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Novi MI 48377

Project Name: RACER Pontiac North Campus
Project #: B0064607.2016
Workorder #: 1605174A

Dear Ms. Heather Stevens

The following report includes the data for the above referenced project for sample(s) received on 5/9/2016 at Air Toxics Ltd.

The data and associated QC analyzed by TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free the Project Manager: Ausha Scott at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Ausha Scott
Project Manager

WORK ORDER #: 1605174A

Work Order Summary

CLIENT: PHONE: FAX: DATE RECEIVED: DATE COMPLETED:	Ms. Heather Stevens Arcadis U.S., Inc. 28550 Cabot Dr. Suite 500 Novi, MI 48377 248.994.2266 248.994.2241 05/09/2016 05/20/2016	BILL TO: P.O. # PROJECT # CONTACT:	Accounts Payable Arcadis U.S., Inc. 630 Plaza Drive Suite 600 Highlands Ranch, CO 80129 B0064607.2016 B0064607.2016 RACER Pontiac North Campus Ausla Scott

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	SG-01(5')-050316	TO-15	4.0 "Hg	15 psi
02A	SG-02(5')-050316	TO-15	5.5 "Hg	15 psi
03A	SG-03(5')-050316	TO-15	5.5 "Hg	15 psi
04A	SG-04(5')-050316	TO-15	5.0 "Hg	15 psi
05A	SG-05(5')-050416	TO-15	5.5 "Hg	15 psi
06A	SG-06(5')-050416	TO-15	6.0 "Hg	15 psi
07A	SG-07(5')-050416	TO-15	6.5 "Hg	15 psi
08A	DUP-01	TO-15	6.5 "Hg	15 psi
09A	Lab Blank	TO-15	NA	NA
09B	Lab Blank	TO-15	NA	NA
10A	CCV	TO-15	NA	NA
10B	CCV	TO-15	NA	NA
11A	LCS	TO-15	NA	NA
11AA	LCSD	TO-15	NA	NA
11B	LCS	TO-15	NA	NA
11BB	LCSD	TO-15	NA	NA

CERTIFIED BY:



Technical Director

DATE: 05/20/16

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
 TX NELAP - T104704434-15-9, UT NELAP CA0093332015-6, VA NELAP - 8113, WA NELAP - C935
 Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
 Accreditation number: CA300005, Effective date: 10/18/2015, Expiration date: 10/17/2016.

Eurofins Air Toxics Inc. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE
EPA Method TO-15
Arcadis U.S., Inc.
Workorder# 1605174A

Eight 1 Liter Summa Canister samples were received on May 09, 2016. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Receiving Notes

The Chain of Custody (COC) information for sample SG-02(5')-050316 did not match the information on the canister with regard to canister identification. The client was notified of the discrepancy and the information on the canister was used to process and report the sample.

Analytical Notes

Dilution was performed on samples SG-01(5')-050316, SG-02(5')-050316, and SG-06(5')-050416 due to the presence of high level target species.

Dilution was performed on samples SG-05(5')-050416 and SG-07(5')-050416 due to the presence of high level non-target species.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

Summary of Detected Compounds

EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: SG-01(5')-050316

Lab ID#: 1605174A-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	1.6	3.0	8.7	17
Ethanol	6.2	13	12	25
Acetone	16	17	37	41
2-Propanol	6.2	21	15	51
Carbon Disulfide	6.2	22	19	69
Hexane	1.6	280	5.5	970
1,1,1-Trichloroethane	1.6	22	8.5	120
Benzene	1.6	9.0	5.0	29
Heptane	1.6	150	6.4	620
Toluene	1.6	42	5.8	160
Tetrachloroethene	1.6	3.8	10	26
Ethyl Benzene	1.6	5.0	6.8	22
m,p-Xylene	1.6	19	6.8	82
o-Xylene	1.6	4.6	6.8	20
4-Ethyltoluene	1.6	2.4	7.6	12
Methylcyclohexane	6.2	13	25	52

Client Sample ID: SG-02(5')-050316

Lab ID#: 1605174A-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Ethanol	9.9	37	19	70
Acetone	25	40	59	96
2-Propanol	9.9	23	24	56
Carbon Disulfide	9.9	36	31	110
Hexane	2.5	160	8.7	560
Cyclohexane	2.5	21	8.5	74
Benzene	2.5	22	7.9	71
Heptane	2.5	47	10	190
Toluene	2.5	81	9.3	300
Tetrachloroethene	2.5	6.2	17	42
Ethyl Benzene	2.5	7.1	11	31
m,p-Xylene	2.5	26	11	110

Summary of Detected Compounds EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: SG-02(5')-050316

Lab ID#: 1605174A-02A

o-Xylene	2.5	7.3	11	32
Styrene	2.5	2.7	10	11
4-Ethyltoluene	2.5	2.8	12	14
Methylcyclohexane	9.9	33	40	130

Client Sample ID: SG-03(5')-050316

Lab ID#: 1605174A-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	1.2	6.9	2.7	15
Ethanol	4.9	21	9.3	40
Acetone	12	44	29	100
Carbon Disulfide	4.9	60	15	190
Hexane	1.2	60	4.4	210
2-Butanone (Methyl Ethyl Ketone)	4.9	6.9	14	20
Cyclohexane	1.2	36	4.2	120
Benzene	1.2	33	3.9	100
Heptane	1.2	22	5.1	91
4-Methyl-2-pentanone	1.2	1.9	5.0	7.7
Toluene	1.2	79	4.6	300
Tetrachloroethene	1.2	6.2	8.4	42
Ethyl Benzene	1.2	7.8	5.4	34
m,p-Xylene	1.2	26	5.4	120
o-Xylene	1.2	7.6	5.4	33
Styrene	1.2	2.8	5.3	12
4-Ethyltoluene	1.2	3.0	6.1	15
1,2,4-Trimethylbenzene	1.2	2.2	6.1	11
Methylcyclohexane	4.9	17	20	68

Client Sample ID: SG-04(5')-050316

Lab ID#: 1605174A-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Ethanol	4.8	29	9.1	55

Summary of Detected Compounds

EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: SG-04(5')-050316

Lab ID#: 1605174A-04A

Acetone	12	49	29	120
2-Propanol	4.8	17	12	42
Carbon Disulfide	4.8	12	15	37
Hexane	1.2	30	4.3	100
2-Butanone (Methyl Ethyl Ketone)	4.8	5.9	14	17
Cyclohexane	1.2	30	4.2	100
Benzene	1.2	20	3.9	65
Heptane	1.2	14	5.0	59
Toluene	1.2	140	4.6	540
Tetrachloroethene	1.2	5.7	8.2	39
Ethyl Benzene	1.2	6.0	5.2	26
m,p-Xylene	1.2	22	5.2	96
o-Xylene	1.2	5.6	5.2	24
Styrene	1.2	3.6	5.2	15
4-Ethyltoluene	1.2	2.1	5.9	10
1,2,4-Trimethylbenzene	1.2	1.9	5.9	9.3
Methylcyclohexane	4.8	10	19	41

Client Sample ID: SG-05(5')-050416

Lab ID#: 1605174A-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	3.3	18	7.3	40
Ethanol	13	110	25	220
Acetone	33	84	78	200
Carbon Disulfide	13	20	41	62
Hexane	3.3	460	12	1600
1,1-Dichloroethane	3.3	5.4	13	22
2-Butanone (Methyl Ethyl Ketone)	13	15	39	44
Cyclohexane	3.3	100	11	360
Benzene	3.3	160	10	500
Heptane	3.3	130	14	550
Trichloroethene	3.3	4.3	18	23
4-Methyl-2-pentanone	3.3	6.3	14	26
Toluene	3.3	190	12	720

Summary of Detected Compounds EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: SG-05(5')-050416

Lab ID#: 1605174A-05A

Tetrachloroethene	3.3	13	22	90
Ethyl Benzene	3.3	17	14	76
m,p-Xylene	3.3	34	14	150
o-Xylene	3.3	11	14	47
Methylcyclohexane	13	110	53	430

Client Sample ID: SG-06(5')-050416

Lab ID#: 1605174A-06A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	3.2	18	7.0	40
Ethanol	13	43	24	81
Acetone	32	74	75	180
Carbon Disulfide	13	14	39	42
Hexane	3.2	580	11	2000
2-Butanone (Methyl Ethyl Ketone)	13	14	37	41
Cyclohexane	3.2	55	11	190
Benzene	3.2	61	10	200
Heptane	3.2	330	13	1400
Toluene	3.2	110	12	420
Tetrachloroethene	3.2	6.3	21	43
Ethyl Benzene	3.2	7.5	14	32
m,p-Xylene	3.2	21	14	93
o-Xylene	3.2	7.4	14	32
Styrene	3.2	3.6	13	16
Methylcyclohexane	13	66	51	270

Client Sample ID: SG-07(5')-050416

Lab ID#: 1605174A-07A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	2.6	12	5.7	27
Ethanol	10	11	19	21
Acetone	26	89	61	210

Summary of Detected Compounds

EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: SG-07(5')-050416

Lab ID#: 1605174A-07A

Carbon Disulfide	10	22	32	70
Hexane	2.6	340	9.1	1200
2-Butanone (Methyl Ethyl Ketone)	10	13	30	39
1,1,1-Trichloroethane	2.6	2.6	14	14
Cyclohexane	2.6	40	8.9	140
Benzene	2.6	35	8.2	110
Heptane	2.6	120	10	480
Toluene	2.6	61	9.7	230
Tetrachloroethene	2.6	2.9	18	20
Ethyl Benzene	2.6	6.9	11	30
m,p-Xylene	2.6	19	11	82
o-Xylene	2.6	6.4	11	28
Methylcyclohexane	10	62	41	250

Client Sample ID: DUP-01

Lab ID#: 1605174A-08A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Ethanol	5.2	11	9.7	20
Acetone	13	57	31	140
Carbon Disulfide	5.2	17	16	52
Hexane	1.3	220	4.5	790
1,1-Dichloroethane	1.3	1.6	5.2	6.4
2-Butanone (Methyl Ethyl Ketone)	5.2	9.6	15	28
1,1,1-Trichloroethane	1.3	2.1	7.0	11
Cyclohexane	1.3	28	4.4	96
Benzene	1.3	27	4.1	87
Heptane	1.3	78	5.3	320
Toluene	1.3	42	4.9	160
Tetrachloroethene	1.3	1.7	8.8	12
Ethyl Benzene	1.3	4.4	5.6	19
m,p-Xylene	1.3	12	5.6	54
o-Xylene	1.3	4.1	5.6	18
4-Ethyltoluene	1.3	1.4	6.3	6.7
Methylcyclohexane	5.2	46	21	180



Air Toxics

Client Sample ID: SG-01(5')-050316

Lab ID#: 1605174A-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a051712	Date of Collection:	5/3/16 9:52:00 AM
Dil. Factor:	3.11	Date of Analysis:	5/17/16 03:48 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.6	Not Detected	7.7	Not Detected
Freon 114	1.6	Not Detected	11	Not Detected
Chloromethane	16	Not Detected	32	Not Detected
Vinyl Chloride	1.6	Not Detected	4.0	Not Detected
1,3-Butadiene	1.6	Not Detected	3.4	Not Detected
Bromomethane	16	Not Detected	60	Not Detected
Chloroethane	6.2	Not Detected	16	Not Detected
Freon 11	1.6	3.0	8.7	17
Ethanol	6.2	13	12	25
Freon 113	1.6	Not Detected	12	Not Detected
1,1-Dichloroethene	1.6	Not Detected	6.2	Not Detected
Acetone	16	17	37	41
2-Propanol	6.2	21	15	51
Carbon Disulfide	6.2	22	19	69
3-Chloropropene	6.2	Not Detected	19	Not Detected
Methylene Chloride	16	Not Detected	54	Not Detected
Methyl tert-butyl ether	1.6	Not Detected	5.6	Not Detected
trans-1,2-Dichloroethene	1.6	Not Detected	6.2	Not Detected
Hexane	1.6	280	5.5	970
1,1-Dichloroethane	1.6	Not Detected	6.3	Not Detected
2-Butanone (Methyl Ethyl Ketone)	6.2	Not Detected	18	Not Detected
cis-1,2-Dichloroethene	1.6	Not Detected	6.2	Not Detected
Tetrahydrofuran	1.6	Not Detected	4.6	Not Detected
Chloroform	1.6	Not Detected	7.6	Not Detected
1,1,1-Trichloroethane	1.6	22	8.5	120
Cyclohexane	1.6	Not Detected	5.4	Not Detected
Carbon Tetrachloride	1.6	Not Detected	9.8	Not Detected
2,2,4-Trimethylpentane	1.6	Not Detected	7.3	Not Detected
Benzene	1.6	9.0	5.0	29
1,2-Dichloroethane	1.6	Not Detected	6.3	Not Detected
Heptane	1.6	150	6.4	620
Trichloroethene	1.6	Not Detected	8.4	Not Detected
1,2-Dichloropropane	1.6	Not Detected	7.2	Not Detected
1,4-Dioxane	6.2	Not Detected	22	Not Detected
Bromodichloromethane	1.6	Not Detected	10	Not Detected
cis-1,3-Dichloropropene	1.6	Not Detected	7.0	Not Detected
4-Methyl-2-pentanone	1.6	Not Detected	6.4	Not Detected
Toluene	1.6	42	5.8	160
trans-1,3-Dichloropropene	1.6	Not Detected	7.0	Not Detected
1,1,2-Trichloroethane	1.6	Not Detected	8.5	Not Detected
Tetrachloroethene	1.6	3.8	10	26
2-Hexanone	6.2	Not Detected	25	Not Detected



Air Toxics

Client Sample ID: SG-01(5')-050316

Lab ID#: 1605174A-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a051712	Date of Collection: 5/3/16 9:52:00 AM
Dil. Factor:	3.11	Date of Analysis: 5/17/16 03:48 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	1.6	Not Detected	13	Not Detected
1,2-Dibromoethane (EDB)	1.6	Not Detected	12	Not Detected
Chlorobenzene	1.6	Not Detected	7.2	Not Detected
Ethyl Benzene	1.6	5.0	6.8	22
m,p-Xylene	1.6	19	6.8	82
o-Xylene	1.6	4.6	6.8	20
Styrene	1.6	Not Detected	6.6	Not Detected
Bromoform	1.6	Not Detected	16	Not Detected
Cumene	1.6	Not Detected	7.6	Not Detected
1,1,2,2-Tetrachloroethane	1.6	Not Detected	11	Not Detected
Propylbenzene	1.6	Not Detected	7.6	Not Detected
4-Ethyltoluene	1.6	2.4	7.6	12
1,3,5-Trimethylbenzene	1.6	Not Detected	7.6	Not Detected
1,2,4-Trimethylbenzene	1.6	Not Detected	7.6	Not Detected
1,3-Dichlorobenzene	1.6	Not Detected	9.3	Not Detected
1,4-Dichlorobenzene	1.6	Not Detected	9.3	Not Detected
alpha-Chlorotoluene	1.6	Not Detected	8.0	Not Detected
1,2-Dichlorobenzene	1.6	Not Detected	9.3	Not Detected
1,2,4-Trichlorobenzene	6.2	Not Detected	46	Not Detected
Hexachlorobutadiene	6.2	Not Detected	66	Not Detected
Methylcyclohexane	6.2	13	25	52

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	99	70-130
4-Bromofluorobenzene	101	70-130



Air Toxics

Client Sample ID: SG-02(5')-050316

Lab ID#: 1605174A-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a051713	Date of Collection:	5/3/16 11:07:00 AM
Dil. Factor:	4.95	Date of Analysis:	5/17/16 04:19 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	2.5	Not Detected	12	Not Detected
Freon 114	2.5	Not Detected	17	Not Detected
Chloromethane	25	Not Detected	51	Not Detected
Vinyl Chloride	2.5	Not Detected	6.3	Not Detected
1,3-Butadiene	2.5	Not Detected	5.5	Not Detected
Bromomethane	25	Not Detected	96	Not Detected
Chloroethane	9.9	Not Detected	26	Not Detected
Freon 11	2.5	Not Detected	14	Not Detected
Ethanol	9.9	37	19	70
Freon 113	2.5	Not Detected	19	Not Detected
1,1-Dichloroethene	2.5	Not Detected	9.8	Not Detected
Acetone	25	40	59	96
2-Propanol	9.9	23	24	56
Carbon Disulfide	9.9	36	31	110
3-Chloropropene	9.9	Not Detected	31	Not Detected
Methylene Chloride	25	Not Detected	86	Not Detected
Methyl tert-butyl ether	2.5	Not Detected	8.9	Not Detected
trans-1,2-Dichloroethene	2.5	Not Detected	9.8	Not Detected
Hexane	2.5	160	8.7	560
1,1-Dichloroethane	2.5	Not Detected	10	Not Detected
2-Butanone (Methyl Ethyl Ketone)	9.9	Not Detected	29	Not Detected
cis-1,2-Dichloroethene	2.5	Not Detected	9.8	Not Detected
Tetrahydrofuran	2.5	Not Detected	7.3	Not Detected
Chloroform	2.5	Not Detected	12	Not Detected
1,1,1-Trichloroethane	2.5	Not Detected	14	Not Detected
Cyclohexane	2.5	21	8.5	74
Carbon Tetrachloride	2.5	Not Detected	16	Not Detected
2,2,4-Trimethylpentane	2.5	Not Detected	12	Not Detected
Benzene	2.5	22	7.9	71
1,2-Dichloroethane	2.5	Not Detected	10	Not Detected
Heptane	2.5	47	10	190
Trichloroethene	2.5	Not Detected	13	Not Detected
1,2-Dichloropropane	2.5	Not Detected	11	Not Detected
1,4-Dioxane	9.9	Not Detected	36	Not Detected
Bromodichloromethane	2.5	Not Detected	16	Not Detected
cis-1,3-Dichloropropene	2.5	Not Detected	11	Not Detected
4-Methyl-2-pentanone	2.5	Not Detected	10	Not Detected
Toluene	2.5	81	9.3	300
trans-1,3-Dichloropropene	2.5	Not Detected	11	Not Detected
1,1,2-Trichloroethane	2.5	Not Detected	14	Not Detected
Tetrachloroethene	2.5	6.2	17	42
2-Hexanone	9.9	Not Detected	40	Not Detected



Air Toxics

Client Sample ID: SG-02(5')-050316

Lab ID#: 1605174A-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a051713	Date of Collection: 5/3/16 11:07:00 AM
Dil. Factor:	4.95	Date of Analysis: 5/17/16 04:19 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	2.5	Not Detected	21	Not Detected
1,2-Dibromoethane (EDB)	2.5	Not Detected	19	Not Detected
Chlorobenzene	2.5	Not Detected	11	Not Detected
Ethyl Benzene	2.5	7.1	11	31
m,p-Xylene	2.5	26	11	110
o-Xylene	2.5	7.3	11	32
Styrene	2.5	2.7	10	11
Bromoform	2.5	Not Detected	26	Not Detected
Cumene	2.5	Not Detected	12	Not Detected
1,1,2,2-Tetrachloroethane	2.5	Not Detected	17	Not Detected
Propylbenzene	2.5	Not Detected	12	Not Detected
4-Ethyltoluene	2.5	2.8	12	14
1,3,5-Trimethylbenzene	2.5	Not Detected	12	Not Detected
1,2,4-Trimethylbenzene	2.5	Not Detected	12	Not Detected
1,3-Dichlorobenzene	2.5	Not Detected	15	Not Detected
1,4-Dichlorobenzene	2.5	Not Detected	15	Not Detected
alpha-Chlorotoluene	2.5	Not Detected	13	Not Detected
1,2-Dichlorobenzene	2.5	Not Detected	15	Not Detected
1,2,4-Trichlorobenzene	9.9	Not Detected	73	Not Detected
Hexachlorobutadiene	9.9	Not Detected	100	Not Detected
Methylcyclohexane	9.9	33	40	130

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	99	70-130
4-Bromofluorobenzene	100	70-130



Air Toxics

Client Sample ID: SG-03(5')-050316

Lab ID#: 1605174A-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a051714	Date of Collection:	5/3/16 12:09:00 PM
Dil. Factor:	2.47	Date of Analysis:	5/17/16 04:46 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.2	Not Detected	6.1	Not Detected
Freon 114	1.2	Not Detected	8.6	Not Detected
Chloromethane	12	Not Detected	26	Not Detected
Vinyl Chloride	1.2	Not Detected	3.2	Not Detected
1,3-Butadiene	1.2	6.9	2.7	15
Bromomethane	12	Not Detected	48	Not Detected
Chloroethane	4.9	Not Detected	13	Not Detected
Freon 11	1.2	Not Detected	6.9	Not Detected
Ethanol	4.9	21	9.3	40
Freon 113	1.2	Not Detected	9.5	Not Detected
1,1-Dichloroethene	1.2	Not Detected	4.9	Not Detected
Acetone	12	44	29	100
2-Propanol	4.9	Not Detected	12	Not Detected
Carbon Disulfide	4.9	60	15	190
3-Chloropropene	4.9	Not Detected	15	Not Detected
Methylene Chloride	12	Not Detected	43	Not Detected
Methyl tert-butyl ether	1.2	Not Detected	4.4	Not Detected
trans-1,2-Dichloroethene	1.2	Not Detected	4.9	Not Detected
Hexane	1.2	60	4.4	210
1,1-Dichloroethane	1.2	Not Detected	5.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.9	6.9	14	20
cis-1,2-Dichloroethene	1.2	Not Detected	4.9	Not Detected
Tetrahydrofuran	1.2	Not Detected	3.6	Not Detected
Chloroform	1.2	Not Detected	6.0	Not Detected
1,1,1-Trichloroethane	1.2	Not Detected	6.7	Not Detected
Cyclohexane	1.2	36	4.2	120
Carbon Tetrachloride	1.2	Not Detected	7.8	Not Detected
2,2,4-Trimethylpentane	1.2	Not Detected	5.8	Not Detected
Benzene	1.2	33	3.9	100
1,2-Dichloroethane	1.2	Not Detected	5.0	Not Detected
Heptane	1.2	22	5.1	91
Trichloroethene	1.2	Not Detected	6.6	Not Detected
1,2-Dichloropropane	1.2	Not Detected	5.7	Not Detected
1,4-Dioxane	4.9	Not Detected	18	Not Detected
Bromodichloromethane	1.2	Not Detected	8.3	Not Detected
cis-1,3-Dichloropropene	1.2	Not Detected	5.6	Not Detected
4-Methyl-2-pentanone	1.2	1.9	5.0	7.7
Toluene	1.2	79	4.6	300
trans-1,3-Dichloropropene	1.2	Not Detected	5.6	Not Detected
1,1,2-Trichloroethane	1.2	Not Detected	6.7	Not Detected
Tetrachloroethene	1.2	6.2	8.4	42
2-Hexanone	4.9	Not Detected	20	Not Detected



Air Toxics

Client Sample ID: SG-03(5')-050316

Lab ID#: 1605174A-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a051714	Date of Collection:	5/3/16 12:09:00 PM
Dil. Factor:	2.47	Date of Analysis:	5/17/16 04:46 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	1.2	Not Detected	10	Not Detected
1,2-Dibromoethane (EDB)	1.2	Not Detected	9.5	Not Detected
Chlorobenzene	1.2	Not Detected	5.7	Not Detected
Ethyl Benzene	1.2	7.8	5.4	34
m,p-Xylene	1.2	26	5.4	120
o-Xylene	1.2	7.6	5.4	33
Styrene	1.2	2.8	5.3	12
Bromoform	1.2	Not Detected	13	Not Detected
Cumene	1.2	Not Detected	6.1	Not Detected
1,1,2,2-Tetrachloroethane	1.2	Not Detected	8.5	Not Detected
Propylbenzene	1.2	Not Detected	6.1	Not Detected
4-Ethyltoluene	1.2	3.0	6.1	15
1,3,5-Trimethylbenzene	1.2	Not Detected	6.1	Not Detected
1,2,4-Trimethylbenzene	1.2	2.2	6.1	11
1,3-Dichlorobenzene	1.2	Not Detected	7.4	Not Detected
1,4-Dichlorobenzene	1.2	Not Detected	7.4	Not Detected
alpha-Chlorotoluene	1.2	Not Detected	6.4	Not Detected
1,2-Dichlorobenzene	1.2	Not Detected	7.4	Not Detected
1,2,4-Trichlorobenzene	4.9	Not Detected	37	Not Detected
Hexachlorobutadiene	4.9	Not Detected	53	Not Detected
Methylcyclohexane	4.9	17	20	68

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	99	70-130
4-Bromofluorobenzene	98	70-130



Air Toxics

Client Sample ID: SG-04(5')-050316

Lab ID#: 1605174A-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a051715	Date of Collection:	5/3/16 2:13:00 PM
Dil. Factor:	2.42	Date of Analysis:	5/17/16 05:13 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.2	Not Detected	6.0	Not Detected
Freon 114	1.2	Not Detected	8.4	Not Detected
Chloromethane	12	Not Detected	25	Not Detected
Vinyl Chloride	1.2	Not Detected	3.1	Not Detected
1,3-Butadiene	1.2	Not Detected	2.7	Not Detected
Bromomethane	12	Not Detected	47	Not Detected
Chloroethane	4.8	Not Detected	13	Not Detected
Freon 11	1.2	Not Detected	6.8	Not Detected
Ethanol	4.8	29	9.1	55
Freon 113	1.2	Not Detected	9.3	Not Detected
1,1-Dichloroethene	1.2	Not Detected	4.8	Not Detected
Acetone	12	49	29	120
2-Propanol	4.8	17	12	42
Carbon Disulfide	4.8	12	15	37
3-Chloropropene	4.8	Not Detected	15	Not Detected
Methylene Chloride	12	Not Detected	42	Not Detected
Methyl tert-butyl ether	1.2	Not Detected	4.4	Not Detected
trans-1,2-Dichloroethene	1.2	Not Detected	4.8	Not Detected
Hexane	1.2	30	4.3	100
1,1-Dichloroethane	1.2	Not Detected	4.9	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.8	5.9	14	17
cis-1,2-Dichloroethene	1.2	Not Detected	4.8	Not Detected
Tetrahydrofuran	1.2	Not Detected	3.6	Not Detected
Chloroform	1.2	Not Detected	5.9	Not Detected
1,1,1-Trichloroethane	1.2	Not Detected	6.6	Not Detected
Cyclohexane	1.2	30	4.2	100
Carbon Tetrachloride	1.2	Not Detected	7.6	Not Detected
2,2,4-Trimethylpentane	1.2	Not Detected	5.6	Not Detected
Benzene	1.2	20	3.9	65
1,2-Dichloroethane	1.2	Not Detected	4.9	Not Detected
Heptane	1.2	14	5.0	59
Trichloroethene	1.2	Not Detected	6.5	Not Detected
1,2-Dichloropropane	1.2	Not Detected	5.6	Not Detected
1,4-Dioxane	4.8	Not Detected	17	Not Detected
Bromodichloromethane	1.2	Not Detected	8.1	Not Detected
cis-1,3-Dichloropropene	1.2	Not Detected	5.5	Not Detected
4-Methyl-2-pentanone	1.2	Not Detected	5.0	Not Detected
Toluene	1.2	140	4.6	540
trans-1,3-Dichloropropene	1.2	Not Detected	5.5	Not Detected
1,1,2-Trichloroethane	1.2	Not Detected	6.6	Not Detected
Tetrachloroethene	1.2	5.7	8.2	39
2-Hexanone	4.8	Not Detected	20	Not Detected



Air Toxics

Client Sample ID: SG-04(5')-050316

Lab ID#: 1605174A-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a051715	Date of Collection:	5/3/16 2:13:00 PM
Dil. Factor:	2.42	Date of Analysis:	5/17/16 05:13 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	1.2	Not Detected	10	Not Detected
1,2-Dibromoethane (EDB)	1.2	Not Detected	9.3	Not Detected
Chlorobenzene	1.2	Not Detected	5.6	Not Detected
Ethyl Benzene	1.2	6.0	5.2	26
m,p-Xylene	1.2	22	5.2	96
o-Xylene	1.2	5.6	5.2	24
Styrene	1.2	3.6	5.2	15
Bromoform	1.2	Not Detected	12	Not Detected
Cumene	1.2	Not Detected	5.9	Not Detected
1,1,2,2-Tetrachloroethane	1.2	Not Detected	8.3	Not Detected
Propylbenzene	1.2	Not Detected	5.9	Not Detected
4-Ethyltoluene	1.2	2.1	5.9	10
1,3,5-Trimethylbenzene	1.2	Not Detected	5.9	Not Detected
1,2,4-Trimethylbenzene	1.2	1.9	5.9	9.3
1,3-Dichlorobenzene	1.2	Not Detected	7.3	Not Detected
1,4-Dichlorobenzene	1.2	Not Detected	7.3	Not Detected
alpha-Chlorotoluene	1.2	Not Detected	6.3	Not Detected
1,2-Dichlorobenzene	1.2	Not Detected	7.3	Not Detected
1,2,4-Trichlorobenzene	4.8	Not Detected	36	Not Detected
Hexachlorobutadiene	4.8	Not Detected	52	Not Detected
Methylcyclohexane	4.8	10	19	41

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130
1,2-Dichloroethane-d4	99	70-130
4-Bromofluorobenzene	98	70-130



Air Toxics

Client Sample ID: SG-05(5')-050416

Lab ID#: 1605174A-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a051719	Date of Collection:	5/4/16 9:59:00 AM
Dil. Factor:	6.60	Date of Analysis:	5/17/16 07:25 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	3.3	Not Detected	16	Not Detected
Freon 114	3.3	Not Detected	23	Not Detected
Chloromethane	33	Not Detected	68	Not Detected
Vinyl Chloride	3.3	Not Detected	8.4	Not Detected
1,3-Butadiene	3.3	18	7.3	40
Bromomethane	33	Not Detected	130	Not Detected
Chloroethane	13	Not Detected	35	Not Detected
Freon 11	3.3	Not Detected	18	Not Detected
Ethanol	13	110	25	220
Freon 113	3.3	Not Detected	25	Not Detected
1,1-Dichloroethene	3.3	Not Detected	13	Not Detected
Acetone	33	84	78	200
2-Propanol	13	Not Detected	32	Not Detected
Carbon Disulfide	13	20	41	62
3-Chloropropene	13	Not Detected	41	Not Detected
Methylene Chloride	33	Not Detected	110	Not Detected
Methyl tert-butyl ether	3.3	Not Detected	12	Not Detected
trans-1,2-Dichloroethene	3.3	Not Detected	13	Not Detected
Hexane	3.3	460	12	1600
1,1-Dichloroethane	3.3	5.4	13	22
2-Butanone (Methyl Ethyl Ketone)	13	15	39	44
cis-1,2-Dichloroethene	3.3	Not Detected	13	Not Detected
Tetrahydrofuran	3.3	Not Detected	9.7	Not Detected
Chloroform	3.3	Not Detected	16	Not Detected
1,1,1-Trichloroethane	3.3	Not Detected	18	Not Detected
Cyclohexane	3.3	100	11	360
Carbon Tetrachloride	3.3	Not Detected	21	Not Detected
2,2,4-Trimethylpentane	3.3	Not Detected	15	Not Detected
Benzene	3.3	160	10	500
1,2-Dichloroethane	3.3	Not Detected	13	Not Detected
Heptane	3.3	130	14	550
Trichloroethene	3.3	4.3	18	23
1,2-Dichloropropane	3.3	Not Detected	15	Not Detected
1,4-Dioxane	13	Not Detected	48	Not Detected
Bromodichloromethane	3.3	Not Detected	22	Not Detected
cis-1,3-Dichloropropene	3.3	Not Detected	15	Not Detected
4-Methyl-2-pentanone	3.3	6.3	14	26
Toluene	3.3	190	12	720
trans-1,3-Dichloropropene	3.3	Not Detected	15	Not Detected
1,1,2-Trichloroethane	3.3	Not Detected	18	Not Detected
Tetrachloroethene	3.3	13	22	90
2-Hexanone	13	Not Detected	54	Not Detected



Air Toxics

Client Sample ID: SG-05(5')-050416

Lab ID#: 1605174A-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a051719	Date of Collection:	5/4/16 9:59:00 AM
Dil. Factor:	6.60	Date of Analysis:	5/17/16 07:25 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	3.3	Not Detected	28	Not Detected
1,2-Dibromoethane (EDB)	3.3	Not Detected	25	Not Detected
Chlorobenzene	3.3	Not Detected	15	Not Detected
Ethyl Benzene	3.3	17	14	76
m,p-Xylene	3.3	34	14	150
o-Xylene	3.3	11	14	47
Styrene	3.3	Not Detected	14	Not Detected
Bromoform	3.3	Not Detected	34	Not Detected
Cumene	3.3	Not Detected	16	Not Detected
1,1,2,2-Tetrachloroethane	3.3	Not Detected	23	Not Detected
Propylbenzene	3.3	Not Detected	16	Not Detected
4-Ethyltoluene	3.3	Not Detected	16	Not Detected
1,3,5-Trimethylbenzene	3.3	Not Detected	16	Not Detected
1,2,4-Trimethylbenzene	3.3	Not Detected	16	Not Detected
1,3-Dichlorobenzene	3.3	Not Detected	20	Not Detected
1,4-Dichlorobenzene	3.3	Not Detected	20	Not Detected
alpha-Chlorotoluene	3.3	Not Detected	17	Not Detected
1,2-Dichlorobenzene	3.3	Not Detected	20	Not Detected
1,2,4-Trichlorobenzene	13	Not Detected	98	Not Detected
Hexachlorobutadiene	13	Not Detected	140	Not Detected
Methylcyclohexane	13	110	53	430

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	100	70-130
4-Bromofluorobenzene	99	70-130



Air Toxics

Client Sample ID: SG-06(5')-050416

Lab ID#: 1605174A-06A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a051720	Date of Collection:	5/4/16 12:06:00 PM
Dil. Factor:	6.31	Date of Analysis:	5/17/16 07:57 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	3.2	Not Detected	16	Not Detected
Freon 114	3.2	Not Detected	22	Not Detected
Chloromethane	32	Not Detected	65	Not Detected
Vinyl Chloride	3.2	Not Detected	8.1	Not Detected
1,3-Butadiene	3.2	18	7.0	40
Bromomethane	32	Not Detected	120	Not Detected
Chloroethane	13	Not Detected	33	Not Detected
Freon 11	3.2	Not Detected	18	Not Detected
Ethanol	13	43	24	81
Freon 113	3.2	Not Detected	24	Not Detected
1,1-Dichloroethene	3.2	Not Detected	12	Not Detected
Acetone	32	74	75	180
2-Propanol	13	Not Detected	31	Not Detected
Carbon Disulfide	13	14	39	42
3-Chloropropene	13	Not Detected	40	Not Detected
Methylene Chloride	32	Not Detected	110	Not Detected
Methyl tert-butyl ether	3.2	Not Detected	11	Not Detected
trans-1,2-Dichloroethene	3.2	Not Detected	12	Not Detected
Hexane	3.2	580	11	2000
1,1-Dichloroethane	3.2	Not Detected	13	Not Detected
2-Butanone (Methyl Ethyl Ketone)	13	14	37	41
cis-1,2-Dichloroethene	3.2	Not Detected	12	Not Detected
Tetrahydrofuran	3.2	Not Detected	9.3	Not Detected
Chloroform	3.2	Not Detected	15	Not Detected
1,1,1-Trichloroethane	3.2	Not Detected	17	Not Detected
Cyclohexane	3.2	55	11	190
Carbon Tetrachloride	3.2	Not Detected	20	Not Detected
2,2,4-Trimethylpentane	3.2	Not Detected	15	Not Detected
Benzene	3.2	61	10	200
1,2-Dichloroethane	3.2	Not Detected	13	Not Detected
Heptane	3.2	330	13	1400
Trichloroethene	3.2	Not Detected	17	Not Detected
1,2-Dichloropropane	3.2	Not Detected	14	Not Detected
1,4-Dioxane	13	Not Detected	45	Not Detected
Bromodichloromethane	3.2	Not Detected	21	Not Detected
cis-1,3-Dichloropropene	3.2	Not Detected	14	Not Detected
4-Methyl-2-pentanone	3.2	Not Detected	13	Not Detected
Toluene	3.2	110	12	420
trans-1,3-Dichloropropene	3.2	Not Detected	14	Not Detected
1,1,2-Trichloroethane	3.2	Not Detected	17	Not Detected
Tetrachloroethene	3.2	6.3	21	43
2-Hexanone	13	Not Detected	52	Not Detected



Air Toxics

Client Sample ID: SG-06(5')-050416

Lab ID#: 1605174A-06A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a051720	Date of Collection: 5/4/16 12:06:00 PM
Dil. Factor:	6.31	Date of Analysis: 5/17/16 07:57 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	3.2	Not Detected	27	Not Detected
1,2-Dibromoethane (EDB)	3.2	Not Detected	24	Not Detected
Chlorobenzene	3.2	Not Detected	14	Not Detected
Ethyl Benzene	3.2	7.5	14	32
m,p-Xylene	3.2	21	14	93
o-Xylene	3.2	7.4	14	32
Styrene	3.2	3.6	13	16
Bromoform	3.2	Not Detected	33	Not Detected
Cumene	3.2	Not Detected	16	Not Detected
1,1,2,2-Tetrachloroethane	3.2	Not Detected	22	Not Detected
Propylbenzene	3.2	Not Detected	16	Not Detected
4-Ethyltoluene	3.2	Not Detected	16	Not Detected
1,3,5-Trimethylbenzene	3.2	Not Detected	16	Not Detected
1,2,4-Trimethylbenzene	3.2	Not Detected	16	Not Detected
1,3-Dichlorobenzene	3.2	Not Detected	19	Not Detected
1,4-Dichlorobenzene	3.2	Not Detected	19	Not Detected
alpha-Chlorotoluene	3.2	Not Detected	16	Not Detected
1,2-Dichlorobenzene	3.2	Not Detected	19	Not Detected
1,2,4-Trichlorobenzene	13	Not Detected	94	Not Detected
Hexachlorobutadiene	13	Not Detected	130	Not Detected
Methylcyclohexane	13	66	51	270

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	98	70-130
4-Bromofluorobenzene	100	70-130



Air Toxics

Client Sample ID: SG-07(5')-050416

Lab ID#: 1605174A-07A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a051721	Date of Collection:	5/4/16 3:15:00 PM
Dil. Factor:	5.16	Date of Analysis:	5/17/16 08:28 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	2.6	Not Detected	13	Not Detected
Freon 114	2.6	Not Detected	18	Not Detected
Chloromethane	26	Not Detected	53	Not Detected
Vinyl Chloride	2.6	Not Detected	6.6	Not Detected
1,3-Butadiene	2.6	12	5.7	27
Bromomethane	26	Not Detected	100	Not Detected
Chloroethane	10	Not Detected	27	Not Detected
Freon 11	2.6	Not Detected	14	Not Detected
Ethanol	10	11	19	21
Freon 113	2.6	Not Detected	20	Not Detected
1,1-Dichloroethene	2.6	Not Detected	10	Not Detected
Acetone	26	89	61	210
2-Propanol	10	Not Detected	25	Not Detected
Carbon Disulfide	10	22	32	70
3-Chloropropene	10	Not Detected	32	Not Detected
Methylene Chloride	26	Not Detected	90	Not Detected
Methyl tert-butyl ether	2.6	Not Detected	9.3	Not Detected
trans-1,2-Dichloroethene	2.6	Not Detected	10	Not Detected
Hexane	2.6	340	9.1	1200
1,1-Dichloroethane	2.6	Not Detected	10	Not Detected
2-Butanone (Methyl Ethyl Ketone)	10	13	30	39
cis-1,2-Dichloroethene	2.6	Not Detected	10	Not Detected
Tetrahydrofuran	2.6	Not Detected	7.6	Not Detected
Chloroform	2.6	Not Detected	12	Not Detected
1,1,1-Trichloroethane	2.6	2.6	14	14
Cyclohexane	2.6	40	8.9	140
Carbon Tetrachloride	2.6	Not Detected	16	Not Detected
2,2,4-Trimethylpentane	2.6	Not Detected	12	Not Detected
Benzene	2.6	35	8.2	110
1,2-Dichloroethane	2.6	Not Detected	10	Not Detected
Heptane	2.6	120	10	480
Trichloroethene	2.6	Not Detected	14	Not Detected
1,2-Dichloropropane	2.6	Not Detected	12	Not Detected
1,4-Dioxane	10	Not Detected	37	Not Detected
Bromodichloromethane	2.6	Not Detected	17	Not Detected
cis-1,3-Dichloropropene	2.6	Not Detected	12	Not Detected
4-Methyl-2-pentanone	2.6	Not Detected	10	Not Detected
Toluene	2.6	61	9.7	230
trans-1,3-Dichloropropene	2.6	Not Detected	12	Not Detected
1,1,2-Trichloroethane	2.6	Not Detected	14	Not Detected
Tetrachloroethene	2.6	2.9	18	20
2-Hexanone	10	Not Detected	42	Not Detected



Air Toxics

Client Sample ID: SG-07(5')-050416

Lab ID#: 1605174A-07A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a051721	Date of Collection:	5/4/16 3:15:00 PM
Dil. Factor:	5.16	Date of Analysis:	5/17/16 08:28 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	2.6	Not Detected	22	Not Detected
1,2-Dibromoethane (EDB)	2.6	Not Detected	20	Not Detected
Chlorobenzene	2.6	Not Detected	12	Not Detected
Ethyl Benzene	2.6	6.9	11	30
m,p-Xylene	2.6	19	11	82
o-Xylene	2.6	6.4	11	28
Styrene	2.6	Not Detected	11	Not Detected
Bromoform	2.6	Not Detected	27	Not Detected
Cumene	2.6	Not Detected	13	Not Detected
1,1,2,2-Tetrachloroethane	2.6	Not Detected	18	Not Detected
Propylbenzene	2.6	Not Detected	13	Not Detected
4-Ethyltoluene	2.6	Not Detected	13	Not Detected
1,3,5-Trimethylbenzene	2.6	Not Detected	13	Not Detected
1,2,4-Trimethylbenzene	2.6	Not Detected	13	Not Detected
1,3-Dichlorobenzene	2.6	Not Detected	16	Not Detected
1,4-Dichlorobenzene	2.6	Not Detected	16	Not Detected
alpha-Chlorotoluene	2.6	Not Detected	13	Not Detected
1,2-Dichlorobenzene	2.6	Not Detected	16	Not Detected
1,2,4-Trichlorobenzene	10	Not Detected	76	Not Detected
Hexachlorobutadiene	10	Not Detected	110	Not Detected
Methylcyclohexane	10	62	41	250

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	97	70-130
4-Bromofluorobenzene	99	70-130



Air Toxics

Client Sample ID: DUP-01

Lab ID#: 1605174A-08A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a051810	Date of Collection:	5/4/16
Dil. Factor:	2.58	Date of Analysis:	5/18/16 03:50 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.3	Not Detected	6.4	Not Detected
Freon 114	1.3	Not Detected	9.0	Not Detected
Chloromethane	13	Not Detected	27	Not Detected
Vinyl Chloride	1.3	Not Detected	3.3	Not Detected
1,3-Butadiene	1.3	Not Detected	2.8	Not Detected
Bromomethane	13	Not Detected	50	Not Detected
Chloroethane	5.2	Not Detected	14	Not Detected
Freon 11	1.3	Not Detected	7.2	Not Detected
Ethanol	5.2	11	9.7	20
Freon 113	1.3	Not Detected	9.9	Not Detected
1,1-Dichloroethene	1.3	Not Detected	5.1	Not Detected
Acetone	13	57	31	140
2-Propanol	5.2	Not Detected	13	Not Detected
Carbon Disulfide	5.2	17	16	52
3-Chloropropene	5.2	Not Detected	16	Not Detected
Methylene Chloride	13	Not Detected	45	Not Detected
Methyl tert-butyl ether	1.3	Not Detected	4.6	Not Detected
trans-1,2-Dichloroethene	1.3	Not Detected	5.1	Not Detected
Hexane	1.3	220	4.5	790
1,1-Dichloroethane	1.3	1.6	5.2	6.4
2-Butanone (Methyl Ethyl Ketone)	5.2	9.6	15	28
cis-1,2-Dichloroethene	1.3	Not Detected	5.1	Not Detected
Tetrahydrofuran	1.3	Not Detected	3.8	Not Detected
Chloroform	1.3	Not Detected	6.3	Not Detected
1,1,1-Trichloroethane	1.3	2.1	7.0	11
Cyclohexane	1.3	28	4.4	96
Carbon Tetrachloride	1.3	Not Detected	8.1	Not Detected
2,2,4-Trimethylpentane	1.3	Not Detected	6.0	Not Detected
Benzene	1.3	27	4.1	87
1,2-Dichloroethane	1.3	Not Detected	5.2	Not Detected
Heptane	1.3	78	5.3	320
Trichloroethene	1.3	Not Detected	6.9	Not Detected
1,2-Dichloropropane	1.3	Not Detected	6.0	Not Detected
1,4-Dioxane	5.2	Not Detected	18	Not Detected
Bromodichloromethane	1.3	Not Detected	8.6	Not Detected
cis-1,3-Dichloropropene	1.3	Not Detected	5.8	Not Detected
4-Methyl-2-pentanone	1.3	Not Detected	5.3	Not Detected
Toluene	1.3	42	4.9	160
trans-1,3-Dichloropropene	1.3	Not Detected	5.8	Not Detected
1,1,2-Trichloroethane	1.3	Not Detected	7.0	Not Detected
Tetrachloroethene	1.3	1.7	8.8	12
2-Hexanone	5.2	Not Detected	21	Not Detected



Air Toxics

Client Sample ID: DUP-01

Lab ID#: 1605174A-08A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a051810	Date of Collection:	5/4/16
Dil. Factor:	2.58	Date of Analysis:	5/18/16 03:50 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	1.3	Not Detected	11	Not Detected
1,2-Dibromoethane (EDB)	1.3	Not Detected	9.9	Not Detected
Chlorobenzene	1.3	Not Detected	5.9	Not Detected
Ethyl Benzene	1.3	4.4	5.6	19
m,p-Xylene	1.3	12	5.6	54
o-Xylene	1.3	4.1	5.6	18
Styrene	1.3	Not Detected	5.5	Not Detected
Bromoform	1.3	Not Detected	13	Not Detected
Cumene	1.3	Not Detected	6.3	Not Detected
1,1,2,2-Tetrachloroethane	1.3	Not Detected	8.8	Not Detected
Propylbenzene	1.3	Not Detected	6.3	Not Detected
4-Ethyltoluene	1.3	1.4	6.3	6.7
1,3,5-Trimethylbenzene	1.3	Not Detected	6.3	Not Detected
1,2,4-Trimethylbenzene	1.3	Not Detected	6.3	Not Detected
1,3-Dichlorobenzene	1.3	Not Detected	7.8	Not Detected
1,4-Dichlorobenzene	1.3	Not Detected	7.8	Not Detected
alpha-Chlorotoluene	1.3	Not Detected	6.7	Not Detected
1,2-Dichlorobenzene	1.3	Not Detected	7.8	Not Detected
1,2,4-Trichlorobenzene	5.2	Not Detected	38	Not Detected
Hexachlorobutadiene	5.2	Not Detected	55	Not Detected
Methylcyclohexane	5.2	46	21	180

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	100	70-130
4-Bromofluorobenzene	99	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1605174A-09A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a051708	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/17/16 01:02 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	5.0	Not Detected	10	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	5.0	Not Detected	19	Not Detected
Chloroethane	2.0	Not Detected	5.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	2.0	Not Detected	3.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	5.0	Not Detected	12	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	2.0	Not Detected	6.2	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	Not Detected	5.9	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1605174A-09A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a051708	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	5/17/16 01:02 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected
Methylcyclohexane	2.0	Not Detected	8.0	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	96	70-130
4-Bromofluorobenzene	100	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1605174A-09B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a051806	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	5/18/16 11:40 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	5.0	Not Detected	10	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	5.0	Not Detected	19	Not Detected
Chloroethane	2.0	Not Detected	5.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	2.0	Not Detected	3.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	5.0	Not Detected	12	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	2.0	Not Detected	6.2	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	Not Detected	5.9	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1605174A-09B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a051806	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/18/16 11:40 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected
Methylcyclohexane	2.0	Not Detected	8.0	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130
1,2-Dichloroethane-d4	99	70-130
4-Bromofluorobenzene	100	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1605174A-10A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a051702	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/17/16 09:41 AM

Compound	%Recovery
Freon 12	102
Freon 114	101
Chloromethane	107
Vinyl Chloride	109
1,3-Butadiene	106
Bromomethane	107
Chloroethane	102
Freon 11	102
Ethanol	99
Freon 113	101
1,1-Dichloroethene	110
Acetone	101
2-Propanol	98
Carbon Disulfide	103
3-Chloropropene	102
Methylene Chloride	111
Methyl tert-butyl ether	105
trans-1,2-Dichloroethene	110
Hexane	107
1,1-Dichloroethane	105
2-Butanone (Methyl Ethyl Ketone)	101
cis-1,2-Dichloroethene	106
Tetrahydrofuran	100
Chloroform	106
1,1,1-Trichloroethane	104
Cyclohexane	104
Carbon Tetrachloride	103
2,2,4-Trimethylpentane	109
Benzene	101
1,2-Dichloroethane	103
Heptane	103
Trichloroethene	101
1,2-Dichloropropane	104
1,4-Dioxane	86
Bromodichloromethane	103
cis-1,3-Dichloropropene	104
4-Methyl-2-pentanone	90
Toluene	99
trans-1,3-Dichloropropene	106
1,1,2-Trichloroethane	102
Tetrachloroethene	101
2-Hexanone	88



Air Toxics

Client Sample ID: CCV

Lab ID#: 1605174A-10A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a051702	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/17/16 09:41 AM

Compound	%Recovery

Dibromochloromethane	103
1,2-Dibromoethane (EDB)	105
Chlorobenzene	103
Ethyl Benzene	102
m,p-Xylene	103
o-Xylene	103
Styrene	102
Bromoform	104
Cumene	100
1,1,2,2-Tetrachloroethane	102
Propylbenzene	101
4-Ethyltoluene	101
1,3,5-Trimethylbenzene	99
1,2,4-Trimethylbenzene	100
1,3-Dichlorobenzene	97
1,4-Dichlorobenzene	98
alpha-Chlorotoluene	104
1,2-Dichlorobenzene	97
1,2,4-Trichlorobenzene	89
Hexachlorobutadiene	90
Methylcyclohexane	103

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	102	70-130
4-Bromofluorobenzene	98	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1605174A-10B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a051802	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/18/16 09:23 AM

Compound	%Recovery
Freon 12	119
Freon 114	117
Chloromethane	125
Vinyl Chloride	128
1,3-Butadiene	122
Bromomethane	128
Chloroethane	117
Freon 11	116
Ethanol	119
Freon 113	113
1,1-Dichloroethene	128
Acetone	118
2-Propanol	113
Carbon Disulfide	120
3-Chloropropene	119
Methylene Chloride	129
Methyl tert-butyl ether	120
trans-1,2-Dichloroethene	125
Hexane	124
1,1-Dichloroethane	121
2-Butanone (Methyl Ethyl Ketone)	116
cis-1,2-Dichloroethene	122
Tetrahydrofuran	117
Chloroform	119
1,1,1-Trichloroethane	119
Cyclohexane	121
Carbon Tetrachloride	118
2,2,4-Trimethylpentane	126
Benzene	120
1,2-Dichloroethane	122
Heptane	122
Trichloroethene	122
1,2-Dichloropropane	123
1,4-Dioxane	104
Bromodichloromethane	121
cis-1,3-Dichloropropene	124
4-Methyl-2-pentanone	108
Toluene	118
trans-1,3-Dichloropropene	122
1,1,2-Trichloroethane	119
Tetrachloroethene	115
2-Hexanone	103



Air Toxics

Client Sample ID: CCV

Lab ID#: 1605174A-10B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a051802	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/18/16 09:23 AM

Compound	%Recovery
Dibromochloromethane	120
1,2-Dibromoethane (EDB)	120
Chlorobenzene	120
Ethyl Benzene	119
m,p-Xylene	121
o-Xylene	120
Styrene	118
Bromoform	121
Cumene	118
1,1,2,2-Tetrachloroethane	119
Propylbenzene	118
4-Ethyltoluene	122
1,3,5-Trimethylbenzene	112
1,2,4-Trimethylbenzene	116
1,3-Dichlorobenzene	114
1,4-Dichlorobenzene	112
alpha-Chlorotoluene	122
1,2-Dichlorobenzene	113
1,2,4-Trichlorobenzene	100
Hexachlorobutadiene	100
Methylcyclohexane	117

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130
1,2-Dichloroethane-d4	98	70-130
4-Bromofluorobenzene	96	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 1605174A-11A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a051703	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/17/16 10:06 AM

Compound	%Recovery	Method Limits
Freon 12	98	70-130
Freon 114	101	70-130
Chloromethane	101	70-130
Vinyl Chloride	103	70-130
1,3-Butadiene	100	70-130
Bromomethane	102	70-130
Chloroethane	100	70-130
Freon 11	98	70-130
Ethanol	100	70-130
Freon 113	94	70-130
1,1-Dichloroethene	105	70-130
Acetone	92	70-130
2-Propanol	100	70-130
Carbon Disulfide	85	70-130
3-Chloropropene	91	70-130
Methylene Chloride	105	70-130
Methyl tert-butyl ether	97	70-130
trans-1,2-Dichloroethene	104	70-130
Hexane	102	70-130
1,1-Dichloroethane	100	70-130
2-Butanone (Methyl Ethyl Ketone)	95	70-130
cis-1,2-Dichloroethene	100	70-130
Tetrahydrofuran	94	70-130
Chloroform	99	70-130
1,1,1-Trichloroethane	97	70-130
Cyclohexane	99	70-130
Carbon Tetrachloride	97	70-130
2,2,4-Trimethylpentane	104	70-130
Benzene	99	70-130
1,2-Dichloroethane	102	70-130
Heptane	101	70-130
Trichloroethene	100	70-130
1,2-Dichloropropane	103	70-130
1,4-Dioxane	88	70-130
Bromodichloromethane	104	70-130
cis-1,3-Dichloropropene	98	70-130
4-Methyl-2-pentanone	90	70-130
Toluene	96	70-130
trans-1,3-Dichloropropene	102	70-130
1,1,2-Trichloroethane	100	70-130
Tetrachloroethene	97	70-130
2-Hexanone	90	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 1605174A-11A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name: a051703

Date of Collection: NA

Dil. Factor: 1.00

Date of Analysis: 5/17/16 10:06 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	102	70-130
1,2-Dibromoethane (EDB)	102	70-130
Chlorobenzene	100	70-130
Ethyl Benzene	99	70-130
m,p-Xylene	100	70-130
o-Xylene	102	70-130
Styrene	102	70-130
Bromoform	102	70-130
Cumene	98	70-130
1,1,2,2-Tetrachloroethane	100	70-130
Propylbenzene	100	70-130
4-Ethyltoluene	99	70-130
1,3,5-Trimethylbenzene	98	70-130
1,2,4-Trimethylbenzene	99	70-130
1,3-Dichlorobenzene	97	70-130
1,4-Dichlorobenzene	95	70-130
alpha-Chlorotoluene	106	70-130
1,2-Dichlorobenzene	95	70-130
1,2,4-Trichlorobenzene	89	70-130
Hexachlorobutadiene	90	70-130
Methylcyclohexane	98	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	97	70-130
4-Bromofluorobenzene	101	70-130

Client Sample ID: LCSD

Lab ID#: 1605174A-11AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a051704	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/17/16 10:32 AM

Compound	%Recovery	Method Limits
Freon 12	100	70-130
Freon 114	103	70-130
Chloromethane	102	70-130
Vinyl Chloride	107	70-130
1,3-Butadiene	100	70-130
Bromomethane	105	70-130
Chloroethane	101	70-130
Freon 11	100	70-130
Ethanol	99	70-130
Freon 113	97	70-130
1,1-Dichloroethene	106	70-130
Acetone	96	70-130
2-Propanol	102	70-130
Carbon Disulfide	87	70-130
3-Chloropropene	95	70-130
Methylene Chloride	106	70-130
Methyl tert-butyl ether	99	70-130
trans-1,2-Dichloroethene	107	70-130
Hexane	102	70-130
1,1-Dichloroethane	102	70-130
2-Butanone (Methyl Ethyl Ketone)	96	70-130
cis-1,2-Dichloroethene	101	70-130
Tetrahydrofuran	97	70-130
Chloroform	100	70-130
1,1,1-Trichloroethane	98	70-130
Cyclohexane	101	70-130
Carbon Tetrachloride	100	70-130
2,2,4-Trimethylpentane	105	70-130
Benzene	101	70-130
1,2-Dichloroethane	104	70-130
Heptane	101	70-130
Trichloroethene	101	70-130
1,2-Dichloropropane	101	70-130
1,4-Dioxane	85	70-130
Bromodichloromethane	104	70-130
cis-1,3-Dichloropropene	97	70-130
4-Methyl-2-pentanone	89	70-130
Toluene	96	70-130
trans-1,3-Dichloropropene	103	70-130
1,1,2-Trichloroethane	100	70-130
Tetrachloroethene	98	70-130
2-Hexanone	89	70-130



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1605174A-11AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name: a051704

Date of Collection: NA

Dil. Factor: 1.00

Date of Analysis: 5/17/16 10:32 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	101	70-130
1,2-Dibromoethane (EDB)	102	70-130
Chlorobenzene	100	70-130
Ethyl Benzene	99	70-130
m,p-Xylene	100	70-130
o-Xylene	101	70-130
Styrene	103	70-130
Bromoform	104	70-130
Cumene	99	70-130
1,1,2,2-Tetrachloroethane	100	70-130
Propylbenzene	102	70-130
4-Ethyltoluene	101	70-130
1,3,5-Trimethylbenzene	99	70-130
1,2,4-Trimethylbenzene	100	70-130
1,3-Dichlorobenzene	97	70-130
1,4-Dichlorobenzene	96	70-130
alpha-Chlorotoluene	108	70-130
1,2-Dichlorobenzene	96	70-130
1,2,4-Trichlorobenzene	96	70-130
Hexachlorobutadiene	96	70-130
Methylcyclohexane	98	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	99	70-130
4-Bromofluorobenzene	100	70-130

Client Sample ID: LCS

Lab ID#: 1605174A-11B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a051803	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/18/16 09:48 AM

Compound	%Recovery	Method Limits
Freon 12	119	70-130
Freon 114	120	70-130
Chloromethane	120	70-130
Vinyl Chloride	125	70-130
1,3-Butadiene	114	70-130
Bromomethane	123	70-130
Chloroethane	118	70-130
Freon 11	115	70-130
Ethanol	113	70-130
Freon 113	110	70-130
1,1-Dichloroethene	122	70-130
Acetone	112	70-130
2-Propanol	116	70-130
Carbon Disulfide	101	70-130
3-Chloropropene	111	70-130
Methylene Chloride	125	70-130
Methyl tert-butyl ether	113	70-130
trans-1,2-Dichloroethene	125	70-130
Hexane	120	70-130
1,1-Dichloroethane	118	70-130
2-Butanone (Methyl Ethyl Ketone)	112	70-130
cis-1,2-Dichloroethene	118	70-130
Tetrahydrofuran	112	70-130
Chloroform	116	70-130
1,1,1-Trichloroethane	113	70-130
Cyclohexane	117	70-130
Carbon Tetrachloride	116	70-130
2,2,4-Trimethylpentane	122	70-130
Benzene	117	70-130
1,2-Dichloroethane	121	70-130
Heptane	120	70-130
Trichloroethene	117	70-130
1,2-Dichloropropane	119	70-130
1,4-Dioxane	100	70-130
Bromodichloromethane	122	70-130
cis-1,3-Dichloropropene	112	70-130
4-Methyl-2-pentanone	104	70-130
Toluene	113	70-130
trans-1,3-Dichloropropene	119	70-130
1,1,2-Trichloroethane	117	70-130
Tetrachloroethene	112	70-130
2-Hexanone	103	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 1605174A-11B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a051803	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/18/16 09:48 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	118	70-130
1,2-Dibromoethane (EDB)	117	70-130
Chlorobenzene	115	70-130
Ethyl Benzene	116	70-130
m,p-Xylene	117	70-130
o-Xylene	117	70-130
Styrene	120	70-130
Bromoform	120	70-130
Cumene	115	70-130
1,1,2,2-Tetrachloroethane	117	70-130
Propylbenzene	117	70-130
4-Ethyltoluene	121	70-130
1,3,5-Trimethylbenzene	110	70-130
1,2,4-Trimethylbenzene	114	70-130
1,3-Dichlorobenzene	111	70-130
1,4-Dichlorobenzene	110	70-130
alpha-Chlorotoluene	124	70-130
1,2-Dichlorobenzene	111	70-130
1,2,4-Trichlorobenzene	104	70-130
Hexachlorobutadiene	105	70-130
Methylcyclohexane	115	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130
1,2-Dichloroethane-d4	96	70-130
4-Bromofluorobenzene	99	70-130



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1605174A-11BB

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a051804	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/18/16 10:14 AM

Compound	%Recovery	Method Limits
Freon 12	120	70-130
Freon 114	123	70-130
Chloromethane	121	70-130
Vinyl Chloride	125	70-130
1,3-Butadiene	117	70-130
Bromomethane	124	70-130
Chloroethane	122	70-130
Freon 11	117	70-130
Ethanol	119	70-130
Freon 113	111	70-130
1,1-Dichloroethene	127	70-130
Acetone	114	70-130
2-Propanol	116	70-130
Carbon Disulfide	104	70-130
3-Chloropropene	114	70-130
Methylene Chloride	127	70-130
Methyl tert-butyl ether	116	70-130
trans-1,2-Dichloroethene	127	70-130
Hexane	121	70-130
1,1-Dichloroethane	122	70-130
2-Butanone (Methyl Ethyl Ketone)	112	70-130
cis-1,2-Dichloroethene	119	70-130
Tetrahydrofuran	118	70-130
Chloroform	117	70-130
1,1,1-Trichloroethane	116	70-130
Cyclohexane	120	70-130
Carbon Tetrachloride	116	70-130
2,2,4-Trimethylpentane	125	70-130
Benzene	114	70-130
1,2-Dichloroethane	120	70-130
Heptane	118	70-130
Trichloroethene	116	70-130
1,2-Dichloropropane	120	70-130
1,4-Dioxane	99	70-130
Bromodichloromethane	120	70-130
cis-1,3-Dichloropropene	112	70-130
4-Methyl-2-pentanone	104	70-130
Toluene	112	70-130
trans-1,3-Dichloropropene	120	70-130
1,1,2-Trichloroethane	117	70-130
Tetrachloroethene	113	70-130
2-Hexanone	105	70-130



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1605174A-11BB

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	a051804	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/18/16 10:14 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	117	70-130
1,2-Dibromoethane (EDB)	118	70-130
Chlorobenzene	117	70-130
Ethyl Benzene	116	70-130
m,p-Xylene	117	70-130
o-Xylene	119	70-130
Styrene	120	70-130
Bromoform	121	70-130
Cumene	116	70-130
1,1,2,2-Tetrachloroethane	118	70-130
Propylbenzene	120	70-130
4-Ethyltoluene	122	70-130
1,3,5-Trimethylbenzene	112	70-130
1,2,4-Trimethylbenzene	116	70-130
1,3-Dichlorobenzene	114	70-130
1,4-Dichlorobenzene	112	70-130
alpha-Chlorotoluene	124	70-130
1,2-Dichlorobenzene	113	70-130
1,2,4-Trichlorobenzene	110	70-130
Hexachlorobutadiene	111	70-130
Methylcyclohexane	116	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	100	70-130
4-Bromofluorobenzene	101	70-130

5/20/2016

Ms. Heather Stevens
Arcadis U.S., Inc.
28550 Cabot Dr.
Suite 500
Novi MI 48377

Project Name: RACER Pontiac North Campus
Project #: B0064607.2016
Workorder #: 1605174B

Dear Ms. Heather Stevens

The following report includes the data for the above referenced project for sample(s) received on 5/9/2016 at Air Toxics Ltd.

The data and associated QC analyzed by Modified ASTM D-1946 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free the Project Manager: Ausha Scott at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Ausha Scott
Project Manager

WORK ORDER #: 1605174B

Work Order Summary

CLIENT: Ms. Heather Stevens
Arcadis U.S., Inc.
28550 Cabot Dr.
Suite 500
Novi, MI 48377

BILL TO: Accounts Payable
Arcadis U.S., Inc.
630 Plaza Drive
Suite 600
Highlands Ranch, CO 80129

PHONE: 248.994.2266

P.O. # B0064607.2016

FAX: 248.994.2241

PROJECT # B0064607.2016 RACER Pontiac North

DATE RECEIVED: 05/09/2016

CONTACT: Campus
Ausha Scott

DATE COMPLETED: 05/20/2016

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	SG-01(5')-050316	Modified ASTM D-1946	4.0 "Hg	15 psi
02A	SG-02(5')-050316	Modified ASTM D-1946	5.5 "Hg	15 psi
03A	SG-03(5')-050316	Modified ASTM D-1946	5.5 "Hg	15 psi
04A	SG-04(5')-050316	Modified ASTM D-1946	5.0 "Hg	15 psi
05A	SG-05(5')-050416	Modified ASTM D-1946	5.5 "Hg	15 psi
06A	SG-06(5')-050416	Modified ASTM D-1946	6.0 "Hg	15 psi
07A	SG-07(5')-050416	Modified ASTM D-1946	6.5 "Hg	15 psi
08A	DUP-01	Modified ASTM D-1946	6.5 "Hg	15 psi
09A	Lab Blank	Modified ASTM D-1946	NA	NA
09B	Lab Blank	Modified ASTM D-1946	NA	NA
10A	LCS	Modified ASTM D-1946	NA	NA
10AA	LCSD	Modified ASTM D-1946	NA	NA

CERTIFIED BY:



Technical Director

DATE: 05/20/16

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
TX NELAP - T104704434-15-9, UT NELAP CA0093332015-6, VA NELAP - 8113, WA NELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2015, Expiration date: 10/17/2016.

Eurofins Air Toxics Inc., certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, Inc.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630

(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified ASTM D-1946
Arcadis U.S., Inc.
Workorder# 1605174B

Eight 1 Liter Summa Canister samples were received on May 09, 2016. The laboratory performed analysis via Modified ASTM Method D-1946 for Methane and fixed gases in air using GC/FID or GC/TCD. The method involves direct injection of 1.0 mL of sample.

On the analytical column employed for this analysis, Oxygen coelutes with Argon. The corresponding peak is quantitated as Oxygen.

Since Nitrogen is used to pressurize samples, the reported Nitrogen values are calculated by adding all the sample components and subtracting from 100%.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

Requirement	ASTM D-1946	ATL Modifications
Calibration	A single point calibration is performed using a reference standard closely matching the composition of the unknown.	A minimum of 5-point calibration curve is performed. Quantitation is based on average Response Factor.
Reference Standard	The composition of any reference standard must be known to within 0.01 mol % for any component.	The standards used by ATL are blended to a $\geq 95\%$ accuracy.
Sample Injection Volume	Components whose concentrations are in excess of 5 % should not be analyzed by using sample volumes greater than 0.5 mL.	The sample container is connected directly to a fixed volume sample loop of 1.0 mL on the GC. Linear range is defined by the calibration curve. Bags are loaded by vacuum.
Normalization	Normalize the mole percent values by multiplying each value by 100 and dividing by the sum of the original values. The sum of the original values should not differ from 100% by more than 1.0%.	Results are not normalized. The sum of the reported values can differ from 100% by as much as 15%, either due to analytical variability or an unusual sample matrix.
Precision	Precision requirements established at each concentration level.	Duplicates should agree within 25% RPD for detections $> 5 \times$ the RL.

Receiving Notes

The Chain of Custody (COC) information for sample SG-02(5')-050316 did not match the information on the canister with regard to canister identification. The client was notified of the discrepancy and the information on the canister was used to process and report the sample.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

B - Compound present in laboratory blank greater than reporting limit.

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the detection limit.

M - Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

Summary of Detected Compounds

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

Client Sample ID: SG-01(5')-050316

Lab ID#: 1605174B-01A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.23	5.4
Nitrogen	0.23	92
Carbon Dioxide	0.023	2.3
Methane	0.00023	0.00025

Client Sample ID: SG-02(5')-050316

Lab ID#: 1605174B-02A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.25	5.3
Nitrogen	0.25	94
Carbon Dioxide	0.025	0.028
Methane	0.00025	0.35

Client Sample ID: SG-03(5')-050316

Lab ID#: 1605174B-03A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.25	17
Nitrogen	0.25	67
Methane	0.00025	0.012
Helium	0.12	16

Client Sample ID: SG-04(5')-050316

Lab ID#: 1605174B-04A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.24	12
Nitrogen	0.24	48
Carbon Dioxide	0.024	0.026
Methane	0.00024	0.059
Helium	0.12	40

Summary of Detected Compounds

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

Client Sample ID: SG-05(5')-050416

Lab ID#: 1605174B-05A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.25	17
Nitrogen	0.25	71
Methane	0.00025	0.16
Helium	0.12	12

Client Sample ID: SG-06(5')-050416

Lab ID#: 1605174B-06A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.25	17
Nitrogen	0.25	82
Methane	0.00025	0.71

Client Sample ID: SG-07(5')-050416

Lab ID#: 1605174B-07A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.26	16
Nitrogen	0.26	84
Methane	0.00026	0.38

Client Sample ID: DUP-01

Lab ID#: 1605174B-08A

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.26	19
Nitrogen	0.26	81
Carbon Dioxide	0.026	0.038
Methane	0.00026	0.14

Client Sample ID: SG-01(5')-050316

Lab ID#: 1605174B-01A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9051407	Date of Collection: 5/3/16 9:52:00 AM
Dil. Factor:	2.33	Date of Analysis: 5/14/16 09:52 AM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.23	5.4
Nitrogen	0.23	92
Carbon Dioxide	0.023	2.3
Methane	0.00023	0.00025
Helium	0.12	Not Detected

Container Type: 1 Liter Summa Canister



Air Toxics

Client Sample ID: SG-02(5')-050316

Lab ID#: 1605174B-02A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9051408	Date of Collection: 5/3/16 11:07:00 AM
Dil. Factor:	2.47	Date of Analysis: 5/14/16 10:21 AM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.25	5.3
Nitrogen	0.25	94
Carbon Dioxide	0.025	0.028
Methane	0.00025	0.35
Helium	0.12	Not Detected

Container Type: 1 Liter Summa Canister



Air Toxics

Client Sample ID: SG-03(5')-050316

Lab ID#: 1605174B-03A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9051409	Date of Collection: 5/3/16 12:09:00 PM
Dil. Factor:	2.47	Date of Analysis: 5/14/16 10:45 AM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.25	17
Nitrogen	0.25	67
Carbon Dioxide	0.025	Not Detected
Methane	0.00025	0.012
Helium	0.12	16

Container Type: 1 Liter Summa Canister



Air Toxics

Client Sample ID: SG-04(5')-050316

Lab ID#: 1605174B-04A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9051410	Date of Collection: 5/3/16 2:13:00 PM
Dil. Factor:	2.42	Date of Analysis: 5/14/16 11:14 AM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.24	12
Nitrogen	0.24	48
Carbon Dioxide	0.024	0.026
Methane	0.00024	0.059
Helium	0.12	40

Container Type: 1 Liter Summa Canister

Client Sample ID: SG-05(5')-050416

Lab ID#: 1605174B-05A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9051411	Date of Collection: 5/4/16 9:59:00 AM
Dil. Factor:	2.47	Date of Analysis: 5/14/16 11:43 AM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.25	17
Nitrogen	0.25	71
Carbon Dioxide	0.025	Not Detected
Methane	0.00025	0.16
Helium	0.12	12

Container Type: 1 Liter Summa Canister



Air Toxics

Client Sample ID: SG-06(5')-050416

Lab ID#: 1605174B-06A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9051412	Date of Collection: 5/4/16 12:06:00 PM
Dil. Factor:	2.52	Date of Analysis: 5/14/16 12:10 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.25	17
Nitrogen	0.25	82
Carbon Dioxide	0.025	Not Detected
Methane	0.00025	0.71
Helium	0.13	Not Detected

Container Type: 1 Liter Summa Canister

Client Sample ID: SG-07(5')-050416

Lab ID#: 1605174B-07A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9051413	Date of Collection: 5/4/16 3:15:00 PM
Dil. Factor:	2.58	Date of Analysis: 5/14/16 12:37 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.26	16
Nitrogen	0.26	84
Carbon Dioxide	0.026	Not Detected
Methane	0.00026	0.38
Helium	0.13	Not Detected

Container Type: 1 Liter Summa Canister

Client Sample ID: DUP-01

Lab ID#: 1605174B-08A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9051414	Date of Collection: 5/4/16
Dil. Factor:	2.58	Date of Analysis: 5/14/16 01:09 PM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.26	19
Nitrogen	0.26	81
Carbon Dioxide	0.026	0.038
Methane	0.00026	0.14
Helium	0.13	Not Detected

Container Type: 1 Liter Summa Canister

Client Sample ID: Lab Blank

Lab ID#: 1605174B-09A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9051404	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/14/16 08:21 AM

Compound	Rpt. Limit (%)	Amount (%)
Oxygen	0.10	Not Detected
Nitrogen	0.10	Not Detected
Carbon Dioxide	0.010	Not Detected
Methane	0.00010	Not Detected

Container Type: NA - Not Applicable

Client Sample ID: Lab Blank

Lab ID#: 1605174B-09B

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name: 9051403b
Dil. Factor: 1.00

Date of Collection: NA
Date of Analysis: 5/14/16 07:53 AM

Compound	Rpt. Limit (%)	Amount (%)
Helium	0.050	Not Detected

Container Type: NA - Not Applicable

Client Sample ID: LCS

Lab ID#: 1605174B-10A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9051402	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/14/16 07:13 AM

Compound	%Recovery	Method Limits
Oxygen	95	85-115
Nitrogen	90	85-115
Carbon Dioxide	101	85-115
Methane	93	85-115
Helium	103	85-115

Container Type: NA - Not Applicable

Client Sample ID: LCSD

Lab ID#: 1605174B-10AA

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	9051416	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 5/14/16 02:07 PM

Compound	%Recovery	Method Limits
Oxygen	95	85-115
Nitrogen	90	85-115
Carbon Dioxide	101	85-115
Methane	92	85-115
Helium	103	85-115

Container Type: NA - Not Applicable

ATTACHMENT 3

Groundwater Laboratory Analytical Reports



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Canton

4101 Shuffel Street NW

North Canton, OH 44720

Tel: (330)497-9396

TestAmerica Job ID: 240-65149-1

Client Project/Site: Pontiac North Campus

For:

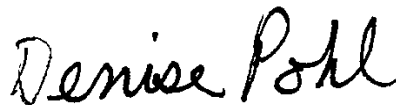
ARCADIS U.S., Inc.

28550 Cabot Drive

Suite 500

Novi, Michigan 48377

Attn: Ms. Theresa Olechiw



Authorized for release by:

6/7/2016 3:37:08 PM

Denise Pohl, Project Manager II

(330)966-9789

denise.pohl@testamericainc.com

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www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	LCS or LCSD is outside acceptance limits.

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
X	Surrogate is outside control limits

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
X	Surrogate is outside control limits

Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Job ID: 240-65149-1

Laboratory: TestAmerica Canton

Narrative

CASE NARRATIVE

Client: ARCADIS U.S., Inc.

Project: Pontiac North Campus

Report Number: 240-65149-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 5/21/2016 9:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 0.7° C, 1.1° C, 2.3° C and 3.1° C.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples TW-10-02-GW-051816 (240-65149-1), MWW10-SEN01-GW-051816 (240-65149-2), MWW10-SEN03-GW-051816 (240-65149-3), MWW10-SEN04-GW-051816 (240-65149-4), MWW10-04-GW-051816 (240-65149-5), MWM2-04-GW-051816 (240-65149-6), MWW5-01-GW-051916 (240-65149-7), TW-03-01-GW-051916 (240-65149-8), MWM16-19-GW-051916 (240-65149-11), MWM10-09-GW-051916 (240-65149-12), SB-62-14-GW-051916 (240-65149-13) and TRIP BLANK (240-65149-15) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 05/27/2016, 05/28/2016 and 06/01/2016.

Trichlorofluoromethane failed the recovery criteria high for LCS 240-232568/4. Refer to the QC report for details.

Method(s) 8260B: The laboratory control sample (LCS) for analytical batch 240-232568 recovered outside control limits for Trichlorofluoromethane. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported. Batch includes: TRIP BLANK (240-65149-15).

Case Narrative

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Job ID: 240-65149-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOLATILE ORGANIC COMPOUNDS (GCMS SIM)

Samples TW-10-02-GW-051816 (240-65149-1), MWW10-04-GW-051816 (240-65149-5), MWM2-04-GW-051816 (240-65149-6), MWF12-01-GW-051916 (240-65149-9), MWF7-01-GW-051916 (240-65149-10), MWM16-19-GW-051916 (240-65149-11) and DUP-01-GW-051916 (240-65149-14) were analyzed for volatile organic compounds (GCMS SIM) in accordance with EPA SW-846 Method 8260B SIM. The samples were analyzed on 05/26/2016, 05/27/2016 and 05/31/2016.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS (GCMS)

Samples TW-10-02-GW-051816 (240-65149-1), MWW10-SEN01-GW-051816 (240-65149-2), MWM2-04-GW-051816 (240-65149-6), TW-03-01-GW-051916 (240-65149-8), MWM16-19-GW-051916 (240-65149-11), MWM10-09-GW-051916 (240-65149-12) and SB-62-14-GW-051916 (240-65149-13) were analyzed for semivolatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 05/24/2016 and analyzed on 05/31/2016 and 06/01/2016.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

Bis(2-ethylhexyl) phthalate and Di-n-butyl phthalate were detected in method blank MB 240-231631/8-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

2-Fluorobiphenyl (Surr) failed the surrogate recovery criteria low for SB-62-14-GW-051916 (240-65149-13). Refer to the QC report for details.

Sample TW-10-02-GW-051816 (240-65149-1)[4X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) 8270C: Six surrogates are used for this analysis. The laboratory's SOP allows one acid and/or one base surrogate to be outside acceptance criteria without performing re-extraction/re-analysis. The following sample contained an allowable number of surrogate compounds outside limits: SB-62-14-GW-051916 (240-65149-13). These results have been reported and qualified.

Method(s) 8270C: The following sample was diluted due to the nature of the sample matrix: TW-10-02-GW-051816 (240-65149-1). Elevated reporting limits (RLs) are provided.

Method(s) 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with analytical batch 240-231631.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

POLYCHLORINATED BIPHENYLS (PCBS)

Samples TW-10-02-GW-051816 (240-65149-1), MWW10-SEN01-GW-051816 (240-65149-2), MWM2-04-GW-051816 (240-65149-6), TW-03-01-GW-051916 (240-65149-8), MWM16-19-GW-051916 (240-65149-11), MWM10-09-GW-051916 (240-65149-12) and SB-62-14-GW-051916 (240-65149-13) were analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA SW-846 Method 8082. The samples were prepared on 05/24/2016 and analyzed on 05/26/2016 and 05/27/2016.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required. All of the samples in this data set analyzed for PCBs were subjected to the sulfuric acid clean-up procedure before instrumental analysis, per EPA Method 3665A.

DCB Decachlorobiphenyl and Tetrachloro-m-xylene failed the surrogate recovery criteria low for SB-62-14-GW-051916 (240-65149-13). Refer to the QC report for details.

Method(s) 8082: The following sample required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: TW-03-01-GW-051916 (240-65149-8) and SB-62-14-GW-051916 (240-65149-13). Reagents: 2540200,2103101 and 2283705

Case Narrative

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Job ID: 240-65149-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

Method(s) 8082: The following sample appears to contain polychlorinated biphenyls (PCBs); however, due to weathering or other environmental processes, the PCBs in the sample do not closely match any of the laboratory's Aroclor standards used for instrument calibration: SB-62-14-GW-051916 (240-65149-13). The sample has been quantified and reported as a mixture of Aroclors. Due to the poor match with the Aroclor standard(s), there is increased qualitative and quantitative uncertainty associated with this result.

Method(s) 8082: Surrogate recovery for the following sample was outside of acceptance limits: SB-62-14-GW-051916 (240-65149-13). There was insufficient sample to perform a re-extraction; therefore, the data have been reported.

Method(s) 8082: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: TW-10-02-GW-051816 (240-65149-1), MWM2-04-GW-051816 (240-65149-6) and MWM16-19-GW-051916 (240-65149-11).
Reagents: 2540200,2103101 and 2283705

Method(s) 8082: The following sample appears to contain polychlorinated biphenyls (PCBs); however, due to weathering or other environmental processes, the PCBs in the sample do not closely match any of the laboratory's Aroclor standards used for instrument calibration: MWM16-19-GW-051916 (240-65149-11). The sample has been quantified and reported as Aroclor 1242. Due to the poor match with the Aroclor standard(s), there is increased qualitative and quantitative uncertainty associated with this result.

Method(s) 3520C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 240-231601.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL RECOVERABLE METALS (ICPMS)

Samples TW-10-02-GW-051816 (240-65149-1), MWW10-SEN01-GW-051816 (240-65149-2), MWM2-04-GW-051816 (240-65149-6), TW-03-01-GW-051916 (240-65149-8), MWM16-19-GW-051916 (240-65149-11), MWM10-09-GW-051916 (240-65149-12) and SB-62-14-GW-051916 (240-65149-13) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 05/24/2016 and analyzed on 05/30/2016.

Barium was detected in method blank MB 240-231668/1-A at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Beryllium and Nickel were detected in method blank MB 240-231668/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Method(s) 6020: Some requested practical quantitation limits (PQLs) on the following samples fall below the laboratory's verified standard quantitation limit: TW-10-02-GW-051816 (240-65149-1), MWW10-SEN01-GW-051816 (240-65149-2), MWM2-04-GW-051816 (240-65149-6), TW-03-01-GW-051916 (240-65149-8), MWM16-19-GW-051916 (240-65149-11), MWM10-09-GW-051916 (240-65149-12) and SB-62-14-GW-051916 (240-65149-13). The continuing calibration blanks and method blanks may not support the lower PQL.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY

Samples TW-10-02-GW-051816 (240-65149-1), MWW10-SEN01-GW-051816 (240-65149-2), MWM2-04-GW-051816 (240-65149-6), TW-03-01-GW-051916 (240-65149-8), MWM16-19-GW-051916 (240-65149-11), MWM10-09-GW-051916 (240-65149-12) and SB-62-14-GW-051916 (240-65149-13) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 05/24/2016 and analyzed on 05/25/2016.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Method Summary

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CAN
8260B SIM	Volatile Organic Compounds (GC/MS)	SW846	TAL CAN
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL CAN
8082	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL CAN
6020	Metals (ICP/MS)	SW846	TAL CAN
7470A	Mercury (CVAA)	SW846	TAL CAN

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Sample Summary

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-65149-1	TW-10-02-GW-051816	Water	05/18/16 11:50	05/21/16 09:40
240-65149-2	MWW10-SEN01-GW-051816	Water	05/18/16 13:35	05/21/16 09:40
240-65149-3	MWW10-SEN03-GW-051816	Water	05/18/16 14:30	05/21/16 09:40
240-65149-4	MWW10-SEN04-GW-051816	Water	05/18/16 15:35	05/21/16 09:40
240-65149-5	MWW10-04-GW-051816	Water	05/18/16 17:50	05/21/16 09:40
240-65149-6	MWM2-04-GW-051816	Water	05/18/16 19:25	05/21/16 09:40
240-65149-7	MWW5-01-GW-051916	Water	05/19/16 09:15	05/21/16 09:40
240-65149-8	TW-03-01-GW-051916	Water	05/19/16 10:30	05/21/16 09:40
240-65149-9	MWF12-01-GW-051916	Water	05/19/16 11:45	05/21/16 09:40
240-65149-10	MWF7-01-GW-051916	Water	05/19/16 12:50	05/21/16 09:40
240-65149-11	MWM16-19-GW-051916	Water	05/19/16 14:30	05/21/16 09:40
240-65149-12	MWM10-09-GW-051916	Water	05/19/16 17:10	05/21/16 09:40
240-65149-13	SB-62-14-GW-051916	Water	05/19/16 18:00	05/21/16 09:40
240-65149-14	DUP-01-GW-051916	Water	05/19/16 00:00	05/21/16 09:40
240-65149-15	TRIP BLANK	Water	05/18/16 00:00	05/21/16 09:40

TestAmerica Canton

Detection Summary

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Client Sample ID: TW-10-02-GW-051816

Lab Sample ID: 240-65149-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
1,4-Dioxane	62		2.0	0.24	ug/L	1			8260B SIM	Total/NA
1,1-Dichloroethane	2.4		1.0	0.30	ug/L	1			8260B	Total/NA
Acetone	25		25	0.94	ug/L	1			8260B	Total/NA
Benzene	0.56	J	1.0	0.35	ug/L	1			8260B	Total/NA
Chloroethane	15		1.0	0.32	ug/L	1			8260B	Total/NA
cis-1,2-Dichloroethene	0.36	J	1.0	0.26	ug/L	1			8260B	Total/NA
Ethylbenzene	2.4		1.0	0.25	ug/L	1			8260B	Total/NA
Isopropylbenzene	0.46	J	5.0	0.35	ug/L	1			8260B	Total/NA
2-Butanone (MEK)	0.93	J	25	0.53	ug/L	1			8260B	Total/NA
4-Methyl-2-pentanone (MIBK)	3.9	J	50	0.99	ug/L	1			8260B	Total/NA
Toluene	3.4		1.0	0.23	ug/L	1			8260B	Total/NA
Trichloroethene	0.24	J	1.0	0.22	ug/L	1			8260B	Total/NA
Xylenes, Total	14		2.0	0.52	ug/L	1			8260B	Total/NA
Fluorene	1.1	J	19	0.13	ug/L	4			8270C	Total/NA
Naphthalene	3.5	J	19	0.16	ug/L	4			8270C	Total/NA
Arsenic	71		2.0	0.49	ug/L	1			6020	Total Recoverable
Barium	180	B	1.0	1.1	ug/L	1			6020	Total Recoverable
Beryllium	0.11	J B	1.0	0.053	ug/L	1			6020	Total Recoverable
Chromium	0.71	J	2.0	0.60	ug/L	1			6020	Total Recoverable
Cobalt	7.5		1.0	0.021	ug/L	1			6020	Total Recoverable
Manganese	490		1.0	1.1	ug/L	1			6020	Total Recoverable
Nickel	18	B	2.0	0.23	ug/L	1			6020	Total Recoverable
Selenium	0.50	J	2.0	0.25	ug/L	1			6020	Total Recoverable
Vanadium	1.5	J	4.0	0.23	ug/L	1			6020	Total Recoverable

Client Sample ID: MWW10-SEN01-GW-051816

Lab Sample ID: 240-65149-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Acetone	17	J	25	0.94	ug/L	1			8260B	Total/NA
Chloroethane	1.8		1.0	0.32	ug/L	1			8260B	Total/NA
4-Methyl-2-pentanone (MIBK)	3.5	J	50	0.99	ug/L	1			8260B	Total/NA
Di-n-butyl phthalate	0.40	J B	4.8	0.38	ug/L	1			8270C	Total/NA
Fluorene	0.25	J	4.8	0.033	ug/L	1			8270C	Total/NA
Arsenic	12		2.0	0.49	ug/L	1			6020	Total Recoverable
Barium	75	B	1.0	1.1	ug/L	1			6020	Total Recoverable
Beryllium	0.12	J B	1.0	0.053	ug/L	1			6020	Total Recoverable
Chromium	1.5	J	2.0	0.60	ug/L	1			6020	Total Recoverable
Cobalt	1.4		1.0	0.021	ug/L	1			6020	Total Recoverable
Manganese	780		1.0	1.1	ug/L	1			6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Client Sample ID: MWW10-SEN01-GW-051816 (Continued)

Lab Sample ID: 240-65149-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Nickel	42	B	2.0	0.23	ug/L	1		6020	Total Recoverable
Selenium	0.29	J	2.0	0.25	ug/L	1		6020	Total Recoverable
Vanadium	0.73	J	4.0	0.23	ug/L	1		6020	Total Recoverable

Client Sample ID: MWW10-SEN03-GW-051816

Lab Sample ID: 240-65149-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	19	J	25	0.94	ug/L	1		8260B	Total/NA
Benzene	0.77	J	1.0	0.35	ug/L	1		8260B	Total/NA
Cyclohexane	0.87	J	1.0	0.45	ug/L	1		8260B	Total/NA
2-Butanone (MEK)	1.8	J	25	0.53	ug/L	1		8260B	Total/NA
4-Methyl-2-pentanone (MIBK)	3.1	J	50	0.99	ug/L	1		8260B	Total/NA
Methylcyclohexane	1.1		1.0	0.43	ug/L	1		8260B	Total/NA

Client Sample ID: MWW10-SEN04-GW-051816

Lab Sample ID: 240-65149-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	25		25	0.94	ug/L	1		8260B	Total/NA
2-Butanone (MEK)	0.57	J	25	0.53	ug/L	1		8260B	Total/NA
4-Methyl-2-pentanone (MIBK)	2.9	J	50	0.99	ug/L	1		8260B	Total/NA

Client Sample ID: MWW10-04-GW-051816

Lab Sample ID: 240-65149-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	13	J	25	0.94	ug/L	1		8260B	Total/NA
4-Methyl-2-pentanone (MIBK)	3.9	J	50	0.99	ug/L	1		8260B	Total/NA

Client Sample ID: MWM2-04-GW-051816

Lab Sample ID: 240-65149-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	0.67	J	2.0	0.24	ug/L	1		8260B SIM	Total/NA
1,1,1-Trichloroethane	17		1.0	0.44	ug/L	1		8260B	Total/NA
1,1-Dichloroethane	11		1.0	0.30	ug/L	1		8260B	Total/NA
1,1-Dichloroethene	2.2		1.0	0.45	ug/L	1		8260B	Total/NA
Acetone	14	J	25	0.94	ug/L	1		8260B	Total/NA
cis-1,2-Dichloroethene	6.4		1.0	0.26	ug/L	1		8260B	Total/NA
4-Methyl-2-pentanone (MIBK)	3.5	J	50	0.99	ug/L	1		8260B	Total/NA
Trichloroethene	0.68	J	1.0	0.22	ug/L	1		8260B	Total/NA
Bis(2-ethylhexyl) phthalate	1.6	J B	5.2	1.6	ug/L	1		8270C	Total/NA
Di-n-butyl phthalate	1.0	J B	5.2	0.41	ug/L	1		8270C	Total/NA
Antimony	0.46	J	2.0	0.16	ug/L	1		6020	Total Recoverable
Arsenic	1.1	J	2.0	0.49	ug/L	1		6020	Total Recoverable
Barium	30	B	1.0	1.1	ug/L	1		6020	Total Recoverable
Beryllium	0.10	J B	1.0	0.053	ug/L	1		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Client Sample ID: MWM2-04-GW-051816 (Continued)

Lab Sample ID: 240-65149-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cadmium	0.37	J	0.50	0.061	ug/L	1		6020	Total Recoverable
Cobalt	1.7		1.0	0.021	ug/L	1		6020	Total Recoverable
Copper	4.5		2.0	0.75	ug/L	1		6020	Total Recoverable
Lead	1.6		1.0	0.11	ug/L	1		6020	Total Recoverable
Manganese	92		1.0	1.1	ug/L	1		6020	Total Recoverable
Nickel	16	B	2.0	0.23	ug/L	1		6020	Total Recoverable
Selenium	5.0		2.0	0.25	ug/L	1		6020	Total Recoverable
Vanadium	2.6	J	4.0	0.23	ug/L	1		6020	Total Recoverable
Zinc	17		10	7.3	ug/L	1		6020	Total Recoverable

Client Sample ID: MWW5-01-GW-051916

Lab Sample ID: 240-65149-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	15	J	25	0.94	ug/L	1		8260B	Total/NA
4-Methyl-2-pentanone (MIBK)	3.6	J	50	0.99	ug/L	1		8260B	Total/NA

Client Sample ID: TW-03-01-GW-051916

Lab Sample ID: 240-65149-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	16	J	25	0.94	ug/L	1		8260B	Total/NA
4-Methyl-2-pentanone (MIBK)	2.6	J	50	0.99	ug/L	1		8260B	Total/NA
2-Methylnaphthalene	2.5	J	4.8	0.036	ug/L	1		8270C	Total/NA
Di-n-butyl phthalate	0.80	J B	4.8	0.38	ug/L	1		8270C	Total/NA
Fluorene	1.1	J	4.8	0.033	ug/L	1		8270C	Total/NA
Naphthalene	0.81	J	4.8	0.041	ug/L	1		8270C	Total/NA
Phenanthrene	1.8	J	1.9	0.030	ug/L	1		8270C	Total/NA
Antimony	0.21	J	2.0	0.16	ug/L	1		6020	Total Recoverable
Arsenic	1.9	J	2.0	0.49	ug/L	1		6020	Total Recoverable
Barium	160	B	1.0	1.1	ug/L	1		6020	Total Recoverable
Beryllium	0.21	J B	1.0	0.053	ug/L	1		6020	Total Recoverable
Chromium	9.6		2.0	0.60	ug/L	1		6020	Total Recoverable
Cobalt	2.7		1.0	0.021	ug/L	1		6020	Total Recoverable
Copper	8.1		2.0	0.75	ug/L	1		6020	Total Recoverable
Lead	0.78	J	1.0	0.11	ug/L	1		6020	Total Recoverable
Manganese	330		1.0	1.1	ug/L	1		6020	Total Recoverable
Nickel	56	B	2.0	0.23	ug/L	1		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Client Sample ID: TW-03-01-GW-051916 (Continued)

Lab Sample ID: 240-65149-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Selenium	0.42	J	2.0	0.25	ug/L	1			6020	Total Recoverable
Vanadium	1.8	J	4.0	0.23	ug/L	1			6020	Total Recoverable
Zinc	9.0	J	10	7.3	ug/L	1			6020	Total Recoverable

Client Sample ID: MWF12-01-GW-051916

Lab Sample ID: 240-65149-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
1,4-Dioxane	9.3		2.0	0.24	ug/L	1			8260B SIM	Total/NA

Client Sample ID: MWF7-01-GW-051916

Lab Sample ID: 240-65149-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
1,4-Dioxane	22		2.0	0.24	ug/L	1			8260B SIM	Total/NA

Client Sample ID: MWM16-19-GW-051916

Lab Sample ID: 240-65149-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
1,4-Dioxane	1.3	J	2.0	0.24	ug/L	1			8260B SIM	Total/NA
1,1-Dichloroethane	0.54	J	1.0	0.30	ug/L	1			8260B	Total/NA
Acetone	15	J	25	0.94	ug/L	1			8260B	Total/NA
cis-1,2-Dichloroethene	0.54	J	1.0	0.26	ug/L	1			8260B	Total/NA
4-Methyl-2-pentanone (MIBK)	3.8	J	50	0.99	ug/L	1			8260B	Total/NA
Vinyl chloride	1.8		1.0	0.29	ug/L	1			8260B	Total/NA
1,1'-Biphenyl	1.3		1.0	0.12	ug/L	1			8270C	Total/NA
2-Methylnaphthalene	0.33	J	5.0	0.037	ug/L	1			8270C	Total/NA
Anthracene	4.5	J	5.0	0.031	ug/L	1			8270C	Total/NA
Bis(2-ethylhexyl) phthalate	2.8	J B	5.0	1.5	ug/L	1			8270C	Total/NA
Fluoranthene	1.5		1.0	0.027	ug/L	1			8270C	Total/NA
Fluorene	6.6		5.0	0.034	ug/L	1			8270C	Total/NA
Phenanthrene	19		2.0	0.031	ug/L	1			8270C	Total/NA
Pyrene	2.5	J	5.0	0.028	ug/L	1			8270C	Total/NA
Aroclor-1242	0.077	J p	0.20	0.060	ug/L	1			8082	Total/NA
Arsenic	9.4		2.0	0.49	ug/L	1			6020	Total Recoverable
Barium	140	B	1.0	1.1	ug/L	1			6020	Total Recoverable
Beryllium	0.11	J B	1.0	0.053	ug/L	1			6020	Total Recoverable
Chromium	1.0	J	2.0	0.60	ug/L	1			6020	Total Recoverable
Cobalt	0.36	J	1.0	0.021	ug/L	1			6020	Total Recoverable
Lead	0.95	J	1.0	0.11	ug/L	1			6020	Total Recoverable
Manganese	170		1.0	1.1	ug/L	1			6020	Total Recoverable
Nickel	3.2	B	2.0	0.23	ug/L	1			6020	Total Recoverable
Vanadium	1.1	J	4.0	0.23	ug/L	1			6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Client Sample ID: MWM10-09-GW-051916

Lab Sample ID: 240-65149-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Acetone	18	J	25	0.94	ug/L	1			8260B	Total/NA
2-Butanone (MEK)	0.94	J	25	0.53	ug/L	1			8260B	Total/NA
4-Methyl-2-pentanone (MIBK)	2.4	J	50	0.99	ug/L	1			8260B	Total/NA
Bis(2-ethylhexyl) phthalate	1.8	J B	4.8	1.5	ug/L	1			8270C	Total/NA
Di-n-butyl phthalate	0.81	J B	4.8	0.38	ug/L	1			8270C	Total/NA
Antimony	0.44	J	2.0	0.16	ug/L	1			6020	Total Recoverable
Arsenic	1.2	J	2.0	0.49	ug/L	1			6020	Total Recoverable
Barium	35	B	1.0	1.1	ug/L	1			6020	Total Recoverable
Beryllium	0.081	J B	1.0	0.053	ug/L	1			6020	Total Recoverable
Cadmium	0.13	J	0.50	0.061	ug/L	1			6020	Total Recoverable
Cobalt	0.90	J	1.0	0.021	ug/L	1			6020	Total Recoverable
Copper	8.9		2.0	0.75	ug/L	1			6020	Total Recoverable
Lead	1.4		1.0	0.11	ug/L	1			6020	Total Recoverable
Manganese	380		1.0	1.1	ug/L	1			6020	Total Recoverable
Nickel	5.0	B	2.0	0.23	ug/L	1			6020	Total Recoverable
Selenium	0.89	J	2.0	0.25	ug/L	1			6020	Total Recoverable
Vanadium	0.33	J	4.0	0.23	ug/L	1			6020	Total Recoverable
Zinc	320		10	7.3	ug/L	1			6020	Total Recoverable

Client Sample ID: SB-62-14-GW-051916

Lab Sample ID: 240-65149-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
1,2-Dichlorobenzene	0.84	J	1.0	0.25	ug/L	1			8260B	Total/NA
Acetone	20	J	25	0.94	ug/L	1			8260B	Total/NA
Benzene	3.7		1.0	0.35	ug/L	1			8260B	Total/NA
cis-1,2-Dichloroethene	0.33	J	1.0	0.26	ug/L	1			8260B	Total/NA
Cyclohexane	0.76	J	1.0	0.45	ug/L	1			8260B	Total/NA
Ethylbenzene	0.85	J	1.0	0.25	ug/L	1			8260B	Total/NA
Isopropylbenzene	0.49	J	5.0	0.35	ug/L	1			8260B	Total/NA
2-Butanone (MEK)	1.8	J	25	0.53	ug/L	1			8260B	Total/NA
4-Methyl-2-pentanone (MIBK)	3.9	J	50	0.99	ug/L	1			8260B	Total/NA
Toluene	0.93	J	1.0	0.23	ug/L	1			8260B	Total/NA
Xylenes, Total	2.1		2.0	0.52	ug/L	1			8260B	Total/NA
Methylcyclohexane	1.0		1.0	0.43	ug/L	1			8260B	Total/NA
2-Methylnaphthalene	1.4	J	4.8	0.036	ug/L	1			8270C	Total/NA
Anthracene	0.24	J	4.8	0.030	ug/L	1			8270C	Total/NA
Benzo[a]anthracene	0.31	J	0.96	0.057	ug/L	1			8270C	Total/NA
Benzo[a]pyrene	0.34	J	0.96	0.029	ug/L	1			8270C	Total/NA
Benzo[b]fluoranthene	0.55	J	0.96	0.057	ug/L	1			8270C	Total/NA
Bis(2-ethylhexyl) phthalate	2.4	J B	4.8	1.5	ug/L	1			8270C	Total/NA
Chrysene	0.39	J	0.96	0.034	ug/L	1			8270C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Client Sample ID: SB-62-14-GW-051916 (Continued)

Lab Sample ID: 240-65149-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Di-n-butyl phthalate	0.89	J B	4.8	0.38	ug/L	1			8270C	Total/NA
Fluoranthene	0.76	J	0.96	0.026	ug/L	1			8270C	Total/NA
Fluorene	0.24	J	4.8	0.033	ug/L	1			8270C	Total/NA
Naphthalene	1.3	J	4.8	0.041	ug/L	1			8270C	Total/NA
Phenanthrene	0.91	J	1.9	0.030	ug/L	1			8270C	Total/NA
Pyrene	0.86	J	4.8	0.027	ug/L	1			8270C	Total/NA
Aroclor-1248	0.28		0.19	0.048	ug/L	1			8082	Total/NA
Antimony	4.4		2.0	0.16	ug/L	1			6020	Total Recoverable
Arsenic	71		2.0	0.49	ug/L	1			6020	Total Recoverable
Barium	1600	B	1.0	1.1	ug/L	1			6020	Total Recoverable
Beryllium	1.9	B	1.0	0.053	ug/L	1			6020	Total Recoverable
Cadmium	1.7		0.50	0.061	ug/L	1			6020	Total Recoverable
Chromium	100		2.0	0.60	ug/L	1			6020	Total Recoverable
Cobalt	22		1.0	0.021	ug/L	1			6020	Total Recoverable
Copper	150		2.0	0.75	ug/L	1			6020	Total Recoverable
Lead	360		1.0	0.11	ug/L	1			6020	Total Recoverable
Manganese	3200		1.0	1.1	ug/L	1			6020	Total Recoverable
Nickel	85	B	2.0	0.23	ug/L	1			6020	Total Recoverable
Selenium	8.3		2.0	0.25	ug/L	1			6020	Total Recoverable
Silver	0.44		0.20	0.020	ug/L	1			6020	Total Recoverable
Thallium	0.66	J	1.0	0.074	ug/L	1			6020	Total Recoverable
Vanadium	94		4.0	0.23	ug/L	1			6020	Total Recoverable
Zinc	270		10	7.3	ug/L	1			6020	Total Recoverable
Mercury	0.48		0.20	0.090	ug/L	1			7470A	Total/NA

Client Sample ID: DUP-01-GW-051916

Lab Sample ID: 240-65149-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
1,4-Dioxane	29		2.0	0.24	ug/L	1			8260B SIM	Total/NA

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-65149-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Acetone	3.3	J	25	0.94	ug/L	1			8260B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Client Sample ID: TW-10-02-GW-051816

Lab Sample ID: 240-65149-1

Date Collected: 05/18/16 11:50

Matrix: Water

Date Received: 05/21/16 09:40

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	62		2.0	0.24	ug/L			05/26/16 20:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		74 - 120					05/26/16 20:10	1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.44	ug/L			05/27/16 18:36	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.22	ug/L			05/27/16 18:36	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.45	ug/L			05/27/16 18:36	1
1,1,2-Trichloroethane	1.0	U	1.0	0.24	ug/L			05/27/16 18:36	1
1,1-Dichloroethane	2.4		1.0	0.30	ug/L			05/27/16 18:36	1
1,1-Dichloroethene	1.0	U	1.0	0.45	ug/L			05/27/16 18:36	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.32	ug/L			05/27/16 18:36	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.82	ug/L			05/27/16 18:36	1
1,2-Dichlorobenzene	1.0	U	1.0	0.25	ug/L			05/27/16 18:36	1
1,2-Dichloroethane	1.0	U	1.0	0.23	ug/L			05/27/16 18:36	1
1,2-Dichloropropane	1.0	U	1.0	0.25	ug/L			05/27/16 18:36	1
1,3-Dichlorobenzene	1.0	U	1.0	0.19	ug/L			05/27/16 18:36	1
1,4-Dichlorobenzene	1.0	U	1.0	0.27	ug/L			05/27/16 18:36	1
2-Hexanone	50	U	50	0.48	ug/L			05/27/16 18:36	1
Acetone	25		25	0.94	ug/L			05/27/16 18:36	1
Benzene	0.56	J	1.0	0.35	ug/L			05/27/16 18:36	1
Bromoform	1.0	U	1.0	0.56	ug/L			05/27/16 18:36	1
Bromomethane	1.0	U	1.0	0.44	ug/L			05/27/16 18:36	1
Carbon disulfide	5.0	U	5.0	0.38	ug/L			05/27/16 18:36	1
Carbon tetrachloride	1.0	U	1.0	0.43	ug/L			05/27/16 18:36	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			05/27/16 18:36	1
Chloroethane	15		1.0	0.32	ug/L			05/27/16 18:36	1
Chloroform	1.0	U	1.0	0.25	ug/L			05/27/16 18:36	1
Chloromethane	1.0	U	1.0	0.44	ug/L			05/27/16 18:36	1
cis-1,2-Dichloroethene	0.36	J	1.0	0.26	ug/L			05/27/16 18:36	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.46	ug/L			05/27/16 18:36	1
Cyclohexane	1.0	U	1.0	0.45	ug/L			05/27/16 18:36	1
Bromodichloromethane	1.0	U	1.0	0.29	ug/L			05/27/16 18:36	1
Dichlorodifluoromethane	1.0	U	1.0	0.32	ug/L			05/27/16 18:36	1
Ethylbenzene	2.4		1.0	0.25	ug/L			05/27/16 18:36	1
1,2-Dibromoethane	1.0	U	1.0	0.32	ug/L			05/27/16 18:36	1
Isopropylbenzene	0.46	J	5.0	0.35	ug/L			05/27/16 18:36	1
Methyl acetate	10	U	10	2.3	ug/L			05/27/16 18:36	1
2-Butanone (MEK)	0.93	J	25	0.53	ug/L			05/27/16 18:36	1
4-Methyl-2-pentanone (MIBK)	3.9	J	50	0.99	ug/L			05/27/16 18:36	1
Methyl tert-butyl ether	5.0	U	5.0	0.20	ug/L			05/27/16 18:36	1
Methylene Chloride	5.0	U	5.0	0.33	ug/L			05/27/16 18:36	1
Styrene	1.0	U	1.0	0.45	ug/L			05/27/16 18:36	1
Tetrachloroethene	1.0	U	1.0	0.31	ug/L			05/27/16 18:36	1
Toluene	3.4		1.0	0.23	ug/L			05/27/16 18:36	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			05/27/16 18:36	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.56	ug/L			05/27/16 18:36	1
Trichloroethene	0.24	J	1.0	0.22	ug/L			05/27/16 18:36	1

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Client Sample ID: TW-10-02-GW-051816

Lab Sample ID: 240-65149-1

Date Collected: 05/18/16 11:50

Matrix: Water

Date Received: 05/21/16 09:40

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	1.0	U	1.0	0.49	ug/L			05/27/16 18:36	1
Vinyl chloride	1.0	U	1.0	0.29	ug/L			05/27/16 18:36	1
Xylenes, Total	14		2.0	0.52	ug/L			05/27/16 18:36	1
Methylcyclohexane	1.0	U	1.0	0.43	ug/L			05/27/16 18:36	1
Dibromochloromethane	1.0	U	1.0	0.43	ug/L			05/27/16 18:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		78 - 125		05/27/16 18:36	1
4-Bromofluorobenzene (Surr)	88		61 - 120		05/27/16 18:36	1
Toluene-d8 (Surr)	82		80 - 120		05/27/16 18:36	1
Dibromofluoromethane (Surr)	91		79 - 120		05/27/16 18:36	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	3.7	U	3.7	0.46	ug/L		05/24/16 09:07	06/01/16 10:12	4
2,2'-oxybis[1-chloropropane]	3.7	U	3.7	0.68	ug/L		05/24/16 09:07	06/01/16 10:12	4
2,4,5-Trichlorophenol	19	U	19	1.4	ug/L		05/24/16 09:07	06/01/16 10:12	4
2,4,6-Trichlorophenol	15	U	15	0.97	ug/L		05/24/16 09:07	06/01/16 10:12	4
2,4-Dichlorophenol	37	U	37	1.1	ug/L		05/24/16 09:07	06/01/16 10:12	4
2,4-Dimethylphenol	19	U	19	1.2	ug/L		05/24/16 09:07	06/01/16 10:12	4
2,4-Dinitrophenol	74	U	74	23	ug/L		05/24/16 09:07	06/01/16 10:12	4
2,4-Dinitrotoluene	19	U	19	0.94	ug/L		05/24/16 09:07	06/01/16 10:12	4
2,6-Dinitrotoluene	19	U	19	0.87	ug/L		05/24/16 09:07	06/01/16 10:12	4
2-Chloronaphthalene	19	U	19	0.43	ug/L		05/24/16 09:07	06/01/16 10:12	4
2-Chlorophenol	19	U	19	0.49	ug/L		05/24/16 09:07	06/01/16 10:12	4
2-Methylnaphthalene	19	U	19	0.14	ug/L		05/24/16 09:07	06/01/16 10:12	4
2-Methylphenol	19	U	19	0.70	ug/L		05/24/16 09:07	06/01/16 10:12	4
2-Nitroaniline	74	U	74	1.1	ug/L		05/24/16 09:07	06/01/16 10:12	4
2-Nitrophenol	19	U	19	0.77	ug/L		05/24/16 09:07	06/01/16 10:12	4
3,3'-Dichlorobenzidine	19	U	19	1.3	ug/L		05/24/16 09:07	06/01/16 10:12	4
3-Nitroaniline	74	U	74	0.98	ug/L		05/24/16 09:07	06/01/16 10:12	4
4,6-Dinitro-2-methylphenol	74	U	74	1.9	ug/L		05/24/16 09:07	06/01/16 10:12	4
4-Bromophenyl phenyl ether	19	U	19	1.3	ug/L		05/24/16 09:07	06/01/16 10:12	4
4-Chloro-3-methylphenol	19	U	19	1.0	ug/L		05/24/16 09:07	06/01/16 10:12	4
4-Chloroaniline	7.4	U	7.4	0.55	ug/L		05/24/16 09:07	06/01/16 10:12	4
4-Chlorophenyl phenyl ether	19	U	19	1.1	ug/L		05/24/16 09:07	06/01/16 10:12	4
4-Nitroaniline	74	U	74	0.89	ug/L		05/24/16 09:07	06/01/16 10:12	4
4-Nitrophenol	74	U	74	2.2	ug/L		05/24/16 09:07	06/01/16 10:12	4
Acenaphthene	19	U	19	0.16	ug/L		05/24/16 09:07	06/01/16 10:12	4
Acenaphthylene	19	U	19	0.074	ug/L		05/24/16 09:07	06/01/16 10:12	4
Acetophenone	3.7	U	3.7	0.52	ug/L		05/24/16 09:07	06/01/16 10:12	4
Anthracene	19	U	19	0.11	ug/L		05/24/16 09:07	06/01/16 10:12	4
Atrazine	3.7	U	3.7	0.43	ug/L		05/24/16 09:07	06/01/16 10:12	4
Benzaldehyde	3.7	U	3.7	1.1	ug/L		05/24/16 09:07	06/01/16 10:12	4
Benzo[a]anthracene	3.7	U	3.7	0.22	ug/L		05/24/16 09:07	06/01/16 10:12	4
Benzo[a]pyrene	3.7	U	3.7	0.11	ug/L		05/24/16 09:07	06/01/16 10:12	4
Benzo[b]fluoranthene	3.7	U	3.7	0.22	ug/L		05/24/16 09:07	06/01/16 10:12	4
Benzo[g,h,i]perylene	3.7	U	3.7	0.19	ug/L		05/24/16 09:07	06/01/16 10:12	4
Benzo[k]fluoranthene	3.7	U	3.7	0.18	ug/L		05/24/16 09:07	06/01/16 10:12	4
Bis(2-chloroethoxy)methane	19	U	19	0.14	ug/L		05/24/16 09:07	06/01/16 10:12	4

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Client Sample ID: TW-10-02-GW-051816

Lab Sample ID: 240-65149-1

Date Collected: 05/18/16 11:50

Matrix: Water

Date Received: 05/21/16 09:40

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	3.7	U	3.7	0.70	ug/L		05/24/16 09:07	06/01/16 10:12	4
Bis(2-ethylhexyl) phthalate	19	U	19	5.6	ug/L		05/24/16 09:07	06/01/16 10:12	4
Butyl benzyl phthalate	19	U	19	0.80	ug/L		05/24/16 09:07	06/01/16 10:12	4
Caprolactam	19	U	19	1.4	ug/L		05/24/16 09:07	06/01/16 10:12	4
Carbazole	37	U	37	0.39	ug/L		05/24/16 09:07	06/01/16 10:12	4
Chrysene	3.7	U	3.7	0.13	ug/L		05/24/16 09:07	06/01/16 10:12	4
Dibenz(a,h)anthracene	7.4	U	7.4	0.15	ug/L		05/24/16 09:07	06/01/16 10:12	4
Dibenzofuran	15	U	15	0.51	ug/L		05/24/16 09:07	06/01/16 10:12	4
Diethyl phthalate	19	U	19	0.46	ug/L		05/24/16 09:07	06/01/16 10:12	4
Dimethyl phthalate	19	U	19	0.37	ug/L		05/24/16 09:07	06/01/16 10:12	4
Di-n-butyl phthalate	19	U	19	1.5	ug/L		05/24/16 09:07	06/01/16 10:12	4
Di-n-octyl phthalate	19	U	19	1.4	ug/L		05/24/16 09:07	06/01/16 10:12	4
Fluoranthene	3.7	U	3.7	0.10	ug/L		05/24/16 09:07	06/01/16 10:12	4
Fluorene	1.1	J	19	0.13	ug/L		05/24/16 09:07	06/01/16 10:12	4
Hexachlorobenzene	0.74	U	0.74	0.43	ug/L		05/24/16 09:07	06/01/16 10:12	4
Hexachlorobutadiene	3.7	U	3.7	0.52	ug/L		05/24/16 09:07	06/01/16 10:12	4
Hexachlorocyclopentadiene	19	U	19	9.2	ug/L		05/24/16 09:07	06/01/16 10:12	4
Hexachloroethane	19	U	19	0.81	ug/L		05/24/16 09:07	06/01/16 10:12	4
Indeno[1,2,3-cd]pyrene	7.4	U	7.4	0.18	ug/L		05/24/16 09:07	06/01/16 10:12	4
Isophorone	19	U	19	0.16	ug/L		05/24/16 09:07	06/01/16 10:12	4
Naphthalene	3.5	J	19	0.16	ug/L		05/24/16 09:07	06/01/16 10:12	4
Nitrobenzene	11	U	11	0.43	ug/L		05/24/16 09:07	06/01/16 10:12	4
N-Nitrosodi-n-propylamine	19	U	19	0.59	ug/L		05/24/16 09:07	06/01/16 10:12	4
N-Nitrosodiphenylamine	19	U	19	0.41	ug/L		05/24/16 09:07	06/01/16 10:12	4
Pentachlorophenol	19	U	19	20	ug/L		05/24/16 09:07	06/01/16 10:12	4
Phenol	19	U	19	0.56	ug/L		05/24/16 09:07	06/01/16 10:12	4
Phenanthrene	7.4	U	7.4	0.11	ug/L		05/24/16 09:07	06/01/16 10:12	4
Pyrene	19	U	19	0.10	ug/L		05/24/16 09:07	06/01/16 10:12	4
3 & 4 Methylphenol	19	U	19	1.2	ug/L		05/24/16 09:07	06/01/16 10:12	4

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	58		44 - 120	05/24/16 09:07	06/01/16 10:12	4
2-Fluorophenol (Surr)	51		26 - 120	05/24/16 09:07	06/01/16 10:12	4
2,4,6-Tribromophenol (Surr)	69		36 - 120	05/24/16 09:07	06/01/16 10:12	4
Nitrobenzene-d5 (Surr)	63		44 - 120	05/24/16 09:07	06/01/16 10:12	4
Phenol-d5 (Surr)	60		16 - 120	05/24/16 09:07	06/01/16 10:12	4
Terphenyl-d14 (Surr)	59		43 - 120	05/24/16 09:07	06/01/16 10:12	4

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.21	U	0.21	0.053	ug/L		05/24/16 07:31	05/27/16 12:28	1
Aroclor-1221	0.21	U	0.21	0.096	ug/L		05/24/16 07:31	05/27/16 12:28	1
Aroclor-1232	0.21	U	0.21	0.074	ug/L		05/24/16 07:31	05/27/16 12:28	1
Aroclor-1242	0.21	U	0.21	0.064	ug/L		05/24/16 07:31	05/27/16 12:28	1
Aroclor-1248	0.21	U	0.21	0.053	ug/L		05/24/16 07:31	05/27/16 12:28	1
Aroclor-1254	0.21	U	0.21	0.032	ug/L		05/24/16 07:31	05/27/16 12:28	1
Aroclor-1260	0.21	U	0.21	0.043	ug/L		05/24/16 07:31	05/27/16 12:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	13		10 - 120	05/24/16 07:31	05/27/16 12:28	1

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Client Sample ID: TW-10-02-GW-051816

Lab Sample ID: 240-65149-1

Date Collected: 05/18/16 11:50

Matrix: Water

Date Received: 05/21/16 09:40

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	43		21 - 120	05/24/16 07:31	05/27/16 12:28	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.16	ug/L		05/24/16 11:04	05/30/16 11:59	1
Arsenic	71		2.0	0.49	ug/L		05/24/16 11:04	05/30/16 11:59	1
Barium	180	B	1.0	1.1	ug/L		05/24/16 11:04	05/30/16 11:59	1
Beryllium	0.11	J B	1.0	0.053	ug/L		05/24/16 11:04	05/30/16 11:59	1
Cadmium	0.50	U	0.50	0.061	ug/L		05/24/16 11:04	05/30/16 11:59	1
Chromium	0.71	J	2.0	0.60	ug/L		05/24/16 11:04	05/30/16 11:59	1
Cobalt	7.5		1.0	0.021	ug/L		05/24/16 11:04	05/30/16 11:59	1
Copper	2.0	U	2.0	0.75	ug/L		05/24/16 11:04	05/30/16 11:59	1
Lead	1.0	U	1.0	0.11	ug/L		05/24/16 11:04	05/30/16 11:59	1
Manganese	490		1.0	1.1	ug/L		05/24/16 11:04	05/30/16 11:59	1
Nickel	18	B	2.0	0.23	ug/L		05/24/16 11:04	05/30/16 11:59	1
Selenium	0.50	J	2.0	0.25	ug/L		05/24/16 11:04	05/30/16 11:59	1
Silver	0.20	U	0.20	0.020	ug/L		05/24/16 11:04	05/30/16 11:59	1
Thallium	1.0	U	1.0	0.074	ug/L		05/24/16 11:04	05/30/16 11:59	1
Vanadium	1.5	J	4.0	0.23	ug/L		05/24/16 11:04	05/30/16 11:59	1
Zinc	10	U	10	7.3	ug/L		05/24/16 11:04	05/30/16 11:59	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.090	ug/L		05/24/16 12:00	05/25/16 15:14	1

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Client Sample ID: MWW10-SEN01-GW-051816

Lab Sample ID: 240-65149-2

Date Collected: 05/18/16 13:35

Matrix: Water

Date Received: 05/21/16 09:40

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.44	ug/L			05/27/16 18:58	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.22	ug/L			05/27/16 18:58	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.45	ug/L			05/27/16 18:58	1
1,1,2-Trichloroethane	1.0	U	1.0	0.24	ug/L			05/27/16 18:58	1
1,1-Dichloroethane	1.0	U	1.0	0.30	ug/L			05/27/16 18:58	1
1,1-Dichloroethene	1.0	U	1.0	0.45	ug/L			05/27/16 18:58	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.32	ug/L			05/27/16 18:58	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.82	ug/L			05/27/16 18:58	1
1,2-Dichlorobenzene	1.0	U	1.0	0.25	ug/L			05/27/16 18:58	1
1,2-Dichloroethane	1.0	U	1.0	0.23	ug/L			05/27/16 18:58	1
1,2-Dichloropropane	1.0	U	1.0	0.25	ug/L			05/27/16 18:58	1
1,3-Dichlorobenzene	1.0	U	1.0	0.19	ug/L			05/27/16 18:58	1
1,4-Dichlorobenzene	1.0	U	1.0	0.27	ug/L			05/27/16 18:58	1
2-Hexanone	50	U	50	0.48	ug/L			05/27/16 18:58	1
Acetone	17	J	25	0.94	ug/L			05/27/16 18:58	1
Benzene	1.0	U	1.0	0.35	ug/L			05/27/16 18:58	1
Bromoform	1.0	U	1.0	0.56	ug/L			05/27/16 18:58	1
Bromomethane	1.0	U	1.0	0.44	ug/L			05/27/16 18:58	1
Carbon disulfide	5.0	U	5.0	0.38	ug/L			05/27/16 18:58	1
Carbon tetrachloride	1.0	U	1.0	0.43	ug/L			05/27/16 18:58	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			05/27/16 18:58	1
Chloroethane	1.8		1.0	0.32	ug/L			05/27/16 18:58	1
Chloroform	1.0	U	1.0	0.25	ug/L			05/27/16 18:58	1
Chloromethane	1.0	U	1.0	0.44	ug/L			05/27/16 18:58	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.26	ug/L			05/27/16 18:58	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.46	ug/L			05/27/16 18:58	1
Cyclohexane	1.0	U	1.0	0.45	ug/L			05/27/16 18:58	1
Bromodichloromethane	1.0	U	1.0	0.29	ug/L			05/27/16 18:58	1
Dichlorodifluoromethane	1.0	U	1.0	0.32	ug/L			05/27/16 18:58	1
Ethylbenzene	1.0	U	1.0	0.25	ug/L			05/27/16 18:58	1
1,2-Dibromoethane	1.0	U	1.0	0.32	ug/L			05/27/16 18:58	1
Isopropylbenzene	5.0	U	5.0	0.35	ug/L			05/27/16 18:58	1
Methyl acetate	10	U	10	2.3	ug/L			05/27/16 18:58	1
2-Butanone (MEK)	25	U	25	0.53	ug/L			05/27/16 18:58	1
4-Methyl-2-pentanone (MIBK)	3.5	J	50	0.99	ug/L			05/27/16 18:58	1
Methyl tert-butyl ether	5.0	U	5.0	0.20	ug/L			05/27/16 18:58	1
Methylene Chloride	5.0	U	5.0	0.33	ug/L			05/27/16 18:58	1
Styrene	1.0	U	1.0	0.45	ug/L			05/27/16 18:58	1
Tetrachloroethene	1.0	U	1.0	0.31	ug/L			05/27/16 18:58	1
Toluene	1.0	U	1.0	0.23	ug/L			05/27/16 18:58	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			05/27/16 18:58	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.56	ug/L			05/27/16 18:58	1
Trichloroethene	1.0	U	1.0	0.22	ug/L			05/27/16 18:58	1
Trichlorofluoromethane	1.0	U	1.0	0.49	ug/L			05/27/16 18:58	1
Vinyl chloride	1.0	U	1.0	0.29	ug/L			05/27/16 18:58	1
Xylenes, Total	2.0	U	2.0	0.52	ug/L			05/27/16 18:58	1
Methylcyclohexane	1.0	U	1.0	0.43	ug/L			05/27/16 18:58	1
Dibromochloromethane	1.0	U	1.0	0.43	ug/L			05/27/16 18:58	1

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Client Sample ID: MWW10-SEN01-GW-051816

Lab Sample ID: 240-65149-2

Date Collected: 05/18/16 13:35

Matrix: Water

Date Received: 05/21/16 09:40

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		78 - 125		05/27/16 18:58	1
4-Bromofluorobenzene (Surr)	84		61 - 120		05/27/16 18:58	1
Toluene-d8 (Surr)	87		80 - 120		05/27/16 18:58	1
Dibromofluoromethane (Surr)	87		79 - 120		05/27/16 18:58	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	0.96	U	0.96	0.12	ug/L		05/24/16 09:07	05/31/16 19:35	1
2,2'-oxybis[1-chloropropane]	0.96	U	0.96	0.18	ug/L		05/24/16 09:07	05/31/16 19:35	1
2,4,5-Trichlorophenol	4.8	U	4.8	0.35	ug/L		05/24/16 09:07	05/31/16 19:35	1
2,4,6-Trichlorophenol	3.8	U	3.8	0.25	ug/L		05/24/16 09:07	05/31/16 19:35	1
2,4-Dichlorophenol	9.6	U	9.6	0.28	ug/L		05/24/16 09:07	05/31/16 19:35	1
2,4-Dimethylphenol	4.8	U	4.8	0.30	ug/L		05/24/16 09:07	05/31/16 19:35	1
2,4-Dinitrophenol	19	U	19	5.9	ug/L		05/24/16 09:07	05/31/16 19:35	1
2,4-Dinitrotoluene	4.8	U	4.8	0.25	ug/L		05/24/16 09:07	05/31/16 19:35	1
2,6-Dinitrotoluene	4.8	U	4.8	0.23	ug/L		05/24/16 09:07	05/31/16 19:35	1
2-Chloronaphthalene	4.8	U	4.8	0.11	ug/L		05/24/16 09:07	05/31/16 19:35	1
2-Chlorophenol	4.8	U	4.8	0.13	ug/L		05/24/16 09:07	05/31/16 19:35	1
2-Methylnaphthalene	4.8	U	4.8	0.036	ug/L		05/24/16 09:07	05/31/16 19:35	1
2-Methylphenol	4.8	U	4.8	0.18	ug/L		05/24/16 09:07	05/31/16 19:35	1
2-Nitroaniline	19	U	19	0.30	ug/L		05/24/16 09:07	05/31/16 19:35	1
2-Nitrophenol	4.8	U	4.8	0.20	ug/L		05/24/16 09:07	05/31/16 19:35	1
3,3'-Dichlorobenzidine	4.8	U	4.8	0.34	ug/L		05/24/16 09:07	05/31/16 19:35	1
3-Nitroaniline	19	U	19	0.25	ug/L		05/24/16 09:07	05/31/16 19:35	1
4,6-Dinitro-2-methylphenol	19	U	19	0.50	ug/L		05/24/16 09:07	05/31/16 19:35	1
4-Bromophenyl phenyl ether	4.8	U	4.8	0.33	ug/L		05/24/16 09:07	05/31/16 19:35	1
4-Chloro-3-methylphenol	4.8	U	4.8	0.27	ug/L		05/24/16 09:07	05/31/16 19:35	1
4-Chloroaniline	1.9	U	1.9	0.14	ug/L		05/24/16 09:07	05/31/16 19:35	1
4-Chlorophenyl phenyl ether	4.8	U	4.8	0.28	ug/L		05/24/16 09:07	05/31/16 19:35	1
4-Nitroaniline	19	U	19	0.23	ug/L		05/24/16 09:07	05/31/16 19:35	1
4-Nitrophenol	19	U	19	0.56	ug/L		05/24/16 09:07	05/31/16 19:35	1
Acenaphthene	4.8	U	4.8	0.042	ug/L		05/24/16 09:07	05/31/16 19:35	1
Acenaphthylene	4.8	U	4.8	0.019	ug/L		05/24/16 09:07	05/31/16 19:35	1
Acetophenone	0.96	U	0.96	0.13	ug/L		05/24/16 09:07	05/31/16 19:35	1
Anthracene	4.8	U	4.8	0.030	ug/L		05/24/16 09:07	05/31/16 19:35	1
Atrazine	0.96	U	0.96	0.11	ug/L		05/24/16 09:07	05/31/16 19:35	1
Benzaldehyde	0.96	U	0.96	0.28	ug/L		05/24/16 09:07	05/31/16 19:35	1
Benzo[a]anthracene	0.96	U	0.96	0.057	ug/L		05/24/16 09:07	05/31/16 19:35	1
Benzo[a]pyrene	0.96	U	0.96	0.029	ug/L		05/24/16 09:07	05/31/16 19:35	1
Benzo[b]fluoranthene	0.96	U	0.96	0.057	ug/L		05/24/16 09:07	05/31/16 19:35	1
Benzo[g,h,i]perylene	0.96	U	0.96	0.048	ug/L		05/24/16 09:07	05/31/16 19:35	1
Benzo[k]fluoranthene	0.96	U	0.96	0.046	ug/L		05/24/16 09:07	05/31/16 19:35	1
Bis(2-chloroethoxy)methane	4.8	U	4.8	0.036	ug/L		05/24/16 09:07	05/31/16 19:35	1
Bis(2-chloroethyl)ether	0.96	U	0.96	0.18	ug/L		05/24/16 09:07	05/31/16 19:35	1
Bis(2-ethylhexyl) phthalate	4.8	U	4.8	1.5	ug/L		05/24/16 09:07	05/31/16 19:35	1
Butyl benzyl phthalate	4.8	U	4.8	0.21	ug/L		05/24/16 09:07	05/31/16 19:35	1
Caprolactam	4.8	U	4.8	0.36	ug/L		05/24/16 09:07	05/31/16 19:35	1
Carbazole	9.6	U	9.6	0.10	ug/L		05/24/16 09:07	05/31/16 19:35	1
Chrysene	0.96	U	0.96	0.034	ug/L		05/24/16 09:07	05/31/16 19:35	1
Dibenz(a,h)anthracene	1.9	U	1.9	0.038	ug/L		05/24/16 09:07	05/31/16 19:35	1

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Client Sample ID: MWW10-SEN01-GW-051816

Lab Sample ID: 240-65149-2

Date Collected: 05/18/16 13:35

Matrix: Water

Date Received: 05/21/16 09:40

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibenzofuran	3.8	U	3.8	0.13	ug/L		05/24/16 09:07	05/31/16 19:35	1
Diethyl phthalate	4.8	U	4.8	0.12	ug/L		05/24/16 09:07	05/31/16 19:35	1
Dimethyl phthalate	4.8	U	4.8	0.097	ug/L		05/24/16 09:07	05/31/16 19:35	1
Di-n-butyl phthalate	0.40	J B	4.8	0.38	ug/L		05/24/16 09:07	05/31/16 19:35	1
Di-n-octyl phthalate	4.8	U	4.8	0.35	ug/L		05/24/16 09:07	05/31/16 19:35	1
Fluoranthene	0.96	U	0.96	0.026	ug/L		05/24/16 09:07	05/31/16 19:35	1
Fluorene	0.25	J	4.8	0.033	ug/L		05/24/16 09:07	05/31/16 19:35	1
Hexachlorobenzene	0.19	U	0.19	0.11	ug/L		05/24/16 09:07	05/31/16 19:35	1
Hexachlorobutadiene	0.96	U	0.96	0.14	ug/L		05/24/16 09:07	05/31/16 19:35	1
Hexachlorocyclopentadiene	4.8	U	4.8	2.4	ug/L		05/24/16 09:07	05/31/16 19:35	1
Hexachloroethane	4.8	U	4.8	0.21	ug/L		05/24/16 09:07	05/31/16 19:35	1
Indeno[1,2,3-cd]pyrene	1.9	U	1.9	0.046	ug/L		05/24/16 09:07	05/31/16 19:35	1
Isophorone	4.8	U	4.8	0.040	ug/L		05/24/16 09:07	05/31/16 19:35	1
Naphthalene	4.8	U	4.8	0.041	ug/L		05/24/16 09:07	05/31/16 19:35	1
Nitrobenzene	2.9	U	2.9	0.11	ug/L		05/24/16 09:07	05/31/16 19:35	1
N-Nitrosodi-n-propylamine	4.8	U	4.8	0.15	ug/L		05/24/16 09:07	05/31/16 19:35	1
N-Nitrosodiphenylamine	4.8	U	4.8	0.11	ug/L		05/24/16 09:07	05/31/16 19:35	1
Pentachlorophenol	4.8	U	4.8	5.3	ug/L		05/24/16 09:07	05/31/16 19:35	1
Phenol	4.8	U	4.8	0.14	ug/L		05/24/16 09:07	05/31/16 19:35	1
Phenanthrene	1.9	U	1.9	0.030	ug/L		05/24/16 09:07	05/31/16 19:35	1
Pyrene	4.8	U	4.8	0.027	ug/L		05/24/16 09:07	05/31/16 19:35	1
3 & 4 Methylphenol	4.8	U	4.8	0.32	ug/L		05/24/16 09:07	05/31/16 19:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	57		44 - 120	05/24/16 09:07	05/31/16 19:35	1
2-Fluorophenol (Surr)	68		26 - 120	05/24/16 09:07	05/31/16 19:35	1
2,4,6-Tribromophenol (Surr)	69		36 - 120	05/24/16 09:07	05/31/16 19:35	1
Nitrobenzene-d5 (Surr)	62		44 - 120	05/24/16 09:07	05/31/16 19:35	1
Phenol-d5 (Surr)	50		16 - 120	05/24/16 09:07	05/31/16 19:35	1
Terphenyl-d14 (Surr)	67		43 - 120	05/24/16 09:07	05/31/16 19:35	1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.19	U	0.19	0.048	ug/L		05/24/16 07:31	05/26/16 18:05	1
Aroclor-1221	0.19	U	0.19	0.086	ug/L		05/24/16 07:31	05/26/16 18:05	1
Aroclor-1232	0.19	U	0.19	0.067	ug/L		05/24/16 07:31	05/26/16 18:05	1
Aroclor-1242	0.19	U	0.19	0.057	ug/L		05/24/16 07:31	05/26/16 18:05	1
Aroclor-1248	0.19	U	0.19	0.048	ug/L		05/24/16 07:31	05/26/16 18:05	1
Aroclor-1254	0.19	U	0.19	0.029	ug/L		05/24/16 07:31	05/26/16 18:05	1
Aroclor-1260	0.19	U	0.19	0.038	ug/L		05/24/16 07:31	05/26/16 18:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	17		10 - 120	05/24/16 07:31	05/26/16 18:05	1
Tetrachloro-m-xylene	54		21 - 120	05/24/16 07:31	05/26/16 18:05	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.16	ug/L		05/24/16 11:04	05/30/16 12:04	1
Arsenic	12		2.0	0.49	ug/L		05/24/16 11:04	05/30/16 12:04	1
Barium	75	B	1.0	1.1	ug/L		05/24/16 11:04	05/30/16 12:04	1

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Client Sample ID: MWW10-SEN01-GW-051816

Lab Sample ID: 240-65149-2

Date Collected: 05/18/16 13:35

Matrix: Water

Date Received: 05/21/16 09:40

Method: 6020 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	0.12	J B	1.0	0.053	ug/L		05/24/16 11:04	05/30/16 12:04	1
Cadmium	0.50	U	0.50	0.061	ug/L		05/24/16 11:04	05/30/16 12:04	1
Chromium	1.5	J	2.0	0.60	ug/L		05/24/16 11:04	05/30/16 12:04	1
Cobalt	1.4		1.0	0.021	ug/L		05/24/16 11:04	05/30/16 12:04	1
Copper	2.0	U	2.0	0.75	ug/L		05/24/16 11:04	05/30/16 12:04	1
Lead	1.0	U	1.0	0.11	ug/L		05/24/16 11:04	05/30/16 12:04	1
Manganese	780		1.0	1.1	ug/L		05/24/16 11:04	05/30/16 12:04	1
Nickel	42	B	2.0	0.23	ug/L		05/24/16 11:04	05/30/16 12:04	1
Selenium	0.29	J	2.0	0.25	ug/L		05/24/16 11:04	05/30/16 12:04	1
Silver	0.20	U	0.20	0.020	ug/L		05/24/16 11:04	05/30/16 12:04	1
Thallium	1.0	U	1.0	0.074	ug/L		05/24/16 11:04	05/30/16 12:04	1
Vanadium	0.73	J	4.0	0.23	ug/L		05/24/16 11:04	05/30/16 12:04	1
Zinc	10	U	10	7.3	ug/L		05/24/16 11:04	05/30/16 12:04	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.090	ug/L		05/24/16 12:00	05/25/16 15:16	1

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Client Sample ID: MWW10-SEN03-GW-051816

Lab Sample ID: 240-65149-3

Date Collected: 05/18/16 14:30

Matrix: Water

Date Received: 05/21/16 09:40

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.44	ug/L			05/27/16 19:20	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.22	ug/L			05/27/16 19:20	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.45	ug/L			05/27/16 19:20	1
1,1,2-Trichloroethane	1.0	U	1.0	0.24	ug/L			05/27/16 19:20	1
1,1-Dichloroethane	1.0	U	1.0	0.30	ug/L			05/27/16 19:20	1
1,1-Dichloroethene	1.0	U	1.0	0.45	ug/L			05/27/16 19:20	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.32	ug/L			05/27/16 19:20	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.82	ug/L			05/27/16 19:20	1
1,2-Dichlorobenzene	1.0	U	1.0	0.25	ug/L			05/27/16 19:20	1
1,2-Dichloroethane	1.0	U	1.0	0.23	ug/L			05/27/16 19:20	1
1,2-Dichloropropane	1.0	U	1.0	0.25	ug/L			05/27/16 19:20	1
1,3-Dichlorobenzene	1.0	U	1.0	0.19	ug/L			05/27/16 19:20	1
1,4-Dichlorobenzene	1.0	U	1.0	0.27	ug/L			05/27/16 19:20	1
2-Hexanone	50	U	50	0.48	ug/L			05/27/16 19:20	1
Acetone	19	J	25	0.94	ug/L			05/27/16 19:20	1
Benzene	0.77	J	1.0	0.35	ug/L			05/27/16 19:20	1
Bromoform	1.0	U	1.0	0.56	ug/L			05/27/16 19:20	1
Bromomethane	1.0	U	1.0	0.44	ug/L			05/27/16 19:20	1
Carbon disulfide	5.0	U	5.0	0.38	ug/L			05/27/16 19:20	1
Carbon tetrachloride	1.0	U	1.0	0.43	ug/L			05/27/16 19:20	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			05/27/16 19:20	1
Chloroethane	1.0	U	1.0	0.32	ug/L			05/27/16 19:20	1
Chloroform	1.0	U	1.0	0.25	ug/L			05/27/16 19:20	1
Chloromethane	1.0	U	1.0	0.44	ug/L			05/27/16 19:20	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.26	ug/L			05/27/16 19:20	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.46	ug/L			05/27/16 19:20	1
Cyclohexane	0.87	J	1.0	0.45	ug/L			05/27/16 19:20	1
Bromodichloromethane	1.0	U	1.0	0.29	ug/L			05/27/16 19:20	1
Dichlorodifluoromethane	1.0	U	1.0	0.32	ug/L			05/27/16 19:20	1
Ethylbenzene	1.0	U	1.0	0.25	ug/L			05/27/16 19:20	1
1,2-Dibromoethane	1.0	U	1.0	0.32	ug/L			05/27/16 19:20	1
Isopropylbenzene	5.0	U	5.0	0.35	ug/L			05/27/16 19:20	1
Methyl acetate	10	U	10	2.3	ug/L			05/27/16 19:20	1
2-Butanone (MEK)	1.8	J	25	0.53	ug/L			05/27/16 19:20	1
4-Methyl-2-pentanone (MIBK)	3.1	J	50	0.99	ug/L			05/27/16 19:20	1
Methyl tert-butyl ether	5.0	U	5.0	0.20	ug/L			05/27/16 19:20	1
Methylene Chloride	5.0	U	5.0	0.33	ug/L			05/27/16 19:20	1
Styrene	1.0	U	1.0	0.45	ug/L			05/27/16 19:20	1
Tetrachloroethene	1.0	U	1.0	0.31	ug/L			05/27/16 19:20	1
Toluene	1.0	U	1.0	0.23	ug/L			05/27/16 19:20	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			05/27/16 19:20	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.56	ug/L			05/27/16 19:20	1
Trichloroethene	1.0	U	1.0	0.22	ug/L			05/27/16 19:20	1
Trichlorofluoromethane	1.0	U	1.0	0.49	ug/L			05/27/16 19:20	1
Vinyl chloride	1.0	U	1.0	0.29	ug/L			05/27/16 19:20	1
Xylenes, Total	2.0	U	2.0	0.52	ug/L			05/27/16 19:20	1
Methylcyclohexane	1.1		1.0	0.43	ug/L			05/27/16 19:20	1
Dibromochloromethane	1.0	U	1.0	0.43	ug/L			05/27/16 19:20	1

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Client Sample ID: MWW10-SEN03-GW-051816

Lab Sample ID: 240-65149-3

Date Collected: 05/18/16 14:30

Matrix: Water

Date Received: 05/21/16 09:40

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	89		78 - 125		05/27/16 19:20	1
4-Bromofluorobenzene (Surr)	87		61 - 120		05/27/16 19:20	1
Toluene-d8 (Surr)	88		80 - 120		05/27/16 19:20	1
Dibromofluoromethane (Surr)	84		79 - 120		05/27/16 19:20	1

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Client Sample ID: MWW10-SEN04-GW-051816

Lab Sample ID: 240-65149-4

Date Collected: 05/18/16 15:35

Matrix: Water

Date Received: 05/21/16 09:40

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.44	ug/L			05/27/16 19:43	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.22	ug/L			05/27/16 19:43	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.45	ug/L			05/27/16 19:43	1
1,1,2-Trichloroethane	1.0	U	1.0	0.24	ug/L			05/27/16 19:43	1
1,1-Dichloroethane	1.0	U	1.0	0.30	ug/L			05/27/16 19:43	1
1,1-Dichloroethene	1.0	U	1.0	0.45	ug/L			05/27/16 19:43	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.32	ug/L			05/27/16 19:43	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.82	ug/L			05/27/16 19:43	1
1,2-Dichlorobenzene	1.0	U	1.0	0.25	ug/L			05/27/16 19:43	1
1,2-Dichloroethane	1.0	U	1.0	0.23	ug/L			05/27/16 19:43	1
1,2-Dichloropropane	1.0	U	1.0	0.25	ug/L			05/27/16 19:43	1
1,3-Dichlorobenzene	1.0	U	1.0	0.19	ug/L			05/27/16 19:43	1
1,4-Dichlorobenzene	1.0	U	1.0	0.27	ug/L			05/27/16 19:43	1
2-Hexanone	50	U	50	0.48	ug/L			05/27/16 19:43	1
Acetone	25		25	0.94	ug/L			05/27/16 19:43	1
Benzene	1.0	U	1.0	0.35	ug/L			05/27/16 19:43	1
Bromoform	1.0	U	1.0	0.56	ug/L			05/27/16 19:43	1
Bromomethane	1.0	U	1.0	0.44	ug/L			05/27/16 19:43	1
Carbon disulfide	5.0	U	5.0	0.38	ug/L			05/27/16 19:43	1
Carbon tetrachloride	1.0	U	1.0	0.43	ug/L			05/27/16 19:43	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			05/27/16 19:43	1
Chloroethane	1.0	U	1.0	0.32	ug/L			05/27/16 19:43	1
Chloroform	1.0	U	1.0	0.25	ug/L			05/27/16 19:43	1
Chloromethane	1.0	U	1.0	0.44	ug/L			05/27/16 19:43	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.26	ug/L			05/27/16 19:43	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.46	ug/L			05/27/16 19:43	1
Cyclohexane	1.0	U	1.0	0.45	ug/L			05/27/16 19:43	1
Bromodichloromethane	1.0	U	1.0	0.29	ug/L			05/27/16 19:43	1
Dichlorodifluoromethane	1.0	U	1.0	0.32	ug/L			05/27/16 19:43	1
Ethylbenzene	1.0	U	1.0	0.25	ug/L			05/27/16 19:43	1
1,2-Dibromoethane	1.0	U	1.0	0.32	ug/L			05/27/16 19:43	1
Isopropylbenzene	5.0	U	5.0	0.35	ug/L			05/27/16 19:43	1
Methyl acetate	10	U	10	2.3	ug/L			05/27/16 19:43	1
2-Butanone (MEK)	0.57	J	25	0.53	ug/L			05/27/16 19:43	1
4-Methyl-2-pentanone (MIBK)	2.9	J	50	0.99	ug/L			05/27/16 19:43	1
Methyl tert-butyl ether	5.0	U	5.0	0.20	ug/L			05/27/16 19:43	1
Methylene Chloride	5.0	U	5.0	0.33	ug/L			05/27/16 19:43	1
Styrene	1.0	U	1.0	0.45	ug/L			05/27/16 19:43	1
Tetrachloroethene	1.0	U	1.0	0.31	ug/L			05/27/16 19:43	1
Toluene	1.0	U	1.0	0.23	ug/L			05/27/16 19:43	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			05/27/16 19:43	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.56	ug/L			05/27/16 19:43	1
Trichloroethene	1.0	U	1.0	0.22	ug/L			05/27/16 19:43	1
Trichlorofluoromethane	1.0	U	1.0	0.49	ug/L			05/27/16 19:43	1
Vinyl chloride	1.0	U	1.0	0.29	ug/L			05/27/16 19:43	1
Xylenes, Total	2.0	U	2.0	0.52	ug/L			05/27/16 19:43	1
Methylcyclohexane	1.0	U	1.0	0.43	ug/L			05/27/16 19:43	1
Dibromochloromethane	1.0	U	1.0	0.43	ug/L			05/27/16 19:43	1

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Client Sample ID: MWW10-SEN04-GW-051816

Lab Sample ID: 240-65149-4

Date Collected: 05/18/16 15:35

Matrix: Water

Date Received: 05/21/16 09:40

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	90		78 - 125		05/27/16 19:43	1
4-Bromofluorobenzene (Surr)	89		61 - 120		05/27/16 19:43	1
Toluene-d8 (Surr)	82		80 - 120		05/27/16 19:43	1
Dibromofluoromethane (Surr)	88		79 - 120		05/27/16 19:43	1

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Client Sample ID: MWW10-04-GW-051816

Lab Sample ID: 240-65149-5

Date Collected: 05/18/16 17:50

Matrix: Water

Date Received: 05/21/16 09:40

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.24	ug/L			05/26/16 20:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		74 - 120					05/26/16 20:34	1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.44	ug/L			05/27/16 20:05	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.22	ug/L			05/27/16 20:05	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.45	ug/L			05/27/16 20:05	1
1,1,2-Trichloroethane	1.0	U	1.0	0.24	ug/L			05/27/16 20:05	1
1,1-Dichloroethane	1.0	U	1.0	0.30	ug/L			05/27/16 20:05	1
1,1-Dichloroethene	1.0	U	1.0	0.45	ug/L			05/27/16 20:05	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.32	ug/L			05/27/16 20:05	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.82	ug/L			05/27/16 20:05	1
1,2-Dichlorobenzene	1.0	U	1.0	0.25	ug/L			05/27/16 20:05	1
1,2-Dichloroethane	1.0	U	1.0	0.23	ug/L			05/27/16 20:05	1
1,2-Dichloropropane	1.0	U	1.0	0.25	ug/L			05/27/16 20:05	1
1,3-Dichlorobenzene	1.0	U	1.0	0.19	ug/L			05/27/16 20:05	1
1,4-Dichlorobenzene	1.0	U	1.0	0.27	ug/L			05/27/16 20:05	1
2-Hexanone	50	U	50	0.48	ug/L			05/27/16 20:05	1
Acetone	13	J	25	0.94	ug/L			05/27/16 20:05	1
Benzene	1.0	U	1.0	0.35	ug/L			05/27/16 20:05	1
Bromoform	1.0	U	1.0	0.56	ug/L			05/27/16 20:05	1
Bromomethane	1.0	U	1.0	0.44	ug/L			05/27/16 20:05	1
Carbon disulfide	5.0	U	5.0	0.38	ug/L			05/27/16 20:05	1
Carbon tetrachloride	1.0	U	1.0	0.43	ug/L			05/27/16 20:05	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			05/27/16 20:05	1
Chloroethane	1.0	U	1.0	0.32	ug/L			05/27/16 20:05	1
Chloroform	1.0	U	1.0	0.25	ug/L			05/27/16 20:05	1
Chloromethane	1.0	U	1.0	0.44	ug/L			05/27/16 20:05	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.26	ug/L			05/27/16 20:05	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.46	ug/L			05/27/16 20:05	1
Cyclohexane	1.0	U	1.0	0.45	ug/L			05/27/16 20:05	1
Bromodichloromethane	1.0	U	1.0	0.29	ug/L			05/27/16 20:05	1
Dichlorodifluoromethane	1.0	U	1.0	0.32	ug/L			05/27/16 20:05	1
Ethylbenzene	1.0	U	1.0	0.25	ug/L			05/27/16 20:05	1
1,2-Dibromoethane	1.0	U	1.0	0.32	ug/L			05/27/16 20:05	1
Isopropylbenzene	5.0	U	5.0	0.35	ug/L			05/27/16 20:05	1
Methyl acetate	10	U	10	2.3	ug/L			05/27/16 20:05	1
2-Butanone (MEK)	25	U	25	0.53	ug/L			05/27/16 20:05	1
4-Methyl-2-pentanone (MIBK)	3.9	J	50	0.99	ug/L			05/27/16 20:05	1
Methyl tert-butyl ether	5.0	U	5.0	0.20	ug/L			05/27/16 20:05	1
Methylene Chloride	5.0	U	5.0	0.33	ug/L			05/27/16 20:05	1
Styrene	1.0	U	1.0	0.45	ug/L			05/27/16 20:05	1
Tetrachloroethene	1.0	U	1.0	0.31	ug/L			05/27/16 20:05	1
Toluene	1.0	U	1.0	0.23	ug/L			05/27/16 20:05	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			05/27/16 20:05	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.56	ug/L			05/27/16 20:05	1
Trichloroethene	1.0	U	1.0	0.22	ug/L			05/27/16 20:05	1

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Client Sample ID: MWW10-04-GW-051816

Lab Sample ID: 240-65149-5

Date Collected: 05/18/16 17:50

Matrix: Water

Date Received: 05/21/16 09:40

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	1.0	U	1.0	0.49	ug/L			05/27/16 20:05	1
Vinyl chloride	1.0	U	1.0	0.29	ug/L			05/27/16 20:05	1
Xylenes, Total	2.0	U	2.0	0.52	ug/L			05/27/16 20:05	1
Methylcyclohexane	1.0	U	1.0	0.43	ug/L			05/27/16 20:05	1
Dibromochloromethane	1.0	U	1.0	0.43	ug/L			05/27/16 20:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		78 - 125		05/27/16 20:05	1
4-Bromofluorobenzene (Surr)	84		61 - 120		05/27/16 20:05	1
Toluene-d8 (Surr)	86		80 - 120		05/27/16 20:05	1
Dibromofluoromethane (Surr)	90		79 - 120		05/27/16 20:05	1

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Client Sample ID: MWM2-04-GW-051816

Lab Sample ID: 240-65149-6

Date Collected: 05/18/16 19:25

Matrix: Water

Date Received: 05/21/16 09:40

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.67	J	2.0	0.24	ug/L			05/26/16 20:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		74 - 120					05/26/16 20:59	1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	17		1.0	0.44	ug/L			05/27/16 20:28	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.22	ug/L			05/27/16 20:28	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.45	ug/L			05/27/16 20:28	1
1,1,2-Trichloroethane	1.0	U	1.0	0.24	ug/L			05/27/16 20:28	1
1,1-Dichloroethane	11		1.0	0.30	ug/L			05/27/16 20:28	1
1,1-Dichloroethene	2.2		1.0	0.45	ug/L			05/27/16 20:28	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.32	ug/L			05/27/16 20:28	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.82	ug/L			05/27/16 20:28	1
1,2-Dichlorobenzene	1.0	U	1.0	0.25	ug/L			05/27/16 20:28	1
1,2-Dichloroethane	1.0	U	1.0	0.23	ug/L			05/27/16 20:28	1
1,2-Dichloropropane	1.0	U	1.0	0.25	ug/L			05/27/16 20:28	1
1,3-Dichlorobenzene	1.0	U	1.0	0.19	ug/L			05/27/16 20:28	1
1,4-Dichlorobenzene	1.0	U	1.0	0.27	ug/L			05/27/16 20:28	1
2-Hexanone	50	U	50	0.48	ug/L			05/27/16 20:28	1
Acetone	14	J	25	0.94	ug/L			05/27/16 20:28	1
Benzene	1.0	U	1.0	0.35	ug/L			05/27/16 20:28	1
Bromoform	1.0	U	1.0	0.56	ug/L			05/27/16 20:28	1
Bromomethane	1.0	U	1.0	0.44	ug/L			05/27/16 20:28	1
Carbon disulfide	5.0	U	5.0	0.38	ug/L			05/27/16 20:28	1
Carbon tetrachloride	1.0	U	1.0	0.43	ug/L			05/27/16 20:28	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			05/27/16 20:28	1
Chloroethane	1.0	U	1.0	0.32	ug/L			05/27/16 20:28	1
Chloroform	1.0	U	1.0	0.25	ug/L			05/27/16 20:28	1
Chloromethane	1.0	U	1.0	0.44	ug/L			05/27/16 20:28	1
cis-1,2-Dichloroethene	6.4		1.0	0.26	ug/L			05/27/16 20:28	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.46	ug/L			05/27/16 20:28	1
Cyclohexane	1.0	U	1.0	0.45	ug/L			05/27/16 20:28	1
Bromodichloromethane	1.0	U	1.0	0.29	ug/L			05/27/16 20:28	1
Dichlorodifluoromethane	1.0	U	1.0	0.32	ug/L			05/27/16 20:28	1
Ethylbenzene	1.0	U	1.0	0.25	ug/L			05/27/16 20:28	1
1,2-Dibromoethane	1.0	U	1.0	0.32	ug/L			05/27/16 20:28	1
Isopropylbenzene	5.0	U	5.0	0.35	ug/L			05/27/16 20:28	1
Methyl acetate	10	U	10	2.3	ug/L			05/27/16 20:28	1
2-Butanone (MEK)	25	U	25	0.53	ug/L			05/27/16 20:28	1
4-Methyl-2-pentanone (MIBK)	3.5	J	50	0.99	ug/L			05/27/16 20:28	1
Methyl tert-butyl ether	5.0	U	5.0	0.20	ug/L			05/27/16 20:28	1
Methylene Chloride	5.0	U	5.0	0.33	ug/L			05/27/16 20:28	1
Styrene	1.0	U	1.0	0.45	ug/L			05/27/16 20:28	1
Tetrachloroethene	1.0	U	1.0	0.31	ug/L			05/27/16 20:28	1
Toluene	1.0	U	1.0	0.23	ug/L			05/27/16 20:28	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			05/27/16 20:28	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.56	ug/L			05/27/16 20:28	1
Trichloroethene	0.68	J	1.0	0.22	ug/L			05/27/16 20:28	1

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Client Sample ID: MWM2-04-GW-051816

Lab Sample ID: 240-65149-6

Date Collected: 05/18/16 19:25

Matrix: Water

Date Received: 05/21/16 09:40

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	1.0	U	1.0	0.49	ug/L			05/27/16 20:28	1
Vinyl chloride	1.0	U	1.0	0.29	ug/L			05/27/16 20:28	1
Xylenes, Total	2.0	U	2.0	0.52	ug/L			05/27/16 20:28	1
Methylcyclohexane	1.0	U	1.0	0.43	ug/L			05/27/16 20:28	1
Dibromochloromethane	1.0	U	1.0	0.43	ug/L			05/27/16 20:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		78 - 125		05/27/16 20:28	1
4-Bromofluorobenzene (Surr)	83		61 - 120		05/27/16 20:28	1
Toluene-d8 (Surr)	84		80 - 120		05/27/16 20:28	1
Dibromofluoromethane (Surr)	95		79 - 120		05/27/16 20:28	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	1.0	U	1.0	0.13	ug/L		05/24/16 09:07	05/31/16 20:00	1
2,2'-oxybis[1-chloropropane]	1.0	U	1.0	0.19	ug/L		05/24/16 09:07	05/31/16 20:00	1
2,4,5-Trichlorophenol	5.2	U	5.2	0.38	ug/L		05/24/16 09:07	05/31/16 20:00	1
2,4,6-Trichlorophenol	4.2	U	4.2	0.27	ug/L		05/24/16 09:07	05/31/16 20:00	1
2,4-Dichlorophenol	10	U	10	0.31	ug/L		05/24/16 09:07	05/31/16 20:00	1
2,4-Dimethylphenol	5.2	U	5.2	0.33	ug/L		05/24/16 09:07	05/31/16 20:00	1
2,4-Dinitrophenol	21	U	21	6.4	ug/L		05/24/16 09:07	05/31/16 20:00	1
2,4-Dinitrotoluene	5.2	U	5.2	0.27	ug/L		05/24/16 09:07	05/31/16 20:00	1
2,6-Dinitrotoluene	5.2	U	5.2	0.24	ug/L		05/24/16 09:07	05/31/16 20:00	1
2-Chloronaphthalene	5.2	U	5.2	0.12	ug/L		05/24/16 09:07	05/31/16 20:00	1
2-Chlorophenol	5.2	U	5.2	0.14	ug/L		05/24/16 09:07	05/31/16 20:00	1
2-Methylnaphthalene	5.2	U	5.2	0.039	ug/L		05/24/16 09:07	05/31/16 20:00	1
2-Methylphenol	5.2	U	5.2	0.20	ug/L		05/24/16 09:07	05/31/16 20:00	1
2-Nitroaniline	21	U	21	0.32	ug/L		05/24/16 09:07	05/31/16 20:00	1
2-Nitrophenol	5.2	U	5.2	0.22	ug/L		05/24/16 09:07	05/31/16 20:00	1
3,3'-Dichlorobenzidine	5.2	U	5.2	0.37	ug/L		05/24/16 09:07	05/31/16 20:00	1
3-Nitroaniline	21	U	21	0.28	ug/L		05/24/16 09:07	05/31/16 20:00	1
4,6-Dinitro-2-methylphenol	21	U	21	0.55	ug/L		05/24/16 09:07	05/31/16 20:00	1
4-Bromophenyl phenyl ether	5.2	U	5.2	0.36	ug/L		05/24/16 09:07	05/31/16 20:00	1
4-Chloro-3-methylphenol	5.2	U	5.2	0.29	ug/L		05/24/16 09:07	05/31/16 20:00	1
4-Chloroaniline	2.1	U	2.1	0.16	ug/L		05/24/16 09:07	05/31/16 20:00	1
4-Chlorophenyl phenyl ether	5.2	U	5.2	0.31	ug/L		05/24/16 09:07	05/31/16 20:00	1
4-Nitroaniline	21	U	21	0.25	ug/L		05/24/16 09:07	05/31/16 20:00	1
4-Nitrophenol	21	U	21	0.61	ug/L		05/24/16 09:07	05/31/16 20:00	1
Acenaphthene	5.2	U	5.2	0.046	ug/L		05/24/16 09:07	05/31/16 20:00	1
Acenaphthylene	5.2	U	5.2	0.021	ug/L		05/24/16 09:07	05/31/16 20:00	1
Acetophenone	1.0	U	1.0	0.15	ug/L		05/24/16 09:07	05/31/16 20:00	1
Anthracene	5.2	U	5.2	0.032	ug/L		05/24/16 09:07	05/31/16 20:00	1
Atrazine	1.0	U	1.0	0.12	ug/L		05/24/16 09:07	05/31/16 20:00	1
Benzaldehyde	1.0	U	1.0	0.31	ug/L		05/24/16 09:07	05/31/16 20:00	1
Benzo[a]anthracene	1.0	U	1.0	0.061	ug/L		05/24/16 09:07	05/31/16 20:00	1
Benzo[a]pyrene	1.0	U	1.0	0.031	ug/L		05/24/16 09:07	05/31/16 20:00	1
Benzo[b]fluoranthene	1.0	U	1.0	0.061	ug/L		05/24/16 09:07	05/31/16 20:00	1
Benzo[g,h,i]perylene	1.0	U	1.0	0.052	ug/L		05/24/16 09:07	05/31/16 20:00	1
Benzo[k]fluoranthene	1.0	U	1.0	0.050	ug/L		05/24/16 09:07	05/31/16 20:00	1
Bis(2-chloroethoxy)methane	5.2	U	5.2	0.039	ug/L		05/24/16 09:07	05/31/16 20:00	1

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Client Sample ID: MWM2-04-GW-051816

Lab Sample ID: 240-65149-6

Date Collected: 05/18/16 19:25

Matrix: Water

Date Received: 05/21/16 09:40

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	1.0	U	1.0	0.20	ug/L		05/24/16 09:07	05/31/16 20:00	1
Bis(2-ethylhexyl) phthalate	1.6	J B	5.2	1.6	ug/L		05/24/16 09:07	05/31/16 20:00	1
Butyl benzyl phthalate	5.2	U	5.2	0.23	ug/L		05/24/16 09:07	05/31/16 20:00	1
Caprolactam	5.2	U	5.2	0.39	ug/L		05/24/16 09:07	05/31/16 20:00	1
Carbazole	10	U	10	0.11	ug/L		05/24/16 09:07	05/31/16 20:00	1
Chrysene	1.0	U	1.0	0.036	ug/L		05/24/16 09:07	05/31/16 20:00	1
Dibenz(a,h)anthracene	2.1	U	2.1	0.042	ug/L		05/24/16 09:07	05/31/16 20:00	1
Dibenzofuran	4.2	U	4.2	0.14	ug/L		05/24/16 09:07	05/31/16 20:00	1
Diethyl phthalate	5.2	U	5.2	0.13	ug/L		05/24/16 09:07	05/31/16 20:00	1
Dimethyl phthalate	5.2	U	5.2	0.11	ug/L		05/24/16 09:07	05/31/16 20:00	1
Di-n-butyl phthalate	1.0	J B	5.2	0.41	ug/L		05/24/16 09:07	05/31/16 20:00	1
Di-n-octyl phthalate	5.2	U	5.2	0.38	ug/L		05/24/16 09:07	05/31/16 20:00	1
Fluoranthene	1.0	U	1.0	0.028	ug/L		05/24/16 09:07	05/31/16 20:00	1
Fluorene	5.2	U	5.2	0.035	ug/L		05/24/16 09:07	05/31/16 20:00	1
Hexachlorobenzene	0.21	U	0.21	0.12	ug/L		05/24/16 09:07	05/31/16 20:00	1
Hexachlorobutadiene	1.0	U	1.0	0.15	ug/L		05/24/16 09:07	05/31/16 20:00	1
Hexachlorocyclopentadiene	5.2	U	5.2	2.6	ug/L		05/24/16 09:07	05/31/16 20:00	1
Hexachloroethane	5.2	U	5.2	0.23	ug/L		05/24/16 09:07	05/31/16 20:00	1
Indeno[1,2,3-cd]pyrene	2.1	U	2.1	0.050	ug/L		05/24/16 09:07	05/31/16 20:00	1
Isophorone	5.2	U	5.2	0.044	ug/L		05/24/16 09:07	05/31/16 20:00	1
Naphthalene	5.2	U	5.2	0.045	ug/L		05/24/16 09:07	05/31/16 20:00	1
Nitrobenzene	3.1	U	3.1	0.12	ug/L		05/24/16 09:07	05/31/16 20:00	1
N-Nitrosodi-n-propylamine	5.2	U	5.2	0.17	ug/L		05/24/16 09:07	05/31/16 20:00	1
N-Nitrosodiphenylamine	5.2	U	5.2	0.12	ug/L		05/24/16 09:07	05/31/16 20:00	1
Pentachlorophenol	5.2	U	5.2	5.7	ug/L		05/24/16 09:07	05/31/16 20:00	1
Phenol	5.2	U	5.2	0.16	ug/L		05/24/16 09:07	05/31/16 20:00	1
Phenanthrene	2.1	U	2.1	0.032	ug/L		05/24/16 09:07	05/31/16 20:00	1
Pyrene	5.2	U	5.2	0.029	ug/L		05/24/16 09:07	05/31/16 20:00	1
3 & 4 Methylphenol	5.2	U	5.2	0.35	ug/L		05/24/16 09:07	05/31/16 20:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	56		44 - 120	05/24/16 09:07	05/31/16 20:00	1
2-Fluorophenol (Surr)	68		26 - 120	05/24/16 09:07	05/31/16 20:00	1
2,4,6-Tribromophenol (Surr)	65		36 - 120	05/24/16 09:07	05/31/16 20:00	1
Nitrobenzene-d5 (Surr)	65		44 - 120	05/24/16 09:07	05/31/16 20:00	1
Phenol-d5 (Surr)	65		16 - 120	05/24/16 09:07	05/31/16 20:00	1
Terphenyl-d14 (Surr)	73		43 - 120	05/24/16 09:07	05/31/16 20:00	1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.19	U	0.19	0.048	ug/L		05/24/16 07:31	05/27/16 12:46	1
Aroclor-1221	0.19	U	0.19	0.086	ug/L		05/24/16 07:31	05/27/16 12:46	1
Aroclor-1232	0.19	U	0.19	0.067	ug/L		05/24/16 07:31	05/27/16 12:46	1
Aroclor-1242	0.19	U	0.19	0.057	ug/L		05/24/16 07:31	05/27/16 12:46	1
Aroclor-1248	0.19	U	0.19	0.048	ug/L		05/24/16 07:31	05/27/16 12:46	1
Aroclor-1254	0.19	U	0.19	0.029	ug/L		05/24/16 07:31	05/27/16 12:46	1
Aroclor-1260	0.19	U	0.19	0.038	ug/L		05/24/16 07:31	05/27/16 12:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	24		10 - 120	05/24/16 07:31	05/27/16 12:46	1

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Client Sample ID: MWM2-04-GW-051816

Lab Sample ID: 240-65149-6

Date Collected: 05/18/16 19:25

Matrix: Water

Date Received: 05/21/16 09:40

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	51		21 - 120	05/24/16 07:31	05/27/16 12:46	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.46	J	2.0	0.16	ug/L		05/24/16 11:04	05/30/16 12:08	1
Arsenic	1.1	J	2.0	0.49	ug/L		05/24/16 11:04	05/30/16 12:08	1
Barium	30	B	1.0	1.1	ug/L		05/24/16 11:04	05/30/16 12:08	1
Beryllium	0.10	J B	1.0	0.053	ug/L		05/24/16 11:04	05/30/16 12:08	1
Cadmium	0.37	J	0.50	0.061	ug/L		05/24/16 11:04	05/30/16 12:08	1
Chromium	2.0	U	2.0	0.60	ug/L		05/24/16 11:04	05/30/16 12:08	1
Cobalt	1.7		1.0	0.021	ug/L		05/24/16 11:04	05/30/16 12:08	1
Copper	4.5		2.0	0.75	ug/L		05/24/16 11:04	05/30/16 12:08	1
Lead	1.6		1.0	0.11	ug/L		05/24/16 11:04	05/30/16 12:08	1
Manganese	92		1.0	1.1	ug/L		05/24/16 11:04	05/30/16 12:08	1
Nickel	16	B	2.0	0.23	ug/L		05/24/16 11:04	05/30/16 12:08	1
Selenium	5.0		2.0	0.25	ug/L		05/24/16 11:04	05/30/16 12:08	1
Silver	0.20	U	0.20	0.020	ug/L		05/24/16 11:04	05/30/16 12:08	1
Thallium	1.0	U	1.0	0.074	ug/L		05/24/16 11:04	05/30/16 12:08	1
Vanadium	2.6	J	4.0	0.23	ug/L		05/24/16 11:04	05/30/16 12:08	1
Zinc	17		10	7.3	ug/L		05/24/16 11:04	05/30/16 12:08	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.090	ug/L		05/24/16 12:00	05/25/16 15:18	1

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Client Sample ID: MWW5-01-GW-051916

Lab Sample ID: 240-65149-7

Date Collected: 05/19/16 09:15

Matrix: Water

Date Received: 05/21/16 09:40

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.44	ug/L			05/28/16 07:17	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.22	ug/L			05/28/16 07:17	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.45	ug/L			05/28/16 07:17	1
1,1,2-Trichloroethane	1.0	U	1.0	0.24	ug/L			05/28/16 07:17	1
1,1-Dichloroethane	1.0	U	1.0	0.30	ug/L			05/28/16 07:17	1
1,1-Dichloroethene	1.0	U	1.0	0.45	ug/L			05/28/16 07:17	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.32	ug/L			05/28/16 07:17	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.82	ug/L			05/28/16 07:17	1
1,2-Dichlorobenzene	1.0	U	1.0	0.25	ug/L			05/28/16 07:17	1
1,2-Dichloroethane	1.0	U	1.0	0.23	ug/L			05/28/16 07:17	1
1,2-Dichloropropane	1.0	U	1.0	0.25	ug/L			05/28/16 07:17	1
1,3-Dichlorobenzene	1.0	U	1.0	0.19	ug/L			05/28/16 07:17	1
1,4-Dichlorobenzene	1.0	U	1.0	0.27	ug/L			05/28/16 07:17	1
2-Hexanone	50	U	50	0.48	ug/L			05/28/16 07:17	1
Acetone	15	J	25	0.94	ug/L			05/28/16 07:17	1
Benzene	1.0	U	1.0	0.35	ug/L			05/28/16 07:17	1
Bromoform	1.0	U	1.0	0.56	ug/L			05/28/16 07:17	1
Bromomethane	1.0	U	1.0	0.44	ug/L			05/28/16 07:17	1
Carbon disulfide	5.0	U	5.0	0.38	ug/L			05/28/16 07:17	1
Carbon tetrachloride	1.0	U	1.0	0.43	ug/L			05/28/16 07:17	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			05/28/16 07:17	1
Chloroethane	1.0	U	1.0	0.32	ug/L			05/28/16 07:17	1
Chloroform	1.0	U	1.0	0.25	ug/L			05/28/16 07:17	1
Chloromethane	1.0	U	1.0	0.44	ug/L			05/28/16 07:17	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.26	ug/L			05/28/16 07:17	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.46	ug/L			05/28/16 07:17	1
Cyclohexane	1.0	U	1.0	0.45	ug/L			05/28/16 07:17	1
Bromodichloromethane	1.0	U	1.0	0.29	ug/L			05/28/16 07:17	1
Dichlorodifluoromethane	1.0	U	1.0	0.32	ug/L			05/28/16 07:17	1
Ethylbenzene	1.0	U	1.0	0.25	ug/L			05/28/16 07:17	1
1,2-Dibromoethane	1.0	U	1.0	0.32	ug/L			05/28/16 07:17	1
Isopropylbenzene	5.0	U	5.0	0.35	ug/L			05/28/16 07:17	1
Methyl acetate	10	U	10	2.3	ug/L			05/28/16 07:17	1
2-Butanone (MEK)	25	U	25	0.53	ug/L			05/28/16 07:17	1
4-Methyl-2-pentanone (MIBK)	3.6	J	50	0.99	ug/L			05/28/16 07:17	1
Methyl tert-butyl ether	5.0	U	5.0	0.20	ug/L			05/28/16 07:17	1
Methylene Chloride	5.0	U	5.0	0.33	ug/L			05/28/16 07:17	1
Styrene	1.0	U	1.0	0.45	ug/L			05/28/16 07:17	1
Tetrachloroethene	1.0	U	1.0	0.31	ug/L			05/28/16 07:17	1
Toluene	1.0	U	1.0	0.23	ug/L			05/28/16 07:17	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			05/28/16 07:17	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.56	ug/L			05/28/16 07:17	1
Trichloroethene	1.0	U	1.0	0.22	ug/L			05/28/16 07:17	1
Trichlorofluoromethane	1.0	U	1.0	0.49	ug/L			05/28/16 07:17	1
Vinyl chloride	1.0	U	1.0	0.29	ug/L			05/28/16 07:17	1
Xylenes, Total	2.0	U	2.0	0.52	ug/L			05/28/16 07:17	1
Methylcyclohexane	1.0	U	1.0	0.43	ug/L			05/28/16 07:17	1
Dibromochloromethane	1.0	U	1.0	0.43	ug/L			05/28/16 07:17	1

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Client Sample ID: MWW5-01-GW-051916

Lab Sample ID: 240-65149-7

Date Collected: 05/19/16 09:15

Matrix: Water

Date Received: 05/21/16 09:40

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	91		78 - 125		05/28/16 07:17	1
4-Bromofluorobenzene (Surr)	80		61 - 120		05/28/16 07:17	1
Toluene-d8 (Surr)	87		80 - 120		05/28/16 07:17	1
Dibromofluoromethane (Surr)	90		79 - 120		05/28/16 07:17	1

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Client Sample ID: TW-03-01-GW-051916

Lab Sample ID: 240-65149-8

Date Collected: 05/19/16 10:30

Matrix: Water

Date Received: 05/21/16 09:40

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.44	ug/L			05/28/16 05:47	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.22	ug/L			05/28/16 05:47	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.45	ug/L			05/28/16 05:47	1
1,1,2-Trichloroethane	1.0	U	1.0	0.24	ug/L			05/28/16 05:47	1
1,1-Dichloroethane	1.0	U	1.0	0.30	ug/L			05/28/16 05:47	1
1,1-Dichloroethene	1.0	U	1.0	0.45	ug/L			05/28/16 05:47	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.32	ug/L			05/28/16 05:47	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.82	ug/L			05/28/16 05:47	1
1,2-Dichlorobenzene	1.0	U	1.0	0.25	ug/L			05/28/16 05:47	1
1,2-Dichloroethane	1.0	U	1.0	0.23	ug/L			05/28/16 05:47	1
1,2-Dichloropropane	1.0	U	1.0	0.25	ug/L			05/28/16 05:47	1
1,3-Dichlorobenzene	1.0	U	1.0	0.19	ug/L			05/28/16 05:47	1
1,4-Dichlorobenzene	1.0	U	1.0	0.27	ug/L			05/28/16 05:47	1
2-Hexanone	50	U	50	0.48	ug/L			05/28/16 05:47	1
Acetone	16	J	25	0.94	ug/L			05/28/16 05:47	1
Benzene	1.0	U	1.0	0.35	ug/L			05/28/16 05:47	1
Bromoform	1.0	U	1.0	0.56	ug/L			05/28/16 05:47	1
Bromomethane	1.0	U	1.0	0.44	ug/L			05/28/16 05:47	1
Carbon disulfide	5.0	U	5.0	0.38	ug/L			05/28/16 05:47	1
Carbon tetrachloride	1.0	U	1.0	0.43	ug/L			05/28/16 05:47	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			05/28/16 05:47	1
Chloroethane	1.0	U	1.0	0.32	ug/L			05/28/16 05:47	1
Chloroform	1.0	U	1.0	0.25	ug/L			05/28/16 05:47	1
Chloromethane	1.0	U	1.0	0.44	ug/L			05/28/16 05:47	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.26	ug/L			05/28/16 05:47	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.46	ug/L			05/28/16 05:47	1
Cyclohexane	1.0	U	1.0	0.45	ug/L			05/28/16 05:47	1
Bromodichloromethane	1.0	U	1.0	0.29	ug/L			05/28/16 05:47	1
Dichlorodifluoromethane	1.0	U	1.0	0.32	ug/L			05/28/16 05:47	1
Ethylbenzene	1.0	U	1.0	0.25	ug/L			05/28/16 05:47	1
1,2-Dibromoethane	1.0	U	1.0	0.32	ug/L			05/28/16 05:47	1
Isopropylbenzene	5.0	U	5.0	0.35	ug/L			05/28/16 05:47	1
Methyl acetate	10	U	10	2.3	ug/L			05/28/16 05:47	1
2-Butanone (MEK)	25	U	25	0.53	ug/L			05/28/16 05:47	1
4-Methyl-2-pentanone (MIBK)	2.6	J	50	0.99	ug/L			05/28/16 05:47	1
Methyl tert-butyl ether	5.0	U	5.0	0.20	ug/L			05/28/16 05:47	1
Methylene Chloride	5.0	U	5.0	0.33	ug/L			05/28/16 05:47	1
Styrene	1.0	U	1.0	0.45	ug/L			05/28/16 05:47	1
Tetrachloroethene	1.0	U	1.0	0.31	ug/L			05/28/16 05:47	1
Toluene	1.0	U	1.0	0.23	ug/L			05/28/16 05:47	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			05/28/16 05:47	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.56	ug/L			05/28/16 05:47	1
Trichloroethene	1.0	U	1.0	0.22	ug/L			05/28/16 05:47	1
Trichlorofluoromethane	1.0	U	1.0	0.49	ug/L			05/28/16 05:47	1
Vinyl chloride	1.0	U	1.0	0.29	ug/L			05/28/16 05:47	1
Xylenes, Total	2.0	U	2.0	0.52	ug/L			05/28/16 05:47	1
Methylcyclohexane	1.0	U	1.0	0.43	ug/L			05/28/16 05:47	1
Dibromochloromethane	1.0	U	1.0	0.43	ug/L			05/28/16 05:47	1

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Client Sample ID: TW-03-01-GW-051916

Lab Sample ID: 240-65149-8

Date Collected: 05/19/16 10:30

Matrix: Water

Date Received: 05/21/16 09:40

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		78 - 125		05/28/16 05:47	1
4-Bromofluorobenzene (Surr)	81		61 - 120		05/28/16 05:47	1
Toluene-d8 (Surr)	86		80 - 120		05/28/16 05:47	1
Dibromofluoromethane (Surr)	91		79 - 120		05/28/16 05:47	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	0.96	U	0.96	0.12	ug/L		05/24/16 09:07	05/31/16 20:25	1
2,2'-oxybis[1-chloropropane]	0.96	U	0.96	0.18	ug/L		05/24/16 09:07	05/31/16 20:25	1
2,4,5-Trichlorophenol	4.8	U	4.8	0.35	ug/L		05/24/16 09:07	05/31/16 20:25	1
2,4,6-Trichlorophenol	3.8	U	3.8	0.25	ug/L		05/24/16 09:07	05/31/16 20:25	1
2,4-Dichlorophenol	9.6	U	9.6	0.28	ug/L		05/24/16 09:07	05/31/16 20:25	1
2,4-Dimethylphenol	4.8	U	4.8	0.30	ug/L		05/24/16 09:07	05/31/16 20:25	1
2,4-Dinitrophenol	19	U	19	5.9	ug/L		05/24/16 09:07	05/31/16 20:25	1
2,4-Dinitrotoluene	4.8	U	4.8	0.25	ug/L		05/24/16 09:07	05/31/16 20:25	1
2,6-Dinitrotoluene	4.8	U	4.8	0.23	ug/L		05/24/16 09:07	05/31/16 20:25	1
2-Chloronaphthalene	4.8	U	4.8	0.11	ug/L		05/24/16 09:07	05/31/16 20:25	1
2-Chlorophenol	4.8	U	4.8	0.13	ug/L		05/24/16 09:07	05/31/16 20:25	1
2-Methylnaphthalene	2.5	J	4.8	0.036	ug/L		05/24/16 09:07	05/31/16 20:25	1
2-Methylphenol	4.8	U	4.8	0.18	ug/L		05/24/16 09:07	05/31/16 20:25	1
2-Nitroaniline	19	U	19	0.30	ug/L		05/24/16 09:07	05/31/16 20:25	1
2-Nitrophenol	4.8	U	4.8	0.20	ug/L		05/24/16 09:07	05/31/16 20:25	1
3,3'-Dichlorobenzidine	4.8	U	4.8	0.34	ug/L		05/24/16 09:07	05/31/16 20:25	1
3-Nitroaniline	19	U	19	0.25	ug/L		05/24/16 09:07	05/31/16 20:25	1
4,6-Dinitro-2-methylphenol	19	U	19	0.50	ug/L		05/24/16 09:07	05/31/16 20:25	1
4-Bromophenyl phenyl ether	4.8	U	4.8	0.33	ug/L		05/24/16 09:07	05/31/16 20:25	1
4-Chloro-3-methylphenol	4.8	U	4.8	0.27	ug/L		05/24/16 09:07	05/31/16 20:25	1
4-Chloroaniline	1.9	U	1.9	0.14	ug/L		05/24/16 09:07	05/31/16 20:25	1
4-Chlorophenyl phenyl ether	4.8	U	4.8	0.28	ug/L		05/24/16 09:07	05/31/16 20:25	1
4-Nitroaniline	19	U	19	0.23	ug/L		05/24/16 09:07	05/31/16 20:25	1
4-Nitrophenol	19	U	19	0.56	ug/L		05/24/16 09:07	05/31/16 20:25	1
Acenaphthene	4.8	U	4.8	0.042	ug/L		05/24/16 09:07	05/31/16 20:25	1
Acenaphthylene	4.8	U	4.8	0.019	ug/L		05/24/16 09:07	05/31/16 20:25	1
Acetophenone	0.96	U	0.96	0.13	ug/L		05/24/16 09:07	05/31/16 20:25	1
Anthracene	4.8	U	4.8	0.030	ug/L		05/24/16 09:07	05/31/16 20:25	1
Atrazine	0.96	U	0.96	0.11	ug/L		05/24/16 09:07	05/31/16 20:25	1
Benzaldehyde	0.96	U	0.96	0.28	ug/L		05/24/16 09:07	05/31/16 20:25	1
Benzo[a]anthracene	0.96	U	0.96	0.057	ug/L		05/24/16 09:07	05/31/16 20:25	1
Benzo[a]pyrene	0.96	U	0.96	0.029	ug/L		05/24/16 09:07	05/31/16 20:25	1
Benzo[b]fluoranthene	0.96	U	0.96	0.057	ug/L		05/24/16 09:07	05/31/16 20:25	1
Benzo[g,h,i]perylene	0.96	U	0.96	0.048	ug/L		05/24/16 09:07	05/31/16 20:25	1
Benzo[k]fluoranthene	0.96	U	0.96	0.046	ug/L		05/24/16 09:07	05/31/16 20:25	1
Bis(2-chloroethoxy)methane	4.8	U	4.8	0.036	ug/L		05/24/16 09:07	05/31/16 20:25	1
Bis(2-chloroethyl)ether	0.96	U	0.96	0.18	ug/L		05/24/16 09:07	05/31/16 20:25	1
Bis(2-ethylhexyl) phthalate	4.8	U	4.8	1.5	ug/L		05/24/16 09:07	05/31/16 20:25	1
Butyl benzyl phthalate	4.8	U	4.8	0.21	ug/L		05/24/16 09:07	05/31/16 20:25	1
Caprolactam	4.8	U	4.8	0.36	ug/L		05/24/16 09:07	05/31/16 20:25	1
Carbazole	9.6	U	9.6	0.10	ug/L		05/24/16 09:07	05/31/16 20:25	1
Chrysene	0.96	U	0.96	0.034	ug/L		05/24/16 09:07	05/31/16 20:25	1
Dibenz(a,h)anthracene	1.9	U	1.9	0.038	ug/L		05/24/16 09:07	05/31/16 20:25	1

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Client Sample ID: TW-03-01-GW-051916

Lab Sample ID: 240-65149-8

Date Collected: 05/19/16 10:30

Matrix: Water

Date Received: 05/21/16 09:40

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibenzofuran	3.8	U	3.8	0.13	ug/L		05/24/16 09:07	05/31/16 20:25	1
Diethyl phthalate	4.8	U	4.8	0.12	ug/L		05/24/16 09:07	05/31/16 20:25	1
Dimethyl phthalate	4.8	U	4.8	0.097	ug/L		05/24/16 09:07	05/31/16 20:25	1
Di-n-butyl phthalate	0.80	J B	4.8	0.38	ug/L		05/24/16 09:07	05/31/16 20:25	1
Di-n-octyl phthalate	4.8	U	4.8	0.35	ug/L		05/24/16 09:07	05/31/16 20:25	1
Fluoranthene	0.96	U	0.96	0.026	ug/L		05/24/16 09:07	05/31/16 20:25	1
Fluorene	1.1	J	4.8	0.033	ug/L		05/24/16 09:07	05/31/16 20:25	1
Hexachlorobenzene	0.19	U	0.19	0.11	ug/L		05/24/16 09:07	05/31/16 20:25	1
Hexachlorobutadiene	0.96	U	0.96	0.14	ug/L		05/24/16 09:07	05/31/16 20:25	1
Hexachlorocyclopentadiene	4.8	U	4.8	2.4	ug/L		05/24/16 09:07	05/31/16 20:25	1
Hexachloroethane	4.8	U	4.8	0.21	ug/L		05/24/16 09:07	05/31/16 20:25	1
Indeno[1,2,3-cd]pyrene	1.9	U	1.9	0.046	ug/L		05/24/16 09:07	05/31/16 20:25	1
Isophorone	4.8	U	4.8	0.040	ug/L		05/24/16 09:07	05/31/16 20:25	1
Naphthalene	0.81	J	4.8	0.041	ug/L		05/24/16 09:07	05/31/16 20:25	1
Nitrobenzene	2.9	U	2.9	0.11	ug/L		05/24/16 09:07	05/31/16 20:25	1
N-Nitrosodi-n-propylamine	4.8	U	4.8	0.15	ug/L		05/24/16 09:07	05/31/16 20:25	1
N-Nitrosodiphenylamine	4.8	U	4.8	0.11	ug/L		05/24/16 09:07	05/31/16 20:25	1
Pentachlorophenol	4.8	U	4.8	5.3	ug/L		05/24/16 09:07	05/31/16 20:25	1
Phenol	4.8	U	4.8	0.14	ug/L		05/24/16 09:07	05/31/16 20:25	1
Phenanthrene	1.8	J	1.9	0.030	ug/L		05/24/16 09:07	05/31/16 20:25	1
Pyrene	4.8	U	4.8	0.027	ug/L		05/24/16 09:07	05/31/16 20:25	1
3 & 4 Methylphenol	4.8	U	4.8	0.32	ug/L		05/24/16 09:07	05/31/16 20:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	54		44 - 120	05/24/16 09:07	05/31/16 20:25	1
2-Fluorophenol (Surr)	70		26 - 120	05/24/16 09:07	05/31/16 20:25	1
2,4,6-Tribromophenol (Surr)	66		36 - 120	05/24/16 09:07	05/31/16 20:25	1
Nitrobenzene-d5 (Surr)	60		44 - 120	05/24/16 09:07	05/31/16 20:25	1
Phenol-d5 (Surr)	50		16 - 120	05/24/16 09:07	05/31/16 20:25	1
Terphenyl-d14 (Surr)	62		43 - 120	05/24/16 09:07	05/31/16 20:25	1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.19	U	0.19	0.048	ug/L		05/24/16 07:31	05/26/16 18:42	1
Aroclor-1221	0.19	U	0.19	0.086	ug/L		05/24/16 07:31	05/26/16 18:42	1
Aroclor-1232	0.19	U	0.19	0.067	ug/L		05/24/16 07:31	05/26/16 18:42	1
Aroclor-1242	0.19	U	0.19	0.057	ug/L		05/24/16 07:31	05/26/16 18:42	1
Aroclor-1248	0.19	U	0.19	0.048	ug/L		05/24/16 07:31	05/26/16 18:42	1
Aroclor-1254	0.19	U	0.19	0.029	ug/L		05/24/16 07:31	05/26/16 18:42	1
Aroclor-1260	0.19	U	0.19	0.038	ug/L		05/24/16 07:31	05/26/16 18:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	24		10 - 120	05/24/16 07:31	05/26/16 18:42	1
Tetrachloro-m-xylene	50		21 - 120	05/24/16 07:31	05/26/16 18:42	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.21	J	2.0	0.16	ug/L		05/24/16 11:04	05/30/16 12:12	1
Arsenic	1.9	J	2.0	0.49	ug/L		05/24/16 11:04	05/30/16 12:12	1
Barium	160	B	1.0	1.1	ug/L		05/24/16 11:04	05/30/16 12:12	1

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Client Sample ID: TW-03-01-GW-051916

Lab Sample ID: 240-65149-8

Date Collected: 05/19/16 10:30

Matrix: Water

Date Received: 05/21/16 09:40

Method: 6020 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	0.21	J B	1.0	0.053	ug/L		05/24/16 11:04	05/30/16 12:12	1
Cadmium	0.50	U	0.50	0.061	ug/L		05/24/16 11:04	05/30/16 12:12	1
Chromium	9.6		2.0	0.60	ug/L		05/24/16 11:04	05/30/16 12:12	1
Cobalt	2.7		1.0	0.021	ug/L		05/24/16 11:04	05/30/16 12:12	1
Copper	8.1		2.0	0.75	ug/L		05/24/16 11:04	05/30/16 12:12	1
Lead	0.78	J	1.0	0.11	ug/L		05/24/16 11:04	05/30/16 12:12	1
Manganese	330		1.0	1.1	ug/L		05/24/16 11:04	05/30/16 12:12	1
Nickel	56	B	2.0	0.23	ug/L		05/24/16 11:04	05/30/16 12:12	1
Selenium	0.42	J	2.0	0.25	ug/L		05/24/16 11:04	05/30/16 12:12	1
Silver	0.20	U	0.20	0.020	ug/L		05/24/16 11:04	05/30/16 12:12	1
Thallium	1.0	U	1.0	0.074	ug/L		05/24/16 11:04	05/30/16 12:12	1
Vanadium	1.8	J	4.0	0.23	ug/L		05/24/16 11:04	05/30/16 12:12	1
Zinc	9.0	J	10	7.3	ug/L		05/24/16 11:04	05/30/16 12:12	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.090	ug/L		05/24/16 12:00	05/25/16 15:20	1

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Client Sample ID: MWF12-01-GW-051916

Lab Sample ID: 240-65149-9

Date Collected: 05/19/16 11:45

Matrix: Water

Date Received: 05/21/16 09:40

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	9.3		2.0	0.24	ug/L	-		05/26/16 21:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		74 - 120					05/26/16 21:23	1

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Client Sample ID: MWF7-01-GW-051916

Lab Sample ID: 240-65149-10

Date Collected: 05/19/16 12:50

Matrix: Water

Date Received: 05/21/16 09:40

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	22		2.0	0.24	ug/L	-		05/27/16 13:38	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		74 - 120					05/27/16 13:38	1

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Client Sample ID: MWM16-19-GW-051916

Lab Sample ID: 240-65149-11

Date Collected: 05/19/16 14:30

Matrix: Water

Date Received: 05/21/16 09:40

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	1.3	J	2.0	0.24	ug/L			05/27/16 14:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		74 - 120					05/27/16 14:03	1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.44	ug/L			05/28/16 06:09	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.22	ug/L			05/28/16 06:09	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.45	ug/L			05/28/16 06:09	1
1,1,2-Trichloroethane	1.0	U	1.0	0.24	ug/L			05/28/16 06:09	1
1,1-Dichloroethane	0.54	J	1.0	0.30	ug/L			05/28/16 06:09	1
1,1-Dichloroethene	1.0	U	1.0	0.45	ug/L			05/28/16 06:09	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.32	ug/L			05/28/16 06:09	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.82	ug/L			05/28/16 06:09	1
1,2-Dichlorobenzene	1.0	U	1.0	0.25	ug/L			05/28/16 06:09	1
1,2-Dichloroethane	1.0	U	1.0	0.23	ug/L			05/28/16 06:09	1
1,2-Dichloropropane	1.0	U	1.0	0.25	ug/L			05/28/16 06:09	1
1,3-Dichlorobenzene	1.0	U	1.0	0.19	ug/L			05/28/16 06:09	1
1,4-Dichlorobenzene	1.0	U	1.0	0.27	ug/L			05/28/16 06:09	1
2-Hexanone	50	U	50	0.48	ug/L			05/28/16 06:09	1
Acetone	15	J	25	0.94	ug/L			05/28/16 06:09	1
Benzene	1.0	U	1.0	0.35	ug/L			05/28/16 06:09	1
Bromoform	1.0	U	1.0	0.56	ug/L			05/28/16 06:09	1
Bromomethane	1.0	U	1.0	0.44	ug/L			05/28/16 06:09	1
Carbon disulfide	5.0	U	5.0	0.38	ug/L			05/28/16 06:09	1
Carbon tetrachloride	1.0	U	1.0	0.43	ug/L			05/28/16 06:09	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			05/28/16 06:09	1
Chloroethane	1.0	U	1.0	0.32	ug/L			05/28/16 06:09	1
Chloroform	1.0	U	1.0	0.25	ug/L			05/28/16 06:09	1
Chloromethane	1.0	U	1.0	0.44	ug/L			05/28/16 06:09	1
cis-1,2-Dichloroethene	0.54	J	1.0	0.26	ug/L			05/28/16 06:09	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.46	ug/L			05/28/16 06:09	1
Cyclohexane	1.0	U	1.0	0.45	ug/L			05/28/16 06:09	1
Bromodichloromethane	1.0	U	1.0	0.29	ug/L			05/28/16 06:09	1
Dichlorodifluoromethane	1.0	U	1.0	0.32	ug/L			05/28/16 06:09	1
Ethylbenzene	1.0	U	1.0	0.25	ug/L			05/28/16 06:09	1
1,2-Dibromoethane	1.0	U	1.0	0.32	ug/L			05/28/16 06:09	1
Isopropylbenzene	5.0	U	5.0	0.35	ug/L			05/28/16 06:09	1
Methyl acetate	10	U	10	2.3	ug/L			05/28/16 06:09	1
2-Butanone (MEK)	25	U	25	0.53	ug/L			05/28/16 06:09	1
4-Methyl-2-pentanone (MIBK)	3.8	J	50	0.99	ug/L			05/28/16 06:09	1
Methyl tert-butyl ether	5.0	U	5.0	0.20	ug/L			05/28/16 06:09	1
Methylene Chloride	5.0	U	5.0	0.33	ug/L			05/28/16 06:09	1
Styrene	1.0	U	1.0	0.45	ug/L			05/28/16 06:09	1
Tetrachloroethene	1.0	U	1.0	0.31	ug/L			05/28/16 06:09	1
Toluene	1.0	U	1.0	0.23	ug/L			05/28/16 06:09	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			05/28/16 06:09	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.56	ug/L			05/28/16 06:09	1
Trichloroethene	1.0	U	1.0	0.22	ug/L			05/28/16 06:09	1

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Client Sample ID: MWM16-19-GW-051916

Lab Sample ID: 240-65149-11

Date Collected: 05/19/16 14:30

Matrix: Water

Date Received: 05/21/16 09:40

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	1.0	U	1.0	0.49	ug/L			05/28/16 06:09	1
Vinyl chloride	1.8		1.0	0.29	ug/L			05/28/16 06:09	1
Xylenes, Total	2.0	U	2.0	0.52	ug/L			05/28/16 06:09	1
Methylcyclohexane	1.0	U	1.0	0.43	ug/L			05/28/16 06:09	1
Dibromochloromethane	1.0	U	1.0	0.43	ug/L			05/28/16 06:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	90		78 - 125		05/28/16 06:09	1
4-Bromofluorobenzene (Surr)	79		61 - 120		05/28/16 06:09	1
Toluene-d8 (Surr)	86		80 - 120		05/28/16 06:09	1
Dibromofluoromethane (Surr)	90		79 - 120		05/28/16 06:09	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	1.3		1.0	0.12	ug/L		05/24/16 09:07	05/31/16 20:50	1
2,2'-oxybis[1-chloropropane]	1.0	U	1.0	0.18	ug/L		05/24/16 09:07	05/31/16 20:50	1
2,4,5-Trichlorophenol	5.0	U	5.0	0.37	ug/L		05/24/16 09:07	05/31/16 20:50	1
2,4,6-Trichlorophenol	4.0	U	4.0	0.26	ug/L		05/24/16 09:07	05/31/16 20:50	1
2,4-Dichlorophenol	10	U	10	0.29	ug/L		05/24/16 09:07	05/31/16 20:50	1
2,4-Dimethylphenol	5.0	U	5.0	0.31	ug/L		05/24/16 09:07	05/31/16 20:50	1
2,4-Dinitrophenol	20	U	20	6.1	ug/L		05/24/16 09:07	05/31/16 20:50	1
2,4-Dinitrotoluene	5.0	U	5.0	0.26	ug/L		05/24/16 09:07	05/31/16 20:50	1
2,6-Dinitrotoluene	5.0	U	5.0	0.24	ug/L		05/24/16 09:07	05/31/16 20:50	1
2-Chloronaphthalene	5.0	U	5.0	0.12	ug/L		05/24/16 09:07	05/31/16 20:50	1
2-Chlorophenol	5.0	U	5.0	0.13	ug/L		05/24/16 09:07	05/31/16 20:50	1
2-Methylnaphthalene	0.33	J	5.0	0.037	ug/L		05/24/16 09:07	05/31/16 20:50	1
2-Methylphenol	5.0	U	5.0	0.19	ug/L		05/24/16 09:07	05/31/16 20:50	1
2-Nitroaniline	20	U	20	0.31	ug/L		05/24/16 09:07	05/31/16 20:50	1
2-Nitrophenol	5.0	U	5.0	0.21	ug/L		05/24/16 09:07	05/31/16 20:50	1
3,3'-Dichlorobenzidine	5.0	U	5.0	0.35	ug/L		05/24/16 09:07	05/31/16 20:50	1
3-Nitroaniline	20	U	20	0.27	ug/L		05/24/16 09:07	05/31/16 20:50	1
4,6-Dinitro-2-methylphenol	20	U	20	0.53	ug/L		05/24/16 09:07	05/31/16 20:50	1
4-Bromophenyl phenyl ether	5.0	U	5.0	0.35	ug/L		05/24/16 09:07	05/31/16 20:50	1
4-Chloro-3-methylphenol	5.0	U	5.0	0.28	ug/L		05/24/16 09:07	05/31/16 20:50	1
4-Chloroaniline	2.0	U	2.0	0.15	ug/L		05/24/16 09:07	05/31/16 20:50	1
4-Chlorophenyl phenyl ether	5.0	U	5.0	0.29	ug/L		05/24/16 09:07	05/31/16 20:50	1
4-Nitroaniline	20	U	20	0.24	ug/L		05/24/16 09:07	05/31/16 20:50	1
4-Nitrophenol	20	U	20	0.59	ug/L		05/24/16 09:07	05/31/16 20:50	1
Acenaphthene	5.0	U	5.0	0.044	ug/L		05/24/16 09:07	05/31/16 20:50	1
Acenaphthylene	5.0	U	5.0	0.020	ug/L		05/24/16 09:07	05/31/16 20:50	1
Acetophenone	1.0	U	1.0	0.14	ug/L		05/24/16 09:07	05/31/16 20:50	1
Anthracene	4.5	J	5.0	0.031	ug/L		05/24/16 09:07	05/31/16 20:50	1
Atrazine	1.0	U	1.0	0.12	ug/L		05/24/16 09:07	05/31/16 20:50	1
Benzaldehyde	1.0	U	1.0	0.30	ug/L		05/24/16 09:07	05/31/16 20:50	1
Benzo[a]anthracene	1.0	U	1.0	0.059	ug/L		05/24/16 09:07	05/31/16 20:50	1
Benzo[a]pyrene	1.0	U	1.0	0.030	ug/L		05/24/16 09:07	05/31/16 20:50	1
Benzo[b]fluoranthene	1.0	U	1.0	0.059	ug/L		05/24/16 09:07	05/31/16 20:50	1
Benzo[g,h,i]perylene	1.0	U	1.0	0.050	ug/L		05/24/16 09:07	05/31/16 20:50	1
Benzo[k]fluoranthene	1.0	U	1.0	0.048	ug/L		05/24/16 09:07	05/31/16 20:50	1
Bis(2-chloroethoxy)methane	5.0	U	5.0	0.037	ug/L		05/24/16 09:07	05/31/16 20:50	1

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Client Sample ID: MWM16-19-GW-051916

Lab Sample ID: 240-65149-11

Date Collected: 05/19/16 14:30

Matrix: Water

Date Received: 05/21/16 09:40

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	1.0	U	1.0	0.19	ug/L		05/24/16 09:07	05/31/16 20:50	1
Bis(2-ethylhexyl) phthalate	2.8	J B	5.0	1.5	ug/L		05/24/16 09:07	05/31/16 20:50	1
Butyl benzyl phthalate	5.0	U	5.0	0.22	ug/L		05/24/16 09:07	05/31/16 20:50	1
Caprolactam	5.0	U	5.0	0.37	ug/L		05/24/16 09:07	05/31/16 20:50	1
Carbazole	10	U	10	0.11	ug/L		05/24/16 09:07	05/31/16 20:50	1
Chrysene	1.0	U	1.0	0.035	ug/L		05/24/16 09:07	05/31/16 20:50	1
Dibenz(a,h)anthracene	2.0	U	2.0	0.040	ug/L		05/24/16 09:07	05/31/16 20:50	1
Dibenzofuran	4.0	U	4.0	0.14	ug/L		05/24/16 09:07	05/31/16 20:50	1
Diethyl phthalate	5.0	U	5.0	0.13	ug/L		05/24/16 09:07	05/31/16 20:50	1
Dimethyl phthalate	5.0	U	5.0	0.10	ug/L		05/24/16 09:07	05/31/16 20:50	1
Di-n-butyl phthalate	5.0	U	5.0	0.40	ug/L		05/24/16 09:07	05/31/16 20:50	1
Di-n-octyl phthalate	5.0	U	5.0	0.37	ug/L		05/24/16 09:07	05/31/16 20:50	1
Fluoranthene	1.5		1.0	0.027	ug/L		05/24/16 09:07	05/31/16 20:50	1
Fluorene	6.6		5.0	0.034	ug/L		05/24/16 09:07	05/31/16 20:50	1
Hexachlorobenzene	0.20	U	0.20	0.12	ug/L		05/24/16 09:07	05/31/16 20:50	1
Hexachlorobutadiene	1.0	U	1.0	0.14	ug/L		05/24/16 09:07	05/31/16 20:50	1
Hexachlorocyclopentadiene	5.0	U	5.0	2.5	ug/L		05/24/16 09:07	05/31/16 20:50	1
Hexachloroethane	5.0	U	5.0	0.22	ug/L		05/24/16 09:07	05/31/16 20:50	1
Indeno[1,2,3-cd]pyrene	2.0	U	2.0	0.048	ug/L		05/24/16 09:07	05/31/16 20:50	1
Isophorone	5.0	U	5.0	0.042	ug/L		05/24/16 09:07	05/31/16 20:50	1
Naphthalene	5.0	U	5.0	0.043	ug/L		05/24/16 09:07	05/31/16 20:50	1
Nitrobenzene	3.0	U	3.0	0.12	ug/L		05/24/16 09:07	05/31/16 20:50	1
N-Nitrosodi-n-propylamine	5.0	U	5.0	0.16	ug/L		05/24/16 09:07	05/31/16 20:50	1
N-Nitrosodiphenylamine	5.0	U	5.0	0.11	ug/L		05/24/16 09:07	05/31/16 20:50	1
Pentachlorophenol	5.0	U	5.0	5.5	ug/L		05/24/16 09:07	05/31/16 20:50	1
Phenol	5.0	U	5.0	0.15	ug/L		05/24/16 09:07	05/31/16 20:50	1
Phenanthrene	19		2.0	0.031	ug/L		05/24/16 09:07	05/31/16 20:50	1
Pyrene	2.5	J	5.0	0.028	ug/L		05/24/16 09:07	05/31/16 20:50	1
3 & 4 Methylphenol	5.0	U	5.0	0.34	ug/L		05/24/16 09:07	05/31/16 20:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	58		44 - 120	05/24/16 09:07	05/31/16 20:50	1
2-Fluorophenol (Surr)	73		26 - 120	05/24/16 09:07	05/31/16 20:50	1
2,4,6-Tribromophenol (Surr)	92		36 - 120	05/24/16 09:07	05/31/16 20:50	1
Nitrobenzene-d5 (Surr)	63		44 - 120	05/24/16 09:07	05/31/16 20:50	1
Phenol-d5 (Surr)	52		16 - 120	05/24/16 09:07	05/31/16 20:50	1
Terphenyl-d14 (Surr)	67		43 - 120	05/24/16 09:07	05/31/16 20:50	1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.20	U	0.20	0.050	ug/L		05/24/16 07:31	05/27/16 13:05	1
Aroclor-1221	0.20	U	0.20	0.090	ug/L		05/24/16 07:31	05/27/16 13:05	1
Aroclor-1232	0.20	U	0.20	0.070	ug/L		05/24/16 07:31	05/27/16 13:05	1
Aroclor-1242	0.077	J p	0.20	0.060	ug/L		05/24/16 07:31	05/27/16 13:05	1
Aroclor-1248	0.20	U	0.20	0.050	ug/L		05/24/16 07:31	05/27/16 13:05	1
Aroclor-1254	0.20	U	0.20	0.030	ug/L		05/24/16 07:31	05/27/16 13:05	1
Aroclor-1260	0.20	U	0.20	0.040	ug/L		05/24/16 07:31	05/27/16 13:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	28		10 - 120	05/24/16 07:31	05/27/16 13:05	1

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Client Sample ID: MWM16-19-GW-051916

Lab Sample ID: 240-65149-11

Date Collected: 05/19/16 14:30

Matrix: Water

Date Received: 05/21/16 09:40

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	45		21 - 120	05/24/16 07:31	05/27/16 13:05	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.16	ug/L		05/24/16 11:04	05/30/16 12:16	1
Arsenic	9.4		2.0	0.49	ug/L		05/24/16 11:04	05/30/16 12:16	1
Barium	140	B	1.0	1.1	ug/L		05/24/16 11:04	05/30/16 12:16	1
Beryllium	0.11	J B	1.0	0.053	ug/L		05/24/16 11:04	05/30/16 12:16	1
Cadmium	0.50	U	0.50	0.061	ug/L		05/24/16 11:04	05/30/16 12:16	1
Chromium	1.0	J	2.0	0.60	ug/L		05/24/16 11:04	05/30/16 12:16	1
Cobalt	0.36	J	1.0	0.021	ug/L		05/24/16 11:04	05/30/16 12:16	1
Copper	2.0	U	2.0	0.75	ug/L		05/24/16 11:04	05/30/16 12:16	1
Lead	0.95	J	1.0	0.11	ug/L		05/24/16 11:04	05/30/16 12:16	1
Manganese	170		1.0	1.1	ug/L		05/24/16 11:04	05/30/16 12:16	1
Nickel	3.2	B	2.0	0.23	ug/L		05/24/16 11:04	05/30/16 12:16	1
Selenium	2.0	U	2.0	0.25	ug/L		05/24/16 11:04	05/30/16 12:16	1
Silver	0.20	U	0.20	0.020	ug/L		05/24/16 11:04	05/30/16 12:16	1
Thallium	1.0	U	1.0	0.074	ug/L		05/24/16 11:04	05/30/16 12:16	1
Vanadium	1.1	J	4.0	0.23	ug/L		05/24/16 11:04	05/30/16 12:16	1
Zinc	10	U	10	7.3	ug/L		05/24/16 11:04	05/30/16 12:16	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.090	ug/L		05/24/16 12:00	05/25/16 15:22	1

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Client Sample ID: MWM10-09-GW-051916

Lab Sample ID: 240-65149-12

Date Collected: 05/19/16 17:10

Matrix: Water

Date Received: 05/21/16 09:40

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.44	ug/L			05/28/16 06:32	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.22	ug/L			05/28/16 06:32	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.45	ug/L			05/28/16 06:32	1
1,1,2-Trichloroethane	1.0	U	1.0	0.24	ug/L			05/28/16 06:32	1
1,1-Dichloroethane	1.0	U	1.0	0.30	ug/L			05/28/16 06:32	1
1,1-Dichloroethene	1.0	U	1.0	0.45	ug/L			05/28/16 06:32	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.32	ug/L			05/28/16 06:32	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.82	ug/L			05/28/16 06:32	1
1,2-Dichlorobenzene	1.0	U	1.0	0.25	ug/L			05/28/16 06:32	1
1,2-Dichloroethane	1.0	U	1.0	0.23	ug/L			05/28/16 06:32	1
1,2-Dichloropropane	1.0	U	1.0	0.25	ug/L			05/28/16 06:32	1
1,3-Dichlorobenzene	1.0	U	1.0	0.19	ug/L			05/28/16 06:32	1
1,4-Dichlorobenzene	1.0	U	1.0	0.27	ug/L			05/28/16 06:32	1
2-Hexanone	50	U	50	0.48	ug/L			05/28/16 06:32	1
Acetone	18	J	25	0.94	ug/L			05/28/16 06:32	1
Benzene	1.0	U	1.0	0.35	ug/L			05/28/16 06:32	1
Bromoform	1.0	U	1.0	0.56	ug/L			05/28/16 06:32	1
Bromomethane	1.0	U	1.0	0.44	ug/L			05/28/16 06:32	1
Carbon disulfide	5.0	U	5.0	0.38	ug/L			05/28/16 06:32	1
Carbon tetrachloride	1.0	U	1.0	0.43	ug/L			05/28/16 06:32	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			05/28/16 06:32	1
Chloroethane	1.0	U	1.0	0.32	ug/L			05/28/16 06:32	1
Chloroform	1.0	U	1.0	0.25	ug/L			05/28/16 06:32	1
Chloromethane	1.0	U	1.0	0.44	ug/L			05/28/16 06:32	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.26	ug/L			05/28/16 06:32	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.46	ug/L			05/28/16 06:32	1
Cyclohexane	1.0	U	1.0	0.45	ug/L			05/28/16 06:32	1
Bromodichloromethane	1.0	U	1.0	0.29	ug/L			05/28/16 06:32	1
Dichlorodifluoromethane	1.0	U	1.0	0.32	ug/L			05/28/16 06:32	1
Ethylbenzene	1.0	U	1.0	0.25	ug/L			05/28/16 06:32	1
1,2-Dibromoethane	1.0	U	1.0	0.32	ug/L			05/28/16 06:32	1
Isopropylbenzene	5.0	U	5.0	0.35	ug/L			05/28/16 06:32	1
Methyl acetate	10	U	10	2.3	ug/L			05/28/16 06:32	1
2-Butanone (MEK)	0.94	J	25	0.53	ug/L			05/28/16 06:32	1
4-Methyl-2-pentanone (MIBK)	2.4	J	50	0.99	ug/L			05/28/16 06:32	1
Methyl tert-butyl ether	5.0	U	5.0	0.20	ug/L			05/28/16 06:32	1
Methylene Chloride	5.0	U	5.0	0.33	ug/L			05/28/16 06:32	1
Styrene	1.0	U	1.0	0.45	ug/L			05/28/16 06:32	1
Tetrachloroethene	1.0	U	1.0	0.31	ug/L			05/28/16 06:32	1
Toluene	1.0	U	1.0	0.23	ug/L			05/28/16 06:32	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			05/28/16 06:32	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.56	ug/L			05/28/16 06:32	1
Trichloroethene	1.0	U	1.0	0.22	ug/L			05/28/16 06:32	1
Trichlorofluoromethane	1.0	U	1.0	0.49	ug/L			05/28/16 06:32	1
Vinyl chloride	1.0	U	1.0	0.29	ug/L			05/28/16 06:32	1
Xylenes, Total	2.0	U	2.0	0.52	ug/L			05/28/16 06:32	1
Methylcyclohexane	1.0	U	1.0	0.43	ug/L			05/28/16 06:32	1
Dibromochloromethane	1.0	U	1.0	0.43	ug/L			05/28/16 06:32	1

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Client Sample ID: MWM10-09-GW-051916

Lab Sample ID: 240-65149-12

Date Collected: 05/19/16 17:10

Matrix: Water

Date Received: 05/21/16 09:40

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,1'-Dichloroethane-d4 (Surr)	87		78 - 125		05/28/16 06:32	1
4-Bromofluorobenzene (Surr)	80		61 - 120		05/28/16 06:32	1
Toluene-d8 (Surr)	86		80 - 120		05/28/16 06:32	1
Dibromofluoromethane (Surr)	89		79 - 120		05/28/16 06:32	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	0.96	U	0.96	0.12	ug/L		05/24/16 09:07	05/31/16 21:15	1
2,2'-oxybis[1-chloropropane]	0.96	U	0.96	0.18	ug/L		05/24/16 09:07	05/31/16 21:15	1
2,4,5-Trichlorophenol	4.8	U	4.8	0.35	ug/L		05/24/16 09:07	05/31/16 21:15	1
2,4,6-Trichlorophenol	3.8	U	3.8	0.25	ug/L		05/24/16 09:07	05/31/16 21:15	1
2,4-Dichlorophenol	9.6	U	9.6	0.28	ug/L		05/24/16 09:07	05/31/16 21:15	1
2,4-Dimethylphenol	4.8	U	4.8	0.30	ug/L		05/24/16 09:07	05/31/16 21:15	1
2,4-Dinitrophenol	19	U	19	5.9	ug/L		05/24/16 09:07	05/31/16 21:15	1
2,4-Dinitrotoluene	4.8	U	4.8	0.25	ug/L		05/24/16 09:07	05/31/16 21:15	1
2,6-Dinitrotoluene	4.8	U	4.8	0.23	ug/L		05/24/16 09:07	05/31/16 21:15	1
2-Chloronaphthalene	4.8	U	4.8	0.11	ug/L		05/24/16 09:07	05/31/16 21:15	1
2-Chlorophenol	4.8	U	4.8	0.13	ug/L		05/24/16 09:07	05/31/16 21:15	1
2-Methylnaphthalene	4.8	U	4.8	0.036	ug/L		05/24/16 09:07	05/31/16 21:15	1
2-Methylphenol	4.8	U	4.8	0.18	ug/L		05/24/16 09:07	05/31/16 21:15	1
2-Nitroaniline	19	U	19	0.30	ug/L		05/24/16 09:07	05/31/16 21:15	1
2-Nitrophenol	4.8	U	4.8	0.20	ug/L		05/24/16 09:07	05/31/16 21:15	1
3,3'-Dichlorobenzidine	4.8	U	4.8	0.34	ug/L		05/24/16 09:07	05/31/16 21:15	1
3-Nitroaniline	19	U	19	0.25	ug/L		05/24/16 09:07	05/31/16 21:15	1
4,6-Dinitro-2-methylphenol	19	U	19	0.50	ug/L		05/24/16 09:07	05/31/16 21:15	1
4-Bromophenyl phenyl ether	4.8	U	4.8	0.33	ug/L		05/24/16 09:07	05/31/16 21:15	1
4-Chloro-3-methylphenol	4.8	U	4.8	0.27	ug/L		05/24/16 09:07	05/31/16 21:15	1
4-Chloroaniline	1.9	U	1.9	0.14	ug/L		05/24/16 09:07	05/31/16 21:15	1
4-Chlorophenyl phenyl ether	4.8	U	4.8	0.28	ug/L		05/24/16 09:07	05/31/16 21:15	1
4-Nitroaniline	19	U	19	0.23	ug/L		05/24/16 09:07	05/31/16 21:15	1
4-Nitrophenol	19	U	19	0.56	ug/L		05/24/16 09:07	05/31/16 21:15	1
Acenaphthene	4.8	U	4.8	0.042	ug/L		05/24/16 09:07	05/31/16 21:15	1
Acenaphthylene	4.8	U	4.8	0.019	ug/L		05/24/16 09:07	05/31/16 21:15	1
Acetophenone	0.96	U	0.96	0.13	ug/L		05/24/16 09:07	05/31/16 21:15	1
Anthracene	4.8	U	4.8	0.030	ug/L		05/24/16 09:07	05/31/16 21:15	1
Atrazine	0.96	U	0.96	0.11	ug/L		05/24/16 09:07	05/31/16 21:15	1
Benzaldehyde	0.96	U	0.96	0.28	ug/L		05/24/16 09:07	05/31/16 21:15	1
Benzo[a]anthracene	0.96	U	0.96	0.057	ug/L		05/24/16 09:07	05/31/16 21:15	1
Benzo[a]pyrene	0.96	U	0.96	0.029	ug/L		05/24/16 09:07	05/31/16 21:15	1
Benzo[b]fluoranthene	0.96	U	0.96	0.057	ug/L		05/24/16 09:07	05/31/16 21:15	1
Benzo[g,h,i]perylene	0.96	U	0.96	0.048	ug/L		05/24/16 09:07	05/31/16 21:15	1
Benzo[k]fluoranthene	0.96	U	0.96	0.046	ug/L		05/24/16 09:07	05/31/16 21:15	1
Bis(2-chloroethoxy)methane	4.8	U	4.8	0.036	ug/L		05/24/16 09:07	05/31/16 21:15	1
Bis(2-chloroethyl)ether	0.96	U	0.96	0.18	ug/L		05/24/16 09:07	05/31/16 21:15	1
Bis(2-ethylhexyl) phthalate	1.8	J B	4.8	1.5	ug/L		05/24/16 09:07	05/31/16 21:15	1
Butyl benzyl phthalate	4.8	U	4.8	0.21	ug/L		05/24/16 09:07	05/31/16 21:15	1
Caprolactam	4.8	U	4.8	0.36	ug/L		05/24/16 09:07	05/31/16 21:15	1
Carbazole	9.6	U	9.6	0.10	ug/L		05/24/16 09:07	05/31/16 21:15	1
Chrysene	0.96	U	0.96	0.034	ug/L		05/24/16 09:07	05/31/16 21:15	1
Dibenz(a,h)anthracene	1.9	U	1.9	0.038	ug/L		05/24/16 09:07	05/31/16 21:15	1

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Client Sample ID: MWM10-09-GW-051916

Lab Sample ID: 240-65149-12

Date Collected: 05/19/16 17:10

Matrix: Water

Date Received: 05/21/16 09:40

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibenzofuran	3.8	U	3.8	0.13	ug/L		05/24/16 09:07	05/31/16 21:15	1
Diethyl phthalate	4.8	U	4.8	0.12	ug/L		05/24/16 09:07	05/31/16 21:15	1
Dimethyl phthalate	4.8	U	4.8	0.097	ug/L		05/24/16 09:07	05/31/16 21:15	1
Di-n-butyl phthalate	0.81	J B	4.8	0.38	ug/L		05/24/16 09:07	05/31/16 21:15	1
Di-n-octyl phthalate	4.8	U	4.8	0.35	ug/L		05/24/16 09:07	05/31/16 21:15	1
Fluoranthene	0.96	U	0.96	0.026	ug/L		05/24/16 09:07	05/31/16 21:15	1
Fluorene	4.8	U	4.8	0.033	ug/L		05/24/16 09:07	05/31/16 21:15	1
Hexachlorobenzene	0.19	U	0.19	0.11	ug/L		05/24/16 09:07	05/31/16 21:15	1
Hexachlorobutadiene	0.96	U	0.96	0.14	ug/L		05/24/16 09:07	05/31/16 21:15	1
Hexachlorocyclopentadiene	4.8	U	4.8	2.4	ug/L		05/24/16 09:07	05/31/16 21:15	1
Hexachloroethane	4.8	U	4.8	0.21	ug/L		05/24/16 09:07	05/31/16 21:15	1
Indeno[1,2,3-cd]pyrene	1.9	U	1.9	0.046	ug/L		05/24/16 09:07	05/31/16 21:15	1
Isophorone	4.8	U	4.8	0.040	ug/L		05/24/16 09:07	05/31/16 21:15	1
Naphthalene	4.8	U	4.8	0.041	ug/L		05/24/16 09:07	05/31/16 21:15	1
Nitrobenzene	2.9	U	2.9	0.11	ug/L		05/24/16 09:07	05/31/16 21:15	1
N-Nitrosodi-n-propylamine	4.8	U	4.8	0.15	ug/L		05/24/16 09:07	05/31/16 21:15	1
N-Nitrosodiphenylamine	4.8	U	4.8	0.11	ug/L		05/24/16 09:07	05/31/16 21:15	1
Pentachlorophenol	4.8	U	4.8	5.3	ug/L		05/24/16 09:07	05/31/16 21:15	1
Phenol	4.8	U	4.8	0.14	ug/L		05/24/16 09:07	05/31/16 21:15	1
Phenanthrene	1.9	U	1.9	0.030	ug/L		05/24/16 09:07	05/31/16 21:15	1
Pyrene	4.8	U	4.8	0.027	ug/L		05/24/16 09:07	05/31/16 21:15	1
3 & 4 Methylphenol	4.8	U	4.8	0.32	ug/L		05/24/16 09:07	05/31/16 21:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	55		44 - 120	05/24/16 09:07	05/31/16 21:15	1
2-Fluorophenol (Surr)	53		26 - 120	05/24/16 09:07	05/31/16 21:15	1
2,4,6-Tribromophenol (Surr)	60		36 - 120	05/24/16 09:07	05/31/16 21:15	1
Nitrobenzene-d5 (Surr)	57		44 - 120	05/24/16 09:07	05/31/16 21:15	1
Phenol-d5 (Surr)	45		16 - 120	05/24/16 09:07	05/31/16 21:15	1
Terphenyl-d14 (Surr)	62		43 - 120	05/24/16 09:07	05/31/16 21:15	1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.19	U	0.19	0.048	ug/L		05/24/16 07:31	05/26/16 19:19	1
Aroclor-1221	0.19	U	0.19	0.087	ug/L		05/24/16 07:31	05/26/16 19:19	1
Aroclor-1232	0.19	U	0.19	0.067	ug/L		05/24/16 07:31	05/26/16 19:19	1
Aroclor-1242	0.19	U	0.19	0.058	ug/L		05/24/16 07:31	05/26/16 19:19	1
Aroclor-1248	0.19	U	0.19	0.048	ug/L		05/24/16 07:31	05/26/16 19:19	1
Aroclor-1254	0.19	U	0.19	0.029	ug/L		05/24/16 07:31	05/26/16 19:19	1
Aroclor-1260	0.19	U	0.19	0.038	ug/L		05/24/16 07:31	05/26/16 19:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	16		10 - 120	05/24/16 07:31	05/26/16 19:19	1
Tetrachloro-m-xylene	52		21 - 120	05/24/16 07:31	05/26/16 19:19	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.44	J	2.0	0.16	ug/L		05/24/16 11:04	05/30/16 12:20	1
Arsenic	1.2	J	2.0	0.49	ug/L		05/24/16 11:04	05/30/16 12:20	1
Barium	35	B	1.0	1.1	ug/L		05/24/16 11:04	05/30/16 12:20	1

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Client Sample ID: MWM10-09-GW-051916

Lab Sample ID: 240-65149-12

Date Collected: 05/19/16 17:10

Matrix: Water

Date Received: 05/21/16 09:40

Method: 6020 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	0.081	J B	1.0	0.053	ug/L		05/24/16 11:04	05/30/16 12:20	1
Cadmium	0.13	J	0.50	0.061	ug/L		05/24/16 11:04	05/30/16 12:20	1
Chromium	2.0	U	2.0	0.60	ug/L		05/24/16 11:04	05/30/16 12:20	1
Cobalt	0.90	J	1.0	0.021	ug/L		05/24/16 11:04	05/30/16 12:20	1
Copper	8.9		2.0	0.75	ug/L		05/24/16 11:04	05/30/16 12:20	1
Lead	1.4		1.0	0.11	ug/L		05/24/16 11:04	05/30/16 12:20	1
Manganese	380		1.0	1.1	ug/L		05/24/16 11:04	05/30/16 12:20	1
Nickel	5.0	B	2.0	0.23	ug/L		05/24/16 11:04	05/30/16 12:20	1
Selenium	0.89	J	2.0	0.25	ug/L		05/24/16 11:04	05/30/16 12:20	1
Silver	0.20	U	0.20	0.020	ug/L		05/24/16 11:04	05/30/16 12:20	1
Thallium	1.0	U	1.0	0.074	ug/L		05/24/16 11:04	05/30/16 12:20	1
Vanadium	0.33	J	4.0	0.23	ug/L		05/24/16 11:04	05/30/16 12:20	1
Zinc	320		10	7.3	ug/L		05/24/16 11:04	05/30/16 12:20	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.090	ug/L		05/24/16 12:00	05/25/16 15:24	1

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Client Sample ID: SB-62-14-GW-051916

Lab Sample ID: 240-65149-13

Date Collected: 05/19/16 18:00

Matrix: Water

Date Received: 05/21/16 09:40

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.44	ug/L			05/28/16 06:54	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.22	ug/L			05/28/16 06:54	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.45	ug/L			05/28/16 06:54	1
1,1,2-Trichloroethane	1.0	U	1.0	0.24	ug/L			05/28/16 06:54	1
1,1-Dichloroethane	1.0	U	1.0	0.30	ug/L			05/28/16 06:54	1
1,1-Dichloroethene	1.0	U	1.0	0.45	ug/L			05/28/16 06:54	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.32	ug/L			05/28/16 06:54	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.82	ug/L			05/28/16 06:54	1
1,2-Dichlorobenzene	0.84	J	1.0	0.25	ug/L			05/28/16 06:54	1
1,2-Dichloroethane	1.0	U	1.0	0.23	ug/L			05/28/16 06:54	1
1,2-Dichloropropane	1.0	U	1.0	0.25	ug/L			05/28/16 06:54	1
1,3-Dichlorobenzene	1.0	U	1.0	0.19	ug/L			05/28/16 06:54	1
1,4-Dichlorobenzene	1.0	U	1.0	0.27	ug/L			05/28/16 06:54	1
2-Hexanone	50	U	50	0.48	ug/L			05/28/16 06:54	1
Acetone	20	J	25	0.94	ug/L			05/28/16 06:54	1
Benzene	3.7		1.0	0.35	ug/L			05/28/16 06:54	1
Bromoform	1.0	U	1.0	0.56	ug/L			05/28/16 06:54	1
Bromomethane	1.0	U	1.0	0.44	ug/L			05/28/16 06:54	1
Carbon disulfide	5.0	U	5.0	0.38	ug/L			05/28/16 06:54	1
Carbon tetrachloride	1.0	U	1.0	0.43	ug/L			05/28/16 06:54	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			05/28/16 06:54	1
Chloroethane	1.0	U	1.0	0.32	ug/L			05/28/16 06:54	1
Chloroform	1.0	U	1.0	0.25	ug/L			05/28/16 06:54	1
Chloromethane	1.0	U	1.0	0.44	ug/L			05/28/16 06:54	1
cis-1,2-Dichloroethene	0.33	J	1.0	0.26	ug/L			05/28/16 06:54	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.46	ug/L			05/28/16 06:54	1
Cyclohexane	0.76	J	1.0	0.45	ug/L			05/28/16 06:54	1
Bromodichloromethane	1.0	U	1.0	0.29	ug/L			05/28/16 06:54	1
Dichlorodifluoromethane	1.0	U	1.0	0.32	ug/L			05/28/16 06:54	1
Ethylbenzene	0.85	J	1.0	0.25	ug/L			05/28/16 06:54	1
1,2-Dibromoethane	1.0	U	1.0	0.32	ug/L			05/28/16 06:54	1
Isopropylbenzene	0.49	J	5.0	0.35	ug/L			05/28/16 06:54	1
Methyl acetate	10	U	10	2.3	ug/L			05/28/16 06:54	1
2-Butanone (MEK)	1.8	J	25	0.53	ug/L			05/28/16 06:54	1
4-Methyl-2-pentanone (MIBK)	3.9	J	50	0.99	ug/L			05/28/16 06:54	1
Methyl tert-butyl ether	5.0	U	5.0	0.20	ug/L			05/28/16 06:54	1
Methylene Chloride	5.0	U	5.0	0.33	ug/L			05/28/16 06:54	1
Styrene	1.0	U	1.0	0.45	ug/L			05/28/16 06:54	1
Tetrachloroethene	1.0	U	1.0	0.31	ug/L			05/28/16 06:54	1
Toluene	0.93	J	1.0	0.23	ug/L			05/28/16 06:54	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			05/28/16 06:54	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.56	ug/L			05/28/16 06:54	1
Trichloroethene	1.0	U	1.0	0.22	ug/L			05/28/16 06:54	1
Trichlorofluoromethane	1.0	U	1.0	0.49	ug/L			05/28/16 06:54	1
Vinyl chloride	1.0	U	1.0	0.29	ug/L			05/28/16 06:54	1
Xylenes, Total	2.1		2.0	0.52	ug/L			05/28/16 06:54	1
Methylcyclohexane	1.0		1.0	0.43	ug/L			05/28/16 06:54	1
Dibromochloromethane	1.0	U	1.0	0.43	ug/L			05/28/16 06:54	1

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Client Sample ID: SB-62-14-GW-051916

Lab Sample ID: 240-65149-13

Date Collected: 05/19/16 18:00

Matrix: Water

Date Received: 05/21/16 09:40

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	87		78 - 125		05/28/16 06:54	1
4-Bromofluorobenzene (Surr)	83		61 - 120		05/28/16 06:54	1
Toluene-d8 (Surr)	86		80 - 120		05/28/16 06:54	1
Dibromofluoromethane (Surr)	89		79 - 120		05/28/16 06:54	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	0.96	U	0.96	0.12	ug/L		05/24/16 09:07	05/31/16 21:40	1
2,2'-oxybis[1-chloropropane]	0.96	U	0.96	0.18	ug/L		05/24/16 09:07	05/31/16 21:40	1
2,4,5-Trichlorophenol	4.8	U	4.8	0.35	ug/L		05/24/16 09:07	05/31/16 21:40	1
2,4,6-Trichlorophenol	3.8	U	3.8	0.25	ug/L		05/24/16 09:07	05/31/16 21:40	1
2,4-Dichlorophenol	9.6	U	9.6	0.28	ug/L		05/24/16 09:07	05/31/16 21:40	1
2,4-Dimethylphenol	4.8	U	4.8	0.30	ug/L		05/24/16 09:07	05/31/16 21:40	1
2,4-Dinitrophenol	19	U	19	5.9	ug/L		05/24/16 09:07	05/31/16 21:40	1
2,4-Dinitrotoluene	4.8	U	4.8	0.25	ug/L		05/24/16 09:07	05/31/16 21:40	1
2,6-Dinitrotoluene	4.8	U	4.8	0.23	ug/L		05/24/16 09:07	05/31/16 21:40	1
2-Chloronaphthalene	4.8	U	4.8	0.11	ug/L		05/24/16 09:07	05/31/16 21:40	1
2-Chlorophenol	4.8	U	4.8	0.13	ug/L		05/24/16 09:07	05/31/16 21:40	1
2-Methylnaphthalene	1.4	J	4.8	0.036	ug/L		05/24/16 09:07	05/31/16 21:40	1
2-Methylphenol	4.8	U	4.8	0.18	ug/L		05/24/16 09:07	05/31/16 21:40	1
2-Nitroaniline	19	U	19	0.30	ug/L		05/24/16 09:07	05/31/16 21:40	1
2-Nitrophenol	4.8	U	4.8	0.20	ug/L		05/24/16 09:07	05/31/16 21:40	1
3,3'-Dichlorobenzidine	4.8	U	4.8	0.34	ug/L		05/24/16 09:07	05/31/16 21:40	1
3-Nitroaniline	19	U	19	0.25	ug/L		05/24/16 09:07	05/31/16 21:40	1
4,6-Dinitro-2-methylphenol	19	U	19	0.50	ug/L		05/24/16 09:07	05/31/16 21:40	1
4-Bromophenyl phenyl ether	4.8	U	4.8	0.33	ug/L		05/24/16 09:07	05/31/16 21:40	1
4-Chloro-3-methylphenol	4.8	U	4.8	0.27	ug/L		05/24/16 09:07	05/31/16 21:40	1
4-Chloroaniline	1.9	U	1.9	0.14	ug/L		05/24/16 09:07	05/31/16 21:40	1
4-Chlorophenyl phenyl ether	4.8	U	4.8	0.28	ug/L		05/24/16 09:07	05/31/16 21:40	1
4-Nitroaniline	19	U	19	0.23	ug/L		05/24/16 09:07	05/31/16 21:40	1
4-Nitrophenol	19	U	19	0.56	ug/L		05/24/16 09:07	05/31/16 21:40	1
Acenaphthene	4.8	U	4.8	0.042	ug/L		05/24/16 09:07	05/31/16 21:40	1
Acenaphthylene	4.8	U	4.8	0.019	ug/L		05/24/16 09:07	05/31/16 21:40	1
Acetophenone	0.96	U	0.96	0.13	ug/L		05/24/16 09:07	05/31/16 21:40	1
Anthracene	0.24	J	4.8	0.030	ug/L		05/24/16 09:07	05/31/16 21:40	1
Atrazine	0.96	U	0.96	0.11	ug/L		05/24/16 09:07	05/31/16 21:40	1
Benzaldehyde	0.96	U	0.96	0.28	ug/L		05/24/16 09:07	05/31/16 21:40	1
Benzo[a]anthracene	0.31	J	0.96	0.057	ug/L		05/24/16 09:07	05/31/16 21:40	1
Benzo[a]pyrene	0.34	J	0.96	0.029	ug/L		05/24/16 09:07	05/31/16 21:40	1
Benzo[b]fluoranthene	0.55	J	0.96	0.057	ug/L		05/24/16 09:07	05/31/16 21:40	1
Benzo[g,h,i]perylene	0.96	U	0.96	0.048	ug/L		05/24/16 09:07	05/31/16 21:40	1
Benzo[k]fluoranthene	0.96	U	0.96	0.046	ug/L		05/24/16 09:07	05/31/16 21:40	1
Bis(2-chloroethoxy)methane	4.8	U	4.8	0.036	ug/L		05/24/16 09:07	05/31/16 21:40	1
Bis(2-chloroethyl)ether	0.96	U	0.96	0.18	ug/L		05/24/16 09:07	05/31/16 21:40	1
Bis(2-ethylhexyl) phthalate	2.4	J B	4.8	1.5	ug/L		05/24/16 09:07	05/31/16 21:40	1
Butyl benzyl phthalate	4.8	U	4.8	0.21	ug/L		05/24/16 09:07	05/31/16 21:40	1
Caprolactam	4.8	U	4.8	0.36	ug/L		05/24/16 09:07	05/31/16 21:40	1
Carbazole	9.6	U	9.6	0.10	ug/L		05/24/16 09:07	05/31/16 21:40	1
Chrysene	0.39	J	0.96	0.034	ug/L		05/24/16 09:07	05/31/16 21:40	1
Dibenz(a,h)anthracene	1.9	U	1.9	0.038	ug/L		05/24/16 09:07	05/31/16 21:40	1

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Client Sample ID: SB-62-14-GW-051916

Lab Sample ID: 240-65149-13

Date Collected: 05/19/16 18:00

Matrix: Water

Date Received: 05/21/16 09:40

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibenzofuran	3.8	U	3.8	0.13	ug/L		05/24/16 09:07	05/31/16 21:40	1
Diethyl phthalate	4.8	U	4.8	0.12	ug/L		05/24/16 09:07	05/31/16 21:40	1
Dimethyl phthalate	4.8	U	4.8	0.097	ug/L		05/24/16 09:07	05/31/16 21:40	1
Di-n-butyl phthalate	0.89	J B	4.8	0.38	ug/L		05/24/16 09:07	05/31/16 21:40	1
Di-n-octyl phthalate	4.8	U	4.8	0.35	ug/L		05/24/16 09:07	05/31/16 21:40	1
Fluoranthene	0.76	J	0.96	0.026	ug/L		05/24/16 09:07	05/31/16 21:40	1
Fluorene	0.24	J	4.8	0.033	ug/L		05/24/16 09:07	05/31/16 21:40	1
Hexachlorobenzene	0.19	U	0.19	0.11	ug/L		05/24/16 09:07	05/31/16 21:40	1
Hexachlorobutadiene	0.96	U	0.96	0.14	ug/L		05/24/16 09:07	05/31/16 21:40	1
Hexachlorocyclopentadiene	4.8	U	4.8	2.4	ug/L		05/24/16 09:07	05/31/16 21:40	1
Hexachloroethane	4.8	U	4.8	0.21	ug/L		05/24/16 09:07	05/31/16 21:40	1
Indeno[1,2,3-cd]pyrene	1.9	U	1.9	0.046	ug/L		05/24/16 09:07	05/31/16 21:40	1
Isophorone	4.8	U	4.8	0.040	ug/L		05/24/16 09:07	05/31/16 21:40	1
Naphthalene	1.3	J	4.8	0.041	ug/L		05/24/16 09:07	05/31/16 21:40	1
Nitrobenzene	2.9	U	2.9	0.11	ug/L		05/24/16 09:07	05/31/16 21:40	1
N-Nitrosodi-n-propylamine	4.8	U	4.8	0.15	ug/L		05/24/16 09:07	05/31/16 21:40	1
N-Nitrosodiphenylamine	4.8	U	4.8	0.11	ug/L		05/24/16 09:07	05/31/16 21:40	1
Pentachlorophenol	4.8	U	4.8	5.3	ug/L		05/24/16 09:07	05/31/16 21:40	1
Phenol	4.8	U	4.8	0.14	ug/L		05/24/16 09:07	05/31/16 21:40	1
Phenanthrene	0.91	J	1.9	0.030	ug/L		05/24/16 09:07	05/31/16 21:40	1
Pyrene	0.86	J	4.8	0.027	ug/L		05/24/16 09:07	05/31/16 21:40	1
3 & 4 Methylphenol	4.8	U	4.8	0.32	ug/L		05/24/16 09:07	05/31/16 21:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	41	X	44 - 120	05/24/16 09:07	05/31/16 21:40	1
2-Fluorophenol (Surr)	50		26 - 120	05/24/16 09:07	05/31/16 21:40	1
2,4,6-Tribromophenol (Surr)	58		36 - 120	05/24/16 09:07	05/31/16 21:40	1
Nitrobenzene-d5 (Surr)	46		44 - 120	05/24/16 09:07	05/31/16 21:40	1
Phenol-d5 (Surr)	43		16 - 120	05/24/16 09:07	05/31/16 21:40	1
Terphenyl-d14 (Surr)	51		43 - 120	05/24/16 09:07	05/31/16 21:40	1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.19	U	0.19	0.048	ug/L		05/24/16 07:31	05/26/16 19:37	1
Aroclor-1221	0.19	U	0.19	0.086	ug/L		05/24/16 07:31	05/26/16 19:37	1
Aroclor-1232	0.19	U	0.19	0.067	ug/L		05/24/16 07:31	05/26/16 19:37	1
Aroclor-1242	0.19	U	0.19	0.057	ug/L		05/24/16 07:31	05/26/16 19:37	1
Aroclor-1248	0.28		0.19	0.048	ug/L		05/24/16 07:31	05/26/16 19:37	1
Aroclor-1254	0.19	U	0.19	0.029	ug/L		05/24/16 07:31	05/26/16 19:37	1
Aroclor-1260	0.19	U	0.19	0.038	ug/L		05/24/16 07:31	05/26/16 19:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	4	X	10 - 120	05/24/16 07:31	05/26/16 19:37	1
Tetrachloro-m-xylene	6	X	21 - 120	05/24/16 07:31	05/26/16 19:37	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	4.4		2.0	0.16	ug/L		05/24/16 11:04	05/30/16 12:24	1
Arsenic	71		2.0	0.49	ug/L		05/24/16 11:04	05/30/16 12:24	1
Barium	1600	B	1.0	1.1	ug/L		05/24/16 11:04	05/30/16 12:24	1

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Client Sample ID: SB-62-14-GW-051916

Lab Sample ID: 240-65149-13

Date Collected: 05/19/16 18:00

Matrix: Water

Date Received: 05/21/16 09:40

Method: 6020 - Metals (ICP/MS) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	1.9	B	1.0	0.053	ug/L		05/24/16 11:04	05/30/16 12:24	1
Cadmium	1.7		0.50	0.061	ug/L		05/24/16 11:04	05/30/16 12:24	1
Chromium	100		2.0	0.60	ug/L		05/24/16 11:04	05/30/16 12:24	1
Cobalt	22		1.0	0.021	ug/L		05/24/16 11:04	05/30/16 12:24	1
Copper	150		2.0	0.75	ug/L		05/24/16 11:04	05/30/16 12:24	1
Lead	360		1.0	0.11	ug/L		05/24/16 11:04	05/30/16 12:24	1
Manganese	3200		1.0	1.1	ug/L		05/24/16 11:04	05/30/16 12:24	1
Nickel	85	B	2.0	0.23	ug/L		05/24/16 11:04	05/30/16 12:24	1
Selenium	8.3		2.0	0.25	ug/L		05/24/16 11:04	05/30/16 12:24	1
Silver	0.44		0.20	0.020	ug/L		05/24/16 11:04	05/30/16 12:24	1
Thallium	0.66	J	1.0	0.074	ug/L		05/24/16 11:04	05/30/16 12:24	1
Vanadium	94		4.0	0.23	ug/L		05/24/16 11:04	05/30/16 12:24	1
Zinc	270		10	7.3	ug/L		05/24/16 11:04	05/30/16 12:24	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.48		0.20	0.090	ug/L		05/24/16 12:00	05/25/16 15:33	1

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Client Sample ID: DUP-01-GW-051916

Lab Sample ID: 240-65149-14

Date Collected: 05/19/16 00:00

Matrix: Water

Date Received: 05/21/16 09:40

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	29		2.0	0.24	ug/L	-		05/31/16 13:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		74 - 120					05/31/16 13:35	1

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-65149-15

Date Collected: 05/18/16 00:00

Matrix: Water

Date Received: 05/21/16 09:40

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.44	ug/L			06/01/16 01:54	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.22	ug/L			06/01/16 01:54	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.45	ug/L			06/01/16 01:54	1
1,1,2-Trichloroethane	1.0	U	1.0	0.24	ug/L			06/01/16 01:54	1
1,1-Dichloroethane	1.0	U	1.0	0.30	ug/L			06/01/16 01:54	1
1,1-Dichloroethene	1.0	U	1.0	0.45	ug/L			06/01/16 01:54	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.32	ug/L			06/01/16 01:54	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.82	ug/L			06/01/16 01:54	1
1,2-Dichlorobenzene	1.0	U	1.0	0.25	ug/L			06/01/16 01:54	1
1,2-Dichloroethane	1.0	U	1.0	0.23	ug/L			06/01/16 01:54	1
1,2-Dichloropropane	1.0	U	1.0	0.25	ug/L			06/01/16 01:54	1
1,3-Dichlorobenzene	1.0	U	1.0	0.19	ug/L			06/01/16 01:54	1
1,4-Dichlorobenzene	1.0	U	1.0	0.27	ug/L			06/01/16 01:54	1
2-Hexanone	50	U	50	0.48	ug/L			06/01/16 01:54	1
Acetone	3.3	J	25	0.94	ug/L			06/01/16 01:54	1
Benzene	1.0	U	1.0	0.35	ug/L			06/01/16 01:54	1
Bromoform	1.0	U	1.0	0.56	ug/L			06/01/16 01:54	1
Bromomethane	1.0	U	1.0	0.44	ug/L			06/01/16 01:54	1
Carbon disulfide	5.0	U	5.0	0.38	ug/L			06/01/16 01:54	1
Carbon tetrachloride	1.0	U	1.0	0.43	ug/L			06/01/16 01:54	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			06/01/16 01:54	1
Chloroethane	1.0	U	1.0	0.32	ug/L			06/01/16 01:54	1
Chloroform	1.0	U	1.0	0.25	ug/L			06/01/16 01:54	1
Chloromethane	1.0	U	1.0	0.44	ug/L			06/01/16 01:54	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.26	ug/L			06/01/16 01:54	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.46	ug/L			06/01/16 01:54	1
Cyclohexane	1.0	U	1.0	0.45	ug/L			06/01/16 01:54	1
Bromodichloromethane	1.0	U	1.0	0.29	ug/L			06/01/16 01:54	1
Dichlorodifluoromethane	1.0	U	1.0	0.32	ug/L			06/01/16 01:54	1
Ethylbenzene	1.0	U	1.0	0.25	ug/L			06/01/16 01:54	1
1,2-Dibromoethane	1.0	U	1.0	0.32	ug/L			06/01/16 01:54	1
Isopropylbenzene	5.0	U	5.0	0.35	ug/L			06/01/16 01:54	1
Methyl acetate	10	U	10	2.3	ug/L			06/01/16 01:54	1
2-Butanone (MEK)	25	U	25	0.53	ug/L			06/01/16 01:54	1
4-Methyl-2-pentanone (MIBK)	50	U	50	0.99	ug/L			06/01/16 01:54	1
Methyl tert-butyl ether	5.0	U	5.0	0.20	ug/L			06/01/16 01:54	1
Methylene Chloride	5.0	U	5.0	0.33	ug/L			06/01/16 01:54	1
Styrene	1.0	U	1.0	0.45	ug/L			06/01/16 01:54	1
Tetrachloroethene	1.0	U	1.0	0.31	ug/L			06/01/16 01:54	1
Toluene	1.0	U	1.0	0.23	ug/L			06/01/16 01:54	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			06/01/16 01:54	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.56	ug/L			06/01/16 01:54	1
Trichloroethene	1.0	U	1.0	0.22	ug/L			06/01/16 01:54	1
Trichlorofluoromethane	1.0	U *	1.0	0.49	ug/L			06/01/16 01:54	1
Vinyl chloride	1.0	U	1.0	0.29	ug/L			06/01/16 01:54	1
Xylenes, Total	2.0	U	2.0	0.52	ug/L			06/01/16 01:54	1
Methylcyclohexane	1.0	U	1.0	0.43	ug/L			06/01/16 01:54	1
Dibromochloromethane	1.0	U	1.0	0.43	ug/L			06/01/16 01:54	1

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-65149-15

Date Collected: 05/18/16 00:00

Matrix: Water

Date Received: 05/21/16 09:40

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	88		78 - 125		06/01/16 01:54	1
4-Bromofluorobenzene (Surr)	97		61 - 120		06/01/16 01:54	1
Toluene-d8 (Surr)	99		80 - 120		06/01/16 01:54	1
Dibromofluoromethane (Surr)	92		79 - 120		06/01/16 01:54	1

Surrogate Summary

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		12DCE (78-125)	BFB (61-120)	TOL (80-120)	DBFM (79-120)
240-65149-1	TW-10-02-GW-051816	95	88	82	91
240-65149-2	MWW10-SEN01-GW-051816	92	84	87	87
240-65149-3	MWW10-SEN03-GW-051816	89	87	88	84
240-65149-4	MWW10-SEN04-GW-051816	90	89	82	88
240-65149-5	MWW10-04-GW-051816	92	84	86	90
240-65149-6	MWM2-04-GW-051816	92	83	84	95
240-65149-7	MWW5-01-GW-051916	91	80	87	90
240-65149-7 MS	MWW5-01-GW-051916	84	90	89	89
240-65149-7 MSD	MWW5-01-GW-051916	86	90	88	90
240-65149-8	TW-03-01-GW-051916	92	81	86	91
240-65149-11	MWM16-19-GW-051916	90	79	86	90
240-65149-12	MWM10-09-GW-051916	87	80	86	89
240-65149-13	SB-62-14-GW-051916	87	83	86	89
240-65149-15	TRIP BLANK	88	97	99	92
LCS 240-232276/4	Lab Control Sample	85	89	88	86
LCS 240-232355/4	Lab Control Sample	84	90	90	84
LCS 240-232568/4	Lab Control Sample	84	101	105	93
MB 240-232276/6	Method Blank	93	80	85	86
MB 240-232355/6	Method Blank	88	80	86	84
MB 240-232568/6	Method Blank	85	96	99	93

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

TOL = Toluene-d8 (Surr)

DBFM = Dibromofluoromethane (Surr)

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		12DCE (74-120)			
240-65149-1	TW-10-02-GW-051816	101			
240-65149-5	MWW10-04-GW-051816	101			
240-65149-6	MWM2-04-GW-051816	105			
240-65149-9	MWF12-01-GW-051916	105			
240-65149-10	MWF7-01-GW-051916	103			
240-65149-11	MWM16-19-GW-051916	104			
240-65149-14	DUP-01-GW-051916	102			
LCS 240-232050/4	Lab Control Sample	103			
LCS 240-232267/4	Lab Control Sample	104			
LCS 240-232500/4	Lab Control Sample	101			
MB 240-232050/5	Method Blank	101			
MB 240-232267/5	Method Blank	104			
MB 240-232500/5	Method Blank	106			

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)

TestAmerica Canton

Surrogate Summary

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		FBP (44-120)	2FP (26-120)	TBP (36-120)	NBZ (44-120)	PHL (16-120)	TPH (43-120)
240-65149-1	TW-10-02-GW-051816	58	51	69	63	60	59
240-65149-2	MWW10-SEN01-GW-051816	57	68	69	62	50	67
240-65149-6	MWM2-04-GW-051816	56	68	65	65	65	73
240-65149-8	TW-03-01-GW-051916	54	70	66	60	50	62
240-65149-11	MWM16-19-GW-051916	58	73	92	63	52	67
240-65149-12	MWM10-09-GW-051916	55	53	60	57	45	62
240-65149-13	SB-62-14-GW-051916	41 X	50	58	46	43	51
LCS 240-231631/9-A	Lab Control Sample	66	79	69	76	51	79
MB 240-231631/8-A	Method Blank	61	73	59	67	59	72

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
TBP = 2,4,6-Tribromophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPH = Terphenyl-d14 (Surr)

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		DCB1 (10-120)	TCX1 (21-120)
240-65149-1	TW-10-02-GW-051816	13	43
240-65149-6	MWM2-04-GW-051816	24	51
240-65149-11	MWM16-19-GW-051916	28	45

Surrogate Legend

DCB = DCB Decachlorobiphenyl
TCX = Tetrachloro-m-xylene

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		DCB2 (10-120)	TCX2 (21-120)
240-65149-2	MWW10-SEN01-GW-051816	17	54
240-65149-8	TW-03-01-GW-051916	24	50
240-65149-12	MWM10-09-GW-051916	16	52
240-65149-13	SB-62-14-GW-051916	4 X	6 X
LCS 240-231601/21-A	Lab Control Sample	33	59
MB 240-231601/20-A	Method Blank	35	62

Surrogate Legend

DCB = DCB Decachlorobiphenyl
TCX = Tetrachloro-m-xylene

TestAmerica Canton

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 240-232276/6

Matrix: Water

Analysis Batch: 232276

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.44	ug/L			05/27/16 12:54	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.22	ug/L			05/27/16 12:54	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.45	ug/L			05/27/16 12:54	1
1,1,2-Trichloroethane	1.0	U	1.0	0.24	ug/L			05/27/16 12:54	1
1,1-Dichloroethane	1.0	U	1.0	0.30	ug/L			05/27/16 12:54	1
1,1-Dichloroethene	1.0	U	1.0	0.45	ug/L			05/27/16 12:54	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.32	ug/L			05/27/16 12:54	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.82	ug/L			05/27/16 12:54	1
1,2-Dichlorobenzene	1.0	U	1.0	0.25	ug/L			05/27/16 12:54	1
1,2-Dichloroethane	1.0	U	1.0	0.23	ug/L			05/27/16 12:54	1
1,2-Dichloropropane	1.0	U	1.0	0.25	ug/L			05/27/16 12:54	1
1,3-Dichlorobenzene	1.0	U	1.0	0.19	ug/L			05/27/16 12:54	1
1,4-Dichlorobenzene	1.0	U	1.0	0.27	ug/L			05/27/16 12:54	1
2-Hexanone	50	U	50	0.48	ug/L			05/27/16 12:54	1
Acetone	25	U	25	0.94	ug/L			05/27/16 12:54	1
Benzene	1.0	U	1.0	0.35	ug/L			05/27/16 12:54	1
Bromoform	1.0	U	1.0	0.56	ug/L			05/27/16 12:54	1
Bromomethane	1.0	U	1.0	0.44	ug/L			05/27/16 12:54	1
Carbon disulfide	5.0	U	5.0	0.38	ug/L			05/27/16 12:54	1
Carbon tetrachloride	1.0	U	1.0	0.43	ug/L			05/27/16 12:54	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			05/27/16 12:54	1
Chloroethane	1.0	U	1.0	0.32	ug/L			05/27/16 12:54	1
Chloroform	1.0	U	1.0	0.25	ug/L			05/27/16 12:54	1
Chloromethane	1.0	U	1.0	0.44	ug/L			05/27/16 12:54	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.26	ug/L			05/27/16 12:54	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.46	ug/L			05/27/16 12:54	1
Cyclohexane	1.0	U	1.0	0.45	ug/L			05/27/16 12:54	1
Bromodichloromethane	1.0	U	1.0	0.29	ug/L			05/27/16 12:54	1
Dichlorodifluoromethane	1.0	U	1.0	0.32	ug/L			05/27/16 12:54	1
Ethylbenzene	1.0	U	1.0	0.25	ug/L			05/27/16 12:54	1
1,2-Dibromoethane	1.0	U	1.0	0.32	ug/L			05/27/16 12:54	1
Isopropylbenzene	5.0	U	5.0	0.35	ug/L			05/27/16 12:54	1
Methyl acetate	10	U	10	2.3	ug/L			05/27/16 12:54	1
2-Butanone (MEK)	25	U	25	0.53	ug/L			05/27/16 12:54	1
4-Methyl-2-pentanone (MIBK)	50	U	50	0.99	ug/L			05/27/16 12:54	1
Methyl tert-butyl ether	5.0	U	5.0	0.20	ug/L			05/27/16 12:54	1
Methylene Chloride	5.0	U	5.0	0.33	ug/L			05/27/16 12:54	1
Styrene	1.0	U	1.0	0.45	ug/L			05/27/16 12:54	1
Tetrachloroethene	1.0	U	1.0	0.31	ug/L			05/27/16 12:54	1
Toluene	1.0	U	1.0	0.23	ug/L			05/27/16 12:54	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			05/27/16 12:54	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.56	ug/L			05/27/16 12:54	1
Trichloroethene	1.0	U	1.0	0.22	ug/L			05/27/16 12:54	1
Trichlorofluoromethane	1.0	U	1.0	0.49	ug/L			05/27/16 12:54	1
Vinyl chloride	1.0	U	1.0	0.29	ug/L			05/27/16 12:54	1
Xylenes, Total	2.0	U	2.0	0.52	ug/L			05/27/16 12:54	1
Methylcyclohexane	1.0	U	1.0	0.43	ug/L			05/27/16 12:54	1
Dibromochloromethane	1.0	U	1.0	0.43	ug/L			05/27/16 12:54	1

TestAmerica Canton

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93		78 - 125		05/27/16 12:54	1
4-Bromofluorobenzene (Surr)	80		61 - 120		05/27/16 12:54	1
Toluene-d8 (Surr)	85		80 - 120		05/27/16 12:54	1
Dibromofluoromethane (Surr)	86		79 - 120		05/27/16 12:54	1

Lab Sample ID: LCS 240-232276/4
Matrix: Water
Analysis Batch: 232276

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	10.0	10.1		ug/L		101	77 - 123
1,1,2,2-Tetrachloroethane	10.0	8.51		ug/L		85	71 - 123
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	10.4		ug/L		104	67 - 138
1,1,2-Trichloroethane	10.0	9.34		ug/L		93	80 - 120
1,1-Dichloroethane	10.0	9.09		ug/L		91	79 - 125
1,1-Dichloroethene	10.0	9.78		ug/L		98	76 - 124
1,2,4-Trichlorobenzene	10.0	8.71		ug/L		87	61 - 120
1,2-Dibromo-3-Chloropropane	10.0	7.55		ug/L		75	50 - 132
1,2-Dichlorobenzene	10.0	9.31		ug/L		93	79 - 120
1,2-Dichloroethane	10.0	9.64		ug/L		96	80 - 120
1,2-Dichloropropane	10.0	9.34		ug/L		93	78 - 124
1,3-Dichlorobenzene	10.0	9.17		ug/L		92	79 - 120
1,4-Dichlorobenzene	10.0	9.00		ug/L		90	79 - 120
2-Hexanone	20.0	19.3	J	ug/L		97	55 - 141
Acetone	20.0	14.1	J	ug/L		70	34 - 148
Benzene	10.0	9.49		ug/L		95	80 - 120
Bromoform	10.0	8.27		ug/L		83	56 - 122
Bromomethane	10.0	6.10		ug/L		61	38 - 132
Carbon disulfide	10.0	8.98		ug/L		90	65 - 144
Carbon tetrachloride	10.0	9.96		ug/L		100	77 - 131
Chlorobenzene	10.0	9.39		ug/L		94	80 - 120
Chloroethane	10.0	5.99		ug/L		60	36 - 126
Chloroform	10.0	9.50		ug/L		95	80 - 120
Chloromethane	10.0	8.50		ug/L		85	48 - 133
cis-1,2-Dichloroethene	10.0	9.51		ug/L		95	79 - 120
cis-1,3-Dichloropropene	10.0	9.58		ug/L		96	74 - 126
Cyclohexane	10.0	10.4		ug/L		104	60 - 140
Bromodichloromethane	10.0	8.68		ug/L		87	80 - 120
Dichlorodifluoromethane	10.0	6.87		ug/L		69	23 - 136
Ethylbenzene	10.0	9.81		ug/L		98	80 - 120
1,2-Dibromoethane	10.0	9.65		ug/L		97	80 - 120
m-Xylene & p-Xylene	10.0	10.1		ug/L		101	80 - 120
Isopropylbenzene	10.0	10.5		ug/L		105	77 - 120
Methyl acetate	50.0	45.5		ug/L		91	67 - 131
2-Butanone (MEK)	20.0	17.3	J	ug/L		86	56 - 138
4-Methyl-2-pentanone (MIBK)	20.0	20.7	J	ug/L		103	64 - 135
Methyl tert-butyl ether	10.0	10.4		ug/L		104	69 - 121
Methylene Chloride	10.0	10.0		ug/L		100	77 - 129
o-Xylene	10.0	10.0		ug/L		100	80 - 120
Styrene	10.0	10.1		ug/L		101	76 - 122
Tetrachloroethene	10.0	9.88		ug/L		99	78 - 121
Toluene	10.0	9.73		ug/L		97	80 - 120
trans-1,2-Dichloroethene	10.0	10.1		ug/L		101	80 - 124

TestAmerica Canton

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-232276/4

Matrix: Water

Analysis Batch: 232276

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,3-Dichloropropene	10.0	8.45		ug/L		84	75 - 131
Trichloroethene	10.0	9.64		ug/L		96	80 - 121
Trichlorofluoromethane	10.0	8.42		ug/L		84	61 - 133
Vinyl chloride	10.0	8.69		ug/L		87	52 - 121
Xylenes, Total	20.0	20.1		ug/L		101	80 - 120
Methylcyclohexane	10.0	10.4		ug/L		104	61 - 134
Dibromochloromethane	10.0	8.35		ug/L		84	74 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	85		78 - 125
4-Bromofluorobenzene (Surr)	89		61 - 120
Toluene-d8 (Surr)	88		80 - 120
Dibromofluoromethane (Surr)	86		79 - 120

Lab Sample ID: MB 240-232355/6

Matrix: Water

Analysis Batch: 232355

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.44	ug/L			05/27/16 23:49	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.22	ug/L			05/27/16 23:49	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.45	ug/L			05/27/16 23:49	1
1,1,2-Trichloroethane	1.0	U	1.0	0.24	ug/L			05/27/16 23:49	1
1,1-Dichloroethane	1.0	U	1.0	0.30	ug/L			05/27/16 23:49	1
1,1-Dichloroethene	1.0	U	1.0	0.45	ug/L			05/27/16 23:49	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.32	ug/L			05/27/16 23:49	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.82	ug/L			05/27/16 23:49	1
1,2-Dichlorobenzene	1.0	U	1.0	0.25	ug/L			05/27/16 23:49	1
1,2-Dichloroethane	1.0	U	1.0	0.23	ug/L			05/27/16 23:49	1
1,2-Dichloropropane	1.0	U	1.0	0.25	ug/L			05/27/16 23:49	1
1,3-Dichlorobenzene	1.0	U	1.0	0.19	ug/L			05/27/16 23:49	1
1,4-Dichlorobenzene	1.0	U	1.0	0.27	ug/L			05/27/16 23:49	1
2-Hexanone	50	U	50	0.48	ug/L			05/27/16 23:49	1
Acetone	25	U	25	0.94	ug/L			05/27/16 23:49	1
Benzene	1.0	U	1.0	0.35	ug/L			05/27/16 23:49	1
Bromoform	1.0	U	1.0	0.56	ug/L			05/27/16 23:49	1
Bromomethane	1.0	U	1.0	0.44	ug/L			05/27/16 23:49	1
Carbon disulfide	5.0	U	5.0	0.38	ug/L			05/27/16 23:49	1
Carbon tetrachloride	1.0	U	1.0	0.43	ug/L			05/27/16 23:49	1
Chlorobenzene	1.0	U	1.0	0.25	ug/L			05/27/16 23:49	1
Chloroethane	1.0	U	1.0	0.32	ug/L			05/27/16 23:49	1
Chloroform	1.0	U	1.0	0.25	ug/L			05/27/16 23:49	1
Chloromethane	1.0	U	1.0	0.44	ug/L			05/27/16 23:49	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.26	ug/L			05/27/16 23:49	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.46	ug/L			05/27/16 23:49	1
Cyclohexane	1.0	U	1.0	0.45	ug/L			05/27/16 23:49	1
Bromodichloromethane	1.0	U	1.0	0.29	ug/L			05/27/16 23:49	1
Dichlorodifluoromethane	1.0	U	1.0	0.32	ug/L			05/27/16 23:49	1

TestAmerica Canton

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-232355/6

Matrix: Water

Analysis Batch: 232355

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	1.0	U	1.0	0.25	ug/L			05/27/16 23:49	1
1,2-Dibromoethane	1.0	U	1.0	0.32	ug/L			05/27/16 23:49	1
Isopropylbenzene	5.0	U	5.0	0.35	ug/L			05/27/16 23:49	1
Methyl acetate	10	U	10	2.3	ug/L			05/27/16 23:49	1
2-Butanone (MEK)	25	U	25	0.53	ug/L			05/27/16 23:49	1
4-Methyl-2-pentanone (MIBK)	50	U	50	0.99	ug/L			05/27/16 23:49	1
Methyl tert-butyl ether	5.0	U	5.0	0.20	ug/L			05/27/16 23:49	1
Methylene Chloride	5.0	U	5.0	0.33	ug/L			05/27/16 23:49	1
Styrene	1.0	U	1.0	0.45	ug/L			05/27/16 23:49	1
Tetrachloroethene	1.0	U	1.0	0.31	ug/L			05/27/16 23:49	1
Toluene	1.0	U	1.0	0.23	ug/L			05/27/16 23:49	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			05/27/16 23:49	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.56	ug/L			05/27/16 23:49	1
Trichloroethene	1.0	U	1.0	0.22	ug/L			05/27/16 23:49	1
Trichlorofluoromethane	1.0	U	1.0	0.49	ug/L			05/27/16 23:49	1
Vinyl chloride	1.0	U	1.0	0.29	ug/L			05/27/16 23:49	1
Xylenes, Total	2.0	U	2.0	0.52	ug/L			05/27/16 23:49	1
Methylcyclohexane	1.0	U	1.0	0.43	ug/L			05/27/16 23:49	1
Dibromochloromethane	1.0	U	1.0	0.43	ug/L			05/27/16 23:49	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	88		78 - 125		05/27/16 23:49	1
4-Bromofluorobenzene (Surr)	80		61 - 120		05/27/16 23:49	1
Toluene-d8 (Surr)	86		80 - 120		05/27/16 23:49	1
Dibromofluoromethane (Surr)	84		79 - 120		05/27/16 23:49	1

Lab Sample ID: LCS 240-232355/4

Matrix: Water

Analysis Batch: 232355

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	10.0	10.1		ug/L		101	77 - 123
1,1,1,2-Tetrachloroethane	10.0	8.27		ug/L		83	71 - 123
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	10.2		ug/L		102	67 - 138
1,1,2-Trichloroethane	10.0	8.92		ug/L		89	80 - 120
1,1-Dichloroethane	10.0	9.13		ug/L		91	79 - 125
1,1-Dichloroethene	10.0	9.50		ug/L		95	76 - 124
1,2,4-Trichlorobenzene	10.0	8.31		ug/L		83	61 - 120
1,2-Dibromo-3-Chloropropane	10.0	7.12		ug/L		71	50 - 132
1,2-Dichlorobenzene	10.0	8.85		ug/L		88	79 - 120
1,2-Dichloroethane	10.0	9.48		ug/L		95	80 - 120
1,2-Dichloropropane	10.0	9.36		ug/L		94	78 - 124
1,3-Dichlorobenzene	10.0	8.93		ug/L		89	79 - 120
1,4-Dichlorobenzene	10.0	8.78		ug/L		88	79 - 120
2-Hexanone	20.0	17.8	J	ug/L		89	55 - 141
Acetone	20.0	13.9	J	ug/L		70	34 - 148
Benzene	10.0	9.46		ug/L		95	80 - 120

TestAmerica Canton

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-232355/4

Matrix: Water

Analysis Batch: 232355

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromoform	10.0	8.51		ug/L		85	56 - 122
Bromomethane	10.0	7.82		ug/L		78	38 - 132
Carbon disulfide	10.0	8.86		ug/L		89	65 - 144
Carbon tetrachloride	10.0	9.58		ug/L		96	77 - 131
Chlorobenzene	10.0	9.02		ug/L		90	80 - 120
Chloroethane	10.0	7.45		ug/L		74	36 - 126
Chloroform	10.0	9.41		ug/L		94	80 - 120
Chloromethane	10.0	8.39		ug/L		84	48 - 133
cis-1,2-Dichloroethene	10.0	9.59		ug/L		96	79 - 120
cis-1,3-Dichloropropene	10.0	9.58		ug/L		96	74 - 126
Cyclohexane	10.0	10.2		ug/L		102	60 - 140
Bromodichloromethane	10.0	8.76		ug/L		88	80 - 120
Dichlorodifluoromethane	10.0	6.24		ug/L		62	23 - 136
Ethylbenzene	10.0	9.16		ug/L		92	80 - 120
1,2-Dibromoethane	10.0	9.38		ug/L		94	80 - 120
m-Xylene & p-Xylene	10.0	9.70		ug/L		97	80 - 120
Isopropylbenzene	10.0	10.0		ug/L		100	77 - 120
Methyl acetate	50.0	43.5		ug/L		87	67 - 131
2-Butanone (MEK)	20.0	17.0	J	ug/L		85	56 - 138
4-Methyl-2-pentanone (MIBK)	20.0	20.0	J	ug/L		100	64 - 135
Methyl tert-butyl ether	10.0	10.5		ug/L		105	69 - 121
Methylene Chloride	10.0	9.99		ug/L		100	77 - 129
o-Xylene	10.0	9.83		ug/L		98	80 - 120
Styrene	10.0	9.84		ug/L		98	76 - 122
Tetrachloroethene	10.0	9.55		ug/L		95	78 - 121
Toluene	10.0	9.51		ug/L		95	80 - 120
trans-1,2-Dichloroethene	10.0	9.83		ug/L		98	80 - 124
trans-1,3-Dichloropropene	10.0	8.22		ug/L		82	75 - 131
Trichloroethene	10.0	9.86		ug/L		99	80 - 121
Trichlorofluoromethane	10.0	8.51		ug/L		85	61 - 133
Vinyl chloride	10.0	8.66		ug/L		87	52 - 121
Xylenes, Total	20.0	19.5		ug/L		98	80 - 120
Methylcyclohexane	10.0	9.95		ug/L		100	61 - 134
Dibromochloromethane	10.0	8.35		ug/L		84	74 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	84		78 - 125
4-Bromofluorobenzene (Surr)	90		61 - 120
Toluene-d8 (Surr)	90		80 - 120
Dibromofluoromethane (Surr)	84		79 - 120

Lab Sample ID: 240-65149-7 MS

Matrix: Water

Analysis Batch: 232355

Client Sample ID: MWW5-01-GW-051916

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	1.0	U	10.0	10.3		ug/L		103	69 - 122
1,1,2,2-Tetrachloroethane	1.0	U	10.0	7.61		ug/L		76	61 - 130

TestAmerica Canton

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-65149-7 MS

Matrix: Water

Analysis Batch: 232355

Client Sample ID: MWW5-01-GW-051916

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	10.0	8.70		ug/L		87	44 - 140
1,1,2-Trichloroethane	1.0	U	10.0	8.72		ug/L		87	72 - 125
1,1-Dichloroethane	1.0	U	10.0	9.31		ug/L		93	73 - 124
1,1-Dichloroethene	1.0	U	10.0	9.03		ug/L		90	67 - 124
1,2,4-Trichlorobenzene	1.0	U	10.0	7.67		ug/L		77	48 - 120
1,2-Dibromo-3-Chloropropane	1.0	U	10.0	6.93		ug/L		69	42 - 130
1,2-Dichlorobenzene	1.0	U	10.0	8.68		ug/L		87	67 - 118
1,2-Dichloroethane	1.0	U	10.0	9.25		ug/L		93	74 - 125
1,2-Dichloropropane	1.0	U	10.0	8.96		ug/L		90	73 - 122
1,3-Dichlorobenzene	1.0	U	10.0	8.53		ug/L		85	65 - 120
1,4-Dichlorobenzene	1.0	U	10.0	8.41		ug/L		84	66 - 120
2-Hexanone	50	U	20.0	16.5	J	ug/L		83	49 - 142
Acetone	15	J	20.0	28.8		ug/L		67	32 - 126
Benzene	1.0	U	10.0	9.22		ug/L		92	73 - 121
Bromoform	1.0	U	10.0	7.92		ug/L		79	45 - 121
Bromomethane	1.0	U	10.0	11.6		ug/L		116	26 - 136
Carbon disulfide	5.0	U	10.0	9.36		ug/L		94	54 - 144
Carbon tetrachloride	1.0	U	10.0	9.64		ug/L		96	65 - 129
Chlorobenzene	1.0	U	10.0	8.70		ug/L		87	72 - 120
Chloroethane	1.0	U	10.0	9.33		ug/L		93	27 - 131
Chloroform	1.0	U	10.0	9.40		ug/L		94	73 - 121
Chloromethane	1.0	U	10.0	6.41		ug/L		64	39 - 134
cis-1,2-Dichloroethene	1.0	U	10.0	9.50		ug/L		95	66 - 124
cis-1,3-Dichloropropene	1.0	U	10.0	8.62		ug/L		86	60 - 120
Cyclohexane	1.0	U	10.0	8.25		ug/L		82	41 - 137
Bromodichloromethane	1.0	U	10.0	8.82		ug/L		88	72 - 120
Dichlorodifluoromethane	1.0	U	10.0	5.45		ug/L		55	14 - 137
Ethylbenzene	1.0	U	10.0	8.87		ug/L		89	68 - 121
1,2-Dibromoethane	1.0	U	10.0	8.84		ug/L		88	69 - 125
m-Xylene & p-Xylene	2.0	U	10.0	9.19		ug/L		92	66 - 123
Isopropylbenzene	5.0	U	10.0	9.16		ug/L		92	61 - 122
Methyl acetate	10	U	50.0	36.2		ug/L		72	64 - 124
2-Butanone (MEK)	25	U	20.0	14.4	J	ug/L		72	49 - 132
4-Methyl-2-pentanone (MIBK)	3.6	J	20.0	23.1	J	ug/L		98	58 - 136
Methyl tert-butyl ether	5.0	U	10.0	9.85		ug/L		99	61 - 121
Methylene Chloride	5.0	U	10.0	9.11		ug/L		91	70 - 124
o-Xylene	1.0	U	10.0	9.21		ug/L		92	68 - 121
Styrene	1.0	U	10.0	9.38		ug/L		94	64 - 126
Tetrachloroethene	1.0	U	10.0	8.92		ug/L		89	59 - 125
Toluene	1.0	U	10.0	9.13		ug/L		91	72 - 122
trans-1,2-Dichloroethene	1.0	U	10.0	9.93		ug/L		99	72 - 125
trans-1,3-Dichloropropene	1.0	U	10.0	7.40		ug/L		74	58 - 132
Trichloroethene	1.0	U	10.0	9.51		ug/L		95	61 - 129
Trichlorofluoromethane	1.0	U	10.0	8.20		ug/L		82	49 - 133
Vinyl chloride	1.0	U	10.0	8.23		ug/L		82	44 - 122
Xylenes, Total	2.0	U	20.0	18.4		ug/L		92	67 - 122
Methylcyclohexane	1.0	U	10.0	7.79		ug/L		78	39 - 135

TestAmerica Canton

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-65149-7 MS

Matrix: Water

Analysis Batch: 232355

Client Sample ID: MWW5-01-GW-051916

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Dibromochloromethane	1.0	U	10.0	8.03		ug/L		80	62 - 122
Surrogate	MS %Recovery	MS Qualifier	Limits						
1,2-Dichloroethane-d4 (Surr)	84		78 - 125						
4-Bromofluorobenzene (Surr)	90		61 - 120						
Toluene-d8 (Surr)	89		80 - 120						
Dibromofluoromethane (Surr)	89		79 - 120						

Lab Sample ID: 240-65149-7 MSD

Matrix: Water

Analysis Batch: 232355

Client Sample ID: MWW5-01-GW-051916

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	1.0	U	10.0	9.73		ug/L		97	69 - 122	6	14
1,1,2,2-Tetrachloroethane	1.0	U	10.0	7.37		ug/L		74	61 - 130	3	18
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	10.0	8.47		ug/L		85	44 - 140	3	35
1,1,2-Trichloroethane	1.0	U	10.0	8.22		ug/L		82	72 - 125	6	19
1,1-Dichloroethane	1.0	U	10.0	8.88		ug/L		89	73 - 124	5	14
1,1-Dichloroethene	1.0	U	10.0	9.01		ug/L		90	67 - 124	0	24
1,2,4-Trichlorobenzene	1.0	U	10.0	8.05		ug/L		81	48 - 120	5	28
1,2-Dibromo-3-Chloropropane	1.0	U	10.0	6.65		ug/L		67	42 - 130	4	24
1,2-Dichlorobenzene	1.0	U	10.0	8.24		ug/L		82	67 - 118	5	15
1,2-Dichloroethane	1.0	U	10.0	9.00		ug/L		90	74 - 125	3	24
1,2-Dichloropropane	1.0	U	10.0	8.80		ug/L		88	73 - 122	2	15
1,3-Dichlorobenzene	1.0	U	10.0	8.11		ug/L		81	65 - 120	5	15
1,4-Dichlorobenzene	1.0	U	10.0	7.91		ug/L		79	66 - 120	6	16
2-Hexanone	50	U	20.0	16.1	J	ug/L		80	49 - 142	3	27
Acetone	15	J	20.0	27.3		ug/L		60	32 - 126	5	28
Benzene	1.0	U	10.0	8.82		ug/L		88	73 - 121	4	13
Bromoform	1.0	U	10.0	7.60		ug/L		76	45 - 121	4	19
Bromomethane	1.0	U	10.0	13.3		ug/L		133	26 - 136	14	35
Carbon disulfide	5.0	U	10.0	9.07		ug/L		91	54 - 144	3	34
Carbon tetrachloride	1.0	U	10.0	9.18		ug/L		92	65 - 129	5	20
Chlorobenzene	1.0	U	10.0	8.40		ug/L		84	72 - 120	3	15
Chloroethane	1.0	U	10.0	10.1		ug/L		101	27 - 131	8	35
Chloroform	1.0	U	10.0	9.26		ug/L		93	73 - 121	1	17
Chloromethane	1.0	U	10.0	6.88		ug/L		69	39 - 134	7	20
cis-1,2-Dichloroethene	1.0	U	10.0	9.21		ug/L		92	66 - 124	3	22
cis-1,3-Dichloropropene	1.0	U	10.0	8.44		ug/L		84	60 - 120	2	21
Cyclohexane	1.0	U	10.0	8.27		ug/L		83	41 - 137	0	35
Bromodichloromethane	1.0	U	10.0	8.57		ug/L		86	72 - 120	3	19
Dichlorodifluoromethane	1.0	U	10.0	5.44		ug/L		54	14 - 137	0	34
Ethylbenzene	1.0	U	10.0	8.51		ug/L		85	68 - 121	4	16
1,2-Dibromoethane	1.0	U	10.0	8.79		ug/L		88	69 - 125	1	24
m-Xylene & p-Xylene	2.0	U	10.0	8.73		ug/L		87	66 - 123	5	15
Isopropylbenzene	5.0	U	10.0	8.83		ug/L		88	61 - 122	4	20
Methyl acetate	10	U	50.0	36.5		ug/L		73	64 - 124	1	12

TestAmerica Canton

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-65149-7 MSD

Matrix: Water

Analysis Batch: 232355

Client Sample ID: MWW5-01-GW-051916

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Butanone (MEK)	25	U	20.0	14.4	J	ug/L		72	49 - 132	0	19
4-Methyl-2-pentanone (MIBK)	3.6	J	20.0	23.0	J	ug/L		97	58 - 136	1	32
Methyl tert-butyl ether	5.0	U	10.0	9.69		ug/L		97	61 - 121	2	12
Methylene Chloride	5.0	U	10.0	8.81		ug/L		88	70 - 124	3	14
o-Xylene	1.0	U	10.0	8.99		ug/L		90	68 - 121	2	14
Styrene	1.0	U	10.0	8.91		ug/L		89	64 - 126	5	15
Tetrachloroethene	1.0	U	10.0	8.68		ug/L		87	59 - 125	3	20
Toluene	1.0	U	10.0	8.54		ug/L		85	72 - 122	7	15
trans-1,2-Dichloroethene	1.0	U	10.0	9.59		ug/L		96	72 - 125	4	25
trans-1,3-Dichloropropene	1.0	U	10.0	7.29		ug/L		73	58 - 132	2	22
Trichloroethene	1.0	U	10.0	9.34		ug/L		93	61 - 129	2	14
Trichlorofluoromethane	1.0	U	10.0	7.23		ug/L		72	49 - 133	12	25
Vinyl chloride	1.0	U	10.0	8.08		ug/L		81	44 - 122	2	35
Xylenes, Total	2.0	U	20.0	17.7		ug/L		89	67 - 122	4	14
Methylcyclohexane	1.0	U	10.0	7.76		ug/L		78	39 - 135	0	35
Dibromochloromethane	1.0	U	10.0	7.77		ug/L		78	62 - 122	3	19

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	86		78 - 125
4-Bromofluorobenzene (Surr)	90		61 - 120
Toluene-d8 (Surr)	88		80 - 120
Dibromofluoromethane (Surr)	90		79 - 120

Lab Sample ID: MB 240-232568/6

Matrix: Water

Analysis Batch: 232568

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	0.44	ug/L			06/01/16 01:10	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.22	ug/L			06/01/16 01:10	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.45	ug/L			06/01/16 01:10	1
1,1,2-Trichloroethane	1.0	U	1.0	0.24	ug/L			06/01/16 01:10	1
1,1-Dichloroethane	1.0	U	1.0	0.30	ug/L			06/01/16 01:10	1
1,1-Dichloroethene	1.0	U	1.0	0.45	ug/L			06/01/16 01:10	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.32	ug/L			06/01/16 01:10	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	0.82	ug/L			06/01/16 01:10	1
1,2-Dichlorobenzene	1.0	U	1.0	0.25	ug/L			06/01/16 01:10	1
1,2-Dichloroethane	1.0	U	1.0	0.23	ug/L			06/01/16 01:10	1
1,2-Dichloropropane	1.0	U	1.0	0.25	ug/L			06/01/16 01:10	1
1,3-Dichlorobenzene	1.0	U	1.0	0.19	ug/L			06/01/16 01:10	1
1,4-Dichlorobenzene	1.0	U	1.0	0.27	ug/L			06/01/16 01:10	1
2-Hexanone	50	U	50	0.48	ug/L			06/01/16 01:10	1
Acetone	25	U	25	0.94	ug/L			06/01/16 01:10	1
Benzene	1.0	U	1.0	0.35	ug/L			06/01/16 01:10	1
Bromoform	1.0	U	1.0	0.56	ug/L			06/01/16 01:10	1
Bromomethane	1.0	U	1.0	0.44	ug/L			06/01/16 01:10	1
Carbon disulfide	5.0	U	5.0	0.38	ug/L			06/01/16 01:10	1
Carbon tetrachloride	1.0	U	1.0	0.43	ug/L			06/01/16 01:10	1

TestAmerica Canton

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-232568/6

Matrix: Water

Analysis Batch: 232568

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	1.0	U	1.0	0.25	ug/L			06/01/16 01:10	1
Chloroethane	1.0	U	1.0	0.32	ug/L			06/01/16 01:10	1
Chloroform	1.0	U	1.0	0.25	ug/L			06/01/16 01:10	1
Chloromethane	1.0	U	1.0	0.44	ug/L			06/01/16 01:10	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.26	ug/L			06/01/16 01:10	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.46	ug/L			06/01/16 01:10	1
Cyclohexane	1.0	U	1.0	0.45	ug/L			06/01/16 01:10	1
Bromodichloromethane	1.0	U	1.0	0.29	ug/L			06/01/16 01:10	1
Dichlorodifluoromethane	1.0	U	1.0	0.32	ug/L			06/01/16 01:10	1
Ethylbenzene	1.0	U	1.0	0.25	ug/L			06/01/16 01:10	1
1,2-Dibromoethane	1.0	U	1.0	0.32	ug/L			06/01/16 01:10	1
Isopropylbenzene	5.0	U	5.0	0.35	ug/L			06/01/16 01:10	1
Methyl acetate	10	U	10	2.3	ug/L			06/01/16 01:10	1
2-Butanone (MEK)	25	U	25	0.53	ug/L			06/01/16 01:10	1
4-Methyl-2-pentanone (MIBK)	50	U	50	0.99	ug/L			06/01/16 01:10	1
Methyl tert-butyl ether	5.0	U	5.0	0.20	ug/L			06/01/16 01:10	1
Methylene Chloride	5.0	U	5.0	0.33	ug/L			06/01/16 01:10	1
Styrene	1.0	U	1.0	0.45	ug/L			06/01/16 01:10	1
Tetrachloroethene	1.0	U	1.0	0.31	ug/L			06/01/16 01:10	1
Toluene	1.0	U	1.0	0.23	ug/L			06/01/16 01:10	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.30	ug/L			06/01/16 01:10	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.56	ug/L			06/01/16 01:10	1
Trichloroethene	1.0	U	1.0	0.22	ug/L			06/01/16 01:10	1
Trichlorofluoromethane	1.0	U	1.0	0.49	ug/L			06/01/16 01:10	1
Vinyl chloride	1.0	U	1.0	0.29	ug/L			06/01/16 01:10	1
Xylenes, Total	2.0	U	2.0	0.52	ug/L			06/01/16 01:10	1
Methylcyclohexane	1.0	U	1.0	0.43	ug/L			06/01/16 01:10	1
Dibromochloromethane	1.0	U	1.0	0.43	ug/L			06/01/16 01:10	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	85		78 - 125		06/01/16 01:10	1
4-Bromofluorobenzene (Surr)	96		61 - 120		06/01/16 01:10	1
Toluene-d8 (Surr)	99		80 - 120		06/01/16 01:10	1
Dibromofluoromethane (Surr)	93		79 - 120		06/01/16 01:10	1

Lab Sample ID: LCS 240-232568/4

Matrix: Water

Analysis Batch: 232568

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	10.0	11.1		ug/L		111	77 - 123
1,1,2,2-Tetrachloroethane	10.0	9.23		ug/L		92	71 - 123
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	10.4		ug/L		104	67 - 138
1,1,2-Trichloroethane	10.0	10.9		ug/L		109	80 - 120
1,1-Dichloroethane	10.0	10.4		ug/L		104	79 - 125
1,1-Dichloroethene	10.0	10.3		ug/L		103	76 - 124
1,2,4-Trichlorobenzene	10.0	7.56		ug/L		76	61 - 120

TestAmerica Canton

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-232568/4

Matrix: Water

Analysis Batch: 232568

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromo-3-Chloropropane	10.0	8.55		ug/L		85	50 - 132
1,2-Dichlorobenzene	10.0	9.83		ug/L		98	79 - 120
1,2-Dichloroethane	10.0	9.48		ug/L		95	80 - 120
1,2-Dichloropropane	10.0	11.0		ug/L		110	78 - 124
1,3-Dichlorobenzene	10.0	9.63		ug/L		96	79 - 120
1,4-Dichlorobenzene	10.0	9.69		ug/L		97	79 - 120
2-Hexanone	20.0	16.0	J	ug/L		80	55 - 141
Acetone	20.0	12.7	J	ug/L		64	34 - 148
Benzene	10.0	10.1		ug/L		101	80 - 120
Bromoform	10.0	9.93		ug/L		99	56 - 122
Bromomethane	10.0	8.73		ug/L		87	38 - 132
Carbon disulfide	10.0	13.4		ug/L		134	65 - 144
Carbon tetrachloride	10.0	10.5		ug/L		105	77 - 131
Chlorobenzene	10.0	10.2		ug/L		102	80 - 120
Chloroethane	10.0	4.70		ug/L		47	36 - 126
Chloroform	10.0	9.75		ug/L		98	80 - 120
Chloromethane	10.0	10.2		ug/L		102	48 - 133
cis-1,2-Dichloroethene	10.0	10.5		ug/L		105	79 - 120
cis-1,3-Dichloropropene	10.0	10.4		ug/L		104	74 - 126
Cyclohexane	10.0	9.77		ug/L		98	60 - 140
Bromodichloromethane	10.0	9.98		ug/L		100	80 - 120
Dichlorodifluoromethane	10.0	8.07		ug/L		81	23 - 136
Ethylbenzene	10.0	10.1		ug/L		101	80 - 120
1,2-Dibromoethane	10.0	10.6		ug/L		106	80 - 120
m-Xylene & p-Xylene	10.0	10.2		ug/L		102	80 - 120
Isopropylbenzene	10.0	9.45		ug/L		94	77 - 120
Methyl acetate	50.0	42.7		ug/L		85	67 - 131
2-Butanone (MEK)	20.0	14.7	J	ug/L		73	56 - 138
4-Methyl-2-pentanone (MIBK)	20.0	17.7	J	ug/L		88	64 - 135
Methyl tert-butyl ether	10.0	9.40		ug/L		94	69 - 121
Methylene Chloride	10.0	10.5		ug/L		105	77 - 129
o-Xylene	10.0	9.76		ug/L		98	80 - 120
Styrene	10.0	10.4		ug/L		104	76 - 122
Tetrachloroethene	10.0	10.8		ug/L		108	78 - 121
Toluene	10.0	10.5		ug/L		105	80 - 120
trans-1,2-Dichloroethene	10.0	11.0		ug/L		110	80 - 124
trans-1,3-Dichloropropene	10.0	9.30		ug/L		93	75 - 131
Trichloroethene	10.0	10.5		ug/L		105	80 - 121
Trichlorofluoromethane	10.0	17.0	*	ug/L		170	61 - 133
Vinyl chloride	10.0	10.3		ug/L		103	52 - 121
Xylenes, Total	20.0	20.0		ug/L		100	80 - 120
Methylcyclohexane	10.0	8.35		ug/L		84	61 - 134
Dibromochloromethane	10.0	10.7		ug/L		107	74 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	84		78 - 125
4-Bromofluorobenzene (Surr)	101		61 - 120
Toluene-d8 (Surr)	105		80 - 120

TestAmerica Canton

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-232568/4

Matrix: Water

Analysis Batch: 232568

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
Dibromofluoromethane (Surr)	93		79 - 120

Method: 8260B SIM - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 240-232050/5

Matrix: Water

Analysis Batch: 232050

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	Result	Qualifier							
	2.0	U	2.0	0.24	ug/L			05/26/16 11:33	1
Surrogate	MB	MB	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	%Recovery	Qualifier							
	101		74 - 120					05/26/16 11:33	1

Lab Sample ID: LCS 240-232050/4

Matrix: Water

Analysis Batch: 232050

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.
1,4-Dioxane	Added	Result	Qualifier				Limits
	10.0	9.97		ug/L		100	59 - 124
Surrogate	LCS	LCS	Limits				
1,2-Dichloroethane-d4 (Surr)	%Recovery	Qualifier					
	103		74 - 120				

Lab Sample ID: MB 240-232267/5

Matrix: Water

Analysis Batch: 232267

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	Result	Qualifier							
	2.0	U	2.0	0.24	ug/L			05/27/16 12:48	1
Surrogate	MB	MB	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	%Recovery	Qualifier							
	104		74 - 120					05/27/16 12:48	1

Lab Sample ID: LCS 240-232267/4

Matrix: Water

Analysis Batch: 232267

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.
1,4-Dioxane	Added	Result	Qualifier				Limits
	10.0	10.2		ug/L		102	59 - 124
Surrogate	LCS	LCS	Limits				
1,2-Dichloroethane-d4 (Surr)	%Recovery	Qualifier					
	104		74 - 120				

TestAmerica Canton

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Method: 8260B SIM - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-232500/5

Matrix: Water

Analysis Batch: 232500

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.0	U	2.0	0.24	ug/L			05/31/16 12:46	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		74 - 120					05/31/16 12:46	1

Lab Sample ID: LCS 240-232500/4

Matrix: Water

Analysis Batch: 232500

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dioxane	10.0	9.38		ug/L		94	59 - 124
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1,2-Dichloroethane-d4 (Surr)	101		74 - 120				

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 240-231631/8-A

Matrix: Water

Analysis Batch: 232002

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 231631

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	1.0	U	1.0	0.12	ug/L		05/24/16 09:07	05/26/16 08:36	1
2,2'-oxybis[1-chloropropane]	1.0	U	1.0	0.18	ug/L		05/24/16 09:07	05/26/16 08:36	1
2,4,5-Trichlorophenol	5.0	U	5.0	0.37	ug/L		05/24/16 09:07	05/26/16 08:36	1
2,4,6-Trichlorophenol	4.0	U	4.0	0.26	ug/L		05/24/16 09:07	05/26/16 08:36	1
2,4-Dichlorophenol	10	U	10	0.29	ug/L		05/24/16 09:07	05/26/16 08:36	1
2,4-Dimethylphenol	5.0	U	5.0	0.31	ug/L		05/24/16 09:07	05/26/16 08:36	1
2,4-Dinitrophenol	20	U	20	6.1	ug/L		05/24/16 09:07	05/26/16 08:36	1
2,4-Dinitrotoluene	5.0	U	5.0	0.26	ug/L		05/24/16 09:07	05/26/16 08:36	1
2,6-Dinitrotoluene	5.0	U	5.0	0.24	ug/L		05/24/16 09:07	05/26/16 08:36	1
2-Chloronaphthalene	5.0	U	5.0	0.12	ug/L		05/24/16 09:07	05/26/16 08:36	1
2-Chlorophenol	5.0	U	5.0	0.13	ug/L		05/24/16 09:07	05/26/16 08:36	1
2-Methylnaphthalene	5.0	U	5.0	0.037	ug/L		05/24/16 09:07	05/26/16 08:36	1
2-Methylphenol	5.0	U	5.0	0.19	ug/L		05/24/16 09:07	05/26/16 08:36	1
2-Nitroaniline	20	U	20	0.31	ug/L		05/24/16 09:07	05/26/16 08:36	1
2-Nitrophenol	5.0	U	5.0	0.21	ug/L		05/24/16 09:07	05/26/16 08:36	1
3,3'-Dichlorobenzidine	5.0	U	5.0	0.35	ug/L		05/24/16 09:07	05/26/16 08:36	1
3-Nitroaniline	20	U	20	0.27	ug/L		05/24/16 09:07	05/26/16 08:36	1
4,6-Dinitro-2-methylphenol	20	U	20	0.53	ug/L		05/24/16 09:07	05/26/16 08:36	1
4-Bromophenyl phenyl ether	5.0	U	5.0	0.35	ug/L		05/24/16 09:07	05/26/16 08:36	1
4-Chloro-3-methylphenol	5.0	U	5.0	0.28	ug/L		05/24/16 09:07	05/26/16 08:36	1
4-Chloroaniline	2.0	U	2.0	0.15	ug/L		05/24/16 09:07	05/26/16 08:36	1
4-Chlorophenyl phenyl ether	5.0	U	5.0	0.29	ug/L		05/24/16 09:07	05/26/16 08:36	1
4-Nitroaniline	20	U	20	0.24	ug/L		05/24/16 09:07	05/26/16 08:36	1
4-Nitrophenol	20	U	20	0.59	ug/L		05/24/16 09:07	05/26/16 08:36	1
Acenaphthene	5.0	U	5.0	0.044	ug/L		05/24/16 09:07	05/26/16 08:36	1

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QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-231631/8-A

Matrix: Water

Analysis Batch: 232002

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 231631

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	5.0	U	5.0	0.020	ug/L		05/24/16 09:07	05/26/16 08:36	1
Acetophenone	1.0	U	1.0	0.14	ug/L		05/24/16 09:07	05/26/16 08:36	1
Anthracene	5.0	U	5.0	0.031	ug/L		05/24/16 09:07	05/26/16 08:36	1
Atrazine	1.0	U	1.0	0.12	ug/L		05/24/16 09:07	05/26/16 08:36	1
Benzaldehyde	1.0	U	1.0	0.30	ug/L		05/24/16 09:07	05/26/16 08:36	1
Benzo[a]anthracene	1.0	U	1.0	0.059	ug/L		05/24/16 09:07	05/26/16 08:36	1
Benzo[a]pyrene	1.0	U	1.0	0.030	ug/L		05/24/16 09:07	05/26/16 08:36	1
Benzo[b]fluoranthene	1.0	U	1.0	0.059	ug/L		05/24/16 09:07	05/26/16 08:36	1
Benzo[g,h,i]perylene	1.0	U	1.0	0.050	ug/L		05/24/16 09:07	05/26/16 08:36	1
Benzo[k]fluoranthene	1.0	U	1.0	0.048	ug/L		05/24/16 09:07	05/26/16 08:36	1
Bis(2-chloroethoxy)methane	5.0	U	5.0	0.037	ug/L		05/24/16 09:07	05/26/16 08:36	1
Bis(2-chloroethyl)ether	1.0	U	1.0	0.19	ug/L		05/24/16 09:07	05/26/16 08:36	1
Bis(2-ethylhexyl) phthalate	16.6		5.0	1.5	ug/L		05/24/16 09:07	05/26/16 08:36	1
Butyl benzyl phthalate	5.0	U	5.0	0.22	ug/L		05/24/16 09:07	05/26/16 08:36	1
Caprolactam	5.0	U	5.0	0.37	ug/L		05/24/16 09:07	05/26/16 08:36	1
Carbazole	10	U	10	0.11	ug/L		05/24/16 09:07	05/26/16 08:36	1
Chrysene	1.0	U	1.0	0.035	ug/L		05/24/16 09:07	05/26/16 08:36	1
Dibenz(a,h)anthracene	2.0	U	2.0	0.040	ug/L		05/24/16 09:07	05/26/16 08:36	1
Dibenzofuran	4.0	U	4.0	0.14	ug/L		05/24/16 09:07	05/26/16 08:36	1
Diethyl phthalate	5.0	U	5.0	0.13	ug/L		05/24/16 09:07	05/26/16 08:36	1
Dimethyl phthalate	5.0	U	5.0	0.10	ug/L		05/24/16 09:07	05/26/16 08:36	1
Di-n-butyl phthalate	0.738	J	5.0	0.40	ug/L		05/24/16 09:07	05/26/16 08:36	1
Di-n-octyl phthalate	5.0	U	5.0	0.37	ug/L		05/24/16 09:07	05/26/16 08:36	1
Fluoranthene	1.0	U	1.0	0.027	ug/L		05/24/16 09:07	05/26/16 08:36	1
Fluorene	5.0	U	5.0	0.034	ug/L		05/24/16 09:07	05/26/16 08:36	1
Hexachlorobenzene	0.20	U	0.20	0.12	ug/L		05/24/16 09:07	05/26/16 08:36	1
Hexachlorobutadiene	1.0	U	1.0	0.14	ug/L		05/24/16 09:07	05/26/16 08:36	1
Hexachlorocyclopentadiene	5.0	U	5.0	2.5	ug/L		05/24/16 09:07	05/26/16 08:36	1
Hexachloroethane	5.0	U	5.0	0.22	ug/L		05/24/16 09:07	05/26/16 08:36	1
Indeno[1,2,3-cd]pyrene	2.0	U	2.0	0.048	ug/L		05/24/16 09:07	05/26/16 08:36	1
Isophorone	5.0	U	5.0	0.042	ug/L		05/24/16 09:07	05/26/16 08:36	1
Naphthalene	5.0	U	5.0	0.043	ug/L		05/24/16 09:07	05/26/16 08:36	1
Nitrobenzene	3.0	U	3.0	0.12	ug/L		05/24/16 09:07	05/26/16 08:36	1
N-Nitrosodi-n-propylamine	5.0	U	5.0	0.16	ug/L		05/24/16 09:07	05/26/16 08:36	1
N-Nitrosodiphenylamine	5.0	U	5.0	0.11	ug/L		05/24/16 09:07	05/26/16 08:36	1
Pentachlorophenol	5.0	U	5.0	5.5	ug/L		05/24/16 09:07	05/26/16 08:36	1
Phenol	5.0	U	5.0	0.15	ug/L		05/24/16 09:07	05/26/16 08:36	1
Phenanthrene	2.0	U	2.0	0.031	ug/L		05/24/16 09:07	05/26/16 08:36	1
Pyrene	5.0	U	5.0	0.028	ug/L		05/24/16 09:07	05/26/16 08:36	1
3 & 4 Methylphenol	5.0	U	5.0	0.34	ug/L		05/24/16 09:07	05/26/16 08:36	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	61		44 - 120	05/24/16 09:07	05/26/16 08:36	1
2-Fluorophenol (Surr)	73		26 - 120	05/24/16 09:07	05/26/16 08:36	1
2,4,6-Tribromophenol (Surr)	59		36 - 120	05/24/16 09:07	05/26/16 08:36	1
Nitrobenzene-d5 (Surr)	67		44 - 120	05/24/16 09:07	05/26/16 08:36	1
Phenol-d5 (Surr)	59		16 - 120	05/24/16 09:07	05/26/16 08:36	1
Terphenyl-d14 (Surr)	72		43 - 120	05/24/16 09:07	05/26/16 08:36	1

TestAmerica Canton

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Lab Sample ID: LCS 240-231631/9-A

Matrix: Water

Analysis Batch: 232002

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 231631

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1'-Biphenyl	32.0	21.8		ug/L		68	53 - 120
2,2'-oxybis[1-chloropropane]	32.0	24.0		ug/L		75	61 - 120
2,4,5-Trichlorophenol	32.0	23.1		ug/L		72	61 - 120
2,4,6-Trichlorophenol	32.0	22.3		ug/L		70	57 - 120
2,4-Dichlorophenol	32.0	24.1		ug/L		75	63 - 120
2,4-Dimethylphenol	32.0	22.9		ug/L		72	41 - 120
2,4-Dinitrophenol	64.0	33.2		ug/L		52	20 - 120
2,4-Dinitrotoluene	32.0	23.8		ug/L		74	62 - 120
2,6-Dinitrotoluene	32.0	22.7		ug/L		71	63 - 120
2-Chloronaphthalene	32.0	21.6		ug/L		67	56 - 120
2-Chlorophenol	32.0	23.9		ug/L		75	62 - 120
2-Methylnaphthalene	32.0	22.4		ug/L		70	57 - 120
2-Methylphenol	32.0	23.3		ug/L		73	55 - 120
2-Nitroaniline	32.0	23.6		ug/L		74	62 - 120
2-Nitrophenol	32.0	23.7		ug/L		74	65 - 120
3,3'-Dichlorobenzidine	64.0	42.4		ug/L		66	10 - 120
3-Nitroaniline	32.0	39.4		ug/L		123	10 - 171
4,6-Dinitro-2-methylphenol	64.0	37.8		ug/L		59	40 - 120
4-Bromophenyl phenyl ether	32.0	21.5		ug/L		67	55 - 120
4-Chloro-3-methylphenol	32.0	24.1		ug/L		75	59 - 120
4-Chloroaniline	32.0	11.2		ug/L		35	10 - 120
4-Chlorophenyl phenyl ether	32.0	21.8		ug/L		68	57 - 120
4-Nitroaniline	32.0	27.6		ug/L		86	32 - 132
4-Nitrophenol	64.0	28.0		ug/L		44	18 - 120
Acenaphthene	32.0	21.8		ug/L		68	58 - 120
Acenaphthylene	32.0	21.5		ug/L		67	59 - 120
Acetophenone	32.0	23.0		ug/L		72	62 - 120
Anthracene	32.0	22.0		ug/L		69	58 - 120
Atrazine	64.0	45.8		ug/L		72	61 - 120
Benzaldehyde	64.0	NQ		ug/L		NaN	10 - 120
Benzo[a]anthracene	32.0	23.1		ug/L		72	58 - 120
Benzo[a]pyrene	32.0	25.8		ug/L		81	63 - 120
Benzo[b]fluoranthene	32.0	26.1		ug/L		81	59 - 120
Benzo[g,h,i]perylene	32.0	23.6		ug/L		74	41 - 127
Benzo[k]fluoranthene	32.0	25.6		ug/L		80	61 - 120
Bis(2-chloroethoxy)methane	32.0	24.5		ug/L		77	63 - 120
Bis(2-chloroethyl)ether	32.0	22.2		ug/L		69	57 - 120
Bis(2-ethylhexyl) phthalate	32.0	26.3		ug/L		82	62 - 120
Butyl benzyl phthalate	32.0	23.8		ug/L		74	60 - 120
Caprolactam	64.0	15.3		ug/L		24	10 - 120
Carbazole	32.0	26.0		ug/L		81	59 - 120
Chrysene	32.0	22.9		ug/L		71	59 - 120
Dibenz(a,h)anthracene	32.0	24.6		ug/L		77	39 - 125
Dibenzofuran	32.0	21.7		ug/L		68	58 - 120
Diethyl phthalate	32.0	22.5		ug/L		70	64 - 120
Dimethyl phthalate	32.0	22.5		ug/L		70	63 - 120
Di-n-butyl phthalate	32.0	23.3		ug/L		73	58 - 120
Di-n-octyl phthalate	32.0	26.5		ug/L		83	58 - 128
Fluoranthene	32.0	22.1		ug/L		69	59 - 120
Fluorene	32.0	22.0		ug/L		69	57 - 120

TestAmerica Canton

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-231631/9-A

Matrix: Water

Analysis Batch: 232002

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 231631

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Hexachlorobenzene	32.0	21.8		ug/L		68	48 - 120
Hexachlorobutadiene	32.0	20.2		ug/L		63	47 - 120
Hexachlorocyclopentadiene	32.0	18.1		ug/L		57	24 - 120
Hexachloroethane	32.0	20.9		ug/L		65	48 - 120
Indeno[1,2,3-cd]pyrene	32.0	24.4		ug/L		76	49 - 121
Isophorone	32.0	24.5		ug/L		77	66 - 120
Naphthalene	32.0	22.0		ug/L		69	58 - 120
Nitrobenzene	32.0	24.5		ug/L		76	63 - 120
N-Nitrosodi-n-propylamine	32.0	23.6		ug/L		74	63 - 120
N-Nitrosodiphenylamine	32.0	21.9		ug/L		68	54 - 120
Pentachlorophenol	64.0	30.0		ug/L		47	33 - 120
Phenol	32.0	16.9		ug/L		53	21 - 120
Phenanthrene	32.0	21.6		ug/L		68	57 - 120
Pyrene	32.0	23.1		ug/L		72	57 - 120
3 & 4 Methylphenol	32.0	22.8		ug/L		71	53 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl (Surr)	66		44 - 120
2-Fluorophenol (Surr)	79		26 - 120
2,4,6-Tribromophenol (Surr)	69		36 - 120
Nitrobenzene-d5 (Surr)	76		44 - 120
Phenol-d5 (Surr)	51		16 - 120
Terphenyl-d14 (Surr)	79		43 - 120

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 240-231601/20-A

Matrix: Water

Analysis Batch: 232115

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 231601

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.20	U	0.20	0.050	ug/L		05/24/16 07:31	05/26/16 22:21	1
Aroclor-1221	0.20	U	0.20	0.090	ug/L		05/24/16 07:31	05/26/16 22:21	1
Aroclor-1232	0.20	U	0.20	0.070	ug/L		05/24/16 07:31	05/26/16 22:21	1
Aroclor-1242	0.20	U	0.20	0.060	ug/L		05/24/16 07:31	05/26/16 22:21	1
Aroclor-1248	0.20	U	0.20	0.050	ug/L		05/24/16 07:31	05/26/16 22:21	1
Aroclor-1254	0.20	U	0.20	0.030	ug/L		05/24/16 07:31	05/26/16 22:21	1
Aroclor-1260	0.20	U	0.20	0.040	ug/L		05/24/16 07:31	05/26/16 22:21	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	35		10 - 120	05/24/16 07:31	05/26/16 22:21	1
Tetrachloro-m-xylene	62		21 - 120	05/24/16 07:31	05/26/16 22:21	1

TestAmerica Canton

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: LCS 240-231601/21-A

Matrix: Water

Analysis Batch: 232115

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 231601

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aroclor-1016	2.50	1.46		ug/L		58	32 - 120
Aroclor-1260	2.50	1.24		ug/L		50	36 - 120
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
DCB Decachlorobiphenyl	33		10 - 120				
Tetrachloro-m-xylene	59		21 - 120				

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 240-231668/1-A

Matrix: Water

Analysis Batch: 232478

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 231668

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	0.16	ug/L		05/24/16 11:04	05/30/16 10:13	1
Arsenic	2.0	U	2.0	0.49	ug/L		05/24/16 11:04	05/30/16 10:13	1
Barium	1.23		1.0	1.1	ug/L		05/24/16 11:04	05/30/16 10:13	1
Beryllium	0.0780	J	1.0	0.053	ug/L		05/24/16 11:04	05/30/16 10:13	1
Cadmium	0.50	U	0.50	0.061	ug/L		05/24/16 11:04	05/30/16 10:13	1
Chromium	2.0	U	2.0	0.60	ug/L		05/24/16 11:04	05/30/16 10:13	1
Cobalt	1.0	U	1.0	0.021	ug/L		05/24/16 11:04	05/30/16 10:13	1
Copper	2.0	U	2.0	0.75	ug/L		05/24/16 11:04	05/30/16 10:13	1
Lead	1.0	U	1.0	0.11	ug/L		05/24/16 11:04	05/30/16 10:13	1
Manganese	1.0	U	1.0	1.1	ug/L		05/24/16 11:04	05/30/16 10:13	1
Nickel	0.767	J	2.0	0.23	ug/L		05/24/16 11:04	05/30/16 10:13	1
Selenium	2.0	U	2.0	0.25	ug/L		05/24/16 11:04	05/30/16 10:13	1
Silver	0.20	U	0.20	0.020	ug/L		05/24/16 11:04	05/30/16 10:13	1
Thallium	1.0	U	1.0	0.074	ug/L		05/24/16 11:04	05/30/16 10:13	1
Vanadium	4.0	U	4.0	0.23	ug/L		05/24/16 11:04	05/30/16 10:13	1
Zinc	10	U	10	7.3	ug/L		05/24/16 11:04	05/30/16 10:13	1

Lab Sample ID: LCS 240-231668/2-A

Matrix: Water

Analysis Batch: 232478

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 231668

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	100	93.4		ug/L		93	80 - 120
Arsenic	1000	968		ug/L		97	80 - 120
Barium	1000	942		ug/L		94	80 - 120
Beryllium	1000	927		ug/L		93	80 - 120
Cadmium	1000	963		ug/L		96	80 - 120
Chromium	1000	953		ug/L		95	80 - 120
Cobalt	1000	981		ug/L		98	80 - 120
Copper	1000	1000		ug/L		100	80 - 120
Lead	1000	981		ug/L		98	80 - 120
Manganese	1000	975		ug/L		97	80 - 120
Nickel	1000	957		ug/L		96	80 - 120
Selenium	1000	971		ug/L		97	80 - 120

TestAmerica Canton

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 240-231668/2-A

Matrix: Water

Analysis Batch: 232478

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 231668

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Silver	100	93.5		ug/L		94	80 - 120
Thallium	250	249		ug/L		99	80 - 120
Vanadium	1000	948		ug/L		95	80 - 120
Zinc	1000	955		ug/L		95	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-231677/1-A

Matrix: Water

Analysis Batch: 231940

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 231677

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.090	ug/L		05/24/16 12:00	05/25/16 14:21	1

Lab Sample ID: LCS 240-231677/2-A

Matrix: Water

Analysis Batch: 231940

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 231677

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	5.00	5.40		ug/L		108	80 - 120

TestAmerica Canton

QC Association Summary

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

GC/MS VOA

Analysis Batch: 232050

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-65149-1	TW-10-02-GW-051816	Total/NA	Water	8260B SIM	
240-65149-5	MWW10-04-GW-051816	Total/NA	Water	8260B SIM	
240-65149-6	MWM2-04-GW-051816	Total/NA	Water	8260B SIM	
240-65149-9	MWF12-01-GW-051916	Total/NA	Water	8260B SIM	
LCS 240-232050/4	Lab Control Sample	Total/NA	Water	8260B SIM	
MB 240-232050/5	Method Blank	Total/NA	Water	8260B SIM	

Analysis Batch: 232267

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-65149-10	MWF7-01-GW-051916	Total/NA	Water	8260B SIM	
240-65149-11	MWM16-19-GW-051916	Total/NA	Water	8260B SIM	
LCS 240-232267/4	Lab Control Sample	Total/NA	Water	8260B SIM	
MB 240-232267/5	Method Blank	Total/NA	Water	8260B SIM	

Analysis Batch: 232276

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-65149-1	TW-10-02-GW-051816	Total/NA	Water	8260B	
240-65149-2	MWW10-SEN01-GW-051816	Total/NA	Water	8260B	
240-65149-3	MWW10-SEN03-GW-051816	Total/NA	Water	8260B	
240-65149-4	MWW10-SEN04-GW-051816	Total/NA	Water	8260B	
240-65149-5	MWW10-04-GW-051816	Total/NA	Water	8260B	
240-65149-6	MWM2-04-GW-051816	Total/NA	Water	8260B	
LCS 240-232276/4	Lab Control Sample	Total/NA	Water	8260B	
MB 240-232276/6	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 232355

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-65149-7	MWW5-01-GW-051916	Total/NA	Water	8260B	
240-65149-7 MS	MWW5-01-GW-051916	Total/NA	Water	8260B	
240-65149-7 MSD	MWW5-01-GW-051916	Total/NA	Water	8260B	
240-65149-8	TW-03-01-GW-051916	Total/NA	Water	8260B	
240-65149-11	MWM16-19-GW-051916	Total/NA	Water	8260B	
240-65149-12	MWM10-09-GW-051916	Total/NA	Water	8260B	
240-65149-13	SB-62-14-GW-051916	Total/NA	Water	8260B	
LCS 240-232355/4	Lab Control Sample	Total/NA	Water	8260B	
MB 240-232355/6	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 232500

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-65149-14	DUP-01-GW-051916	Total/NA	Water	8260B SIM	
LCS 240-232500/4	Lab Control Sample	Total/NA	Water	8260B SIM	
MB 240-232500/5	Method Blank	Total/NA	Water	8260B SIM	

Analysis Batch: 232568

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-65149-15	TRIP BLANK	Total/NA	Water	8260B	
LCS 240-232568/4	Lab Control Sample	Total/NA	Water	8260B	
MB 240-232568/6	Method Blank	Total/NA	Water	8260B	

TestAmerica Canton

QC Association Summary

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

GC/MS Semi VOA

Prep Batch: 231631

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-65149-1	TW-10-02-GW-051816	Total/NA	Water	3510C	
240-65149-2	MWW10-SEN01-GW-051816	Total/NA	Water	3510C	
240-65149-6	MWM2-04-GW-051816	Total/NA	Water	3510C	
240-65149-8	TW-03-01-GW-051916	Total/NA	Water	3510C	
240-65149-11	MWM16-19-GW-051916	Total/NA	Water	3510C	
240-65149-12	MWM10-09-GW-051916	Total/NA	Water	3510C	
240-65149-13	SB-62-14-GW-051916	Total/NA	Water	3510C	
LCS 240-231631/9-A	Lab Control Sample	Total/NA	Water	3510C	
MB 240-231631/8-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 232002

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 240-231631/9-A	Lab Control Sample	Total/NA	Water	8270C	231631
MB 240-231631/8-A	Method Blank	Total/NA	Water	8270C	231631

Analysis Batch: 232458

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-65149-2	MWW10-SEN01-GW-051816	Total/NA	Water	8270C	231631
240-65149-6	MWM2-04-GW-051816	Total/NA	Water	8270C	231631
240-65149-8	TW-03-01-GW-051916	Total/NA	Water	8270C	231631
240-65149-11	MWM16-19-GW-051916	Total/NA	Water	8270C	231631
240-65149-12	MWM10-09-GW-051916	Total/NA	Water	8270C	231631
240-65149-13	SB-62-14-GW-051916	Total/NA	Water	8270C	231631

Analysis Batch: 232629

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-65149-1	TW-10-02-GW-051816	Total/NA	Water	8270C	231631

GC Semi VOA

Prep Batch: 231601

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-65149-1	TW-10-02-GW-051816	Total/NA	Water	3520C	
240-65149-2	MWW10-SEN01-GW-051816	Total/NA	Water	3520C	
240-65149-6	MWM2-04-GW-051816	Total/NA	Water	3520C	
240-65149-8	TW-03-01-GW-051916	Total/NA	Water	3520C	
240-65149-11	MWM16-19-GW-051916	Total/NA	Water	3520C	
240-65149-12	MWM10-09-GW-051916	Total/NA	Water	3520C	
240-65149-13	SB-62-14-GW-051916	Total/NA	Water	3520C	
LCS 240-231601/21-A	Lab Control Sample	Total/NA	Water	3520C	
MB 240-231601/20-A	Method Blank	Total/NA	Water	3520C	

Analysis Batch: 232115

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-65149-2	MWW10-SEN01-GW-051816	Total/NA	Water	8082	231601
240-65149-8	TW-03-01-GW-051916	Total/NA	Water	8082	231601
240-65149-12	MWM10-09-GW-051916	Total/NA	Water	8082	231601
240-65149-13	SB-62-14-GW-051916	Total/NA	Water	8082	231601
LCS 240-231601/21-A	Lab Control Sample	Total/NA	Water	8082	231601
MB 240-231601/20-A	Method Blank	Total/NA	Water	8082	231601

TestAmerica Canton

QC Association Summary

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

GC Semi VOA (Continued)

Analysis Batch: 232207

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-65149-1	TW-10-02-GW-051816	Total/NA	Water	8082	231601
240-65149-6	MWM2-04-GW-051816	Total/NA	Water	8082	231601
240-65149-11	MWM16-19-GW-051916	Total/NA	Water	8082	231601

Metals

Prep Batch: 231668

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-65149-1	TW-10-02-GW-051816	Total Recoverable	Water	3005A	
240-65149-2	MWW10-SEN01-GW-051816	Total Recoverable	Water	3005A	
240-65149-6	MWM2-04-GW-051816	Total Recoverable	Water	3005A	
240-65149-8	TW-03-01-GW-051916	Total Recoverable	Water	3005A	
240-65149-11	MWM16-19-GW-051916	Total Recoverable	Water	3005A	
240-65149-12	MWM10-09-GW-051916	Total Recoverable	Water	3005A	
240-65149-13	SB-62-14-GW-051916	Total Recoverable	Water	3005A	
LCS 240-231668/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 240-231668/1-A	Method Blank	Total Recoverable	Water	3005A	

Prep Batch: 231677

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-65149-1	TW-10-02-GW-051816	Total/NA	Water	7470A	
240-65149-2	MWW10-SEN01-GW-051816	Total/NA	Water	7470A	
240-65149-6	MWM2-04-GW-051816	Total/NA	Water	7470A	
240-65149-8	TW-03-01-GW-051916	Total/NA	Water	7470A	
240-65149-11	MWM16-19-GW-051916	Total/NA	Water	7470A	
240-65149-12	MWM10-09-GW-051916	Total/NA	Water	7470A	
240-65149-13	SB-62-14-GW-051916	Total/NA	Water	7470A	
LCS 240-231677/2-A	Lab Control Sample	Total/NA	Water	7470A	
MB 240-231677/1-A	Method Blank	Total/NA	Water	7470A	

Analysis Batch: 231940

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-65149-1	TW-10-02-GW-051816	Total/NA	Water	7470A	231677
240-65149-2	MWW10-SEN01-GW-051816	Total/NA	Water	7470A	231677
240-65149-6	MWM2-04-GW-051816	Total/NA	Water	7470A	231677
240-65149-8	TW-03-01-GW-051916	Total/NA	Water	7470A	231677
240-65149-11	MWM16-19-GW-051916	Total/NA	Water	7470A	231677
240-65149-12	MWM10-09-GW-051916	Total/NA	Water	7470A	231677
240-65149-13	SB-62-14-GW-051916	Total/NA	Water	7470A	231677
LCS 240-231677/2-A	Lab Control Sample	Total/NA	Water	7470A	231677
MB 240-231677/1-A	Method Blank	Total/NA	Water	7470A	231677

Analysis Batch: 232478

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-65149-1	TW-10-02-GW-051816	Total Recoverable	Water	6020	231668
240-65149-2	MWW10-SEN01-GW-051816	Total Recoverable	Water	6020	231668
240-65149-6	MWM2-04-GW-051816	Total Recoverable	Water	6020	231668
240-65149-8	TW-03-01-GW-051916	Total Recoverable	Water	6020	231668
240-65149-11	MWM16-19-GW-051916	Total Recoverable	Water	6020	231668
240-65149-12	MWM10-09-GW-051916	Total Recoverable	Water	6020	231668

TestAmerica Canton

QC Association Summary

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Metals (Continued)

Analysis Batch: 232478 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-65149-13	SB-62-14-GW-051916	Total Recoverable	Water	6020	231668
LCS 240-231668/2-A	Lab Control Sample	Total Recoverable	Water	6020	231668
MB 240-231668/1-A	Method Blank	Total Recoverable	Water	6020	231668

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Client Sample ID: TW-10-02-GW-051816

Date Collected: 05/18/16 11:50

Date Received: 05/21/16 09:40

Lab Sample ID: 240-65149-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	232276	05/27/16 18:36	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	232050	05/26/16 20:10	SAM	TAL CAN
Total/NA	Prep	3510C			231631	05/24/16 09:07	EMB	TAL CAN
Total/NA	Analysis	8270C		4	232629	06/01/16 10:12	TMH	TAL CAN
Total/NA	Prep	3520C			231601	05/24/16 07:31	SDE	TAL CAN
Total/NA	Analysis	8082		1	232207	05/27/16 12:28	KMG	TAL CAN
Total Recoverable	Prep	3005A			231668	05/24/16 11:04	AJC	TAL CAN
Total Recoverable	Analysis	6020		1	232478	05/30/16 11:59	AMM2	TAL CAN
Total/NA	Prep	7470A			231677	05/24/16 12:00	AJC	TAL CAN
Total/NA	Analysis	7470A		1	231940	05/25/16 15:14	WKD	TAL CAN

Client Sample ID: MWW10-SEN01-GW-051816

Date Collected: 05/18/16 13:35

Date Received: 05/21/16 09:40

Lab Sample ID: 240-65149-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	232276	05/27/16 18:58	LRW	TAL CAN
Total/NA	Prep	3510C			231631	05/24/16 09:07	EMB	TAL CAN
Total/NA	Analysis	8270C		1	232458	05/31/16 19:35	TMH	TAL CAN
Total/NA	Prep	3520C			231601	05/24/16 07:31	SDE	TAL CAN
Total/NA	Analysis	8082		1	232115	05/26/16 18:05	HMB	TAL CAN
Total Recoverable	Prep	3005A			231668	05/24/16 11:04	AJC	TAL CAN
Total Recoverable	Analysis	6020		1	232478	05/30/16 12:04	AMM2	TAL CAN
Total/NA	Prep	7470A			231677	05/24/16 12:00	AJC	TAL CAN
Total/NA	Analysis	7470A		1	231940	05/25/16 15:16	WKD	TAL CAN

Client Sample ID: MWW10-SEN03-GW-051816

Date Collected: 05/18/16 14:30

Date Received: 05/21/16 09:40

Lab Sample ID: 240-65149-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	232276	05/27/16 19:20	LRW	TAL CAN

Client Sample ID: MWW10-SEN04-GW-051816

Date Collected: 05/18/16 15:35

Date Received: 05/21/16 09:40

Lab Sample ID: 240-65149-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	232276	05/27/16 19:43	LRW	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Client Sample ID: MWW10-04-GW-051816

Lab Sample ID: 240-65149-5

Date Collected: 05/18/16 17:50

Matrix: Water

Date Received: 05/21/16 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	232276	05/27/16 20:05	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	232050	05/26/16 20:34	SAM	TAL CAN

Client Sample ID: MWM2-04-GW-051816

Lab Sample ID: 240-65149-6

Date Collected: 05/18/16 19:25

Matrix: Water

Date Received: 05/21/16 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	232276	05/27/16 20:28	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	232050	05/26/16 20:59	SAM	TAL CAN
Total/NA	Prep	3510C			231631	05/24/16 09:07	EMB	TAL CAN
Total/NA	Analysis	8270C		1	232458	05/31/16 20:00	TMH	TAL CAN
Total/NA	Prep	3520C			231601	05/24/16 07:31	SDE	TAL CAN
Total/NA	Analysis	8082		1	232207	05/27/16 12:46	KMG	TAL CAN
Total Recoverable	Prep	3005A			231668	05/24/16 11:04	AJC	TAL CAN
Total Recoverable	Analysis	6020		1	232478	05/30/16 12:08	AMM2	TAL CAN
Total/NA	Prep	7470A			231677	05/24/16 12:00	AJC	TAL CAN
Total/NA	Analysis	7470A		1	231940	05/25/16 15:18	WKD	TAL CAN

Client Sample ID: MWW5-01-GW-051916

Lab Sample ID: 240-65149-7

Date Collected: 05/19/16 09:15

Matrix: Water

Date Received: 05/21/16 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	232355	05/28/16 07:17	LRW	TAL CAN

Client Sample ID: TW-03-01-GW-051916

Lab Sample ID: 240-65149-8

Date Collected: 05/19/16 10:30

Matrix: Water

Date Received: 05/21/16 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	232355	05/28/16 05:47	LRW	TAL CAN
Total/NA	Prep	3510C			231631	05/24/16 09:07	EMB	TAL CAN
Total/NA	Analysis	8270C		1	232458	05/31/16 20:25	TMH	TAL CAN
Total/NA	Prep	3520C			231601	05/24/16 07:31	SDE	TAL CAN
Total/NA	Analysis	8082		1	232115	05/26/16 18:42	HMB	TAL CAN
Total Recoverable	Prep	3005A			231668	05/24/16 11:04	AJC	TAL CAN
Total Recoverable	Analysis	6020		1	232478	05/30/16 12:12	AMM2	TAL CAN
Total/NA	Prep	7470A			231677	05/24/16 12:00	AJC	TAL CAN
Total/NA	Analysis	7470A		1	231940	05/25/16 15:20	WKD	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Client Sample ID: MWF12-01-GW-051916

Lab Sample ID: 240-65149-9

Date Collected: 05/19/16 11:45

Matrix: Water

Date Received: 05/21/16 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B SIM		1	232050	05/26/16 21:23	SAM	TAL CAN

Client Sample ID: MWF7-01-GW-051916

Lab Sample ID: 240-65149-10

Date Collected: 05/19/16 12:50

Matrix: Water

Date Received: 05/21/16 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B SIM		1	232267	05/27/16 13:38	SAM	TAL CAN

Client Sample ID: MWM16-19-GW-051916

Lab Sample ID: 240-65149-11

Date Collected: 05/19/16 14:30

Matrix: Water

Date Received: 05/21/16 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	232355	05/28/16 06:09	LRW	TAL CAN
Total/NA	Analysis	8260B SIM		1	232267	05/27/16 14:03	SAM	TAL CAN
Total/NA	Prep	3510C			231631	05/24/16 09:07	EMB	TAL CAN
Total/NA	Analysis	8270C		1	232458	05/31/16 20:50	TMH	TAL CAN
Total/NA	Prep	3520C			231601	05/24/16 07:31	SDE	TAL CAN
Total/NA	Analysis	8082		1	232207	05/27/16 13:05	KMG	TAL CAN
Total Recoverable	Prep	3005A			231668	05/24/16 11:04	AJC	TAL CAN
Total Recoverable	Analysis	6020		1	232478	05/30/16 12:16	AMM2	TAL CAN
Total/NA	Prep	7470A			231677	05/24/16 12:00	AJC	TAL CAN
Total/NA	Analysis	7470A		1	231940	05/25/16 15:22	WKD	TAL CAN

Client Sample ID: MWM10-09-GW-051916

Lab Sample ID: 240-65149-12

Date Collected: 05/19/16 17:10

Matrix: Water

Date Received: 05/21/16 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	232355	05/28/16 06:32	LRW	TAL CAN
Total/NA	Prep	3510C			231631	05/24/16 09:07	EMB	TAL CAN
Total/NA	Analysis	8270C		1	232458	05/31/16 21:15	TMH	TAL CAN
Total/NA	Prep	3520C			231601	05/24/16 07:31	SDE	TAL CAN
Total/NA	Analysis	8082		1	232115	05/26/16 19:19	HMB	TAL CAN
Total Recoverable	Prep	3005A			231668	05/24/16 11:04	AJC	TAL CAN
Total Recoverable	Analysis	6020		1	232478	05/30/16 12:20	AMM2	TAL CAN
Total/NA	Prep	7470A			231677	05/24/16 12:00	AJC	TAL CAN
Total/NA	Analysis	7470A		1	231940	05/25/16 15:24	WKD	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Client Sample ID: SB-62-14-GW-051916

Lab Sample ID: 240-65149-13

Date Collected: 05/19/16 18:00

Matrix: Water

Date Received: 05/21/16 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	232355	05/28/16 06:54	LRW	TAL CAN
Total/NA	Prep	3510C			231631	05/24/16 09:07	EMB	TAL CAN
Total/NA	Analysis	8270C		1	232458	05/31/16 21:40	TMH	TAL CAN
Total/NA	Prep	3520C			231601	05/24/16 07:31	SDE	TAL CAN
Total/NA	Analysis	8082		1	232115	05/26/16 19:37	HMB	TAL CAN
Total Recoverable	Prep	3005A			231668	05/24/16 11:04	AJC	TAL CAN
Total Recoverable	Analysis	6020		1	232478	05/30/16 12:24	AMM2	TAL CAN
Total/NA	Prep	7470A			231677	05/24/16 12:00	AJC	TAL CAN
Total/NA	Analysis	7470A		1	231940	05/25/16 15:33	WKD	TAL CAN

Client Sample ID: DUP-01-GW-051916

Lab Sample ID: 240-65149-14

Date Collected: 05/19/16 00:00

Matrix: Water

Date Received: 05/21/16 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B SIM		1	232500	05/31/16 13:35	SAM	TAL CAN

Client Sample ID: TRIP BLANK

Lab Sample ID: 240-65149-15

Date Collected: 05/18/16 00:00

Matrix: Water

Date Received: 05/21/16 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	232568	06/01/16 01:54	RJQ	TAL CAN

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Certification Summary

Client: ARCADIS U.S., Inc.
Project/Site: Pontiac North Campus

TestAmerica Job ID: 240-65149-1

Laboratory: TestAmerica Canton

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	NELAP	9	01144CA	06-30-14 *
California	State Program	9	2927	04-30-17
Connecticut	State Program	1	PH-0590	12-31-17
Florida	NELAP	4	E87225	06-30-16 *
Illinois	NELAP	5	200004	07-31-16 *
Kansas	NELAP	7	E-10336	07-31-16 *
Kentucky (UST)	State Program	4	58	02-23-17
Kentucky (VW)	State Program	4	98016	12-31-16
L-A-B	DoD ELAP		L2315	07-18-16
Minnesota	NELAP	5	039-999-348	12-31-16
Nevada	State Program	9	OH-000482008A	07-31-16 *
New Jersey	NELAP	2	OH001	06-30-16 *
New York	NELAP	2	10975	03-31-17
Ohio VAP	State Program	5	CL0024	09-14-17
Oregon	NELAP	10	4062	02-23-17
Pennsylvania	NELAP	3	68-00340	08-31-16 *
Texas	NELAP	6	T104704517-15-5	08-31-16 *
USDA	Federal		P330-13-00319	11-26-16
Virginia	NELAP	3	460175	09-14-16
Washington	State Program	10	C971	01-12-17
West Virginia DEP	State Program	3	210	12-31-16
Wisconsin	State Program	5	999518190	08-31-16 *

* Certification renewal pending - certification considered valid.

TestAmerica Canton

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

CHAIN OF CUSTODY AND RECEIVING DOCUMENTS



240-65149 Chain of Custody

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

TestAmerica Canton Sample Receipt Form/Narrative		Login # : _____
Canton Facility _____		
Client <u>Arcadis</u>	Site Name _____	Cooler unpacked by: <u>[Signature]</u>
Cooler Received on <u>5-21-16</u>	Opened on <u>5-21-16</u>	
FedEx: 1 st Grd ☒ UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____		
Receipt After-hours: Drop-off Date/Time _____		Storage Location _____
TestAmerica Cooler # _____	Foam Box _____	Client Cooler Box ☒ Other _____
Packing material used: <u>Bubble Wrap</u> Foam Plastic Bag None Other _____		
COOLANT: <u>Wet Ice</u> Blue Ice Dry Ice Water None		
1. Cooler temperature upon receipt		☒ See Multiple Cooler Form
IR GUN# 48 (CF -1.9 °C)	Observed Cooler Temp. _____ °C	Corrected Cooler Temp. _____ °C
IR GUN# 36 (CF -1.5 °C)	Observed Cooler Temp. _____ °C	Corrected Cooler Temp. _____ °C
IR GUN# 18 (CF -0.5 °C)	Observed Cooler Temp. _____ °C	Corrected Cooler Temp. _____ °C
2. Were custody seals on the outside of the cooler(s)? _____ If Yes Quantity <u>4</u>		Yes No
-Were custody seals on the outside of the cooler(s) signed & dated?		Yes No NA
-Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?		Yes No
3. Shippers' packing slip attached to the cooler(s)?		Yes No
4. Did custody papers accompany the sample(s)?		Yes No
5. Were the custody papers relinquished & signed in the appropriate place?		Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC?		Yes No
7. Did all bottles arrive in good condition (Unbroken)?		Yes No
8. Could all bottle labels be reconciled with the COC?		Yes No
9. Were correct bottle(s) used for the test(s) indicated?		Yes No
10. Sufficient quantity received to perform indicated analyses?		Yes No
11. Are these work share samples?		Yes No
<i>If yes, Questions 12-16 have been checked at the originating laboratory.</i>		
12. Were sample(s) at the correct pH upon receipt?		Yes No NA pH Strip Lot# <u>HC559158</u>
13. Were VOAs on the COC?		Yes No
14. Were air bubbles >6 mm in any VOA vials?		Yes No NA
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot# _____		Yes No
16. Was a LL Hg or Me Hg trip blank present?		Yes No
Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____		
Concerning _____		

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES	Samples processed by: _____
<u>Rec'd 3x40 DUP.01, + 4x40 TB listed in comments on COC</u>	
18. SAMPLE CONDITION	
Sample(s) _____ were received after the recommended holding time had expired.	
Sample(s) _____ were received in a broken container.	
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)	
19. SAMPLE PRESERVATION	
Sample(s) _____ were further preserved in the laboratory.	
Time preserved: _____ Preservative(s) added/Lot number(s): _____	

Temperature readings: _____

<u>Client Sample ID</u>	<u>Lab ID</u>	<u>Container Type</u>	<u>Container</u> pH	<u>Preservative</u> Added (mls)	<u>Lot #</u>
TW-10-02-GW_051816	240-65149-I-1	Plastic 500ml - with Nitric Acid	<2	_____	_____
MWW10-SEN-01-GW_051816	240-65149-F-2	Plastic 500ml - with Nitric Acid	<2	_____	_____
MWM2-04-GW_051816	240-65149-I-6	Plastic 500ml - with Nitric Acid	<2	_____	_____
TW-03-01-GW_051916	240-65149-F-8	Plastic 500ml - with Nitric Acid	<2	_____	_____
MWM-16-19-GW-051916	240-65149-I-11	Plastic 500ml - with Nitric Acid	<2	_____	_____
MWM-10-09-GW-051916	240-65149-F-12	Plastic 500ml - with Nitric Acid	<2	_____	_____
SB-62-14-GW_051916	240-65149-E-13	Plastic 500ml - with Nitric Acid	<2	_____	_____

ATTACHMENT 4

Soil Laboratory Analytical Reports



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Canton

4101 Shuffel Street NW

North Canton, OH 44720

Tel: (330)497-9396

TestAmerica Job ID: 240-64670-1

Client Project/Site: Racer Pontiac North Campus

For:

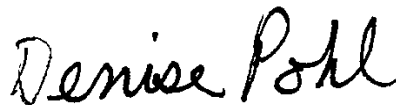
ARCADIS U.S., Inc.

28550 Cabot Drive

Suite 500

Novi, Michigan 48377

Attn: Ms. Theresa Olechiw



Authorized for release by:

5/19/2016 8:54:30 AM

Denise Pohl, Project Manager II

(330)966-9789

denise.pohl@testamericainc.com

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac North Campus

TestAmerica Job ID: 240-64670-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac North Campus

TestAmerica Job ID: 240-64670-1

Job ID: 240-64670-1

Laboratory: TestAmerica Canton

Narrative

CASE NARRATIVE

Client: ARCADIS U.S., Inc.

Project: Racer Pontiac North Campus

Report Number: 240-64670-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 5/11/2016 9:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.7° C.

POLYCHLORINATED BIPHENYLS (PCBS)

Samples TW-03-01-S(1-2)-050916 (240-64670-1), TW-03-01-S(6-7)-050916 (240-64670-4), TW-03-01-S(9-10)-050916 (240-64670-6), TW-03-01-S(21-22)-050916 (240-64670-9), TW-03-01-S(23-24)-050916 (240-64670-10), TW-03-01-S(30-31)-050916 (240-64670-11), TW-03-01-S(32-33)-050916 (240-64670-12), TW-03-01-S(34-35)-050916 (240-64670-13) and DUP-01 (240-64670-14) were analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA SW-846 Method 8082. The samples were prepared on 05/12/2016 and analyzed on 05/16/2016.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required. All of the samples in this data set analyzed for PCBs were subjected to the sulfuric acid cleanup procedure before instrumental analysis, per EPA Method 3665A.

Samples TW-03-01-S(1-2)-050916 (240-64670-1)[5X], TW-03-01-S(6-7)-050916 (240-64670-4)[5X] and TW-03-01-S(9-10)-050916 (240-64670-6)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Case Narrative

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac North Campus

TestAmerica Job ID: 240-64670-1

Job ID: 240-64670-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

Method(s) 8082: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: TW-03-01-S(1-2)-050916 (240-64670-1), TW-03-01-S(6-7)-050916 (240-64670-4), TW-03-01-S(6-7)-050916 (240-64670-4[MS]), TW-03-01-S(6-7)-050916 (240-64670-4[MSD]), TW-03-01-S(9-10)-050916 (240-64670-6), TW-03-01-S(21-22)-050916 (240-64670-9) and TW-03-01-S(30-31)-050916 (240-64670-11). Reagents: .2512963, 2103098 and 2283704.

Method(s) 8082: The following samples appear to contain polychlorinated biphenyls (PCBs); however, due to weathering or other environmental processes, the PCBs in the sample do not closely match any of the laboratory's Aroclor standards used for instrument calibration: TW-03-01-S(1-2)-050916 (240-64670-1), TW-03-01-S(6-7)-050916 (240-64670-4), TW-03-01-S(9-10)-050916 (240-64670-6) and TW-03-01-S(32-33)-050916 (240-64670-12). The samples have been quantified and reported as a mixture of Aroclors 1242 and 1248. Due to the poor match with the Aroclor standard(s), there is increased qualitative and quantitative uncertainty associated with this result.

Method(s) 8082: DCB failed in the continuing calibration verification(CCV). The surrogates in the samples were carefully evaluated and the results are reported. Samples impacted: TW-03-01-S(21-22)-050916 (240-64670-9), TW-03-01-S(23-24)-050916 (240-64670-10), TW-03-01-S(30-31)-050916 (240-64670-11), TW-03-01-S(32-33)-050916 (240-64670-12), TW-03-01-S(34-35)-050916 (240-64670-13) and DUP-01 (240-64670-14).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PERCENT SOLIDS

Samples TW-03-01-S(1-2)-050916 (240-64670-1), TW-03-01-S(3-4)-050916 (240-64670-2), TW-03-01-S(4-5)-050916 (240-64670-3), TW-03-01-S(6-7)-050916 (240-64670-4), TW-03-01-S(8-9)-050916 (240-64670-5), TW-03-01-S(9-10)-050916 (240-64670-6), TW-03-01-S(11-12)-050916 (240-64670-7), TW-03-01-S(13-14)-050916 (240-64670-8), TW-03-01-S(21-22)-050916 (240-64670-9), TW-03-01-S(23-24)-050916 (240-64670-10), TW-03-01-S(30-31)-050916 (240-64670-11), TW-03-01-S(32-33)-050916 (240-64670-12), TW-03-01-S(34-35)-050916 (240-64670-13) and DUP-01 (240-64670-14) were analyzed for percent solids in accordance with EPA Method 160.3 MOD. The samples were analyzed on 05/11/2016.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Method Summary

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac North Campus

TestAmerica Job ID: 240-64670-1

Method	Method Description	Protocol	Laboratory
8082	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL CAN
Moisture	Percent Moisture	EPA	TAL CAN

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Sample Summary

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac North Campus

TestAmerica Job ID: 240-64670-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-64670-1	TW-03-01-S(1-2)-050916	Solid	05/09/16 10:45	05/11/16 09:00
240-64670-4	TW-03-01-S(6-7)-050916	Solid	05/09/16 10:57	05/11/16 09:00
240-64670-6	TW-03-01-S(9-10)-050916	Solid	05/09/16 11:02	05/11/16 09:00
240-64670-9	TW-03-01-S(21-22)-050916	Solid	05/09/16 13:05	05/11/16 09:00
240-64670-10	TW-03-01-S(23-24)-050916	Solid	05/09/16 13:10	05/11/16 09:00
240-64670-11	TW-03-01-S(30-31)-050916	Solid	05/09/16 13:12	05/11/16 09:00
240-64670-12	TW-03-01-S(32-33)-050916	Solid	05/09/16 13:15	05/11/16 09:00
240-64670-13	TW-03-01-S(34-35)-050916	Solid	05/09/16 13:20	05/11/16 09:00
240-64670-14	DUP-01	Solid	05/09/16 00:00	05/11/16 09:00

Detection Summary

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac North Campus

TestAmerica Job ID: 240-64670-1

Client Sample ID: TW-03-01-S(1-2)-050916

Lab Sample ID: 240-64670-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	330		210	71	ug/Kg	5	✱	8082	Total/NA
Aroclor-1254	100	J	210	91	ug/Kg	5	✱	8082	Total/NA

Client Sample ID: TW-03-01-S(6-7)-050916

Lab Sample ID: 240-64670-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	340		190	46	ug/Kg	5	✱	8082	Total/NA

Client Sample ID: TW-03-01-S(9-10)-050916

Lab Sample ID: 240-64670-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	790		190	63	ug/Kg	5	✱	8082	Total/NA
Aroclor-1254	140	J	190	80	ug/Kg	5	✱	8082	Total/NA

Client Sample ID: TW-03-01-S(21-22)-050916

Lab Sample ID: 240-64670-9

No Detections.

Client Sample ID: TW-03-01-S(23-24)-050916

Lab Sample ID: 240-64670-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	76		40	9.8	ug/Kg	1	✱	8082	Total/NA

Client Sample ID: TW-03-01-S(30-31)-050916

Lab Sample ID: 240-64670-11

No Detections.

Client Sample ID: TW-03-01-S(32-33)-050916

Lab Sample ID: 240-64670-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	54		37	8.9	ug/Kg	1	✱	8082	Total/NA

Client Sample ID: TW-03-01-S(34-35)-050916

Lab Sample ID: 240-64670-13

No Detections.

Client Sample ID: DUP-01

Lab Sample ID: 240-64670-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	81		40	9.6	ug/Kg	1	✱	8082	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac North Campus

TestAmerica Job ID: 240-64670-1

Client Sample ID: TW-03-01-S(1-2)-050916

Lab Sample ID: 240-64670-1

Date Collected: 05/09/16 10:45

Matrix: Solid

Date Received: 05/11/16 09:00

Percent Solids: 75.9

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	210	U	210	78	ug/Kg	☼	05/12/16 08:27	05/16/16 09:06	5
Aroclor-1221	210	U	210	100	ug/Kg	☼	05/12/16 08:27	05/16/16 09:06	5
Aroclor-1232	210	U	210	130	ug/Kg	☼	05/12/16 08:27	05/16/16 09:06	5
Aroclor-1242	330		210	71	ug/Kg	☼	05/12/16 08:27	05/16/16 09:06	5
Aroclor-1248	210	U	210	52	ug/Kg	☼	05/12/16 08:27	05/16/16 09:06	5
Aroclor-1254	100 J		210	91	ug/Kg	☼	05/12/16 08:27	05/16/16 09:06	5
Aroclor-1260	210	U	210	58	ug/Kg	☼	05/12/16 08:27	05/16/16 09:06	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	84		14 - 128	05/12/16 08:27	05/16/16 09:06	5
DCB Decachlorobiphenyl	92		10 - 132	05/12/16 08:27	05/16/16 09:06	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	75.9		0.1	0.1	%	—		05/11/16 16:01	1

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac North Campus

TestAmerica Job ID: 240-64670-1

Client Sample ID: TW-03-01-S(6-7)-050916

Lab Sample ID: 240-64670-4

Date Collected: 05/09/16 10:57

Matrix: Solid

Date Received: 05/11/16 09:00

Percent Solids: 88.7

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	190	U	190	69	ug/Kg	☼	05/12/16 08:27	05/16/16 10:03	5
Aroclor-1221	190	U	190	91	ug/Kg	☼	05/12/16 08:27	05/16/16 10:03	5
Aroclor-1232	190	U	190	110	ug/Kg	☼	05/12/16 08:27	05/16/16 10:03	5
Aroclor-1242	190	U	190	63	ug/Kg	☼	05/12/16 08:27	05/16/16 10:03	5
Aroclor-1248	340		190	46	ug/Kg	☼	05/12/16 08:27	05/16/16 10:03	5
Aroclor-1254	190	U	190	80	ug/Kg	☼	05/12/16 08:27	05/16/16 10:03	5
Aroclor-1260	190	U	190	51	ug/Kg	☼	05/12/16 08:27	05/16/16 10:03	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	88		14 - 128	05/12/16 08:27	05/16/16 10:03	5
DCB Decachlorobiphenyl	112		10 - 132	05/12/16 08:27	05/16/16 10:03	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	88.7		0.1	0.1	%	—		05/11/16 16:01	1

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac North Campus

TestAmerica Job ID: 240-64670-1

Client Sample ID: TW-03-01-S(9-10)-050916

Lab Sample ID: 240-64670-6

Date Collected: 05/09/16 11:02

Matrix: Solid

Date Received: 05/11/16 09:00

Percent Solids: 86.7

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	190	U	190	69	ug/Kg	☼	05/12/16 08:27	05/16/16 11:19	5
Aroclor-1221	190	U	190	91	ug/Kg	☼	05/12/16 08:27	05/16/16 11:19	5
Aroclor-1232	190	U	190	110	ug/Kg	☼	05/12/16 08:27	05/16/16 11:19	5
Aroclor-1242	790		190	63	ug/Kg	☼	05/12/16 08:27	05/16/16 11:19	5
Aroclor-1248	190	U	190	46	ug/Kg	☼	05/12/16 08:27	05/16/16 11:19	5
Aroclor-1254	140	J	190	80	ug/Kg	☼	05/12/16 08:27	05/16/16 11:19	5
Aroclor-1260	190	U	190	51	ug/Kg	☼	05/12/16 08:27	05/16/16 11:19	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	91		14 - 128	05/12/16 08:27	05/16/16 11:19	5
DCB Decachlorobiphenyl	127		10 - 132	05/12/16 08:27	05/16/16 11:19	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	86.7		0.1	0.1	%	—		05/11/16 16:01	1

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac North Campus

TestAmerica Job ID: 240-64670-1

Client Sample ID: TW-03-01-S(21-22)-050916

Lab Sample ID: 240-64670-9

Date Collected: 05/09/16 13:05

Matrix: Solid

Date Received: 05/11/16 09:00

Percent Solids: 70.5

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	46	U	46	17	ug/Kg	☼	05/12/16 08:27	05/16/16 12:15	1
Aroclor-1221	46	U	46	22	ug/Kg	☼	05/12/16 08:27	05/16/16 12:15	1
Aroclor-1232	46	U	46	28	ug/Kg	☼	05/12/16 08:27	05/16/16 12:15	1
Aroclor-1242	46	U	46	15	ug/Kg	☼	05/12/16 08:27	05/16/16 12:15	1
Aroclor-1248	46	U	46	11	ug/Kg	☼	05/12/16 08:27	05/16/16 12:15	1
Aroclor-1254	46	U	46	20	ug/Kg	☼	05/12/16 08:27	05/16/16 12:15	1
Aroclor-1260	46	U	46	13	ug/Kg	☼	05/12/16 08:27	05/16/16 12:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	64		14 - 128	05/12/16 08:27	05/16/16 12:15	1
DCB Decachlorobiphenyl	74	p	10 - 132	05/12/16 08:27	05/16/16 12:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	70.5		0.1	0.1	%	—		05/11/16 16:01	1

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac North Campus

TestAmerica Job ID: 240-64670-1

Client Sample ID: TW-03-01-S(23-24)-050916

Lab Sample ID: 240-64670-10

Date Collected: 05/09/16 13:10

Matrix: Solid

Date Received: 05/11/16 09:00

Percent Solids: 82.6

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	40	U	40	15	ug/Kg	☼	05/12/16 08:27	05/16/16 12:34	1
Aroclor-1221	40	U	40	20	ug/Kg	☼	05/12/16 08:27	05/16/16 12:34	1
Aroclor-1232	40	U	40	24	ug/Kg	☼	05/12/16 08:27	05/16/16 12:34	1
Aroclor-1242	40	U	40	13	ug/Kg	☼	05/12/16 08:27	05/16/16 12:34	1
Aroclor-1248	76		40	9.8	ug/Kg	☼	05/12/16 08:27	05/16/16 12:34	1
Aroclor-1254	40	U	40	17	ug/Kg	☼	05/12/16 08:27	05/16/16 12:34	1
Aroclor-1260	40	U	40	11	ug/Kg	☼	05/12/16 08:27	05/16/16 12:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	68		14 - 128	05/12/16 08:27	05/16/16 12:34	1
DCB Decachlorobiphenyl	110		10 - 132	05/12/16 08:27	05/16/16 12:34	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	82.6		0.1	0.1	%	—		05/11/16 16:01	1

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac North Campus

TestAmerica Job ID: 240-64670-1

Client Sample ID: TW-03-01-S(30-31)-050916

Lab Sample ID: 240-64670-11

Date Collected: 05/09/16 13:12

Matrix: Solid

Date Received: 05/11/16 09:00

Percent Solids: 79.2

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	42	U	42	15	ug/Kg	☼	05/12/16 08:27	05/16/16 12:53	1
Aroclor-1221	42	U	42	20	ug/Kg	☼	05/12/16 08:27	05/16/16 12:53	1
Aroclor-1232	42	U	42	26	ug/Kg	☼	05/12/16 08:27	05/16/16 12:53	1
Aroclor-1242	42	U	42	14	ug/Kg	☼	05/12/16 08:27	05/16/16 12:53	1
Aroclor-1248	42	U	42	10	ug/Kg	☼	05/12/16 08:27	05/16/16 12:53	1
Aroclor-1254	42	U	42	18	ug/Kg	☼	05/12/16 08:27	05/16/16 12:53	1
Aroclor-1260	42	U	42	12	ug/Kg	☼	05/12/16 08:27	05/16/16 12:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	67		14 - 128	05/12/16 08:27	05/16/16 12:53	1
DCB Decachlorobiphenyl	87	p	10 - 132	05/12/16 08:27	05/16/16 12:53	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	79.2		0.1	0.1	%	—		05/11/16 16:01	1

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac North Campus

TestAmerica Job ID: 240-64670-1

Client Sample ID: TW-03-01-S(32-33)-050916

Lab Sample ID: 240-64670-12

Date Collected: 05/09/16 13:15

Matrix: Solid

Date Received: 05/11/16 09:00

Percent Solids: 91.2

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	37	U	37	13	ug/Kg	☼	05/12/16 08:27	05/16/16 13:12	1
Aroclor-1221	37	U	37	18	ug/Kg	☼	05/12/16 08:27	05/16/16 13:12	1
Aroclor-1232	37	U	37	22	ug/Kg	☼	05/12/16 08:27	05/16/16 13:12	1
Aroclor-1242	37	U	37	12	ug/Kg	☼	05/12/16 08:27	05/16/16 13:12	1
Aroclor-1248	54		37	8.9	ug/Kg	☼	05/12/16 08:27	05/16/16 13:12	1
Aroclor-1254	37	U	37	15	ug/Kg	☼	05/12/16 08:27	05/16/16 13:12	1
Aroclor-1260	37	U	37	10	ug/Kg	☼	05/12/16 08:27	05/16/16 13:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	81		14 - 128	05/12/16 08:27	05/16/16 13:12	1
DCB Decachlorobiphenyl	84		10 - 132	05/12/16 08:27	05/16/16 13:12	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	91.2		0.1	0.1	%	—		05/11/16 16:01	1

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac North Campus

TestAmerica Job ID: 240-64670-1

Client Sample ID: TW-03-01-S(34-35)-050916

Lab Sample ID: 240-64670-13

Date Collected: 05/09/16 13:20

Matrix: Solid

Date Received: 05/11/16 09:00

Percent Solids: 90.2

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	36	U	36	13	ug/Kg	☼	05/12/16 08:27	05/16/16 13:31	1
Aroclor-1221	36	U	36	18	ug/Kg	☼	05/12/16 08:27	05/16/16 13:31	1
Aroclor-1232	36	U	36	22	ug/Kg	☼	05/12/16 08:27	05/16/16 13:31	1
Aroclor-1242	36	U	36	12	ug/Kg	☼	05/12/16 08:27	05/16/16 13:31	1
Aroclor-1248	36	U	36	8.8	ug/Kg	☼	05/12/16 08:27	05/16/16 13:31	1
Aroclor-1254	36	U	36	15	ug/Kg	☼	05/12/16 08:27	05/16/16 13:31	1
Aroclor-1260	36	U	36	10	ug/Kg	☼	05/12/16 08:27	05/16/16 13:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	68		14 - 128	05/12/16 08:27	05/16/16 13:31	1
DCB Decachlorobiphenyl	73		10 - 132	05/12/16 08:27	05/16/16 13:31	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	90.2		0.1	0.1	%	—		05/11/16 16:01	1

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac North Campus

TestAmerica Job ID: 240-64670-1

Client Sample ID: DUP-01

Date Collected: 05/09/16 00:00

Date Received: 05/11/16 09:00

Lab Sample ID: 240-64670-14

Matrix: Solid

Percent Solids: 82.3

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	40	U	40	14	ug/Kg	☼	05/12/16 08:27	05/16/16 13:51	1
Aroclor-1221	40	U	40	19	ug/Kg	☼	05/12/16 08:27	05/16/16 13:51	1
Aroclor-1232	40	U	40	24	ug/Kg	☼	05/12/16 08:27	05/16/16 13:51	1
Aroclor-1242	40	U	40	13	ug/Kg	☼	05/12/16 08:27	05/16/16 13:51	1
Aroclor-1248	81		40	9.6	ug/Kg	☼	05/12/16 08:27	05/16/16 13:51	1
Aroclor-1254	40	U	40	17	ug/Kg	☼	05/12/16 08:27	05/16/16 13:51	1
Aroclor-1260	40	U	40	11	ug/Kg	☼	05/12/16 08:27	05/16/16 13:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	70		14 - 128	05/12/16 08:27	05/16/16 13:51	1
DCB Decachlorobiphenyl	82	p	10 - 132	05/12/16 08:27	05/16/16 13:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	82.3		0.1	0.1	%	—		05/11/16 16:01	1

TestAmerica Canton

Surrogate Summary

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac North Campus

TestAmerica Job ID: 240-64670-1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	TCX1 (14-128)	DCB1 (10-132)
240-64670-1	TW-03-01-S(1-2)-050916	84	92
240-64670-4	TW-03-01-S(6-7)-050916	88	112
240-64670-4 MS	TW-03-01-S(6-7)-050916	83	132 p
240-64670-4 MSD	TW-03-01-S(6-7)-050916	105	94 p
240-64670-6	TW-03-01-S(9-10)-050916	91	127
240-64670-9	TW-03-01-S(21-22)-050916	64	74 p
240-64670-10	TW-03-01-S(23-24)-050916	68	110
240-64670-11	TW-03-01-S(30-31)-050916	67	87 p
240-64670-12	TW-03-01-S(32-33)-050916	81	84
240-64670-13	TW-03-01-S(34-35)-050916	68	73
240-64670-14	DUP-01	70	82 p
LCS 240-229999/22-A	Lab Control Sample	62	58
MB 240-229999/21-A	Method Blank	62	59 p

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCB = DCB Decachlorobiphenyl

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac North Campus

TestAmerica Job ID: 240-64670-1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 240-229999/21-A

Matrix: Solid

Analysis Batch: 230370

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 229999

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	33	U	33	12	ug/Kg		05/12/16 08:27	05/16/16 14:10	1
Aroclor-1221	33	U	33	16	ug/Kg		05/12/16 08:27	05/16/16 14:10	1
Aroclor-1232	33	U	33	20	ug/Kg		05/12/16 08:27	05/16/16 14:10	1
Aroclor-1242	33	U	33	11	ug/Kg		05/12/16 08:27	05/16/16 14:10	1
Aroclor-1248	33	U	33	8.0	ug/Kg		05/12/16 08:27	05/16/16 14:10	1
Aroclor-1254	33	U	33	14	ug/Kg		05/12/16 08:27	05/16/16 14:10	1
Aroclor-1260	33	U	33	9.0	ug/Kg		05/12/16 08:27	05/16/16 14:10	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	62		14 - 128	05/12/16 08:27	05/16/16 14:10	1
DCB Decachlorobiphenyl	59	p	10 - 132	05/12/16 08:27	05/16/16 14:10	1

Lab Sample ID: LCS 240-229999/22-A

Matrix: Solid

Analysis Batch: 230370

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 229999

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Aroclor-1016	333	194		ug/Kg		58	47 - 120
Aroclor-1260	333	205		ug/Kg		61	46 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	62		14 - 128
DCB Decachlorobiphenyl	58		10 - 132

Lab Sample ID: 240-64670-4 MS

Matrix: Solid

Analysis Batch: 230370

Client Sample ID: TW-03-01-S(6-7)-050916

Prep Type: Total/NA

Prep Batch: 229999

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Aroclor-1016	190	U	380	441		ug/Kg	☼	116	31 - 120
Aroclor-1260	190	U	380	287		ug/Kg	☼	75	21 - 122

Surrogate	MS %Recovery	MS Qualifier	Limits
Tetrachloro-m-xylene	83		14 - 128
DCB Decachlorobiphenyl	132	p	10 - 132

Lab Sample ID: 240-64670-4 MSD

Matrix: Solid

Analysis Batch: 230370

Client Sample ID: TW-03-01-S(6-7)-050916

Prep Type: Total/NA

Prep Batch: 229999

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Aroclor-1016	190	U	376	435	p	ug/Kg	☼	116	31 - 120	2	30
Aroclor-1260	190	U	376	380		ug/Kg	☼	101	21 - 122	28	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Tetrachloro-m-xylene	105		14 - 128
DCB Decachlorobiphenyl	94	p	10 - 132

TestAmerica Canton

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac North Campus

TestAmerica Job ID: 240-64670-1

Method: Moisture - Percent Moisture

Lab Sample ID: 240-64670-4 DU

Matrix: Solid

Analysis Batch: 229920

Client Sample ID: TW-03-01-S(6-7)-050916

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Solids	88.7		88.1		%	—	0.7	20

QC Association Summary

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac North Campus

TestAmerica Job ID: 240-64670-1

GC Semi VOA

Prep Batch: 229999

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-64670-1	TW-03-01-S(1-2)-050916	Total/NA	Solid	3540C	
240-64670-4	TW-03-01-S(6-7)-050916	Total/NA	Solid	3540C	
240-64670-4 MS	TW-03-01-S(6-7)-050916	Total/NA	Solid	3540C	
240-64670-4 MSD	TW-03-01-S(6-7)-050916	Total/NA	Solid	3540C	
240-64670-6	TW-03-01-S(9-10)-050916	Total/NA	Solid	3540C	
240-64670-9	TW-03-01-S(21-22)-050916	Total/NA	Solid	3540C	
240-64670-10	TW-03-01-S(23-24)-050916	Total/NA	Solid	3540C	
240-64670-11	TW-03-01-S(30-31)-050916	Total/NA	Solid	3540C	
240-64670-12	TW-03-01-S(32-33)-050916	Total/NA	Solid	3540C	
240-64670-13	TW-03-01-S(34-35)-050916	Total/NA	Solid	3540C	
240-64670-14	DUP-01	Total/NA	Solid	3540C	
LCS 240-229999/22-A	Lab Control Sample	Total/NA	Solid	3540C	
MB 240-229999/21-A	Method Blank	Total/NA	Solid	3540C	

Analysis Batch: 230370

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-64670-1	TW-03-01-S(1-2)-050916	Total/NA	Solid	8082	229999
240-64670-4	TW-03-01-S(6-7)-050916	Total/NA	Solid	8082	229999
240-64670-4 MS	TW-03-01-S(6-7)-050916	Total/NA	Solid	8082	229999
240-64670-4 MSD	TW-03-01-S(6-7)-050916	Total/NA	Solid	8082	229999
240-64670-6	TW-03-01-S(9-10)-050916	Total/NA	Solid	8082	229999
240-64670-9	TW-03-01-S(21-22)-050916	Total/NA	Solid	8082	229999
240-64670-10	TW-03-01-S(23-24)-050916	Total/NA	Solid	8082	229999
240-64670-11	TW-03-01-S(30-31)-050916	Total/NA	Solid	8082	229999
240-64670-12	TW-03-01-S(32-33)-050916	Total/NA	Solid	8082	229999
240-64670-13	TW-03-01-S(34-35)-050916	Total/NA	Solid	8082	229999
240-64670-14	DUP-01	Total/NA	Solid	8082	229999
LCS 240-229999/22-A	Lab Control Sample	Total/NA	Solid	8082	229999
MB 240-229999/21-A	Method Blank	Total/NA	Solid	8082	229999

General Chemistry

Analysis Batch: 229920

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-64670-1	TW-03-01-S(1-2)-050916	Total/NA	Solid	Moisture	
240-64670-4	TW-03-01-S(6-7)-050916	Total/NA	Solid	Moisture	
240-64670-4 DU	TW-03-01-S(6-7)-050916	Total/NA	Solid	Moisture	
240-64670-6	TW-03-01-S(9-10)-050916	Total/NA	Solid	Moisture	
240-64670-9	TW-03-01-S(21-22)-050916	Total/NA	Solid	Moisture	
240-64670-10	TW-03-01-S(23-24)-050916	Total/NA	Solid	Moisture	
240-64670-11	TW-03-01-S(30-31)-050916	Total/NA	Solid	Moisture	
240-64670-12	TW-03-01-S(32-33)-050916	Total/NA	Solid	Moisture	
240-64670-13	TW-03-01-S(34-35)-050916	Total/NA	Solid	Moisture	
240-64670-14	DUP-01	Total/NA	Solid	Moisture	

TestAmerica Canton

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac North Campus

TestAmerica Job ID: 240-64670-1

Client Sample ID: TW-03-01-S(1-2)-050916

Date Collected: 05/09/16 10:45

Date Received: 05/11/16 09:00

Lab Sample ID: 240-64670-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	229920	05/11/16 16:01	LCN	TAL CAN

Client Sample ID: TW-03-01-S(1-2)-050916

Date Collected: 05/09/16 10:45

Date Received: 05/11/16 09:00

Lab Sample ID: 240-64670-1

Matrix: Solid

Percent Solids: 75.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			229999	05/12/16 08:27	YDN	TAL CAN
Total/NA	Analysis	8082		5	230370	05/16/16 09:06	LSH	TAL CAN

Client Sample ID: TW-03-01-S(6-7)-050916

Date Collected: 05/09/16 10:57

Date Received: 05/11/16 09:00

Lab Sample ID: 240-64670-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	229920	05/11/16 16:01	LCN	TAL CAN

Client Sample ID: TW-03-01-S(6-7)-050916

Date Collected: 05/09/16 10:57

Date Received: 05/11/16 09:00

Lab Sample ID: 240-64670-4

Matrix: Solid

Percent Solids: 88.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			229999	05/12/16 08:27	YDN	TAL CAN
Total/NA	Analysis	8082		5	230370	05/16/16 10:03	LSH	TAL CAN

Client Sample ID: TW-03-01-S(9-10)-050916

Date Collected: 05/09/16 11:02

Date Received: 05/11/16 09:00

Lab Sample ID: 240-64670-6

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	229920	05/11/16 16:01	LCN	TAL CAN

Client Sample ID: TW-03-01-S(9-10)-050916

Date Collected: 05/09/16 11:02

Date Received: 05/11/16 09:00

Lab Sample ID: 240-64670-6

Matrix: Solid

Percent Solids: 86.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			229999	05/12/16 08:27	YDN	TAL CAN
Total/NA	Analysis	8082		5	230370	05/16/16 11:19	LSH	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac North Campus

TestAmerica Job ID: 240-64670-1

Client Sample ID: TW-03-01-S(21-22)-050916

Lab Sample ID: 240-64670-9

Date Collected: 05/09/16 13:05

Matrix: Solid

Date Received: 05/11/16 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	229920	05/11/16 16:01	LCN	TAL CAN

Client Sample ID: TW-03-01-S(21-22)-050916

Lab Sample ID: 240-64670-9

Date Collected: 05/09/16 13:05

Matrix: Solid

Date Received: 05/11/16 09:00

Percent Solids: 70.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			229999	05/12/16 08:27	YDN	TAL CAN
Total/NA	Analysis	8082		1	230370	05/16/16 12:15	LSH	TAL CAN

Client Sample ID: TW-03-01-S(23-24)-050916

Lab Sample ID: 240-64670-10

Date Collected: 05/09/16 13:10

Matrix: Solid

Date Received: 05/11/16 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	229920	05/11/16 16:01	LCN	TAL CAN

Client Sample ID: TW-03-01-S(23-24)-050916

Lab Sample ID: 240-64670-10

Date Collected: 05/09/16 13:10

Matrix: Solid

Date Received: 05/11/16 09:00

Percent Solids: 82.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			229999	05/12/16 08:27	YDN	TAL CAN
Total/NA	Analysis	8082		1	230370	05/16/16 12:34	LSH	TAL CAN

Client Sample ID: TW-03-01-S(30-31)-050916

Lab Sample ID: 240-64670-11

Date Collected: 05/09/16 13:12

Matrix: Solid

Date Received: 05/11/16 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	229920	05/11/16 16:01	LCN	TAL CAN

Client Sample ID: TW-03-01-S(30-31)-050916

Lab Sample ID: 240-64670-11

Date Collected: 05/09/16 13:12

Matrix: Solid

Date Received: 05/11/16 09:00

Percent Solids: 79.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			229999	05/12/16 08:27	YDN	TAL CAN
Total/NA	Analysis	8082		1	230370	05/16/16 12:53	LSH	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac North Campus

TestAmerica Job ID: 240-64670-1

Client Sample ID: TW-03-01-S(32-33)-050916

Lab Sample ID: 240-64670-12

Date Collected: 05/09/16 13:15

Matrix: Solid

Date Received: 05/11/16 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	229920	05/11/16 16:01	LCN	TAL CAN

Client Sample ID: TW-03-01-S(32-33)-050916

Lab Sample ID: 240-64670-12

Date Collected: 05/09/16 13:15

Matrix: Solid

Date Received: 05/11/16 09:00

Percent Solids: 91.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			229999	05/12/16 08:27	YDN	TAL CAN
Total/NA	Analysis	8082		1	230370	05/16/16 13:12	LSH	TAL CAN

Client Sample ID: TW-03-01-S(34-35)-050916

Lab Sample ID: 240-64670-13

Date Collected: 05/09/16 13:20

Matrix: Solid

Date Received: 05/11/16 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	229920	05/11/16 16:01	LCN	TAL CAN

Client Sample ID: TW-03-01-S(34-35)-050916

Lab Sample ID: 240-64670-13

Date Collected: 05/09/16 13:20

Matrix: Solid

Date Received: 05/11/16 09:00

Percent Solids: 90.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			229999	05/12/16 08:27	YDN	TAL CAN
Total/NA	Analysis	8082		1	230370	05/16/16 13:31	LSH	TAL CAN

Client Sample ID: DUP-01

Lab Sample ID: 240-64670-14

Date Collected: 05/09/16 00:00

Matrix: Solid

Date Received: 05/11/16 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	229920	05/11/16 16:01	LCN	TAL CAN

Client Sample ID: DUP-01

Lab Sample ID: 240-64670-14

Date Collected: 05/09/16 00:00

Matrix: Solid

Date Received: 05/11/16 09:00

Percent Solids: 82.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			229999	05/12/16 08:27	YDN	TAL CAN
Total/NA	Analysis	8082		1	230370	05/16/16 13:51	LSH	TAL CAN

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TestAmerica Canton

Certification Summary

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac North Campus

TestAmerica Job ID: 240-64670-1

Laboratory: TestAmerica Canton

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	NELAP	9	01144CA	06-30-14 *
California	State Program	9	2927	04-30-17
Connecticut	State Program	1	PH-0590	12-31-17
Florida	NELAP	4	E87225	06-30-16 *
Illinois	NELAP	5	200004	07-31-16 *
Kansas	NELAP	7	E-10336	07-31-16 *
Kentucky (UST)	State Program	4	58	02-23-17
Kentucky (VW)	State Program	4	98016	12-31-16
L-A-B	DoD ELAP		L2315	07-18-16
Minnesota	NELAP	5	039-999-348	12-31-16
Nevada	State Program	9	OH-000482008A	07-31-16 *
New Jersey	NELAP	2	OH001	06-30-16 *
New York	NELAP	2	10975	03-31-17
Ohio VAP	State Program	5	CL0024	09-14-17
Oregon	NELAP	10	4062	02-23-17
Pennsylvania	NELAP	3	68-00340	08-31-16 *
Texas	NELAP	6	T104704517-15-5	08-31-16 *
USDA	Federal		P330-13-00319	11-26-16
Virginia	NELAP	3	460175	09-14-16
Washington	State Program	10	C971	01-12-17
West Virginia DEP	State Program	3	210	12-31-16
Wisconsin	State Program	5	999518190	08-31-16 *

* Certification renewal pending - certification considered valid.

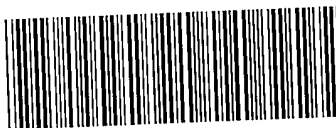
TestAmerica Canton

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

CHAIN OF CUSTODY AND RECEIVING DOCUMENTS



240-64670 Chain of Custody

TestAmerica Michigan
10448 Citation Drive
Suite 200
Brighton, MI 48116
Phone: 810.229.2763 Fax:

1.2/CO.2

Chain of Custody Record

133951

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact		Project Manager: Christi Kikes		Site Contact: A. Richmond		Date: 5/9/16		COC No: 1 of 2 COCs	
Company Name: ARCADIS		Tel/Fax: (832) 239-0892		Lab Contact:		Carrier:		Sampler:	
Address: 28550 Cabot Dr. Ste. 500		☒ CALENDAR DAYS ☐ WORKING DAYS		Analysis Turnaround Time				For Lab Use Only:	
City/State/Zip: 48382-Nav, MI 48377		☒ JAT if different from Below		2 weeks (Standard)				Walk-in Client:	
Phone: (248) 994-2240		☐ 1 week		1 day				Lab Sampling:	
Fax: (248) 994-2240		☐ 2 days						Job / SDG No.:	
Project Name: RACEP Pontine North Campus		☐ 1 day							
Site: RACEP Pontine North Campus									
PO# B0064607-2016.00005									
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	Sample Specific Notes:
TW-03-01-S(1-2)-050916		5/9/16	1045	G	S	1	N	N	
TW-03-01-S(3-4)-050916			1050	G	S	1	N	N	HOLD
TW-03-01-S(4-5)-050916			1055	G	S	1	N	N	HOLD
TW-03-01-S(6-7)-050916			1057	G	S	3	N	N	
TW-03-01-S(8-9)-050916			1059	G	S	1	N	N	
TW-03-01-S(9-10)-050916			1102	G	S	1	N	N	HOLD
TW-03-01-S(11-12)-050916			1105	G	S	1	N	N	HOLD
TW-03-01-S(13-14)-050916			1107	G	S	1	N	N	HOLD
TW-03-01-S(21-22)-050916			1305	G	S	1	N	N	
TW-03-01-S(23-24)-050916			1310	G	S	1	N	N	
TW-03-01-S(30-31)-050916			1312	G	S	1	N	N	
TW-03-01-S(32-33)-050916			1315	G	S	1	N	N	
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4= HNO3; 5= NaOH; 6= Other									
Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.									
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown									
Special Instructions/QC Requirements & Comments:									
Custody Seals Intact: ☐ Yes ☐ No		Custody Seal No.:		Cooler Temp. (°C): Obs'd:		Therm ID No.:			
Relinquished by: [Signature]		Company: ARCADIS		Received by: [Signature]		Company: ARCADIS		Date/Time: 5/9/16 1800	
Relinquished by: [Signature]		Company: ARCADIS		Received by: [Signature]		Company: ARCADIS		Date/Time: 5/10/16 1150	
Relinquished by: [Signature]		Company: TH		Received in Laboratory by: [Signature]		Company: TH		Date/Time: 5/11/16 900	

Michigan



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Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for Months

TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility

Login # : 64670

Client Arcadis Site Name _____ Cooler unpacked by: _____
Cooler Received on 5-11-16 Opened on 5-11-16
FedEx: 1st Grd Exp UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # _____ Foam Box Client Cooler Box _____ Other _____
Packing material used: Bubble Wrap Foam Plastic Bag None Other _____
COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
IR GUN# 48 (CF -1.9 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
IR GUN# 36 (CF -1.5 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
IR GUN# 18 (CF -0.5 °C) Observed Cooler Temp. 1.2 °C Corrected Cooler Temp. 0.7 °C

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No
-Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA
-Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No

3. Shippers' packing slip attached to the cooler(s)? Yes No

4. Did custody papers accompany the sample(s)? Yes No

5. Were the custody papers relinquished & signed in the appropriate place? Yes No

6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No

7. Did all bottles arrive in good condition (Unbroken)? Yes No

8. Could all bottle labels be reconciled with the COC? Yes No

9. Were correct bottle(s) used for the test(s) indicated? Yes No

10. Sufficient quantity received to perform indicated analyses? Yes No

11. Are these work share samples? Yes No

If yes, Questions 12-16 have been checked at the originating laboratory.

12. Were sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC559158

13. Were VOAs on the COC? Yes No

14. Were air bubbles >6 mm in any VOA vials? Yes No NA

15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____ Yes No

16. Was a LL Hg or Me Hg trip blank present? Yes No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____

Concerning _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by: _____

18. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

ATTACHMENT 5

Soil Boring and Well Construction Log



Date Start: 5/09/16
Date Finish: 5/09/16
Drilling Company: Cascade
Driller's Name: Steve Argue, Shane Hix
Drilling Method: Sonic
Sampling Method: 5" diameter, 5' core barrel
Rig Type: Sonic
Water Level Start (ft. bgs.): 24.0
Water Level Finish (ft. btoc.): 31.10

Northing: 424368.4
Easting: 13412967.2
Casing Elevation: 970.48
Borehole Depth (ft. bgs.): 35.0
Surface Elevation: 970.5
Descriptions By: Adam Richmond

Well/Boring ID: TW-03-01
Client: RACER
Location: RACER PNC
Weather Conditions: Sunny, 66 F

DEPTH (feet bgs.)	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
0	970	1	0.0-5.0	5.0				(0.0 - 1.0') ASPHALT.		
					3.1	×	☒	(1.0 - 4.0') PEBBLE, medium, angular; some silt; little sand, fine; little small pebbles, subangular; poorly sorted; dry; very dark grayish brown (10YR 3/2).		Backfill sand (0.0-2.0' bgs)
					1.4		☒			
					1.0	×	☒			
					6.8	×	☒	(4.0 - 6.0') SAND, coarse, subangular; some silt; some small pebbles, subangular; dry; poorly sorted; very dark grayish brown (10YR 3/2).		
5	965	2	5.0-10.0	5.0	3.7		☒	Note: Old factory debris (wiring and brick) at 6.0' bgs.		
					1.2	×	☒	(6.0 - 10.0') PEBBLE, large, subangular; some silt; some sand, coarse, subround to subangular; dry; poorly sorted; very dark grayish brown (10YR 3/2).		
					2.3		☒			
					1.2	×	☒	Note: Concrete chunks at 6.0-7.0' bgs and 8.0-9.0' bgs, brick chunks at 10.0' bgs.		
					5.7	×	☒			
10	960	3	10.0-15.0	5.0	0.4		☒	(10.0 - 13.0') PEBBLE, small, angular; some clay; little sand, coarse, angular; little silt; dry; poorly sorted; very dark grayish brown (10YR 3/2).		2" sch 40 pvc (0.0-23.0' bgs)
					1.5	×	☒			Bentonite chips (2.0-22.0' bgs)
					2.2		☒	Note: Concrete chunks at 11.0' bgs, brick chunks at 12.0' bgs, factory debris (rebar, metal, etc.).		
					7.8	×	☒	(13.0 - 15.0') PEBBLE, small to medium, angular, and SAND, coarse, angular; some silt; dry; poorly sorted; very dark grayish brown (10YR 3/2).		
15	955	4	15.0-20.0	1.0	17.2		☒	Note: Factory debris (brick, metal, concrete, plastic chunks, garbage, etc.) High temperature soils from drilling from 14.0-15.0' bgs, no evidence of impacts.		
							☒	(15.0 - 20.0') CONCRETE.		
							☒	Note: Ductile iron pipe at 18.0' bgs, 0.5" thick.		



Remarks: bgs = below ground surface
 NA = not applicable
 btoc = below top of casing
 Hand auger to 5.0' bgs.
 Groundwater encountered at 24.0' bgs.
 Negative Shake Tests at: 21-22', 24-25', and 34-35' bgs.
 Positive Shake Tests at: 23-24', 30-31', and 32-33' bgs.

Date Start: 5/09/16 Date Finish: 5/09/16 Drilling Company: Cascade Driller's Name: Steve Argue, Shane Hix Drilling Method: Sonic Sampling Method: 5" diameter, 5' core barrel Rig Type: Sonic Water Level Start (ft. bgs.): 24.0 Water Level Finish (ft. btoc.): 31.10	Northing: 424368.4 Easting: 13412967.2 Casing Elevation: 970.48 Borehole Depth (ft. bgs.): 35.0 Surface Elevation: 970.5 Descriptions By: Adam Richmond	Well/Boring ID: TW-03-01 Client: RACER Location: RACER PNC Weather Conditions: Sunny, 66 F

DEPTH (feet bgs.)	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Analytical Sample	Geologic Column	Stratigraphic Description	Water Level (ft. bgs.)	Well/Boring Construction
20	950	5	20.0-25.0	5.0	1.3			(20.0 - 21.0') SAND, coarse, subrounded to subangular, and SILT, nonplastic, rapid dilatancy; trace granules, subangular, wet; very dark brown (10YR 2/2). Note: Backfill sand from utility corridor.	▼	<

	Remarks: bgs = below ground surface NA = not applicable btoc = below top of casing Hand auger to 5.0' bgs. Groundwater encountered at 24.0' bgs. Negative Shake Tests at: 21-22', 24-25', and 34-35' bgs. Positive Shake Tests at: 23-24', 30-31', and 32-33' bgs.

ATTACHMENT 6

LNAPL Laboratory Analytical Reports



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Canton

4101 Shuffel Street NW

North Canton, OH 44720

Tel: (330)497-9396

TestAmerica Job ID: 240-65173-1

Client Project/Site: Racer Pontiac

For:

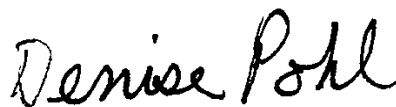
ARCADIS U.S., Inc.

28550 Cabot Drive

Suite 500

Novi, Michigan 48377

Attn: Ms. Theresa Olechiw



Authorized for release by:

6/7/2016 4:18:30 PM

Denise Pohl, Project Manager II

(330)966-9789

denise.pohl@testamericainc.com

LINKS

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results through

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
*	LCS or LCSD is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.
*	LCS or LCSD is outside acceptance limits.
X	Surrogate is outside control limits
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
X	Surrogate is outside control limits

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

TestAmerica Canton

Case Narrative

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Job ID: 240-65173-1

Laboratory: TestAmerica Canton

Narrative

CASE NARRATIVE

Client: ARCADIS U.S., Inc.

Project: Racer Pontiac

Report Number: 240-65173-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 5/21/2016 9:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.3° C.

Samples MWM4-06R-LNAPL-052016 (240-65173-1), RWW8-129-LNAPL-052016 (240-65173-9), TW-09-01-LNAPL-052016 (240-65173-10), MWW8-65-LNAPL-052016 (240-65173-11) and TW11-02-LNAPL-052016 (240-65173-12) were received with limited volume and not all of the requested analysis could be done.

Trip Blank was received but was not listed on the chain of custody as noted on the cooler receipt form. The Trip Blank was not analyzed due to the sample could not be located for analysis after it was logged.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples MWM2-29-LNAPL-052016 (240-65173-2), TWM2-07-LNAPL-052016 (240-65173-3), MWW10-01-LNAPL-052016 (240-65173-4), MWW10-08-LNAPL-052016 (240-65173-5), TW-01-01-LNAPL-052016 (240-65173-6), SB-46-14-LNAPL-052016 (240-65173-7), SB-43-14-LNAPL-052016 (240-65173-8), RWW8-129-LNAPL-052016 (240-65173-9), MWW8-65-LNAPL-052016 (240-65173-11) and TW11-02-LNAPL-052016 (240-65173-12) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 05/26/2016 and 05/27/2016.

Case Narrative

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Job ID: 240-65173-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

Cyclohexane failed the recovery criteria high for LCS 240-232068/2-A. Refer to the QC report for details.

Cyclohexane exceeded the RPD limit for the MSD of sample MWW10-01-LNAPL-052016MSD (240-65173-4) in batch 240-232171. Refer to the QC report for details.

Sample SB-46-14-LNAPL-052016 (240-65173-7)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) 8260B: The laboratory control sample (LCS) for preparation batch 240-232068 and analytical batch 240-232171 recovered outside control limits for cyclohexane. This analyte has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed. The results have been reported and qualified.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS (GCMS)

Samples MWM2-29-LNAPL-052016 (240-65173-2), TWM2-07-LNAPL-052016 (240-65173-3), MWW10-01-LNAPL-052016 (240-65173-4), MWW10-08-LNAPL-052016 (240-65173-5), TW-01-01-LNAPL-052016 (240-65173-6), SB-46-14-LNAPL-052016 (240-65173-7) and SB-43-14-LNAPL-052016 (240-65173-8) were analyzed for semivolatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 05/25/2016 and analyzed on 05/26/2016.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

2-Fluorobiphenyl (Surr), 2-Fluorophenol (Surr), Nitrobenzene-d5 (Surr), Phenol-d5 (Surr) and Terphenyl-d14 (Surr) failed the surrogate recovery criteria high for TWM2-07-LNAPL-052016 (240-65173-3). 2-Fluorobiphenyl (Surr), Nitrobenzene-d5 (Surr) and Terphenyl-d14 (Surr) failed the surrogate recovery criteria high for MWW10-01-LNAPL-052016 (240-65173-4). 2,4,6-Tribromophenol (Surr) failed the surrogate recovery criteria low for MWW10-08-LNAPL-052016 (240-65173-5). Nitrobenzene-d5 (Surr) failed the surrogate recovery criteria low for SB-46-14-LNAPL-052016 (240-65173-7). Nitrobenzene-d5 (Surr) failed the surrogate recovery criteria low for SB-43-14-LNAPL-052016MS (240-65173-8MS). Nitrobenzene-d5 (Surr) failed the surrogate recovery criteria high for SB-43-14-LNAPL-052016MSD (240-65173-8MSD). Refer to the QC report for details.

Hexachlorobenzene failed the recovery criteria high for LCS 240-231939/11-A. Refer to the QC report for details.

Several analytes failed the recovery criteria low for the MS of sample SB-43-14-LNAPL-052016MS (240-65173-8) in batch 240-232030. Several analytes failed the recovery criteria high. For the MSD of sample SB-43-14-LNAPL-052016MSD (240-65173-8) in batch 240-232030, Several analytes failed the recovery criteria low. Several analytes failed the recovery criteria high. Also, 4-Chloroaniline, 4-Chlorophenyl phenyl ether and Di-n-octyl phthalate exceeded the RPD limit. Refer to the QC report for details.

Samples MWM2-29-LNAPL-052016 (240-65173-2)[25X], TWM2-07-LNAPL-052016 (240-65173-3)[25X], MWW10-01-LNAPL-052016 (240-65173-4)[50X], MWW10-08-LNAPL-052016 (240-65173-5)[50X], TW-01-01-LNAPL-052016 (240-65173-6)[25X], SB-46-14-LNAPL-052016 (240-65173-7)[25X] and SB-43-14-LNAPL-052016 (240-65173-8)[25X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) 8270C: The laboratory control sample (LCS) for 231939 associated with samples TWM2-07-LNAPL-052016 (240-65173-3), MWW10-01-LNAPL-052016 (240-65173-4), MWW10-08-LNAPL-052016 (240-65173-5), TW-01-01-LNAPL-052016 (240-65173-6), SB-46-14-LNAPL-052016 (240-65173-7) and SB-43-14-LNAPL-052016 (240-65173-8), recovered outside control limits for the following analyte: Hexachlorobenzene. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported.

Method(s) 8270C: The following samples was diluted due to the nature of the sample matrix: MWM2-29-LNAPL-052016 (240-65173-2), TWM2-07-LNAPL-052016 (240-65173-3), MWW10-01-LNAPL-052016 (240-65173-4), MWW10-08-LNAPL-052016 (240-65173-5), TW-01-01-LNAPL-052016 (240-65173-6), SB-46-14-LNAPL-052016 (240-65173-7), SB-43-14-LNAPL-052016 (240-65173-8), (240-65173-B-8-C MS) and (240-65173-B-8-D MSD). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Case Narrative

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Job ID: 240-65173-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

POLYCHLORINATED BIPHENYLS (PCBS)

Samples MWM4-06R-LNAPL-052016 (240-65173-1), MWM2-29-LNAPL-052016 (240-65173-2), TWM2-07-LNAPL-052016 (240-65173-3), MWW10-01-LNAPL-052016 (240-65173-4), MWW10-08-LNAPL-052016 (240-65173-5), TW-01-01-LNAPL-052016 (240-65173-6), SB-46-14-LNAPL-052016 (240-65173-7), SB-43-14-LNAPL-052016 (240-65173-8), RWW8-129-LNAPL-052016 (240-65173-9), TW-09-01-LNAPL-052016 (240-65173-10), MWW8-65-LNAPL-052016 (240-65173-11) and TW11-02-LNAPL-052016 (240-65173-12) were analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA SW-846 Method 8082. The samples were prepared on 05/25/2016 and analyzed on 05/26/2016 and 05/27/2016.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required. All of the samples in this data set analyzed for PCBs were subjected to the sulfuric acid cleanup procedure before instrumental analysis, per EPA Method 3665A.

DCB Decachlorobiphenyl failed the surrogate recovery criteria low for MWM4-06R-LNAPL-052016 (240-65173-1). DCB Decachlorobiphenyl and Tetrachloro-m-xylene failed the surrogate recovery criteria high for MWM2-29-LNAPL-052016 (240-65173-2). DCB Decachlorobiphenyl failed the surrogate recovery criteria high for MWW10-01-LNAPL-052016 (240-65173-4). DCB Decachlorobiphenyl failed the surrogate recovery criteria high for MWW10-08-LNAPL-052016 (240-65173-5). DCB Decachlorobiphenyl and Tetrachloro-m-xylene failed the surrogate recovery criteria high for TW-01-01-LNAPL-052016 (240-65173-6). DCB Decachlorobiphenyl and Tetrachloro-m-xylene failed the surrogate recovery criteria high for SB-46-14-LNAPL-052016 (240-65173-7). DCB Decachlorobiphenyl and Tetrachloro-m-xylene failed the surrogate recovery criteria high for SB-43-14-LNAPL-052016 (240-65173-8). Refer to the QC report for details.

Samples MWM4-06R-LNAPL-052016 (240-65173-1)[10X], MWM2-29-LNAPL-052016 (240-65173-2)[200X], MWW10-01-LNAPL-052016 (240-65173-4)[20X], MWW10-08-LNAPL-052016 (240-65173-5)[20X], TW-01-01-LNAPL-052016 (240-65173-6)[50X], SB-46-14-LNAPL-052016 (240-65173-7)[200X], SB-43-14-LNAPL-052016 (240-65173-8)[100X] and RWW8-129-LNAPL-052016 (240-65173-9)[2X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) 8082: The following samples appear to contain polychlorinated biphenyls (PCBs); however, due to weathering or other environmental processes, the PCBs in the sample do not closely match any of the laboratory's Aroclor standards used for instrument calibration: MWM2-29-LNAPL-052016 (240-65173-2) and RWW8-129-LNAPL-052016 (240-65173-9). The samples have been quantified and reported as a mixture of Aroclors 1242 and 1248. Due to the poor match with the Aroclor standard(s), there is increased qualitative and quantitative uncertainty associated with this result.

Method(s) 8082: The following sample appears to contain polychlorinated biphenyls (PCBs); however, due to weathering or other environmental processes, the PCBs in the sample do not closely match any of the laboratory's Aroclor standards used for instrument calibration: TWM2-07-LNAPL-052016 (240-65173-3). The sample has been quantified and reported as a mixture of Aroclors 1248 and 1254. Due to the poor match with the Aroclor standard(s), there is increased qualitative and quantitative uncertainty associated with this result.

Method(s) 8082: The following sample required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: TWM2-07-LNAPL-052016 (240-65173-3). Reagents: 2540201, 2103098 and 2283704.

Method(s) 8082: The %RPD between the primary and confirmation column exceeded 40% for the following samples: MWM4-06R-LNAPL-052016 (240-65173-1). The primary column has been reported and qualified in accordance with the laboratory's SOP. The IS failed on the front.

Method(s) 8082: The continuing calibration verification (CCV) recovery for the following samples was outside acceptance limits (low biased) on the confirmation column: RWW8-129-LNAPL-052016 (240-65173-9), MWW8-65-LNAPL-052016 (240-65173-11) and TW11-02-LNAPL-052016 (240-65173-12). The recovery is within acceptance limits on the primary column. An Aroclor pattern is present and quantitated in the sample on the confirmation column. Therefore the results are reported from the passing primary column.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL METALS IN WASTE (ICP)

Samples MWM2-29-LNAPL-052016 (240-65173-2), TWM2-07-LNAPL-052016 (240-65173-3), MWW10-01-LNAPL-052016 (240-65173-4),

Case Narrative

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Job ID: 240-65173-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

MWW10-08-LNAPL-052016 (240-65173-5), TW-01-01-LNAPL-052016 (240-65173-6), SB-46-14-LNAPL-052016 (240-65173-7) and SB-43-14-LNAPL-052016 (240-65173-8) were analyzed for total metals in waste (ICP) in accordance with EPA SW-846 Method 6010B. The samples were prepared on 06/01/2016 and analyzed on 06/02/2016 and 06/03/2016.

Chromium and Manganese were detected in method blank MB 240-232737/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY

Samples MWM2-29-LNAPL-052016 (240-65173-2), TWM2-07-LNAPL-052016 (240-65173-3), MWW10-01-LNAPL-052016 (240-65173-4), MWW10-08-LNAPL-052016 (240-65173-5), TW-01-01-LNAPL-052016 (240-65173-6), SB-46-14-LNAPL-052016 (240-65173-7), SB-43-14-LNAPL-052016 (240-65173-8), RWW8-129-LNAPL-052016 (240-65173-9), MWW8-65-LNAPL-052016 (240-65173-11) and TW11-02-LNAPL-052016 (240-65173-12) were analyzed for total mercury in accordance with EPA SW-846 Method 7471A. The samples were prepared on 05/25/2016 and 05/26/2016 and analyzed on 05/26/2016 and 05/27/2016.

Mercury was detected in method blank MB 240-232130/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Mercury failed the recovery criteria low for the MS/MSD of sample 240-65192-1 in batch 240-232039. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Method Summary

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CAN
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL CAN
8082	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL CAN
6010B	Metals (ICP)	SW846	TAL CAN
7471A	Mercury (CVAA)	SW846	TAL CAN

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Sample Summary

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-65173-1	MWM4-06R-LNAPL-052016	Waste	05/20/16 08:30	05/21/16 09:40
240-65173-2	MWM2-29-LNAPL-052016	Waste	05/20/16 09:00	05/21/16 09:40
240-65173-3	TWM2-07-LNAPL-052016	Waste	05/20/16 09:30	05/21/16 09:40
240-65173-4	MWW10-01-LNAPL-052016	Waste	05/20/16 10:05	05/21/16 09:40
240-65173-5	MWW10-08-LNAPL-052016	Waste	05/20/16 10:25	05/21/16 09:40
240-65173-6	TW-01-01-LNAPL-052016	Waste	05/20/16 10:50	05/21/16 09:40
240-65173-7	SB-46-14-LNAPL-052016	Waste	05/20/16 11:05	05/21/16 09:40
240-65173-8	SB-43-14-LNAPL-052016	Waste	05/20/16 11:10	05/21/16 09:40
240-65173-9	RWW8-129-LNAPL-052016	Waste	05/20/16 11:35	05/21/16 09:40
240-65173-10	TW-09-01-LNAPL-052016	Waste	05/20/16 12:20	05/21/16 09:40
240-65173-11	MWW8-65-LNAPL-052016	Waste	05/20/16 12:45	05/21/16 09:40
240-65173-12	TW11-02-LNAPL-052016	Waste	05/20/16 13:15	05/21/16 09:40

TestAmerica Canton

Detection Summary

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Client Sample ID: MWM4-06R-LNAPL-052016

Lab Sample ID: 240-65173-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	70000		4800	2800	ug/Kg	10		8082	Total/NA
Aroclor-1254	11000		4800	1200	ug/Kg	10		8082	Total/NA

Client Sample ID: MWM2-29-LNAPL-052016

Lab Sample ID: 240-65173-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	220	J	4500	190	ug/Kg	1		8260B	Total/NA
Benzene	340	J	1100	14	ug/Kg	1		8260B	Total/NA
Chloroethane	480	J	2300	69	ug/Kg	1		8260B	Total/NA
1,2-Dichlorobenzene	1900		1100	9.8	ug/Kg	1		8260B	Total/NA
1,4-Dichlorobenzene	250	J	1100	9.1	ug/Kg	1		8260B	Total/NA
1,1-Dichloroethane	23000		1100	19	ug/Kg	1		8260B	Total/NA
Ethylbenzene	5000		1100	6.1	ug/Kg	1		8260B	Total/NA
Isopropylbenzene	3800		1100	7.4	ug/Kg	1		8260B	Total/NA
Methylcyclohexane	3600		1100	14	ug/Kg	1		8260B	Total/NA
Tetrachloroethene	2900		1100	14	ug/Kg	1		8260B	Total/NA
Toluene	8600		1100	19	ug/Kg	1		8260B	Total/NA
1,2,4-Trichlorobenzene	740	J	1100	8.3	ug/Kg	1		8260B	Total/NA
Trichloroethene	530	J	1100	11	ug/Kg	1		8260B	Total/NA
1,1,2-Trichloro-1,2,2-trifluoroethane	17000		2300	44	ug/Kg	1		8260B	Total/NA
Vinyl chloride	320	J	2300	20	ug/Kg	1		8260B	Total/NA
Xylenes, Total	21000		2300	7.0	ug/Kg	1		8260B	Total/NA
Anthracene	110000	J	490000	3400	ug/Kg	25		8270C	Total/NA
Benzo[a]anthracene	23000	J	490000	2100	ug/Kg	25		8270C	Total/NA
1,1'-Biphenyl	24000	J	490000	11000	ug/Kg	25		8270C	Total/NA
Bis(2-ethylhexyl) phthalate	65000	J	490000	24000	ug/Kg	25		8270C	Total/NA
Chrysene	26000	J	490000	1500	ug/Kg	25		8270C	Total/NA
Fluoranthene	140000	J	490000	1400	ug/Kg	25		8270C	Total/NA
Fluorene	280000	J	490000	1900	ug/Kg	25		8270C	Total/NA
2-Methylnaphthalene	260000	J	490000	1500	ug/Kg	25		8270C	Total/NA
Naphthalene	86000	J	490000	1300	ug/Kg	25		8270C	Total/NA
Phenanthrene	760000		490000	1600	ug/Kg	25		8270C	Total/NA
Pyrene	230000	J	490000	1500	ug/Kg	25		8270C	Total/NA
Aroclor-1242	1800000		99000	57000	ug/Kg	200		8082	Total/NA
Arsenic	9.4		0.87	0.36	mg/Kg	1		6010B	Total/NA
Barium	10	J	17	0.36	mg/Kg	1		6010B	Total/NA
Cadmium	0.12	J	0.17	0.018	mg/Kg	1		6010B	Total/NA
Chromium	4.2	B	0.43	0.065	mg/Kg	1		6010B	Total/NA
Cobalt	0.043	J	4.3	0.041	mg/Kg	1		6010B	Total/NA
Copper	14		2.2	0.20	mg/Kg	1		6010B	Total/NA
Lead	6.6		0.26	0.17	mg/Kg	1		6010B	Total/NA
Manganese	0.85	J B	1.3	0.073	mg/Kg	1		6010B	Total/NA
Nickel	10		3.5	0.070	mg/Kg	1		6010B	Total/NA
Selenium	0.35	J	0.43	0.30	mg/Kg	1		6010B	Total/NA
Vanadium	0.30	J	4.3	0.17	mg/Kg	1		6010B	Total/NA
Zinc	2.8		1.7	0.49	mg/Kg	1		6010B	Total/NA

Client Sample ID: TWM2-07-LNAPL-052016

Lab Sample ID: 240-65173-3

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Client Sample ID: TWM2-07-LNAPL-052016 (Continued)

Lab Sample ID: 240-65173-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	620	J	1100	13	ug/Kg	1		8260B	Total/NA
Di-n-butyl phthalate	170000	J	460000	6900	ug/Kg	25		8270C	Total/NA
Phenanthrene	52000	J	460000	1500	ug/Kg	25		8270C	Total/NA
Aroclor-1248	3100		490	200	ug/Kg	1		8082	Total/NA
Arsenic	0.47	J	0.96	0.39	mg/Kg	1		6010B	Total/NA
Barium	4.7	J	19	0.39	mg/Kg	1		6010B	Total/NA
Beryllium	0.027	J	0.48	0.025	mg/Kg	1		6010B	Total/NA
Cadmium	0.080	J	0.19	0.020	mg/Kg	1		6010B	Total/NA
Chromium	5.5	B	0.48	0.072	mg/Kg	1		6010B	Total/NA
Cobalt	0.059	J	4.8	0.045	mg/Kg	1		6010B	Total/NA
Copper	3.5		2.4	0.22	mg/Kg	1		6010B	Total/NA
Lead	0.80		0.29	0.19	mg/Kg	1		6010B	Total/NA
Manganese	9.0	B	1.4	0.081	mg/Kg	1		6010B	Total/NA
Nickel	1.4	J	3.8	0.077	mg/Kg	1		6010B	Total/NA
Selenium	0.67		0.48	0.33	mg/Kg	1		6010B	Total/NA
Vanadium	19		4.8	0.19	mg/Kg	1		6010B	Total/NA
Zinc	1.1	J	1.9	0.54	mg/Kg	1		6010B	Total/NA

Client Sample ID: MWW10-01-LNAPL-052016

Lab Sample ID: 240-65173-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	410	J F1	4600	49	ug/Kg	1		8260B	Total/NA
Cyclohexane	130	J F1 F2 *	2300	46	ug/Kg	1		8260B	Total/NA
Ethylbenzene	2700	F1	1100	6.2	ug/Kg	1		8260B	Total/NA
Isopropylbenzene	3300	F1	1100	7.5	ug/Kg	1		8260B	Total/NA
Methylcyclohexane	2700	F1	1100	14	ug/Kg	1		8260B	Total/NA
Toluene	890	J F1	1100	20	ug/Kg	1		8260B	Total/NA
Xylenes, Total	15000		2300	7.1	ug/Kg	1		8260B	Total/NA
Anthracene	78000	J	980000	6800	ug/Kg	50		8270C	Total/NA
Fluoranthene	220000	J	980000	2700	ug/Kg	50		8270C	Total/NA
Fluorene	280000	J	980000	3800	ug/Kg	50		8270C	Total/NA
2-Methylnaphthalene	380000	J	980000	2900	ug/Kg	50		8270C	Total/NA
Naphthalene	36000	J	980000	2600	ug/Kg	50		8270C	Total/NA
Phenanthrene	960000	J	980000	3200	ug/Kg	50		8270C	Total/NA
Pyrene	270000	J	980000	2900	ug/Kg	50		8270C	Total/NA
Aroclor-1248	130000		9400	3800	ug/Kg	20		8082	Total/NA
Arsenic	8.5		0.99	0.41	mg/Kg	1		6010B	Total/NA
Barium	2.2	J	20	0.41	mg/Kg	1		6010B	Total/NA
Cadmium	0.024	J	0.20	0.021	mg/Kg	1		6010B	Total/NA
Chromium	3.7	B	0.50	0.074	mg/Kg	1		6010B	Total/NA
Copper	1.2	J	2.5	0.23	mg/Kg	1		6010B	Total/NA
Lead	0.54		0.30	0.20	mg/Kg	1		6010B	Total/NA
Manganese	0.22	J B	1.5	0.083	mg/Kg	1		6010B	Total/NA
Nickel	1.7	J	4.0	0.079	mg/Kg	1		6010B	Total/NA
Vanadium	3.2	J	5.0	0.20	mg/Kg	1		6010B	Total/NA

Client Sample ID: MWW10-08-LNAPL-052016

Lab Sample ID: 240-65173-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	450	J	4500	48	ug/Kg	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Client Sample ID: MWW10-08-LNAPL-052016 (Continued)

Lab Sample ID: 240-65173-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Ethylbenzene	250	J	1100	6.1	ug/Kg	1			8260B	Total/NA
Isopropylbenzene	660	J	1100	7.3	ug/Kg	1			8260B	Total/NA
Methylcyclohexane	950	J	1100	13	ug/Kg	1			8260B	Total/NA
Toluene	140	J	1100	19	ug/Kg	1			8260B	Total/NA
Xylenes, Total	2300		2200	7.0	ug/Kg	1			8260B	Total/NA
Fluoranthene	100000	J	990000	2800	ug/Kg	50			8270C	Total/NA
Fluorene	170000	J	990000	3900	ug/Kg	50			8270C	Total/NA
Phenanthrene	210000	J	990000	3300	ug/Kg	50			8270C	Total/NA
Pyrene	130000	J	990000	3000	ug/Kg	50			8270C	Total/NA
Aroclor-1248	86000		9700	3900	ug/Kg	20			8082	Total/NA
Arsenic	13		0.98	0.40	mg/Kg	1			6010B	Total/NA
Barium	6.2	J	20	0.40	mg/Kg	1			6010B	Total/NA
Chromium	4.6	B	0.49	0.074	mg/Kg	1			6010B	Total/NA
Cobalt	0.068	J	4.9	0.046	mg/Kg	1			6010B	Total/NA
Copper	0.49	J	2.5	0.23	mg/Kg	1			6010B	Total/NA
Lead	0.64		0.29	0.20	mg/Kg	1			6010B	Total/NA
Manganese	1.2	J B	1.5	0.082	mg/Kg	1			6010B	Total/NA
Nickel	0.70	J	3.9	0.078	mg/Kg	1			6010B	Total/NA
Selenium	0.42	J	0.49	0.33	mg/Kg	1			6010B	Total/NA
Vanadium	2.7	J	4.9	0.20	mg/Kg	1			6010B	Total/NA

Client Sample ID: TW-01-01-LNAPL-052016

Lab Sample ID: 240-65173-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Benzene	260	J	1100	14	ug/Kg	1			8260B	Total/NA
Cyclohexane	2100	J *	2300	45	ug/Kg	1			8260B	Total/NA
Ethylbenzene	210	J	1100	6.1	ug/Kg	1			8260B	Total/NA
Isopropylbenzene	7700		1100	7.4	ug/Kg	1			8260B	Total/NA
Methylcyclohexane	22000		1100	14	ug/Kg	1			8260B	Total/NA
Xylenes, Total	750	J	2300	7.0	ug/Kg	1			8260B	Total/NA
Fluoranthene	93000	J	490000	1400	ug/Kg	25			8270C	Total/NA
Fluorene	110000	J	490000	1900	ug/Kg	25			8270C	Total/NA
2-Methylnaphthalene	190000	J	490000	1400	ug/Kg	25			8270C	Total/NA
Phenanthrene	330000	J	490000	1600	ug/Kg	25			8270C	Total/NA
Pyrene	110000	J	490000	1500	ug/Kg	25			8270C	Total/NA
Aroclor-1248	220000		25000	9800	ug/Kg	50			8082	Total/NA
Arsenic	9.3		0.91	0.37	mg/Kg	1			6010B	Total/NA
Barium	12	J	18	0.37	mg/Kg	1			6010B	Total/NA
Chromium	10	B	0.45	0.068	mg/Kg	1			6010B	Total/NA
Cobalt	0.093	J	4.5	0.043	mg/Kg	1			6010B	Total/NA
Copper	3.3		2.3	0.21	mg/Kg	1			6010B	Total/NA
Lead	0.96		0.27	0.18	mg/Kg	1			6010B	Total/NA
Manganese	1.6	B	1.4	0.076	mg/Kg	1			6010B	Total/NA
Nickel	4.4		3.6	0.073	mg/Kg	1			6010B	Total/NA
Selenium	0.57		0.45	0.31	mg/Kg	1			6010B	Total/NA
Vanadium	7.3		4.5	0.18	mg/Kg	1			6010B	Total/NA

Client Sample ID: SB-46-14-LNAPL-052016

Lab Sample ID: 240-65173-7

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Client Sample ID: SB-46-14-LNAPL-052016 (Continued)

Lab Sample ID: 240-65173-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	890	J	5600	67	ug/Kg	5		8260B	Total/NA
Cyclohexane	9500	J *	11000	220	ug/Kg	5		8260B	Total/NA
Ethylbenzene	30000		5600	30	ug/Kg	5		8260B	Total/NA
Isopropylbenzene	16000		5600	36	ug/Kg	5		8260B	Total/NA
Methylcyclohexane	31000		5600	67	ug/Kg	5		8260B	Total/NA
Toluene	1300	J	5600	94	ug/Kg	5		8260B	Total/NA
Xylenes, Total	230000		11000	34	ug/Kg	5		8260B	Total/NA
Acenaphthene	66000	J	440000	1200	ug/Kg	25		8270C	Total/NA
Acenaphthylene	26000	J	440000	1900	ug/Kg	25		8270C	Total/NA
Benzo[a]anthracene	30000	J	440000	1900	ug/Kg	25		8270C	Total/NA
Benzo[b]fluoranthene	22000	J	440000	3100	ug/Kg	25		8270C	Total/NA
1,1'-Biphenyl	98000	J	440000	9600	ug/Kg	25		8270C	Total/NA
Bis(2-ethylhexyl) phthalate	440000		440000	21000	ug/Kg	25		8270C	Total/NA
Chrysene	50000	J	440000	1300	ug/Kg	25		8270C	Total/NA
Dibenzofuran	44000	J	440000	1100	ug/Kg	25		8270C	Total/NA
Fluoranthene	93000	J	440000	1200	ug/Kg	25		8270C	Total/NA
Fluorene	130000	J	440000	1700	ug/Kg	25		8270C	Total/NA
2-Methylnaphthalene	1700000		440000	1300	ug/Kg	25		8270C	Total/NA
Naphthalene	270000	J	440000	1200	ug/Kg	25		8270C	Total/NA
Phenanthrene	290000	J	440000	1500	ug/Kg	25		8270C	Total/NA
Pyrene	130000	J	440000	1300	ug/Kg	25		8270C	Total/NA
Aroclor-1248	1500000		89000	36000	ug/Kg	200		8082	Total/NA
Arsenic	3.4		0.98	0.40	mg/Kg	1		6010B	Total/NA
Barium	12	J	20	0.40	mg/Kg	1		6010B	Total/NA
Cadmium	0.028	J	0.20	0.021	mg/Kg	1		6010B	Total/NA
Chromium	8.3	B	0.49	0.074	mg/Kg	1		6010B	Total/NA
Copper	1.5	J	2.5	0.23	mg/Kg	1		6010B	Total/NA
Lead	1.7		0.29	0.20	mg/Kg	1		6010B	Total/NA
Manganese	2.2	B	1.5	0.082	mg/Kg	1		6010B	Total/NA
Nickel	2.0	J	3.9	0.078	mg/Kg	1		6010B	Total/NA
Vanadium	2.2	J	4.9	0.20	mg/Kg	1		6010B	Total/NA

Client Sample ID: SB-43-14-LNAPL-052016

Lab Sample ID: 240-65173-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1100		1100	14	ug/Kg	1		8260B	Total/NA
Cyclohexane	4600	*	2300	46	ug/Kg	1		8260B	Total/NA
1,1-Dichloroethane	250	J	1100	20	ug/Kg	1		8260B	Total/NA
Ethylbenzene	37000		1100	6.2	ug/Kg	1		8260B	Total/NA
Isopropylbenzene	9200		1100	7.5	ug/Kg	1		8260B	Total/NA
Methylcyclohexane	50000		1100	14	ug/Kg	1		8260B	Total/NA
Toluene	4700		1100	20	ug/Kg	1		8260B	Total/NA
Xylenes, Total	48000		2300	7.1	ug/Kg	1		8260B	Total/NA
Acenaphthene	71000	J	500000	1400	ug/Kg	25		8270C	Total/NA
Acenaphthylene	17000	J	500000	2100	ug/Kg	25		8270C	Total/NA
Anthracene	36000	J	500000	3400	ug/Kg	25		8270C	Total/NA
Benzo[a]anthracene	42000	J	500000	2100	ug/Kg	25		8270C	Total/NA
Benzo[a]pyrene	36000	J	500000	3400	ug/Kg	25		8270C	Total/NA
Benzo[b]fluoranthene	49000	J	500000	3400	ug/Kg	25		8270C	Total/NA
Benzo[g,h,i]perylene	32000	J	500000	2700	ug/Kg	25		8270C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Client Sample ID: SB-43-14-LNAPL-052016 (Continued)

Lab Sample ID: 240-65173-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1'-Biphenyl	83000	J F1	500000	11000	ug/Kg	25		8270C	Total/NA
Bis(2-ethylhexyl) phthalate	110000	J	500000	24000	ug/Kg	25		8270C	Total/NA
Chrysene	72000	J	500000	1500	ug/Kg	25		8270C	Total/NA
Fluoranthene	150000	J	500000	1400	ug/Kg	25		8270C	Total/NA
Fluorene	130000	J F1	500000	1900	ug/Kg	25		8270C	Total/NA
2-Methylnaphthalene	1000000		500000	1500	ug/Kg	25		8270C	Total/NA
Naphthalene	220000	J	500000	1300	ug/Kg	25		8270C	Total/NA
Phenanthrene	270000	J	500000	1600	ug/Kg	25		8270C	Total/NA
Pyrene	200000	J	500000	1500	ug/Kg	25		8270C	Total/NA
Aroclor-1248	1000000		49000	20000	ug/Kg	100		8082	Total/NA
Arsenic	0.48	J	0.88	0.36	mg/Kg	1		6010B	Total/NA
Barium	18		18	0.36	mg/Kg	1		6010B	Total/NA
Cadmium	0.037	J	0.18	0.018	mg/Kg	1		6010B	Total/NA
Chromium	7.0	B	0.44	0.066	mg/Kg	1		6010B	Total/NA
Cobalt	0.047	J	4.4	0.041	mg/Kg	1		6010B	Total/NA
Copper	48		2.2	0.20	mg/Kg	1		6010B	Total/NA
Lead	8.0		0.26	0.18	mg/Kg	1		6010B	Total/NA
Manganese	3.3	B	1.3	0.074	mg/Kg	1		6010B	Total/NA
Nickel	2.9	J	3.5	0.070	mg/Kg	1		6010B	Total/NA
Vanadium	3.2	J	4.4	0.18	mg/Kg	1		6010B	Total/NA
Zinc	2.4		1.8	0.49	mg/Kg	1		6010B	Total/NA
Mercury	0.031	J	0.12	0.016	mg/Kg	1		7471A	Total/NA

Client Sample ID: RWW8-129-LNAPL-052016

Lab Sample ID: 240-65173-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	9900		1200	8.2	ug/Kg	1		8260B	Total/NA
Ethylbenzene	240	J	1200	6.4	ug/Kg	1		8260B	Total/NA
Methylcyclohexane	1200		1200	14	ug/Kg	1		8260B	Total/NA
trans-1,2-Dichloroethene	14000		1200	11	ug/Kg	1		8260B	Total/NA
Trichloroethene	49000		1200	12	ug/Kg	1		8260B	Total/NA
Vinyl chloride	1800	J	2400	21	ug/Kg	1		8260B	Total/NA
Xylenes, Total	1200	J	2400	7.4	ug/Kg	1		8260B	Total/NA
Aroclor-1242	13000		980	570	ug/Kg	2		8082	Total/NA
Aroclor-1260	5100		980	250	ug/Kg	2		8082	Total/NA
Mercury	0.026	J B	0.11	0.016	mg/Kg	1		7471A	Total/NA

Client Sample ID: TW-09-01-LNAPL-052016

Lab Sample ID: 240-65173-10

No Detections.

Client Sample ID: MWW8-65-LNAPL-052016

Lab Sample ID: 240-65173-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Ethylbenzene	970	J	1200	6.4	ug/Kg	1		8260B	Total/NA
Isopropylbenzene	1700		1200	7.6	ug/Kg	1		8260B	Total/NA
Methylcyclohexane	1800		1200	14	ug/Kg	1		8260B	Total/NA
Toluene	160	J	1200	20	ug/Kg	1		8260B	Total/NA
Xylenes, Total	6900		2400	7.3	ug/Kg	1		8260B	Total/NA
Aroclor-1248	1600		490	200	ug/Kg	1		8082	Total/NA
Aroclor-1260	940		490	130	ug/Kg	1		8082	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Client Sample ID: MWW8-65-LNAPL-052016 (Continued)

Lab Sample ID: 240-65173-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	0.024	J B	0.11	0.016	mg/Kg	1		7471A	Total/NA

Client Sample ID: TW11-02-LNAPL-052016

Lab Sample ID: 240-65173-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	440	J	4600	49	ug/Kg	1		8260B	Total/NA
Ethylbenzene	2700		1100	6.2	ug/Kg	1		8260B	Total/NA
Isopropylbenzene	3000		1100	7.5	ug/Kg	1		8260B	Total/NA
Methylcyclohexane	1500		1100	14	ug/Kg	1		8260B	Total/NA
Toluene	510	J	1100	20	ug/Kg	1		8260B	Total/NA
Xylenes, Total	12000		2300	7.1	ug/Kg	1		8260B	Total/NA
Aroclor-1248	1400		500	200	ug/Kg	1		8082	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Client Sample ID: MWM4-06R-LNAPL-052016

Lab Sample ID: 240-65173-1

Date Collected: 05/20/16 08:30

Matrix: Waste

Date Received: 05/21/16 09:40

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	4800	U	4800	1800	ug/Kg		05/25/16 13:34	05/26/16 16:41	10
Aroclor-1221	4800	U	4800	2100	ug/Kg		05/25/16 13:34	05/26/16 16:41	10
Aroclor-1232	4800	U	4800	1600	ug/Kg		05/25/16 13:34	05/26/16 16:41	10
Aroclor-1242	70000		4800	2800	ug/Kg		05/25/16 13:34	05/26/16 16:41	10
Aroclor-1248	4800	U	4800	1900	ug/Kg		05/25/16 13:34	05/26/16 16:41	10
Aroclor-1254	11000		4800	1200	ug/Kg		05/25/16 13:34	05/26/16 16:41	10
Aroclor-1260	4800	U	4800	1300	ug/Kg		05/25/16 13:34	05/26/16 16:41	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	0	X	10 - 191				05/25/16 13:34	05/26/16 16:41	10
Tetrachloro-m-xylene	128		23 - 160				05/25/16 13:34	05/26/16 16:41	10

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Client Sample ID: MWM2-29-LNAPL-052016

Lab Sample ID: 240-65173-2

Date Collected: 05/20/16 09:00

Matrix: Waste

Date Received: 05/21/16 09:40

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	220	J	4500	190	ug/Kg		05/26/16 10:38	05/26/16 18:11	1
Benzene	340	J	1100	14	ug/Kg		05/26/16 10:38	05/26/16 18:11	1
Bromodichloromethane	1100	U	1100	11	ug/Kg		05/26/16 10:38	05/26/16 18:11	1
Bromoform	1100	U	1100	22	ug/Kg		05/26/16 10:38	05/26/16 18:11	1
Bromomethane	2300	U	2300	33	ug/Kg		05/26/16 10:38	05/26/16 18:11	1
2-Butanone (MEK)	4500	U	4500	49	ug/Kg		05/26/16 10:38	05/26/16 18:11	1
Carbon disulfide	1100	U	1100	14	ug/Kg		05/26/16 10:38	05/26/16 18:11	1
Carbon tetrachloride	1100	U	1100	7.3	ug/Kg		05/26/16 10:38	05/26/16 18:11	1
Chlorobenzene	1100	U	1100	7.3	ug/Kg		05/26/16 10:38	05/26/16 18:11	1
Chloroethane	480	J	2300	69	ug/Kg		05/26/16 10:38	05/26/16 18:11	1
Chloroform	1100	U	1100	10	ug/Kg		05/26/16 10:38	05/26/16 18:11	1
Chloromethane	2300	U	2300	16	ug/Kg		05/26/16 10:38	05/26/16 18:11	1
cis-1,2-Dichloroethene	1100	U	1100	7.8	ug/Kg		05/26/16 10:38	05/26/16 18:11	1
cis-1,3-Dichloropropene	1100	U	1100	9.0	ug/Kg		05/26/16 10:38	05/26/16 18:11	1
Cyclohexane	2300	U *	2300	45	ug/Kg		05/26/16 10:38	05/26/16 18:11	1
Dibromochloromethane	1100	U	1100	14	ug/Kg		05/26/16 10:38	05/26/16 18:11	1
1,2-Dibromo-3-Chloropropane	1100	U	1100	57	ug/Kg		05/26/16 10:38	05/26/16 18:11	1
1,2-Dibromoethane	1100	U	1100	11	ug/Kg		05/26/16 10:38	05/26/16 18:11	1
1,2-Dichlorobenzene	1900		1100	9.8	ug/Kg		05/26/16 10:38	05/26/16 18:11	1
1,3-Dichlorobenzene	1100	U	1100	5.5	ug/Kg		05/26/16 10:38	05/26/16 18:11	1
1,4-Dichlorobenzene	250	J	1100	9.1	ug/Kg		05/26/16 10:38	05/26/16 18:11	1
Dichlorodifluoromethane	2300	U	2300	18	ug/Kg		05/26/16 10:38	05/26/16 18:11	1
1,1-Dichloroethane	23000		1100	19	ug/Kg		05/26/16 10:38	05/26/16 18:11	1
1,2-Dichloroethane	1100	U	1100	11	ug/Kg		05/26/16 10:38	05/26/16 18:11	1
1,1-Dichloroethene	1100	U	1100	20	ug/Kg		05/26/16 10:38	05/26/16 18:11	1
1,2-Dichloropropane	1100	U	1100	9.3	ug/Kg		05/26/16 10:38	05/26/16 18:11	1
Ethylbenzene	5000		1100	6.1	ug/Kg		05/26/16 10:38	05/26/16 18:11	1
2-Hexanone	4500	U	4500	23	ug/Kg		05/26/16 10:38	05/26/16 18:11	1
Isopropylbenzene	3800		1100	7.4	ug/Kg		05/26/16 10:38	05/26/16 18:11	1
Methyl acetate	2300	U	2300	28	ug/Kg		05/26/16 10:38	05/26/16 18:11	1
Methylcyclohexane	3600		1100	14	ug/Kg		05/26/16 10:38	05/26/16 18:11	1
Methylene Chloride	1100	U	1100	88	ug/Kg		05/26/16 10:38	05/26/16 18:11	1
4-Methyl-2-pentanone (MIBK)	4500	U	4500	55	ug/Kg		05/26/16 10:38	05/26/16 18:11	1
Methyl tert-butyl ether	4500	U	4500	8.1	ug/Kg		05/26/16 10:38	05/26/16 18:11	1
Styrene	1100	U	1100	6.4	ug/Kg		05/26/16 10:38	05/26/16 18:11	1
1,1,2,2-Tetrachloroethane	1100	U	1100	10	ug/Kg		05/26/16 10:38	05/26/16 18:11	1
Tetrachloroethene	2900		1100	14	ug/Kg		05/26/16 10:38	05/26/16 18:11	1
Toluene	8600		1100	19	ug/Kg		05/26/16 10:38	05/26/16 18:11	1
trans-1,2-Dichloroethene	1100	U	1100	10	ug/Kg		05/26/16 10:38	05/26/16 18:11	1
trans-1,3-Dichloropropene	1100	U	1100	23	ug/Kg		05/26/16 10:38	05/26/16 18:11	1
1,2,4-Trichlorobenzene	740	J	1100	8.3	ug/Kg		05/26/16 10:38	05/26/16 18:11	1
1,1,1-Trichloroethane	1100	U	1100	24	ug/Kg		05/26/16 10:38	05/26/16 18:11	1
1,1,2-Trichloroethane	1100	U	1100	14	ug/Kg		05/26/16 10:38	05/26/16 18:11	1
Trichloroethene	530	J	1100	11	ug/Kg		05/26/16 10:38	05/26/16 18:11	1
Trichlorofluoromethane	2300	U	2300	18	ug/Kg		05/26/16 10:38	05/26/16 18:11	1
1,1,2-Trichloro-1,2,2-trifluoroethane	17000		2300	44	ug/Kg		05/26/16 10:38	05/26/16 18:11	1
Vinyl chloride	320	J	2300	20	ug/Kg		05/26/16 10:38	05/26/16 18:11	1
Xylenes, Total	21000		2300	7.0	ug/Kg		05/26/16 10:38	05/26/16 18:11	1

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Client Sample ID: MWM2-29-LNAPL-052016

Lab Sample ID: 240-65173-2

Date Collected: 05/20/16 09:00

Matrix: Waste

Date Received: 05/21/16 09:40

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		26 - 141	05/26/16 10:38	05/26/16 18:11	1
Dibromofluoromethane (Surr)	84		30 - 122	05/26/16 10:38	05/26/16 18:11	1
1,2-Dichloroethane-d4 (Surr)	79		39 - 128	05/26/16 10:38	05/26/16 18:11	1
Toluene-d8 (Surr)	81		33 - 134	05/26/16 10:38	05/26/16 18:11	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	490000	U	490000	1400	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
Acenaphthylene	490000	U	490000	2100	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
Acetophenone	490000	U	490000	8100	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
Anthracene	110000	J	490000	3400	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
Atrazine	490000	U	490000	16000	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
Benzaldehyde	490000	U	490000	10000	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
Benzo[a]anthracene	23000	J	490000	2100	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
Benzo[a]pyrene	490000	U	490000	3400	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
Benzo[b]fluoranthene	490000	U	490000	3400	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
Benzo[g,h,i]perylene	490000	U	490000	2600	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
Benzo[k]fluoranthene	490000	U	490000	3400	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
1,1'-Biphenyl	24000	J	490000	11000	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
Bis(2-chloroethoxy)methane	490000	U	490000	24000	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
Bis(2-chloroethyl)ether	490000	U	490000	6000	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
Bis(2-ethylhexyl) phthalate	65000	J	490000	24000	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
4-Bromophenyl phenyl ether	490000	U	490000	6900	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
Butyl benzyl phthalate	490000	U	490000	5400	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
Caprolactam	490000	U	490000	11000	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
Carbazole	490000	U	490000	14000	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
4-Chloroaniline	490000	U	490000	7600	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
4-Chloro-3-methylphenol	490000	U	490000	75000	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
2-Chloronaphthalene	490000	U	490000	9300	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
2-Chlorophenol	490000	U	490000	5300	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
4-Chlorophenyl phenyl ether	490000	U	490000	5300	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
Chrysene	26000	J	490000	1500	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
Dibenz(a,h)anthracene	490000	U	490000	2200	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
Dibenzofuran	490000	U	490000	1200	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
3,3'-Dichlorobenzidine	2400000	U	2400000	7200	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
2,4-Dichlorophenol	490000	U	490000	7800	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
Diethyl phthalate	490000	U	490000	9100	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
2,4-Dimethylphenol	490000	U	490000	10000	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
Dimethyl phthalate	490000	U	490000	9400	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
Di-n-butyl phthalate	490000	U	490000	7400	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
4,6-Dinitro-2-methylphenol	2400000	U	2400000	69000	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
2,4-Dinitrophenol	2400000	U	2400000	60000	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
2,4-Dinitrotoluene	490000	U	490000	8400	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
2,6-Dinitrotoluene	490000	U	490000	8500	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
Di-n-octyl phthalate	490000	U	490000	16000	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
Fluoranthene	140000	J	490000	1400	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
Fluorene	280000	J	490000	1900	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
Hexachlorobenzene	490000	U *	490000	2100	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
Hexachlorobutadiene	490000	U	490000	3700	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
Hexachlorocyclopentadiene	2400000	U	2400000	4300	ug/Kg		05/25/16 14:07	05/26/16 18:28	25

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Client Sample ID: MWM2-29-LNAPL-052016

Lab Sample ID: 240-65173-2

Date Collected: 05/20/16 09:00

Matrix: Waste

Date Received: 05/21/16 09:40

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachloroethane	490000	U	490000	7200	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
Indeno[1,2,3-cd]pyrene	490000	U	490000	2900	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
Isophorone	490000	U	490000	5100	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
2-Methylnaphthalene	260000	J	490000	1500	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
2-Methylphenol	490000	U	490000	9900	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
3 & 4 Methylphenol	980000	U	980000	29000	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
Naphthalene	86000	J	490000	1300	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
2-Nitroaniline	2400000	U	2400000	7500	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
3-Nitroaniline	2400000	U	2400000	4700	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
4-Nitroaniline	2400000	U	2400000	5300	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
Nitrobenzene	490000	U	490000	9400	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
2-Nitrophenol	490000	U	490000	5000	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
4-Nitrophenol	2400000	U	2400000	120000	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
N-Nitrosodi-n-propylamine	490000	U	490000	11000	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
N-Nitrosodiphenylamine	490000	U	490000	6000	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
2,2'-oxybis[1-chloropropane]	490000	U	490000	7600	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
Pentachlorophenol	490000	U	490000	66000	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
Phenanthrene	760000		490000	1600	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
Phenol	490000	U	490000	8400	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
Pyrene	230000	J	490000	1500	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
2,4,5-Trichlorophenol	490000	U	490000	7200	ug/Kg		05/25/16 14:07	05/26/16 18:28	25
2,4,6-Trichlorophenol	490000	U	490000	10000	ug/Kg		05/25/16 14:07	05/26/16 18:28	25

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	104		57 - 134	05/25/16 14:07	05/26/16 18:28	25
2-Fluorophenol (Surr)	83		64 - 125	05/25/16 14:07	05/26/16 18:28	25
Nitrobenzene-d5 (Surr)	102		63 - 129	05/25/16 14:07	05/26/16 18:28	25
Phenol-d5 (Surr)	71		44 - 140	05/25/16 14:07	05/26/16 18:28	25
Terphenyl-d14 (Surr)	113		51 - 138	05/25/16 14:07	05/26/16 18:28	25
2,4,6-Tribromophenol (Surr)	108		31 - 148	05/25/16 14:07	05/26/16 18:28	25

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	99000	U	99000	38000	ug/Kg		05/25/16 13:34	05/26/16 16:59	200
Aroclor-1221	99000	U	99000	44000	ug/Kg		05/25/16 13:34	05/26/16 16:59	200
Aroclor-1232	99000	U	99000	34000	ug/Kg		05/25/16 13:34	05/26/16 16:59	200
Aroclor-1242	1800000		99000	57000	ug/Kg		05/25/16 13:34	05/26/16 16:59	200
Aroclor-1248	99000	U	99000	40000	ug/Kg		05/25/16 13:34	05/26/16 16:59	200
Aroclor-1254	99000	U	99000	24000	ug/Kg		05/25/16 13:34	05/26/16 16:59	200
Aroclor-1260	99000	U	99000	26000	ug/Kg		05/25/16 13:34	05/26/16 16:59	200

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	478	X	10 - 191	05/25/16 13:34	05/26/16 16:59	200
Tetrachloro-m-xylene	292	X	23 - 160	05/25/16 13:34	05/26/16 16:59	200

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.87	U	0.87	0.42	mg/Kg		06/01/16 13:49	06/02/16 17:56	1
Arsenic	9.4		0.87	0.36	mg/Kg		06/01/16 13:49	06/02/16 17:56	1
Barium	10	J	17	0.36	mg/Kg		06/01/16 13:49	06/02/16 17:56	1

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Client Sample ID: MWM2-29-LNAPL-052016

Lab Sample ID: 240-65173-2

Date Collected: 05/20/16 09:00

Matrix: Waste

Date Received: 05/21/16 09:40

Method: 6010B - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	0.43	U	0.43	0.023	mg/Kg		06/01/16 13:49	06/02/16 17:56	1
Cadmium	0.12	J	0.17	0.018	mg/Kg		06/01/16 13:49	06/02/16 17:56	1
Chromium	4.2	B	0.43	0.065	mg/Kg		06/01/16 13:49	06/02/16 17:56	1
Cobalt	0.043	J	4.3	0.041	mg/Kg		06/01/16 13:49	06/02/16 17:56	1
Copper	14		2.2	0.20	mg/Kg		06/01/16 13:49	06/02/16 17:56	1
Lead	6.6		0.26	0.17	mg/Kg		06/01/16 13:49	06/02/16 17:56	1
Manganese	0.85	J B	1.3	0.073	mg/Kg		06/01/16 13:49	06/02/16 17:56	1
Nickel	10		3.5	0.070	mg/Kg		06/01/16 13:49	06/03/16 07:04	1
Selenium	0.35	J	0.43	0.30	mg/Kg		06/01/16 13:49	06/02/16 17:56	1
Silver	0.43	U	0.43	0.055	mg/Kg		06/01/16 13:49	06/02/16 17:56	1
Thallium	0.87	U	0.87	0.11	mg/Kg		06/01/16 13:49	06/02/16 17:56	1
Vanadium	0.30	J	4.3	0.17	mg/Kg		06/01/16 13:49	06/02/16 17:56	1
Zinc	2.8		1.7	0.49	mg/Kg		06/01/16 13:49	06/03/16 07:04	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.11	U	0.11	0.016	mg/Kg		05/25/16 15:00	05/26/16 08:17	1

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Client Sample ID: TWM2-07-LNAPL-052016

Lab Sample ID: 240-65173-3

Date Collected: 05/20/16 09:30

Matrix: Waste

Date Received: 05/21/16 09:40

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	4300	U	4300	180	ug/Kg		05/26/16 10:38	05/26/16 18:34	1
Benzene	1100	U	1100	13	ug/Kg		05/26/16 10:38	05/26/16 18:34	1
Bromodichloromethane	1100	U	1100	11	ug/Kg		05/26/16 10:38	05/26/16 18:34	1
Bromoform	1100	U	1100	20	ug/Kg		05/26/16 10:38	05/26/16 18:34	1
Bromomethane	2200	U	2200	31	ug/Kg		05/26/16 10:38	05/26/16 18:34	1
2-Butanone (MEK)	4300	U	4300	46	ug/Kg		05/26/16 10:38	05/26/16 18:34	1
Carbon disulfide	1100	U	1100	13	ug/Kg		05/26/16 10:38	05/26/16 18:34	1
Carbon tetrachloride	1100	U	1100	6.9	ug/Kg		05/26/16 10:38	05/26/16 18:34	1
Chlorobenzene	1100	U	1100	6.9	ug/Kg		05/26/16 10:38	05/26/16 18:34	1
Chloroethane	2200	U	2200	66	ug/Kg		05/26/16 10:38	05/26/16 18:34	1
Chloroform	1100	U	1100	9.5	ug/Kg		05/26/16 10:38	05/26/16 18:34	1
Chloromethane	2200	U	2200	15	ug/Kg		05/26/16 10:38	05/26/16 18:34	1
cis-1,2-Dichloroethene	1100	U	1100	7.4	ug/Kg		05/26/16 10:38	05/26/16 18:34	1
cis-1,3-Dichloropropene	1100	U	1100	8.5	ug/Kg		05/26/16 10:38	05/26/16 18:34	1
Cyclohexane	2200	U *	2200	43	ug/Kg		05/26/16 10:38	05/26/16 18:34	1
Dibromochloromethane	1100	U	1100	13	ug/Kg		05/26/16 10:38	05/26/16 18:34	1
1,2-Dibromo-3-Chloropropane	1100	U	1100	54	ug/Kg		05/26/16 10:38	05/26/16 18:34	1
1,2-Dibromoethane	1100	U	1100	11	ug/Kg		05/26/16 10:38	05/26/16 18:34	1
1,2-Dichlorobenzene	1100	U	1100	9.2	ug/Kg		05/26/16 10:38	05/26/16 18:34	1
1,3-Dichlorobenzene	1100	U	1100	5.2	ug/Kg		05/26/16 10:38	05/26/16 18:34	1
1,4-Dichlorobenzene	1100	U	1100	8.6	ug/Kg		05/26/16 10:38	05/26/16 18:34	1
Dichlorodifluoromethane	2200	U	2200	17	ug/Kg		05/26/16 10:38	05/26/16 18:34	1
1,1-Dichloroethane	1100	U	1100	18	ug/Kg		05/26/16 10:38	05/26/16 18:34	1
1,2-Dichloroethane	1100	U	1100	11	ug/Kg		05/26/16 10:38	05/26/16 18:34	1
1,1-Dichloroethene	1100	U	1100	19	ug/Kg		05/26/16 10:38	05/26/16 18:34	1
1,2-Dichloropropane	1100	U	1100	8.8	ug/Kg		05/26/16 10:38	05/26/16 18:34	1
Ethylbenzene	1100	U	1100	5.8	ug/Kg		05/26/16 10:38	05/26/16 18:34	1
2-Hexanone	4300	U	4300	22	ug/Kg		05/26/16 10:38	05/26/16 18:34	1
Isopropylbenzene	1100	U	1100	7.0	ug/Kg		05/26/16 10:38	05/26/16 18:34	1
Methyl acetate	2200	U	2200	27	ug/Kg		05/26/16 10:38	05/26/16 18:34	1
Methylcyclohexane	1100	U	1100	13	ug/Kg		05/26/16 10:38	05/26/16 18:34	1
Methylene Chloride	1100	U	1100	83	ug/Kg		05/26/16 10:38	05/26/16 18:34	1
4-Methyl-2-pentanone (MIBK)	4300	U	4300	52	ug/Kg		05/26/16 10:38	05/26/16 18:34	1
Methyl tert-butyl ether	4300	U	4300	7.6	ug/Kg		05/26/16 10:38	05/26/16 18:34	1
Styrene	1100	U	1100	6.0	ug/Kg		05/26/16 10:38	05/26/16 18:34	1
1,1,2,2-Tetrachloroethane	1100	U	1100	9.6	ug/Kg		05/26/16 10:38	05/26/16 18:34	1
Tetrachloroethene	620	J	1100	13	ug/Kg		05/26/16 10:38	05/26/16 18:34	1
Toluene	1100	U	1100	18	ug/Kg		05/26/16 10:38	05/26/16 18:34	1
trans-1,2-Dichloroethene	1100	U	1100	9.9	ug/Kg		05/26/16 10:38	05/26/16 18:34	1
trans-1,3-Dichloropropene	1100	U	1100	22	ug/Kg		05/26/16 10:38	05/26/16 18:34	1
1,2,4-Trichlorobenzene	1100	U	1100	7.8	ug/Kg		05/26/16 10:38	05/26/16 18:34	1
1,1,1-Trichloroethane	1100	U	1100	23	ug/Kg		05/26/16 10:38	05/26/16 18:34	1
1,1,2-Trichloroethane	1100	U	1100	13	ug/Kg		05/26/16 10:38	05/26/16 18:34	1
Trichloroethene	1100	U	1100	10	ug/Kg		05/26/16 10:38	05/26/16 18:34	1
Trichlorofluoromethane	2200	U	2200	17	ug/Kg		05/26/16 10:38	05/26/16 18:34	1
1,1,2-Trichloro-1,2,2-trifluoroethane	2200	U	2200	42	ug/Kg		05/26/16 10:38	05/26/16 18:34	1
Vinyl chloride	2200	U	2200	19	ug/Kg		05/26/16 10:38	05/26/16 18:34	1
Xylenes, Total	2200	U	2200	6.7	ug/Kg		05/26/16 10:38	05/26/16 18:34	1

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Client Sample ID: TWM2-07-LNAPL-052016

Lab Sample ID: 240-65173-3

Date Collected: 05/20/16 09:30

Matrix: Waste

Date Received: 05/21/16 09:40

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	83		26 - 141	05/26/16 10:38	05/26/16 18:34	1
Dibromofluoromethane (Surr)	83		30 - 122	05/26/16 10:38	05/26/16 18:34	1
1,2-Dichloroethane-d4 (Surr)	76		39 - 128	05/26/16 10:38	05/26/16 18:34	1
Toluene-d8 (Surr)	85		33 - 134	05/26/16 10:38	05/26/16 18:34	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	460000	U	460000	1300	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
Acenaphthylene	460000	U	460000	1900	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
Acetophenone	460000	U	460000	7600	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
Anthracene	460000	U	460000	3200	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
Atrazine	460000	U	460000	15000	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
Benzaldehyde	460000	U	460000	9600	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
Benzo[a]anthracene	460000	U	460000	1900	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
Benzo[a]pyrene	460000	U	460000	3200	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
Benzo[b]fluoranthene	460000	U	460000	3200	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
Benzo[g,h,i]perylene	460000	U	460000	2500	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
Benzo[k]fluoranthene	460000	U	460000	3200	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
1,1'-Biphenyl	460000	U	460000	10000	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
Bis(2-chloroethoxy)methane	460000	U	460000	22000	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
Bis(2-chloroethyl)ether	460000	U	460000	5700	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
Bis(2-ethylhexyl) phthalate	460000	U	460000	22000	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
4-Bromophenyl phenyl ether	460000	U	460000	6500	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
Butyl benzyl phthalate	460000	U	460000	5100	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
Caprolactam	460000	U	460000	11000	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
Carbazole	460000	U	460000	13000	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
4-Chloroaniline	460000	U	460000	7200	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
4-Chloro-3-methylphenol	460000	U	460000	71000	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
2-Chloronaphthalene	460000	U	460000	8800	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
2-Chlorophenol	460000	U	460000	5000	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
4-Chlorophenyl phenyl ether	460000	U	460000	5000	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
Chrysene	460000	U	460000	1400	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
Dibenz(a,h)anthracene	460000	U	460000	2100	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
Dibenzofuran	460000	U	460000	1200	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
3,3'-Dichlorobenzidine	2200000	U	2200000	6800	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
2,4-Dichlorophenol	460000	U	460000	7400	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
Diethyl phthalate	460000	U	460000	8600	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
2,4-Dimethylphenol	460000	U	460000	9400	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
Dimethyl phthalate	460000	U	460000	8900	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
Di-n-butyl phthalate	170000	J	460000	6900	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
4,6-Dinitro-2-methylphenol	2200000	U	2200000	65000	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
2,4-Dinitrophenol	2200000	U	2200000	57000	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
2,4-Dinitrotoluene	460000	U	460000	7900	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
2,6-Dinitrotoluene	460000	U	460000	8100	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
Di-n-octyl phthalate	460000	U	460000	15000	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
Fluoranthene	460000	U	460000	1300	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
Fluorene	460000	U	460000	1800	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
Hexachlorobenzene	460000	U *	460000	1900	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
Hexachlorobutadiene	460000	U	460000	3500	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
Hexachlorocyclopentadiene	2200000	U	2200000	4000	ug/Kg		05/25/16 14:07	05/26/16 18:52	25

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Client Sample ID: TWM2-07-LNAPL-052016

Lab Sample ID: 240-65173-3

Date Collected: 05/20/16 09:30

Matrix: Waste

Date Received: 05/21/16 09:40

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachloroethane	460000	U	460000	6800	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
Indeno[1,2,3-cd]pyrene	460000	U	460000	2800	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
Isophorone	460000	U	460000	4900	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
2-Methylnaphthalene	460000	U	460000	1400	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
2-Methylphenol	460000	U	460000	9300	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
3 & 4 Methylphenol	930000	U	930000	28000	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
Naphthalene	460000	U	460000	1200	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
2-Nitroaniline	2200000	U	2200000	7100	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
3-Nitroaniline	2200000	U	2200000	4400	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
4-Nitroaniline	2200000	U	2200000	5000	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
Nitrobenzene	460000	U	460000	8900	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
2-Nitrophenol	460000	U	460000	4700	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
4-Nitrophenol	2200000	U	2200000	110000	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
N-Nitrosodi-n-propylamine	460000	U	460000	11000	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
N-Nitrosodiphenylamine	460000	U	460000	5700	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
2,2'-oxybis[1-chloropropane]	460000	U	460000	7200	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
Pentachlorophenol	460000	U	460000	63000	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
Phenanthrene	52000	J	460000	1500	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
Phenol	460000	U	460000	7900	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
Pyrene	460000	U	460000	1400	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
2,4,5-Trichlorophenol	460000	U	460000	6800	ug/Kg		05/25/16 14:07	05/26/16 18:52	25
2,4,6-Trichlorophenol	460000	U	460000	9400	ug/Kg		05/25/16 14:07	05/26/16 18:52	25

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	186	X	57 - 134	05/25/16 14:07	05/26/16 18:52	25
2-Fluorophenol (Surr)	144	X	64 - 125	05/25/16 14:07	05/26/16 18:52	25
Nitrobenzene-d5 (Surr)	146	X	63 - 129	05/25/16 14:07	05/26/16 18:52	25
Phenol-d5 (Surr)	168	X	44 - 140	05/25/16 14:07	05/26/16 18:52	25
Terphenyl-d14 (Surr)	236	X	51 - 138	05/25/16 14:07	05/26/16 18:52	25
2,4,6-Tribromophenol (Surr)	146		31 - 148	05/25/16 14:07	05/26/16 18:52	25

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	490	U	490	190	ug/Kg		05/25/16 13:34	05/26/16 17:17	1
Aroclor-1221	490	U	490	220	ug/Kg		05/25/16 13:34	05/26/16 17:17	1
Aroclor-1232	490	U	490	170	ug/Kg		05/25/16 13:34	05/26/16 17:17	1
Aroclor-1242	490	U	490	280	ug/Kg		05/25/16 13:34	05/26/16 17:17	1
Aroclor-1248	3100		490	200	ug/Kg		05/25/16 13:34	05/26/16 17:17	1
Aroclor-1254	490	U	490	120	ug/Kg		05/25/16 13:34	05/26/16 17:17	1
Aroclor-1260	490	U	490	130	ug/Kg		05/25/16 13:34	05/26/16 17:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	149		10 - 191	05/25/16 13:34	05/26/16 17:17	1
Tetrachloro-m-xylene	69		23 - 160	05/25/16 13:34	05/26/16 17:17	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.96	U	0.96	0.46	mg/Kg		06/01/16 13:49	06/02/16 18:00	1
Arsenic	0.47	J	0.96	0.39	mg/Kg		06/01/16 13:49	06/02/16 18:00	1
Barium	4.7	J	19	0.39	mg/Kg		06/01/16 13:49	06/02/16 18:00	1

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Client Sample ID: TWM2-07-LNAPL-052016

Lab Sample ID: 240-65173-3

Date Collected: 05/20/16 09:30

Matrix: Waste

Date Received: 05/21/16 09:40

Method: 6010B - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	0.027	J	0.48	0.025	mg/Kg		06/01/16 13:49	06/02/16 18:00	1
Cadmium	0.080	J	0.19	0.020	mg/Kg		06/01/16 13:49	06/02/16 18:00	1
Chromium	5.5	B	0.48	0.072	mg/Kg		06/01/16 13:49	06/02/16 18:00	1
Cobalt	0.059	J	4.8	0.045	mg/Kg		06/01/16 13:49	06/02/16 18:00	1
Copper	3.5		2.4	0.22	mg/Kg		06/01/16 13:49	06/02/16 18:00	1
Lead	0.80		0.29	0.19	mg/Kg		06/01/16 13:49	06/02/16 18:00	1
Manganese	9.0	B	1.4	0.081	mg/Kg		06/01/16 13:49	06/02/16 18:00	1
Nickel	1.4	J	3.8	0.077	mg/Kg		06/01/16 13:49	06/03/16 07:08	1
Selenium	0.67		0.48	0.33	mg/Kg		06/01/16 13:49	06/02/16 18:00	1
Silver	0.48	U	0.48	0.061	mg/Kg		06/01/16 13:49	06/02/16 18:00	1
Thallium	0.96	U	0.96	0.13	mg/Kg		06/01/16 13:49	06/02/16 18:00	1
Vanadium	19		4.8	0.19	mg/Kg		06/01/16 13:49	06/02/16 18:00	1
Zinc	1.1	J	1.9	0.54	mg/Kg		06/01/16 13:49	06/03/16 07:08	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.10	U	0.10	0.014	mg/Kg		05/25/16 15:00	05/26/16 08:19	1

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Client Sample ID: MWW10-01-LNAPL-052016

Lab Sample ID: 240-65173-4

Date Collected: 05/20/16 10:05

Matrix: Waste

Date Received: 05/21/16 09:40

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	4600	U F1	4600	200	ug/Kg		05/26/16 10:38	05/26/16 18:55	1
Benzene	1100	U F1	1100	14	ug/Kg		05/26/16 10:38	05/26/16 18:55	1
Bromodichloromethane	1100	U F1	1100	11	ug/Kg		05/26/16 10:38	05/26/16 18:55	1
Bromoform	1100	U F1	1100	22	ug/Kg		05/26/16 10:38	05/26/16 18:55	1
Bromomethane	2300	U F1	2300	33	ug/Kg		05/26/16 10:38	05/26/16 18:55	1
2-Butanone (MEK)	410	J F1	4600	49	ug/Kg		05/26/16 10:38	05/26/16 18:55	1
Carbon disulfide	1100	U F1	1100	14	ug/Kg		05/26/16 10:38	05/26/16 18:55	1
Carbon tetrachloride	1100	U F1	1100	7.4	ug/Kg		05/26/16 10:38	05/26/16 18:55	1
Chlorobenzene	1100	U F1	1100	7.4	ug/Kg		05/26/16 10:38	05/26/16 18:55	1
Chloroethane	2300	U F1	2300	70	ug/Kg		05/26/16 10:38	05/26/16 18:55	1
Chloroform	1100	U F1	1100	10	ug/Kg		05/26/16 10:38	05/26/16 18:55	1
Chloromethane	2300	U F1	2300	16	ug/Kg		05/26/16 10:38	05/26/16 18:55	1
cis-1,2-Dichloroethene	1100	U F1	1100	7.9	ug/Kg		05/26/16 10:38	05/26/16 18:55	1
cis-1,3-Dichloropropene	1100	U F1	1100	9.1	ug/Kg		05/26/16 10:38	05/26/16 18:55	1
Cyclohexane	130	J F1 F2 *	2300	46	ug/Kg		05/26/16 10:38	05/26/16 18:55	1
Dibromochloromethane	1100	U F1	1100	14	ug/Kg		05/26/16 10:38	05/26/16 18:55	1
1,2-Dibromo-3-Chloropropane	1100	U F1	1100	57	ug/Kg		05/26/16 10:38	05/26/16 18:55	1
1,2-Dibromoethane	1100	U F1	1100	11	ug/Kg		05/26/16 10:38	05/26/16 18:55	1
1,2-Dichlorobenzene	1100	U F1	1100	9.9	ug/Kg		05/26/16 10:38	05/26/16 18:55	1
1,3-Dichlorobenzene	1100	U F1	1100	5.5	ug/Kg		05/26/16 10:38	05/26/16 18:55	1
1,4-Dichlorobenzene	1100	U F1	1100	9.2	ug/Kg		05/26/16 10:38	05/26/16 18:55	1
Dichlorodifluoromethane	2300	U F1	2300	18	ug/Kg		05/26/16 10:38	05/26/16 18:55	1
1,1-Dichloroethane	1100	U F1	1100	20	ug/Kg		05/26/16 10:38	05/26/16 18:55	1
1,2-Dichloroethane	1100	U F1	1100	11	ug/Kg		05/26/16 10:38	05/26/16 18:55	1
1,1-Dichloroethene	1100	U F1	1100	21	ug/Kg		05/26/16 10:38	05/26/16 18:55	1
1,2-Dichloropropane	1100	U F1	1100	9.4	ug/Kg		05/26/16 10:38	05/26/16 18:55	1
Ethylbenzene	2700	F1	1100	6.2	ug/Kg		05/26/16 10:38	05/26/16 18:55	1
2-Hexanone	4600	U F1	4600	23	ug/Kg		05/26/16 10:38	05/26/16 18:55	1
Isopropylbenzene	3300	F1	1100	7.5	ug/Kg		05/26/16 10:38	05/26/16 18:55	1
Methyl acetate	2300	U F1	2300	29	ug/Kg		05/26/16 10:38	05/26/16 18:55	1
Methylcyclohexane	2700	F1	1100	14	ug/Kg		05/26/16 10:38	05/26/16 18:55	1
Methylene Chloride	1100	U F1	1100	89	ug/Kg		05/26/16 10:38	05/26/16 18:55	1
4-Methyl-2-pentanone (MIBK)	4600	U F1	4600	55	ug/Kg		05/26/16 10:38	05/26/16 18:55	1
Methyl tert-butyl ether	4600	U F1	4600	8.2	ug/Kg		05/26/16 10:38	05/26/16 18:55	1
Styrene	1100	U F1	1100	6.4	ug/Kg		05/26/16 10:38	05/26/16 18:55	1
1,1,2,2-Tetrachloroethane	1100	U F1	1100	10	ug/Kg		05/26/16 10:38	05/26/16 18:55	1
Tetrachloroethene	1100	U F1	1100	14	ug/Kg		05/26/16 10:38	05/26/16 18:55	1
Toluene	890	J F1	1100	20	ug/Kg		05/26/16 10:38	05/26/16 18:55	1
trans-1,2-Dichloroethene	1100	U F1	1100	11	ug/Kg		05/26/16 10:38	05/26/16 18:55	1
trans-1,3-Dichloropropene	1100	U F1	1100	23	ug/Kg		05/26/16 10:38	05/26/16 18:55	1
1,2,4-Trichlorobenzene	1100	U F1	1100	8.4	ug/Kg		05/26/16 10:38	05/26/16 18:55	1
1,1,1-Trichloroethane	1100	U F1	1100	24	ug/Kg		05/26/16 10:38	05/26/16 18:55	1
1,1,2-Trichloroethane	1100	U F1	1100	14	ug/Kg		05/26/16 10:38	05/26/16 18:55	1
Trichloroethene	1100	U F1	1100	11	ug/Kg		05/26/16 10:38	05/26/16 18:55	1
Trichlorofluoromethane	2300	U F1	2300	18	ug/Kg		05/26/16 10:38	05/26/16 18:55	1
1,1,2-Trichloro-1,2,2-trifluoroethane	2300	U F1	2300	45	ug/Kg		05/26/16 10:38	05/26/16 18:55	1
Vinyl chloride	2300	U F1	2300	21	ug/Kg		05/26/16 10:38	05/26/16 18:55	1
Xylenes, Total	15000		2300	7.1	ug/Kg		05/26/16 10:38	05/26/16 18:55	1

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Client Sample ID: MWW10-01-LNAPL-052016

Lab Sample ID: 240-65173-4

Date Collected: 05/20/16 10:05

Matrix: Waste

Date Received: 05/21/16 09:40

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		26 - 141	05/26/16 10:38	05/26/16 18:55	1
Dibromofluoromethane (Surr)	82		30 - 122	05/26/16 10:38	05/26/16 18:55	1
1,2-Dichloroethane-d4 (Surr)	79		39 - 128	05/26/16 10:38	05/26/16 18:55	1
Toluene-d8 (Surr)	81		33 - 134	05/26/16 10:38	05/26/16 18:55	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	980000	U	980000	2700	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
Acenaphthylene	980000	U	980000	4100	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
Acetophenone	980000	U	980000	16000	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
Anthracene	78000	J	980000	6800	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
Atrazine	980000	U	980000	32000	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
Benzaldehyde	980000	U	980000	20000	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
Benzo[a]anthracene	980000	U	980000	4100	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
Benzo[a]pyrene	980000	U	980000	6800	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
Benzo[b]fluoranthene	980000	U	980000	6800	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
Benzo[g,h,i]perylene	980000	U	980000	5300	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
Benzo[k]fluoranthene	980000	U	980000	6800	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
1,1'-Biphenyl	980000	U	980000	21000	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
Bis(2-chloroethoxy)methane	980000	U	980000	47000	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
Bis(2-chloroethyl)ether	980000	U	980000	12000	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
Bis(2-ethylhexyl) phthalate	980000	U	980000	47000	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
4-Bromophenyl phenyl ether	980000	U	980000	14000	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
Butyl benzyl phthalate	980000	U	980000	11000	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
Caprolactam	980000	U	980000	23000	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
Carbazole	980000	U	980000	27000	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
4-Chloroaniline	980000	U	980000	15000	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
4-Chloro-3-methylphenol	980000	U	980000	150000	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
2-Chloronaphthalene	980000	U	980000	19000	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
2-Chlorophenol	980000	U	980000	11000	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
4-Chlorophenyl phenyl ether	980000	U	980000	11000	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
Chrysene	980000	U	980000	2900	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
Dibenz(a,h)anthracene	980000	U	980000	4400	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
Dibenzofuran	980000	U	980000	2400	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
3,3'-Dichlorobenzidine	4700000	U	4700000	14000	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
2,4-Dichlorophenol	980000	U	980000	16000	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
Diethyl phthalate	980000	U	980000	18000	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
2,4-Dimethylphenol	980000	U	980000	20000	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
Dimethyl phthalate	980000	U	980000	19000	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
Di-n-butyl phthalate	980000	U	980000	15000	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
4,6-Dinitro-2-methylphenol	4700000	U	4700000	140000	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
2,4-Dinitrophenol	4700000	U	4700000	120000	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
2,4-Dinitrotoluene	980000	U	980000	17000	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
2,6-Dinitrotoluene	980000	U	980000	17000	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
Di-n-octyl phthalate	980000	U	980000	32000	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
Fluoranthene	220000	J	980000	2700	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
Fluorene	280000	J	980000	3800	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
Hexachlorobenzene	980000	U *	980000	4100	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
Hexachlorobutadiene	980000	U	980000	7400	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
Hexachlorocyclopentadiene	4700000	U	4700000	8500	ug/Kg		05/25/16 14:07	05/26/16 19:15	50

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Client Sample ID: MWW10-01-LNAPL-052016

Lab Sample ID: 240-65173-4

Date Collected: 05/20/16 10:05

Matrix: Waste

Date Received: 05/21/16 09:40

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachloroethane	980000	U	980000	14000	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
Indeno[1,2,3-cd]pyrene	980000	U	980000	5900	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
Isophorone	980000	U	980000	10000	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
2-Methylnaphthalene	380000	J	980000	2900	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
2-Methylphenol	980000	U	980000	20000	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
3 & 4 Methylphenol	2000000	U	2000000	59000	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
Naphthalene	36000	J	980000	2600	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
2-Nitroaniline	4700000	U	4700000	15000	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
3-Nitroaniline	4700000	U	4700000	9400	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
4-Nitroaniline	4700000	U	4700000	11000	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
Nitrobenzene	980000	U	980000	19000	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
2-Nitrophenol	980000	U	980000	10000	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
4-Nitrophenol	4700000	U	4700000	240000	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
N-Nitrosodi-n-propylamine	980000	U	980000	22000	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
N-Nitrosodiphenylamine	980000	U	980000	12000	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
2,2'-oxybis[1-chloropropane]	980000	U	980000	15000	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
Pentachlorophenol	980000	U	980000	130000	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
Phenanthrene	960000	J	980000	3200	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
Phenol	980000	U	980000	17000	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
Pyrene	270000	J	980000	2900	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
2,4,5-Trichlorophenol	980000	U	980000	14000	ug/Kg		05/25/16 14:07	05/26/16 19:15	50
2,4,6-Trichlorophenol	980000	U	980000	20000	ug/Kg		05/25/16 14:07	05/26/16 19:15	50

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	137	X	57 - 134	05/25/16 14:07	05/26/16 19:15	50
2-Fluorophenol (Surr)	113		64 - 125	05/25/16 14:07	05/26/16 19:15	50
Nitrobenzene-d5 (Surr)	131	X	63 - 129	05/25/16 14:07	05/26/16 19:15	50
Phenol-d5 (Surr)	102		44 - 140	05/25/16 14:07	05/26/16 19:15	50
Terphenyl-d14 (Surr)	157	X	51 - 138	05/25/16 14:07	05/26/16 19:15	50
2,4,6-Tribromophenol (Surr)	90		31 - 148	05/25/16 14:07	05/26/16 19:15	50

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	9400	U	9400	3600	ug/Kg		05/25/16 13:34	05/26/16 17:34	20
Aroclor-1221	9400	U	9400	4200	ug/Kg		05/25/16 13:34	05/26/16 17:34	20
Aroclor-1232	9400	U	9400	3200	ug/Kg		05/25/16 13:34	05/26/16 17:34	20
Aroclor-1242	9400	U	9400	5500	ug/Kg		05/25/16 13:34	05/26/16 17:34	20
Aroclor-1248	130000		9400	3800	ug/Kg		05/25/16 13:34	05/26/16 17:34	20
Aroclor-1254	9400	U	9400	2300	ug/Kg		05/25/16 13:34	05/26/16 17:34	20
Aroclor-1260	9400	U	9400	2500	ug/Kg		05/25/16 13:34	05/26/16 17:34	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	211	X	10 - 191	05/25/16 13:34	05/26/16 17:34	20
Tetrachloro-m-xylene	139		23 - 160	05/25/16 13:34	05/26/16 17:34	20

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.99	U	0.99	0.48	mg/Kg		06/01/16 13:49	06/02/16 18:04	1
Arsenic	8.5		0.99	0.41	mg/Kg		06/01/16 13:49	06/02/16 18:04	1
Barium	2.2	J	20	0.41	mg/Kg		06/01/16 13:49	06/02/16 18:04	1

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Client Sample ID: MWW10-01-LNAPL-052016

Lab Sample ID: 240-65173-4

Date Collected: 05/20/16 10:05

Matrix: Waste

Date Received: 05/21/16 09:40

Method: 6010B - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	0.50	U	0.50	0.026	mg/Kg		06/01/16 13:49	06/02/16 18:04	1
Cadmium	0.024	J	0.20	0.021	mg/Kg		06/01/16 13:49	06/02/16 18:04	1
Chromium	3.7	B	0.50	0.074	mg/Kg		06/01/16 13:49	06/02/16 18:04	1
Cobalt	5.0	U	5.0	0.047	mg/Kg		06/01/16 13:49	06/02/16 18:04	1
Copper	1.2	J	2.5	0.23	mg/Kg		06/01/16 13:49	06/02/16 18:04	1
Lead	0.54		0.30	0.20	mg/Kg		06/01/16 13:49	06/02/16 18:04	1
Manganese	0.22	J B	1.5	0.083	mg/Kg		06/01/16 13:49	06/02/16 18:04	1
Nickel	1.7	J	4.0	0.079	mg/Kg		06/01/16 13:49	06/03/16 07:12	1
Selenium	0.50	U	0.50	0.34	mg/Kg		06/01/16 13:49	06/02/16 18:04	1
Silver	0.50	U	0.50	0.062	mg/Kg		06/01/16 13:49	06/02/16 18:04	1
Thallium	0.99	U	0.99	0.13	mg/Kg		06/01/16 13:49	06/02/16 18:04	1
Vanadium	3.2	J	5.0	0.20	mg/Kg		06/01/16 13:49	06/02/16 18:04	1
Zinc	2.0	U	2.0	0.55	mg/Kg		06/01/16 13:49	06/03/16 07:12	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.098	U	0.098	0.014	mg/Kg		05/25/16 15:00	05/26/16 08:21	1

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Client Sample ID: MWW10-08-LNAPL-052016

Lab Sample ID: 240-65173-5

Date Collected: 05/20/16 10:25

Matrix: Waste

Date Received: 05/21/16 09:40

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	4500	U	4500	190	ug/Kg		05/26/16 10:38	05/26/16 19:18	1
Benzene	1100	U	1100	13	ug/Kg		05/26/16 10:38	05/26/16 19:18	1
Bromodichloromethane	1100	U	1100	11	ug/Kg		05/26/16 10:38	05/26/16 19:18	1
Bromoform	1100	U	1100	21	ug/Kg		05/26/16 10:38	05/26/16 19:18	1
Bromomethane	2200	U	2200	33	ug/Kg		05/26/16 10:38	05/26/16 19:18	1
2-Butanone (MEK)	450	J	4500	48	ug/Kg		05/26/16 10:38	05/26/16 19:18	1
Carbon disulfide	1100	U	1100	13	ug/Kg		05/26/16 10:38	05/26/16 19:18	1
Carbon tetrachloride	1100	U	1100	7.2	ug/Kg		05/26/16 10:38	05/26/16 19:18	1
Chlorobenzene	1100	U	1100	7.2	ug/Kg		05/26/16 10:38	05/26/16 19:18	1
Chloroethane	2200	U	2200	69	ug/Kg		05/26/16 10:38	05/26/16 19:18	1
Chloroform	1100	U	1100	9.9	ug/Kg		05/26/16 10:38	05/26/16 19:18	1
Chloromethane	2200	U	2200	16	ug/Kg		05/26/16 10:38	05/26/16 19:18	1
cis-1,2-Dichloroethene	1100	U	1100	7.8	ug/Kg		05/26/16 10:38	05/26/16 19:18	1
cis-1,3-Dichloropropene	1100	U	1100	8.9	ug/Kg		05/26/16 10:38	05/26/16 19:18	1
Cyclohexane	2200	U *	2200	45	ug/Kg		05/26/16 10:38	05/26/16 19:18	1
Dibromochloromethane	1100	U	1100	13	ug/Kg		05/26/16 10:38	05/26/16 19:18	1
1,2-Dibromo-3-Chloropropane	1100	U	1100	56	ug/Kg		05/26/16 10:38	05/26/16 19:18	1
1,2-Dibromoethane	1100	U	1100	11	ug/Kg		05/26/16 10:38	05/26/16 19:18	1
1,2-Dichlorobenzene	1100	U	1100	9.7	ug/Kg		05/26/16 10:38	05/26/16 19:18	1
1,3-Dichlorobenzene	1100	U	1100	5.4	ug/Kg		05/26/16 10:38	05/26/16 19:18	1
1,4-Dichlorobenzene	1100	U	1100	9.0	ug/Kg		05/26/16 10:38	05/26/16 19:18	1
Dichlorodifluoromethane	2200	U	2200	18	ug/Kg		05/26/16 10:38	05/26/16 19:18	1
1,1-Dichloroethane	1100	U	1100	19	ug/Kg		05/26/16 10:38	05/26/16 19:18	1
1,2-Dichloroethane	1100	U	1100	11	ug/Kg		05/26/16 10:38	05/26/16 19:18	1
1,1-Dichloroethene	1100	U	1100	20	ug/Kg		05/26/16 10:38	05/26/16 19:18	1
1,2-Dichloropropane	1100	U	1100	9.2	ug/Kg		05/26/16 10:38	05/26/16 19:18	1
Ethylbenzene	250	J	1100	6.1	ug/Kg		05/26/16 10:38	05/26/16 19:18	1
2-Hexanone	4500	U	4500	22	ug/Kg		05/26/16 10:38	05/26/16 19:18	1
Isopropylbenzene	660	J	1100	7.3	ug/Kg		05/26/16 10:38	05/26/16 19:18	1
Methyl acetate	2200	U	2200	28	ug/Kg		05/26/16 10:38	05/26/16 19:18	1
Methylcyclohexane	950	J	1100	13	ug/Kg		05/26/16 10:38	05/26/16 19:18	1
Methylene Chloride	1100	U	1100	87	ug/Kg		05/26/16 10:38	05/26/16 19:18	1
4-Methyl-2-pentanone (MIBK)	4500	U	4500	54	ug/Kg		05/26/16 10:38	05/26/16 19:18	1
Methyl tert-butyl ether	4500	U	4500	8.0	ug/Kg		05/26/16 10:38	05/26/16 19:18	1
Styrene	1100	U	1100	6.3	ug/Kg		05/26/16 10:38	05/26/16 19:18	1
1,1,2,2-Tetrachloroethane	1100	U	1100	10	ug/Kg		05/26/16 10:38	05/26/16 19:18	1
Tetrachloroethene	1100	U	1100	13	ug/Kg		05/26/16 10:38	05/26/16 19:18	1
Toluene	140	J	1100	19	ug/Kg		05/26/16 10:38	05/26/16 19:18	1
trans-1,2-Dichloroethene	1100	U	1100	10	ug/Kg		05/26/16 10:38	05/26/16 19:18	1
trans-1,3-Dichloropropene	1100	U	1100	22	ug/Kg		05/26/16 10:38	05/26/16 19:18	1
1,2,4-Trichlorobenzene	1100	U	1100	8.2	ug/Kg		05/26/16 10:38	05/26/16 19:18	1
1,1,1-Trichloroethane	1100	U	1100	24	ug/Kg		05/26/16 10:38	05/26/16 19:18	1
1,1,2-Trichloroethane	1100	U	1100	13	ug/Kg		05/26/16 10:38	05/26/16 19:18	1
Trichloroethene	1100	U	1100	11	ug/Kg		05/26/16 10:38	05/26/16 19:18	1
Trichlorofluoromethane	2200	U	2200	18	ug/Kg		05/26/16 10:38	05/26/16 19:18	1
1,1,2-Trichloro-1,2,2-trifluoroethane	2200	U	2200	44	ug/Kg		05/26/16 10:38	05/26/16 19:18	1
Vinyl chloride	2200	U	2200	20	ug/Kg		05/26/16 10:38	05/26/16 19:18	1
Xylenes, Total	2300		2200	7.0	ug/Kg		05/26/16 10:38	05/26/16 19:18	1

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Client Sample ID: MWW10-08-LNAPL-052016

Lab Sample ID: 240-65173-5

Date Collected: 05/20/16 10:25

Matrix: Waste

Date Received: 05/21/16 09:40

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		26 - 141	05/26/16 10:38	05/26/16 19:18	1
Dibromofluoromethane (Surr)	85		30 - 122	05/26/16 10:38	05/26/16 19:18	1
1,2-Dichloroethane-d4 (Surr)	75		39 - 128	05/26/16 10:38	05/26/16 19:18	1
Toluene-d8 (Surr)	84		33 - 134	05/26/16 10:38	05/26/16 19:18	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	990000	U	990000	2700	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
Acenaphthylene	990000	U	990000	4200	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
Acetophenone	990000	U	990000	16000	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
Anthracene	990000	U	990000	6800	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
Atrazine	990000	U	990000	33000	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
Benzaldehyde	990000	U	990000	20000	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
Benzo[a]anthracene	990000	U	990000	4200	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
Benzo[a]pyrene	990000	U	990000	6800	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
Benzo[b]fluoranthene	990000	U	990000	6800	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
Benzo[g,h,i]perylene	990000	U	990000	5300	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
Benzo[k]fluoranthene	990000	U	990000	6800	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
1,1'-Biphenyl	990000	U	990000	21000	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
Bis(2-chloroethoxy)methane	990000	U	990000	48000	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
Bis(2-chloroethyl)ether	990000	U	990000	12000	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
Bis(2-ethylhexyl) phthalate	990000	U	990000	48000	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
4-Bromophenyl phenyl ether	990000	U	990000	14000	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
Butyl benzyl phthalate	990000	U	990000	11000	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
Caprolactam	990000	U	990000	23000	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
Carbazole	990000	U	990000	28000	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
4-Chloroaniline	990000	U	990000	15000	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
4-Chloro-3-methylphenol	990000	U	990000	150000	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
2-Chloronaphthalene	990000	U	990000	19000	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
2-Chlorophenol	990000	U	990000	11000	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
4-Chlorophenyl phenyl ether	990000	U	990000	11000	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
Chrysene	990000	U	990000	2900	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
Dibenz(a,h)anthracene	990000	U	990000	4500	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
Dibenzofuran	990000	U	990000	2500	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
3,3'-Dichlorobenzidine	4800000	U	4800000	15000	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
2,4-Dichlorophenol	990000	U	990000	16000	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
Diethyl phthalate	990000	U	990000	18000	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
2,4-Dimethylphenol	990000	U	990000	20000	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
Dimethyl phthalate	990000	U	990000	19000	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
Di-n-butyl phthalate	990000	U	990000	15000	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
4,6-Dinitro-2-methylphenol	4800000	U	4800000	140000	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
2,4-Dinitrophenol	4800000	U	4800000	120000	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
2,4-Dinitrotoluene	990000	U	990000	17000	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
2,6-Dinitrotoluene	990000	U	990000	17000	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
Di-n-octyl phthalate	990000	U	990000	33000	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
Fluoranthene	100000	J	990000	2800	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
Fluorene	170000	J	990000	3900	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
Hexachlorobenzene	990000	U *	990000	4200	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
Hexachlorobutadiene	990000	U	990000	7400	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
Hexachlorocyclopentadiene	4800000	U	4800000	8600	ug/Kg		05/25/16 14:07	05/26/16 19:39	50

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Client Sample ID: MWW10-08-LNAPL-052016

Lab Sample ID: 240-65173-5

Date Collected: 05/20/16 10:25

Matrix: Waste

Date Received: 05/21/16 09:40

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachloroethane	990000	U	990000	15000	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
Indeno[1,2,3-cd]pyrene	990000	U	990000	5900	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
Isophorone	990000	U	990000	10000	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
2-Methylnaphthalene	990000	U	990000	2900	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
2-Methylphenol	990000	U	990000	20000	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
3 & 4 Methylphenol	2000000	U	2000000	59000	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
Naphthalene	990000	U	990000	2600	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
2-Nitroaniline	4800000	U	4800000	15000	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
3-Nitroaniline	4800000	U	4800000	9500	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
4-Nitroaniline	4800000	U	4800000	11000	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
Nitrobenzene	990000	U	990000	19000	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
2-Nitrophenol	990000	U	990000	10000	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
4-Nitrophenol	4800000	U	4800000	240000	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
N-Nitrosodi-n-propylamine	990000	U	990000	23000	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
N-Nitrosodiphenylamine	990000	U	990000	12000	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
2,2'-oxybis[1-chloropropane]	990000	U	990000	15000	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
Pentachlorophenol	990000	U	990000	130000	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
Phenanthrene	210000	J	990000	3300	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
Phenol	990000	U	990000	17000	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
Pyrene	130000	J	990000	3000	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
2,4,5-Trichlorophenol	990000	U	990000	15000	ug/Kg		05/25/16 14:07	05/26/16 19:39	50
2,4,6-Trichlorophenol	990000	U	990000	20000	ug/Kg		05/25/16 14:07	05/26/16 19:39	50

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	93		57 - 134	05/25/16 14:07	05/26/16 19:39	50
2-Fluorophenol (Surr)	97		64 - 125	05/25/16 14:07	05/26/16 19:39	50
Nitrobenzene-d5 (Surr)	67		63 - 129	05/25/16 14:07	05/26/16 19:39	50
Phenol-d5 (Surr)	95		44 - 140	05/25/16 14:07	05/26/16 19:39	50
Terphenyl-d14 (Surr)	88		51 - 138	05/25/16 14:07	05/26/16 19:39	50
2,4,6-Tribromophenol (Surr)	0	X	31 - 148	05/25/16 14:07	05/26/16 19:39	50

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	9700	U	9700	3700	ug/Kg		05/25/16 13:34	05/26/16 17:52	20
Aroclor-1221	9700	U	9700	4300	ug/Kg		05/25/16 13:34	05/26/16 17:52	20
Aroclor-1232	9700	U	9700	3300	ug/Kg		05/25/16 13:34	05/26/16 17:52	20
Aroclor-1242	9700	U	9700	5600	ug/Kg		05/25/16 13:34	05/26/16 17:52	20
Aroclor-1248	86000		9700	3900	ug/Kg		05/25/16 13:34	05/26/16 17:52	20
Aroclor-1254	9700	U	9700	2300	ug/Kg		05/25/16 13:34	05/26/16 17:52	20
Aroclor-1260	9700	U	9700	2500	ug/Kg		05/25/16 13:34	05/26/16 17:52	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	538	X	10 - 191	05/25/16 13:34	05/26/16 17:52	20
Tetrachloro-m-xylene	134		23 - 160	05/25/16 13:34	05/26/16 17:52	20

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.98	U	0.98	0.47	mg/Kg		06/01/16 13:49	06/02/16 18:08	1
Arsenic	13		0.98	0.40	mg/Kg		06/01/16 13:49	06/02/16 18:08	1
Barium	6.2	J	20	0.40	mg/Kg		06/01/16 13:49	06/02/16 18:08	1

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Client Sample ID: MWW10-08-LNAPL-052016

Lab Sample ID: 240-65173-5

Date Collected: 05/20/16 10:25

Matrix: Waste

Date Received: 05/21/16 09:40

Method: 6010B - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	0.49	U	0.49	0.025	mg/Kg		06/01/16 13:49	06/02/16 18:08	1
Cadmium	0.20	U	0.20	0.021	mg/Kg		06/01/16 13:49	06/02/16 18:08	1
Chromium	4.6	B	0.49	0.074	mg/Kg		06/01/16 13:49	06/02/16 18:08	1
Cobalt	0.068	J	4.9	0.046	mg/Kg		06/01/16 13:49	06/02/16 18:08	1
Copper	0.49	J	2.5	0.23	mg/Kg		06/01/16 13:49	06/02/16 18:08	1
Lead	0.64		0.29	0.20	mg/Kg		06/01/16 13:49	06/02/16 18:08	1
Manganese	1.2	J B	1.5	0.082	mg/Kg		06/01/16 13:49	06/02/16 18:08	1
Nickel	0.70	J	3.9	0.078	mg/Kg		06/01/16 13:49	06/03/16 07:16	1
Selenium	0.42	J	0.49	0.33	mg/Kg		06/01/16 13:49	06/02/16 18:08	1
Silver	0.49	U	0.49	0.062	mg/Kg		06/01/16 13:49	06/02/16 18:08	1
Thallium	0.98	U	0.98	0.13	mg/Kg		06/01/16 13:49	06/02/16 18:08	1
Vanadium	2.7	J	4.9	0.20	mg/Kg		06/01/16 13:49	06/02/16 18:08	1
Zinc	2.0	U	2.0	0.55	mg/Kg		06/01/16 13:49	06/03/16 07:16	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.10	U	0.10	0.014	mg/Kg		05/25/16 15:00	05/26/16 08:23	1

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Client Sample ID: TW-01-01-LNAPL-052016

Lab Sample ID: 240-65173-6

Date Collected: 05/20/16 10:50

Matrix: Waste

Date Received: 05/21/16 09:40

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	4500	U	4500	190	ug/Kg		05/26/16 10:38	05/26/16 19:41	1
Benzene	260	J	1100	14	ug/Kg		05/26/16 10:38	05/26/16 19:41	1
Bromodichloromethane	1100	U	1100	11	ug/Kg		05/26/16 10:38	05/26/16 19:41	1
Bromoform	1100	U	1100	22	ug/Kg		05/26/16 10:38	05/26/16 19:41	1
Bromomethane	2300	U	2300	33	ug/Kg		05/26/16 10:38	05/26/16 19:41	1
2-Butanone (MEK)	4500	U	4500	49	ug/Kg		05/26/16 10:38	05/26/16 19:41	1
Carbon disulfide	1100	U	1100	14	ug/Kg		05/26/16 10:38	05/26/16 19:41	1
Carbon tetrachloride	1100	U	1100	7.3	ug/Kg		05/26/16 10:38	05/26/16 19:41	1
Chlorobenzene	1100	U	1100	7.3	ug/Kg		05/26/16 10:38	05/26/16 19:41	1
Chloroethane	2300	U	2300	69	ug/Kg		05/26/16 10:38	05/26/16 19:41	1
Chloroform	1100	U	1100	10	ug/Kg		05/26/16 10:38	05/26/16 19:41	1
Chloromethane	2300	U	2300	16	ug/Kg		05/26/16 10:38	05/26/16 19:41	1
cis-1,2-Dichloroethene	1100	U	1100	7.8	ug/Kg		05/26/16 10:38	05/26/16 19:41	1
cis-1,3-Dichloropropene	1100	U	1100	9.0	ug/Kg		05/26/16 10:38	05/26/16 19:41	1
Cyclohexane	2100	J *	2300	45	ug/Kg		05/26/16 10:38	05/26/16 19:41	1
Dibromochloromethane	1100	U	1100	14	ug/Kg		05/26/16 10:38	05/26/16 19:41	1
1,2-Dibromo-3-Chloropropane	1100	U	1100	57	ug/Kg		05/26/16 10:38	05/26/16 19:41	1
1,2-Dibromoethane	1100	U	1100	11	ug/Kg		05/26/16 10:38	05/26/16 19:41	1
1,2-Dichlorobenzene	1100	U	1100	9.8	ug/Kg		05/26/16 10:38	05/26/16 19:41	1
1,3-Dichlorobenzene	1100	U	1100	5.5	ug/Kg		05/26/16 10:38	05/26/16 19:41	1
1,4-Dichlorobenzene	1100	U	1100	9.1	ug/Kg		05/26/16 10:38	05/26/16 19:41	1
Dichlorodifluoromethane	2300	U	2300	18	ug/Kg		05/26/16 10:38	05/26/16 19:41	1
1,1-Dichloroethane	1100	U	1100	19	ug/Kg		05/26/16 10:38	05/26/16 19:41	1
1,2-Dichloroethane	1100	U	1100	11	ug/Kg		05/26/16 10:38	05/26/16 19:41	1
1,1-Dichloroethene	1100	U	1100	20	ug/Kg		05/26/16 10:38	05/26/16 19:41	1
1,2-Dichloropropane	1100	U	1100	9.3	ug/Kg		05/26/16 10:38	05/26/16 19:41	1
Ethylbenzene	210	J	1100	6.1	ug/Kg		05/26/16 10:38	05/26/16 19:41	1
2-Hexanone	4500	U	4500	23	ug/Kg		05/26/16 10:38	05/26/16 19:41	1
Isopropylbenzene	7700		1100	7.4	ug/Kg		05/26/16 10:38	05/26/16 19:41	1
Methyl acetate	2300	U	2300	28	ug/Kg		05/26/16 10:38	05/26/16 19:41	1
Methylcyclohexane	22000		1100	14	ug/Kg		05/26/16 10:38	05/26/16 19:41	1
Methylene Chloride	1100	U	1100	88	ug/Kg		05/26/16 10:38	05/26/16 19:41	1
4-Methyl-2-pentanone (MIBK)	4500	U	4500	55	ug/Kg		05/26/16 10:38	05/26/16 19:41	1
Methyl tert-butyl ether	4500	U	4500	8.1	ug/Kg		05/26/16 10:38	05/26/16 19:41	1
Styrene	1100	U	1100	6.4	ug/Kg		05/26/16 10:38	05/26/16 19:41	1
1,1,2,2-Tetrachloroethane	1100	U	1100	10	ug/Kg		05/26/16 10:38	05/26/16 19:41	1
Tetrachloroethene	1100	U	1100	14	ug/Kg		05/26/16 10:38	05/26/16 19:41	1
Toluene	1100	U	1100	19	ug/Kg		05/26/16 10:38	05/26/16 19:41	1
trans-1,2-Dichloroethene	1100	U	1100	10	ug/Kg		05/26/16 10:38	05/26/16 19:41	1
trans-1,3-Dichloropropene	1100	U	1100	23	ug/Kg		05/26/16 10:38	05/26/16 19:41	1
1,2,4-Trichlorobenzene	1100	U	1100	8.3	ug/Kg		05/26/16 10:38	05/26/16 19:41	1
1,1,1-Trichloroethane	1100	U	1100	24	ug/Kg		05/26/16 10:38	05/26/16 19:41	1
1,1,2-Trichloroethane	1100	U	1100	14	ug/Kg		05/26/16 10:38	05/26/16 19:41	1
Trichloroethene	1100	U	1100	11	ug/Kg		05/26/16 10:38	05/26/16 19:41	1
Trichlorofluoromethane	2300	U	2300	18	ug/Kg		05/26/16 10:38	05/26/16 19:41	1
1,1,2-Trichloro-1,2,2-trifluoroethane	2300	U	2300	44	ug/Kg		05/26/16 10:38	05/26/16 19:41	1
Vinyl chloride	2300	U	2300	20	ug/Kg		05/26/16 10:38	05/26/16 19:41	1
Xylenes, Total	750	J	2300	7.0	ug/Kg		05/26/16 10:38	05/26/16 19:41	1

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Client Sample ID: TW-01-01-LNAPL-052016

Lab Sample ID: 240-65173-6

Date Collected: 05/20/16 10:50

Matrix: Waste

Date Received: 05/21/16 09:40

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	83		26 - 141	05/26/16 10:38	05/26/16 19:41	1
Dibromofluoromethane (Surr)	73		30 - 122	05/26/16 10:38	05/26/16 19:41	1
1,2-Dichloroethane-d4 (Surr)	70		39 - 128	05/26/16 10:38	05/26/16 19:41	1
Toluene-d8 (Surr)	80		33 - 134	05/26/16 10:38	05/26/16 19:41	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	490000	U	490000	1300	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
Acenaphthylene	490000	U	490000	2000	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
Acetophenone	490000	U	490000	8000	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
Anthracene	490000	U	490000	3300	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
Atrazine	490000	U	490000	16000	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
Benzaldehyde	490000	U	490000	10000	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
Benzo[a]anthracene	490000	U	490000	2000	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
Benzo[a]pyrene	490000	U	490000	3300	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
Benzo[b]fluoranthene	490000	U	490000	3300	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
Benzo[g,h,i]perylene	490000	U	490000	2600	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
Benzo[k]fluoranthene	490000	U	490000	3300	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
1,1'-Biphenyl	490000	U	490000	10000	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
Bis(2-chloroethoxy)methane	490000	U	490000	23000	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
Bis(2-chloroethyl)ether	490000	U	490000	6000	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
Bis(2-ethylhexyl) phthalate	490000	U	490000	23000	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
4-Bromophenyl phenyl ether	490000	U	490000	6800	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
Butyl benzyl phthalate	490000	U	490000	5400	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
Caprolactam	490000	U	490000	11000	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
Carbazole	490000	U	490000	14000	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
4-Chloroaniline	490000	U	490000	7600	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
4-Chloro-3-methylphenol	490000	U	490000	74000	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
2-Chloronaphthalene	490000	U	490000	9200	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
2-Chlorophenol	490000	U	490000	5200	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
4-Chlorophenyl phenyl ether	490000	U	490000	5200	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
Chrysene	490000	U	490000	1400	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
Dibenz(a,h)anthracene	490000	U	490000	2200	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
Dibenzofuran	490000	U	490000	1200	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
3,3'-Dichlorobenzidine	2300000	U	2300000	7100	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
2,4-Dichlorophenol	490000	U	490000	7700	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
Diethyl phthalate	490000	U	490000	9000	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
2,4-Dimethylphenol	490000	U	490000	9900	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
Dimethyl phthalate	490000	U	490000	9300	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
Di-n-butyl phthalate	490000	U	490000	7300	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
4,6-Dinitro-2-methylphenol	2300000	U	2300000	68000	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
2,4-Dinitrophenol	2300000	U	2300000	60000	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
2,4-Dinitrotoluene	490000	U	490000	8300	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
2,6-Dinitrotoluene	490000	U	490000	8400	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
Di-n-octyl phthalate	490000	U	490000	16000	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
Fluoranthene	93000	J	490000	1400	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
Fluorene	110000	J	490000	1900	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
Hexachlorobenzene	490000	U *	490000	2000	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
Hexachlorobutadiene	490000	U	490000	3600	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
Hexachlorocyclopentadiene	2300000	U	2300000	4200	ug/Kg		05/25/16 14:07	05/26/16 20:02	25

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Client Sample ID: TW-01-01-LNAPL-052016

Lab Sample ID: 240-65173-6

Date Collected: 05/20/16 10:50

Matrix: Waste

Date Received: 05/21/16 09:40

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachloroethane	490000	U	490000	7100	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
Indeno[1,2,3-cd]pyrene	490000	U	490000	2900	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
Isophorone	490000	U	490000	5100	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
2-Methylnaphthalene	190000	J	490000	1400	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
2-Methylphenol	490000	U	490000	9800	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
3 & 4 Methylphenol	970000	U	970000	29000	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
Naphthalene	490000	U	490000	1300	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
2-Nitroaniline	2300000	U	2300000	7400	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
3-Nitroaniline	2300000	U	2300000	4700	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
4-Nitroaniline	2300000	U	2300000	5200	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
Nitrobenzene	490000	U	490000	9300	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
2-Nitrophenol	490000	U	490000	5000	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
4-Nitrophenol	2300000	U	2300000	120000	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
N-Nitrosodi-n-propylamine	490000	U	490000	11000	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
N-Nitrosodiphenylamine	490000	U	490000	6000	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
2,2'-oxybis[1-chloropropane]	490000	U	490000	7600	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
Pentachlorophenol	490000	U	490000	66000	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
Phenanthrene	330000	J	490000	1600	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
Phenol	490000	U	490000	8300	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
Pyrene	110000	J	490000	1500	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
2,4,5-Trichlorophenol	490000	U	490000	7100	ug/Kg		05/25/16 14:07	05/26/16 20:02	25
2,4,6-Trichlorophenol	490000	U	490000	9900	ug/Kg		05/25/16 14:07	05/26/16 20:02	25

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	87		57 - 134	05/25/16 14:07	05/26/16 20:02	25
2-Fluorophenol (Surr)	75		64 - 125	05/25/16 14:07	05/26/16 20:02	25
Nitrobenzene-d5 (Surr)	112		63 - 129	05/25/16 14:07	05/26/16 20:02	25
Phenol-d5 (Surr)	80		44 - 140	05/25/16 14:07	05/26/16 20:02	25
Terphenyl-d14 (Surr)	101		51 - 138	05/25/16 14:07	05/26/16 20:02	25
2,4,6-Tribromophenol (Surr)	100		31 - 148	05/25/16 14:07	05/26/16 20:02	25

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	25000	U	25000	9300	ug/Kg		05/25/16 13:34	05/26/16 18:10	50
Aroclor-1221	25000	U	25000	11000	ug/Kg		05/25/16 13:34	05/26/16 18:10	50
Aroclor-1232	25000	U	25000	8300	ug/Kg		05/25/16 13:34	05/26/16 18:10	50
Aroclor-1242	25000	U	25000	14000	ug/Kg		05/25/16 13:34	05/26/16 18:10	50
Aroclor-1248	220000		25000	9800	ug/Kg		05/25/16 13:34	05/26/16 18:10	50
Aroclor-1254	25000	U	25000	5900	ug/Kg		05/25/16 13:34	05/26/16 18:10	50
Aroclor-1260	25000	U	25000	6400	ug/Kg		05/25/16 13:34	05/26/16 18:10	50

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	1330	X	10 - 191	05/25/16 13:34	05/26/16 18:10	50
Tetrachloro-m-xylene	183	X	23 - 160	05/25/16 13:34	05/26/16 18:10	50

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.91	U	0.91	0.44	mg/Kg		06/01/16 13:49	06/02/16 18:13	1
Arsenic	9.3		0.91	0.37	mg/Kg		06/01/16 13:49	06/02/16 18:13	1
Barium	12	J	18	0.37	mg/Kg		06/01/16 13:49	06/02/16 18:13	1

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Client Sample ID: TW-01-01-LNAPL-052016

Lab Sample ID: 240-65173-6

Date Collected: 05/20/16 10:50

Matrix: Waste

Date Received: 05/21/16 09:40

Method: 6010B - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	0.45	U	0.45	0.024	mg/Kg		06/01/16 13:49	06/02/16 18:13	1
Cadmium	0.18	U	0.18	0.019	mg/Kg		06/01/16 13:49	06/02/16 18:13	1
Chromium	10	B	0.45	0.068	mg/Kg		06/01/16 13:49	06/02/16 18:13	1
Cobalt	0.093	J	4.5	0.043	mg/Kg		06/01/16 13:49	06/02/16 18:13	1
Copper	3.3		2.3	0.21	mg/Kg		06/01/16 13:49	06/02/16 18:13	1
Lead	0.96		0.27	0.18	mg/Kg		06/01/16 13:49	06/02/16 18:13	1
Manganese	1.6	B	1.4	0.076	mg/Kg		06/01/16 13:49	06/02/16 18:13	1
Nickel	4.4		3.6	0.073	mg/Kg		06/01/16 13:49	06/03/16 07:21	1
Selenium	0.57		0.45	0.31	mg/Kg		06/01/16 13:49	06/02/16 18:13	1
Silver	0.45	U	0.45	0.057	mg/Kg		06/01/16 13:49	06/02/16 18:13	1
Thallium	0.91	U	0.91	0.12	mg/Kg		06/01/16 13:49	06/02/16 18:13	1
Vanadium	7.3		4.5	0.18	mg/Kg		06/01/16 13:49	06/02/16 18:13	1
Zinc	1.8	U	1.8	0.51	mg/Kg		06/01/16 13:49	06/03/16 07:21	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.11	U	0.11	0.015	mg/Kg		05/25/16 15:00	05/26/16 08:26	1

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Client Sample ID: SB-46-14-LNAPL-052016

Lab Sample ID: 240-65173-7

Date Collected: 05/20/16 11:05

Matrix: Waste

Date Received: 05/21/16 09:40

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	22000	U	22000	940	ug/Kg		05/26/16 10:38	05/27/16 00:37	5
Benzene	890	J	5600	67	ug/Kg		05/26/16 10:38	05/27/16 00:37	5
Bromodichloromethane	5600	U	5600	55	ug/Kg		05/26/16 10:38	05/27/16 00:37	5
Bromoform	5600	U	5600	110	ug/Kg		05/26/16 10:38	05/27/16 00:37	5
Bromomethane	11000	U	11000	160	ug/Kg		05/26/16 10:38	05/27/16 00:37	5
2-Butanone (MEK)	22000	U	22000	240	ug/Kg		05/26/16 10:38	05/27/16 00:37	5
Carbon disulfide	5600	U	5600	67	ug/Kg		05/26/16 10:38	05/27/16 00:37	5
Carbon tetrachloride	5600	U	5600	36	ug/Kg		05/26/16 10:38	05/27/16 00:37	5
Chlorobenzene	5600	U	5600	36	ug/Kg		05/26/16 10:38	05/27/16 00:37	5
Chloroethane	11000	U	11000	340	ug/Kg		05/26/16 10:38	05/27/16 00:37	5
Chloroform	5600	U	5600	49	ug/Kg		05/26/16 10:38	05/27/16 00:37	5
Chloromethane	11000	U	11000	78	ug/Kg		05/26/16 10:38	05/27/16 00:37	5
cis-1,2-Dichloroethene	5600	U	5600	38	ug/Kg		05/26/16 10:38	05/27/16 00:37	5
cis-1,3-Dichloropropene	5600	U	5600	44	ug/Kg		05/26/16 10:38	05/27/16 00:37	5
Cyclohexane	9500	J *	11000	220	ug/Kg		05/26/16 10:38	05/27/16 00:37	5
Dibromochloromethane	5600	U	5600	67	ug/Kg		05/26/16 10:38	05/27/16 00:37	5
1,2-Dibromo-3-Chloropropane	5600	U	5600	280	ug/Kg		05/26/16 10:38	05/27/16 00:37	5
1,2-Dibromoethane	5600	U	5600	56	ug/Kg		05/26/16 10:38	05/27/16 00:37	5
1,2-Dichlorobenzene	5600	U	5600	48	ug/Kg		05/26/16 10:38	05/27/16 00:37	5
1,3-Dichlorobenzene	5600	U	5600	27	ug/Kg		05/26/16 10:38	05/27/16 00:37	5
1,4-Dichlorobenzene	5600	U	5600	44	ug/Kg		05/26/16 10:38	05/27/16 00:37	5
Dichlorodifluoromethane	11000	U	11000	89	ug/Kg		05/26/16 10:38	05/27/16 00:37	5
1,1-Dichloroethane	5600	U	5600	94	ug/Kg		05/26/16 10:38	05/27/16 00:37	5
1,2-Dichloroethane	5600	U	5600	56	ug/Kg		05/26/16 10:38	05/27/16 00:37	5
1,1-Dichloroethene	5600	U	5600	100	ug/Kg		05/26/16 10:38	05/27/16 00:37	5
1,2-Dichloropropane	5600	U	5600	46	ug/Kg		05/26/16 10:38	05/27/16 00:37	5
Ethylbenzene	30000		5600	30	ug/Kg		05/26/16 10:38	05/27/16 00:37	5
2-Hexanone	22000	U	22000	110	ug/Kg		05/26/16 10:38	05/27/16 00:37	5
Isopropylbenzene	16000		5600	36	ug/Kg		05/26/16 10:38	05/27/16 00:37	5
Methyl acetate	11000	U	11000	140	ug/Kg		05/26/16 10:38	05/27/16 00:37	5
Methylcyclohexane	31000		5600	67	ug/Kg		05/26/16 10:38	05/27/16 00:37	5
Methylene Chloride	5600	U	5600	430	ug/Kg		05/26/16 10:38	05/27/16 00:37	5
4-Methyl-2-pentanone (MIBK)	22000	U	22000	270	ug/Kg		05/26/16 10:38	05/27/16 00:37	5
Methyl tert-butyl ether	22000	U	22000	39	ug/Kg		05/26/16 10:38	05/27/16 00:37	5
Styrene	5600	U	5600	31	ug/Kg		05/26/16 10:38	05/27/16 00:37	5
1,1,2,2-Tetrachloroethane	5600	U	5600	49	ug/Kg		05/26/16 10:38	05/27/16 00:37	5
Tetrachloroethene	5600	U	5600	67	ug/Kg		05/26/16 10:38	05/27/16 00:37	5
Toluene	1300	J	5600	94	ug/Kg		05/26/16 10:38	05/27/16 00:37	5
trans-1,2-Dichloroethene	5600	U	5600	51	ug/Kg		05/26/16 10:38	05/27/16 00:37	5
trans-1,3-Dichloropropene	5600	U	5600	110	ug/Kg		05/26/16 10:38	05/27/16 00:37	5
1,2,4-Trichlorobenzene	5600	U	5600	41	ug/Kg		05/26/16 10:38	05/27/16 00:37	5
1,1,1-Trichloroethane	5600	U	5600	120	ug/Kg		05/26/16 10:38	05/27/16 00:37	5
1,1,2-Trichloroethane	5600	U	5600	67	ug/Kg		05/26/16 10:38	05/27/16 00:37	5
Trichloroethene	5600	U	5600	54	ug/Kg		05/26/16 10:38	05/27/16 00:37	5
Trichlorofluoromethane	11000	U	11000	89	ug/Kg		05/26/16 10:38	05/27/16 00:37	5
1,1,2-Trichloro-1,2,2-trifluoroethane	11000	U	11000	220	ug/Kg		05/26/16 10:38	05/27/16 00:37	5
Vinyl chloride	11000	U	11000	100	ug/Kg		05/26/16 10:38	05/27/16 00:37	5
Xylenes, Total	230000		11000	34	ug/Kg		05/26/16 10:38	05/27/16 00:37	5

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Client Sample ID: SB-46-14-LNAPL-052016

Lab Sample ID: 240-65173-7

Date Collected: 05/20/16 11:05

Matrix: Waste

Date Received: 05/21/16 09:40

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	85		26 - 141	05/26/16 10:38	05/27/16 00:37	5
Dibromofluoromethane (Surr)	69		30 - 122	05/26/16 10:38	05/27/16 00:37	5
1,2-Dichloroethane-d4 (Surr)	70		39 - 128	05/26/16 10:38	05/27/16 00:37	5
Toluene-d8 (Surr)	81		33 - 134	05/26/16 10:38	05/27/16 00:37	5

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	66000	J	440000	1200	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
Acenaphthylene	26000	J	440000	1900	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
Acetophenone	440000	U	440000	7300	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
Anthracene	440000	U	440000	3100	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
Atrazine	440000	U	440000	15000	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
Benzaldehyde	440000	U	440000	9200	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
Benzo[a]anthracene	30000	J	440000	1900	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
Benzo[a]pyrene	440000	U	440000	3100	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
Benzo[b]fluoranthene	22000	J	440000	3100	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
Benzo[g,h,i]perylene	440000	U	440000	2400	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
Benzo[k]fluoranthene	440000	U	440000	3100	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
1,1'-Biphenyl	98000	J	440000	9600	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
Bis(2-chloroethoxy)methane	440000	U	440000	21000	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
Bis(2-chloroethyl)ether	440000	U	440000	5400	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
Bis(2-ethylhexyl) phthalate	440000		440000	21000	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
4-Bromophenyl phenyl ether	440000	U	440000	6200	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
Butyl benzyl phthalate	440000	U	440000	4900	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
Caprolactam	440000	U	440000	10000	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
Carbazole	440000	U	440000	12000	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
4-Chloroaniline	440000	U	440000	6900	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
4-Chloro-3-methylphenol	440000	U	440000	68000	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
2-Chloronaphthalene	440000	U	440000	8400	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
2-Chlorophenol	440000	U	440000	4800	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
4-Chlorophenyl phenyl ether	440000	U	440000	4800	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
Chrysene	50000	J	440000	1300	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
Dibenz(a,h)anthracene	440000	U	440000	2000	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
Dibenzofuran	44000	J	440000	1100	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
3,3'-Dichlorobenzidine	2100000	U	2100000	6500	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
2,4-Dichlorophenol	440000	U	440000	7000	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
Diethyl phthalate	440000	U	440000	8200	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
2,4-Dimethylphenol	440000	U	440000	9000	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
Dimethyl phthalate	440000	U	440000	8500	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
Di-n-butyl phthalate	440000	U	440000	6600	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
4,6-Dinitro-2-methylphenol	2100000	U	2100000	62000	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
2,4-Dinitrophenol	2100000	U	2100000	54000	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
2,4-Dinitrotoluene	440000	U	440000	7600	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
2,6-Dinitrotoluene	440000	U	440000	7700	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
Di-n-octyl phthalate	440000	U	440000	15000	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
Fluoranthene	93000	J	440000	1200	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
Fluorene	130000	J	440000	1700	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
Hexachlorobenzene	440000	U *	440000	1900	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
Hexachlorobutadiene	440000	U	440000	3300	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
Hexachlorocyclopentadiene	2100000	U	2100000	3800	ug/Kg		05/25/16 14:07	05/26/16 20:26	25

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Client Sample ID: SB-46-14-LNAPL-052016

Lab Sample ID: 240-65173-7

Date Collected: 05/20/16 11:05

Matrix: Waste

Date Received: 05/21/16 09:40

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachloroethane	440000	U	440000	6500	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
Indeno[1,2,3-cd]pyrene	440000	U	440000	2700	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
Isophorone	440000	U	440000	4600	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
2-Methylnaphthalene	1700000		440000	1300	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
2-Methylphenol	440000	U	440000	8900	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
3 & 4 Methylphenol	880000	U	880000	27000	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
Naphthalene	270000	J	440000	1200	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
2-Nitroaniline	2100000	U	2100000	6800	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
3-Nitroaniline	2100000	U	2100000	4200	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
4-Nitroaniline	2100000	U	2100000	4800	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
Nitrobenzene	440000	U	440000	8500	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
2-Nitrophenol	440000	U	440000	4500	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
4-Nitrophenol	2100000	U	2100000	110000	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
N-Nitrosodi-n-propylamine	440000	U	440000	10000	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
N-Nitrosodiphenylamine	440000	U	440000	5400	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
2,2'-oxybis[1-chloropropane]	440000	U	440000	6900	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
Pentachlorophenol	440000	U	440000	60000	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
Phenanthrene	290000	J	440000	1500	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
Phenol	440000	U	440000	7600	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
Pyrene	130000	J	440000	1300	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
2,4,5-Trichlorophenol	440000	U	440000	6500	ug/Kg		05/25/16 14:07	05/26/16 20:26	25
2,4,6-Trichlorophenol	440000	U	440000	9000	ug/Kg		05/25/16 14:07	05/26/16 20:26	25

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	84		57 - 134	05/25/16 14:07	05/26/16 20:26	25
2-Fluorophenol (Surr)	64		64 - 125	05/25/16 14:07	05/26/16 20:26	25
Nitrobenzene-d5 (Surr)	0	X	63 - 129	05/25/16 14:07	05/26/16 20:26	25
Phenol-d5 (Surr)	95		44 - 140	05/25/16 14:07	05/26/16 20:26	25
Terphenyl-d14 (Surr)	103		51 - 138	05/25/16 14:07	05/26/16 20:26	25
2,4,6-Tribromophenol (Surr)	105		31 - 148	05/25/16 14:07	05/26/16 20:26	25

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	89000	U	89000	34000	ug/Kg		05/25/16 13:34	05/26/16 18:28	200
Aroclor-1221	89000	U	89000	39000	ug/Kg		05/25/16 13:34	05/26/16 18:28	200
Aroclor-1232	89000	U	89000	30000	ug/Kg		05/25/16 13:34	05/26/16 18:28	200
Aroclor-1242	89000	U	89000	52000	ug/Kg		05/25/16 13:34	05/26/16 18:28	200
Aroclor-1248	1500000		89000	36000	ug/Kg		05/25/16 13:34	05/26/16 18:28	200
Aroclor-1254	89000	U	89000	21000	ug/Kg		05/25/16 13:34	05/26/16 18:28	200
Aroclor-1260	89000	U	89000	23000	ug/Kg		05/25/16 13:34	05/26/16 18:28	200

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	706	X	10 - 191	05/25/16 13:34	05/26/16 18:28	200
Tetrachloro-m-xylene	236	X	23 - 160	05/25/16 13:34	05/26/16 18:28	200

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.98	U	0.98	0.47	mg/Kg		06/01/16 13:49	06/02/16 18:17	1
Arsenic	3.4		0.98	0.40	mg/Kg		06/01/16 13:49	06/02/16 18:17	1
Barium	12	J	20	0.40	mg/Kg		06/01/16 13:49	06/02/16 18:17	1

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Client Sample ID: SB-46-14-LNAPL-052016

Lab Sample ID: 240-65173-7

Date Collected: 05/20/16 11:05

Matrix: Waste

Date Received: 05/21/16 09:40

Method: 6010B - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	0.49	U	0.49	0.025	mg/Kg		06/01/16 13:49	06/02/16 18:17	1
Cadmium	0.028	J	0.20	0.021	mg/Kg		06/01/16 13:49	06/02/16 18:17	1
Chromium	8.3	B	0.49	0.074	mg/Kg		06/01/16 13:49	06/02/16 18:17	1
Cobalt	4.9	U	4.9	0.046	mg/Kg		06/01/16 13:49	06/02/16 18:17	1
Copper	1.5	J	2.5	0.23	mg/Kg		06/01/16 13:49	06/02/16 18:17	1
Lead	1.7		0.29	0.20	mg/Kg		06/01/16 13:49	06/02/16 18:17	1
Manganese	2.2	B	1.5	0.082	mg/Kg		06/01/16 13:49	06/02/16 18:17	1
Nickel	2.0	J	3.9	0.078	mg/Kg		06/01/16 13:49	06/03/16 07:25	1
Selenium	0.49	U	0.49	0.33	mg/Kg		06/01/16 13:49	06/02/16 18:17	1
Silver	0.49	U	0.49	0.062	mg/Kg		06/01/16 13:49	06/02/16 18:17	1
Thallium	0.98	U	0.98	0.13	mg/Kg		06/01/16 13:49	06/02/16 18:17	1
Vanadium	2.2	J	4.9	0.20	mg/Kg		06/01/16 13:49	06/02/16 18:17	1
Zinc	2.0	U	2.0	0.55	mg/Kg		06/01/16 13:49	06/03/16 07:25	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.11	U	0.11	0.016	mg/Kg		05/25/16 15:00	05/26/16 08:33	1

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Client Sample ID: SB-43-14-LNAPL-052016

Lab Sample ID: 240-65173-8

Date Collected: 05/20/16 11:10

Matrix: Waste

Date Received: 05/21/16 09:40

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	4600	U	4600	200	ug/Kg		05/26/16 10:38	05/26/16 20:27	1
Benzene	1100		1100	14	ug/Kg		05/26/16 10:38	05/26/16 20:27	1
Bromodichloromethane	1100	U	1100	11	ug/Kg		05/26/16 10:38	05/26/16 20:27	1
Bromoform	1100	U	1100	22	ug/Kg		05/26/16 10:38	05/26/16 20:27	1
Bromomethane	2300	U	2300	33	ug/Kg		05/26/16 10:38	05/26/16 20:27	1
2-Butanone (MEK)	4600	U	4600	49	ug/Kg		05/26/16 10:38	05/26/16 20:27	1
Carbon disulfide	1100	U	1100	14	ug/Kg		05/26/16 10:38	05/26/16 20:27	1
Carbon tetrachloride	1100	U	1100	7.4	ug/Kg		05/26/16 10:38	05/26/16 20:27	1
Chlorobenzene	1100	U	1100	7.4	ug/Kg		05/26/16 10:38	05/26/16 20:27	1
Chloroethane	2300	U	2300	70	ug/Kg		05/26/16 10:38	05/26/16 20:27	1
Chloroform	1100	U	1100	10	ug/Kg		05/26/16 10:38	05/26/16 20:27	1
Chloromethane	2300	U	2300	16	ug/Kg		05/26/16 10:38	05/26/16 20:27	1
cis-1,2-Dichloroethene	1100	U	1100	7.9	ug/Kg		05/26/16 10:38	05/26/16 20:27	1
cis-1,3-Dichloropropene	1100	U	1100	9.1	ug/Kg		05/26/16 10:38	05/26/16 20:27	1
Cyclohexane	4600	*	2300	46	ug/Kg		05/26/16 10:38	05/26/16 20:27	1
Dibromochloromethane	1100	U	1100	14	ug/Kg		05/26/16 10:38	05/26/16 20:27	1
1,2-Dibromo-3-Chloropropane	1100	U	1100	57	ug/Kg		05/26/16 10:38	05/26/16 20:27	1
1,2-Dibromoethane	1100	U	1100	11	ug/Kg		05/26/16 10:38	05/26/16 20:27	1
1,2-Dichlorobenzene	1100	U	1100	9.9	ug/Kg		05/26/16 10:38	05/26/16 20:27	1
1,3-Dichlorobenzene	1100	U	1100	5.5	ug/Kg		05/26/16 10:38	05/26/16 20:27	1
1,4-Dichlorobenzene	1100	U	1100	9.2	ug/Kg		05/26/16 10:38	05/26/16 20:27	1
Dichlorodifluoromethane	2300	U	2300	18	ug/Kg		05/26/16 10:38	05/26/16 20:27	1
1,1-Dichloroethane	250	J	1100	20	ug/Kg		05/26/16 10:38	05/26/16 20:27	1
1,2-Dichloroethane	1100	U	1100	11	ug/Kg		05/26/16 10:38	05/26/16 20:27	1
1,1-Dichloroethene	1100	U	1100	21	ug/Kg		05/26/16 10:38	05/26/16 20:27	1
1,2-Dichloropropane	1100	U	1100	9.4	ug/Kg		05/26/16 10:38	05/26/16 20:27	1
Ethylbenzene	37000		1100	6.2	ug/Kg		05/26/16 10:38	05/26/16 20:27	1
2-Hexanone	4600	U	4600	23	ug/Kg		05/26/16 10:38	05/26/16 20:27	1
Isopropylbenzene	9200		1100	7.5	ug/Kg		05/26/16 10:38	05/26/16 20:27	1
Methyl acetate	2300	U	2300	29	ug/Kg		05/26/16 10:38	05/26/16 20:27	1
Methylcyclohexane	50000		1100	14	ug/Kg		05/26/16 10:38	05/26/16 20:27	1
Methylene Chloride	1100	U	1100	89	ug/Kg		05/26/16 10:38	05/26/16 20:27	1
4-Methyl-2-pentanone (MIBK)	4600	U	4600	55	ug/Kg		05/26/16 10:38	05/26/16 20:27	1
Methyl tert-butyl ether	4600	U	4600	8.2	ug/Kg		05/26/16 10:38	05/26/16 20:27	1
Styrene	1100	U	1100	6.4	ug/Kg		05/26/16 10:38	05/26/16 20:27	1
1,1,2,2-Tetrachloroethane	1100	U	1100	10	ug/Kg		05/26/16 10:38	05/26/16 20:27	1
Tetrachloroethene	1100	U	1100	14	ug/Kg		05/26/16 10:38	05/26/16 20:27	1
Toluene	4700		1100	20	ug/Kg		05/26/16 10:38	05/26/16 20:27	1
trans-1,2-Dichloroethene	1100	U	1100	11	ug/Kg		05/26/16 10:38	05/26/16 20:27	1
trans-1,3-Dichloropropene	1100	U	1100	23	ug/Kg		05/26/16 10:38	05/26/16 20:27	1
1,2,4-Trichlorobenzene	1100	U	1100	8.4	ug/Kg		05/26/16 10:38	05/26/16 20:27	1
1,1,1-Trichloroethane	1100	U	1100	24	ug/Kg		05/26/16 10:38	05/26/16 20:27	1
1,1,2-Trichloroethane	1100	U	1100	14	ug/Kg		05/26/16 10:38	05/26/16 20:27	1
Trichloroethene	1100	U	1100	11	ug/Kg		05/26/16 10:38	05/26/16 20:27	1
Trichlorofluoromethane	2300	U	2300	18	ug/Kg		05/26/16 10:38	05/26/16 20:27	1
1,1,2-Trichloro-1,2,2-trifluoroethane	2300	U	2300	45	ug/Kg		05/26/16 10:38	05/26/16 20:27	1
Vinyl chloride	2300	U	2300	21	ug/Kg		05/26/16 10:38	05/26/16 20:27	1
Xylenes, Total	48000		2300	7.1	ug/Kg		05/26/16 10:38	05/26/16 20:27	1

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Client Sample ID: SB-43-14-LNAPL-052016

Lab Sample ID: 240-65173-8

Date Collected: 05/20/16 11:10

Matrix: Waste

Date Received: 05/21/16 09:40

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		26 - 141	05/26/16 10:38	05/26/16 20:27	1
Dibromofluoromethane (Surr)	78		30 - 122	05/26/16 10:38	05/26/16 20:27	1
1,2-Dichloroethane-d4 (Surr)	73		39 - 128	05/26/16 10:38	05/26/16 20:27	1
Toluene-d8 (Surr)	91		33 - 134	05/26/16 10:38	05/26/16 20:27	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	71000	J	500000	1400	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
Acenaphthylene	17000	J	500000	2100	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
Acetophenone	500000	U F1	500000	8200	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
Anthracene	36000	J	500000	3400	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
Atrazine	500000	U	500000	16000	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
Benzaldehyde	500000	U	500000	10000	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
Benzo[a]anthracene	42000	J	500000	2100	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
Benzo[a]pyrene	36000	J	500000	3400	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
Benzo[b]fluoranthene	49000	J	500000	3400	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
Benzo[g,h,i]perylene	32000	J	500000	2700	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
Benzo[k]fluoranthene	500000	U	500000	3400	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
1,1'-Biphenyl	83000	J F1	500000	11000	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
Bis(2-chloroethoxy)methane	500000	U F1	500000	24000	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
Bis(2-chloroethyl)ether	500000	U	500000	6100	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
Bis(2-ethylhexyl) phthalate	110000	J	500000	24000	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
4-Bromophenyl phenyl ether	500000	U	500000	7000	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
Butyl benzyl phthalate	500000	U F1	500000	5500	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
Caprolactam	500000	U F1	500000	12000	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
Carbazole	500000	U F1	500000	14000	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
4-Chloroaniline	500000	U F1 F2	500000	7700	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
4-Chloro-3-methylphenol	500000	U	500000	76000	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
2-Chloronaphthalene	500000	U	500000	9400	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
2-Chlorophenol	500000	U	500000	5300	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
4-Chlorophenyl phenyl ether	500000	U F1 F2	500000	5300	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
Chrysene	72000	J	500000	1500	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
Dibenz(a,h)anthracene	500000	U	500000	2200	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
Dibenzofuran	500000	U	500000	1200	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
3,3'-Dichlorobenzidine	2400000	U	2400000	7300	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
2,4-Dichlorophenol	500000	U	500000	7900	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
Diethyl phthalate	500000	U F1	500000	9200	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
2,4-Dimethylphenol	500000	U F1	500000	10000	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
Dimethyl phthalate	500000	U	500000	9500	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
Di-n-butyl phthalate	500000	U F1	500000	7400	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
4,6-Dinitro-2-methylphenol	2400000	U F1	2400000	70000	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
2,4-Dinitrophenol	2400000	U F1	2400000	61000	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
2,4-Dinitrotoluene	500000	U F1	500000	8500	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
2,6-Dinitrotoluene	500000	U F1	500000	8600	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
Di-n-octyl phthalate	500000	U F2	500000	16000	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
Fluoranthene	150000	J	500000	1400	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
Fluorene	130000	J F1	500000	1900	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
Hexachlorobenzene	500000	U *	500000	2100	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
Hexachlorobutadiene	500000	U	500000	3700	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
Hexachlorocyclopentadiene	2400000	U F1	2400000	4300	ug/Kg		05/25/16 14:07	05/26/16 17:18	25

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Client Sample ID: SB-43-14-LNAPL-052016

Lab Sample ID: 240-65173-8

Date Collected: 05/20/16 11:10

Matrix: Waste

Date Received: 05/21/16 09:40

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachloroethane	500000	U F1	500000	7300	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
Indeno[1,2,3-cd]pyrene	500000	U	500000	3000	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
Isophorone	500000	U F1	500000	5200	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
2-Methylnaphthalene	1000000		500000	1500	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
2-Methylphenol	500000	U	500000	10000	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
3 & 4 Methylphenol	990000	U	990000	30000	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
Naphthalene	220000 J		500000	1300	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
2-Nitroaniline	2400000	U F1	2400000	7600	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
3-Nitroaniline	2400000	U F1	2400000	4800	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
4-Nitroaniline	2400000	U F1	2400000	5300	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
Nitrobenzene	500000	U F1	500000	9500	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
2-Nitrophenol	500000	U F1	500000	5000	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
4-Nitrophenol	2400000	U	2400000	120000	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
N-Nitrosodi-n-propylamine	500000	U F1	500000	11000	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
N-Nitrosodiphenylamine	500000	U F1	500000	6100	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
2,2'-oxybis[1-chloropropane]	500000	U	500000	7700	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
Pentachlorophenol	500000	U F1	500000	67000	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
Phenanthrene	270000 J		500000	1600	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
Phenol	500000	U	500000	8500	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
Pyrene	200000 J		500000	1500	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
2,4,5-Trichlorophenol	500000	U	500000	7300	ug/Kg		05/25/16 14:07	05/26/16 17:18	25
2,4,6-Trichlorophenol	500000	U	500000	10000	ug/Kg		05/25/16 14:07	05/26/16 17:18	25

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	123		57 - 134	05/25/16 14:07	05/26/16 17:18	25
2-Fluorophenol (Surr)	90		64 - 125	05/25/16 14:07	05/26/16 17:18	25
Nitrobenzene-d5 (Surr)	128		63 - 129	05/25/16 14:07	05/26/16 17:18	25
Phenol-d5 (Surr)	107		44 - 140	05/25/16 14:07	05/26/16 17:18	25
Terphenyl-d14 (Surr)	132		51 - 138	05/25/16 14:07	05/26/16 17:18	25
2,4,6-Tribromophenol (Surr)	123		31 - 148	05/25/16 14:07	05/26/16 17:18	25

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	49000	U	49000	19000	ug/Kg		05/25/16 13:34	05/26/16 18:45	100
Aroclor-1221	49000	U	49000	22000	ug/Kg		05/25/16 13:34	05/26/16 18:45	100
Aroclor-1232	49000	U	49000	17000	ug/Kg		05/25/16 13:34	05/26/16 18:45	100
Aroclor-1242	49000	U	49000	28000	ug/Kg		05/25/16 13:34	05/26/16 18:45	100
Aroclor-1248	1000000		49000	20000	ug/Kg		05/25/16 13:34	05/26/16 18:45	100
Aroclor-1254	49000	U	49000	12000	ug/Kg		05/25/16 13:34	05/26/16 18:45	100
Aroclor-1260	49000	U	49000	13000	ug/Kg		05/25/16 13:34	05/26/16 18:45	100

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	505	X	10 - 191	05/25/16 13:34	05/26/16 18:45	100
Tetrachloro-m-xylene	218	X	23 - 160	05/25/16 13:34	05/26/16 18:45	100

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.88	U	0.88	0.42	mg/Kg		06/01/16 13:49	06/02/16 18:21	1
Arsenic	0.48 J		0.88	0.36	mg/Kg		06/01/16 13:49	06/02/16 18:21	1
Barium	18		18	0.36	mg/Kg		06/01/16 13:49	06/02/16 18:21	1

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Client Sample ID: SB-43-14-LNAPL-052016

Lab Sample ID: 240-65173-8

Date Collected: 05/20/16 11:10

Matrix: Waste

Date Received: 05/21/16 09:40

Method: 6010B - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	0.44	U	0.44	0.023	mg/Kg		06/01/16 13:49	06/02/16 18:21	1
Cadmium	0.037	J	0.18	0.018	mg/Kg		06/01/16 13:49	06/02/16 18:21	1
Chromium	7.0	B	0.44	0.066	mg/Kg		06/01/16 13:49	06/02/16 18:21	1
Cobalt	0.047	J	4.4	0.041	mg/Kg		06/01/16 13:49	06/02/16 18:21	1
Copper	48		2.2	0.20	mg/Kg		06/01/16 13:49	06/02/16 18:21	1
Lead	8.0		0.26	0.18	mg/Kg		06/01/16 13:49	06/02/16 18:21	1
Manganese	3.3	B	1.3	0.074	mg/Kg		06/01/16 13:49	06/02/16 18:21	1
Nickel	2.9	J	3.5	0.070	mg/Kg		06/01/16 13:49	06/03/16 07:29	1
Selenium	0.44	U	0.44	0.30	mg/Kg		06/01/16 13:49	06/02/16 18:21	1
Silver	0.44	U	0.44	0.055	mg/Kg		06/01/16 13:49	06/02/16 18:21	1
Thallium	0.88	U	0.88	0.11	mg/Kg		06/01/16 13:49	06/02/16 18:21	1
Vanadium	3.2	J	4.4	0.18	mg/Kg		06/01/16 13:49	06/02/16 18:21	1
Zinc	2.4		1.8	0.49	mg/Kg		06/01/16 13:49	06/03/16 07:29	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.031	J	0.12	0.016	mg/Kg		05/25/16 15:00	05/26/16 08:35	1

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Client Sample ID: RWW8-129-LNAPL-052016

Lab Sample ID: 240-65173-9

Date Collected: 05/20/16 11:35

Matrix: Waste

Date Received: 05/21/16 09:40

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	4800	U	4800	200	ug/Kg		05/26/16 10:38	05/26/16 20:49	1
Benzene	1200	U	1200	14	ug/Kg		05/26/16 10:38	05/26/16 20:49	1
Bromodichloromethane	1200	U	1200	12	ug/Kg		05/26/16 10:38	05/26/16 20:49	1
Bromoform	1200	U	1200	23	ug/Kg		05/26/16 10:38	05/26/16 20:49	1
Bromomethane	2400	U	2400	35	ug/Kg		05/26/16 10:38	05/26/16 20:49	1
2-Butanone (MEK)	4800	U	4800	51	ug/Kg		05/26/16 10:38	05/26/16 20:49	1
Carbon disulfide	1200	U	1200	14	ug/Kg		05/26/16 10:38	05/26/16 20:49	1
Carbon tetrachloride	1200	U	1200	7.6	ug/Kg		05/26/16 10:38	05/26/16 20:49	1
Chlorobenzene	1200	U	1200	7.6	ug/Kg		05/26/16 10:38	05/26/16 20:49	1
Chloroethane	2400	U	2400	73	ug/Kg		05/26/16 10:38	05/26/16 20:49	1
Chloroform	1200	U	1200	10	ug/Kg		05/26/16 10:38	05/26/16 20:49	1
Chloromethane	2400	U	2400	17	ug/Kg		05/26/16 10:38	05/26/16 20:49	1
cis-1,2-Dichloroethene	9900		1200	8.2	ug/Kg		05/26/16 10:38	05/26/16 20:49	1
cis-1,3-Dichloropropene	1200	U	1200	9.4	ug/Kg		05/26/16 10:38	05/26/16 20:49	1
Cyclohexane	2400	U *	2400	48	ug/Kg		05/26/16 10:38	05/26/16 20:49	1
Dibromochloromethane	1200	U	1200	14	ug/Kg		05/26/16 10:38	05/26/16 20:49	1
1,2-Dibromo-3-Chloropropane	1200	U	1200	60	ug/Kg		05/26/16 10:38	05/26/16 20:49	1
1,2-Dibromoethane	1200	U	1200	12	ug/Kg		05/26/16 10:38	05/26/16 20:49	1
1,2-Dichlorobenzene	1200	U	1200	10	ug/Kg		05/26/16 10:38	05/26/16 20:49	1
1,3-Dichlorobenzene	1200	U	1200	5.7	ug/Kg		05/26/16 10:38	05/26/16 20:49	1
1,4-Dichlorobenzene	1200	U	1200	9.5	ug/Kg		05/26/16 10:38	05/26/16 20:49	1
Dichlorodifluoromethane	2400	U	2400	19	ug/Kg		05/26/16 10:38	05/26/16 20:49	1
1,1-Dichloroethane	1200	U	1200	20	ug/Kg		05/26/16 10:38	05/26/16 20:49	1
1,2-Dichloroethane	1200	U	1200	12	ug/Kg		05/26/16 10:38	05/26/16 20:49	1
1,1-Dichloroethene	1200	U	1200	21	ug/Kg		05/26/16 10:38	05/26/16 20:49	1
1,2-Dichloropropane	1200	U	1200	9.8	ug/Kg		05/26/16 10:38	05/26/16 20:49	1
Ethylbenzene	240 J		1200	6.4	ug/Kg		05/26/16 10:38	05/26/16 20:49	1
2-Hexanone	4800	U	4800	24	ug/Kg		05/26/16 10:38	05/26/16 20:49	1
Isopropylbenzene	1200	U	1200	7.7	ug/Kg		05/26/16 10:38	05/26/16 20:49	1
Methyl acetate	2400	U	2400	30	ug/Kg		05/26/16 10:38	05/26/16 20:49	1
Methylcyclohexane	1200		1200	14	ug/Kg		05/26/16 10:38	05/26/16 20:49	1
Methylene Chloride	1200	U	1200	92	ug/Kg		05/26/16 10:38	05/26/16 20:49	1
4-Methyl-2-pentanone (MIBK)	4800	U	4800	57	ug/Kg		05/26/16 10:38	05/26/16 20:49	1
Methyl tert-butyl ether	4800	U	4800	8.5	ug/Kg		05/26/16 10:38	05/26/16 20:49	1
Styrene	1200	U	1200	6.7	ug/Kg		05/26/16 10:38	05/26/16 20:49	1
1,1,2,2-Tetrachloroethane	1200	U	1200	11	ug/Kg		05/26/16 10:38	05/26/16 20:49	1
Tetrachloroethene	1200	U	1200	14	ug/Kg		05/26/16 10:38	05/26/16 20:49	1
Toluene	1200	U	1200	20	ug/Kg		05/26/16 10:38	05/26/16 20:49	1
trans-1,2-Dichloroethene	14000		1200	11	ug/Kg		05/26/16 10:38	05/26/16 20:49	1
trans-1,3-Dichloropropene	1200	U	1200	24	ug/Kg		05/26/16 10:38	05/26/16 20:49	1
1,2,4-Trichlorobenzene	1200	U	1200	8.7	ug/Kg		05/26/16 10:38	05/26/16 20:49	1
1,1,1-Trichloroethane	1200	U	1200	25	ug/Kg		05/26/16 10:38	05/26/16 20:49	1
1,1,2-Trichloroethane	1200	U	1200	14	ug/Kg		05/26/16 10:38	05/26/16 20:49	1
Trichloroethene	49000		1200	12	ug/Kg		05/26/16 10:38	05/26/16 20:49	1
Trichlorofluoromethane	2400	U	2400	19	ug/Kg		05/26/16 10:38	05/26/16 20:49	1
1,1,2-Trichloro-1,2,2-trifluoroethane	2400	U	2400	46	ug/Kg		05/26/16 10:38	05/26/16 20:49	1
Vinyl chloride	1800 J		2400	21	ug/Kg		05/26/16 10:38	05/26/16 20:49	1
Xylenes, Total	1200 J		2400	7.4	ug/Kg		05/26/16 10:38	05/26/16 20:49	1

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Client Sample ID: RWW8-129-LNAPL-052016

Lab Sample ID: 240-65173-9

Date Collected: 05/20/16 11:35

Matrix: Waste

Date Received: 05/21/16 09:40

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	82		26 - 141	05/26/16 10:38	05/26/16 20:49	1
Dibromofluoromethane (Surr)	80		30 - 122	05/26/16 10:38	05/26/16 20:49	1
1,2-Dichloroethane-d4 (Surr)	72		39 - 128	05/26/16 10:38	05/26/16 20:49	1
Toluene-d8 (Surr)	82		33 - 134	05/26/16 10:38	05/26/16 20:49	1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	980	U	980	370	ug/Kg		05/25/16 13:34	05/27/16 13:11	2
Aroclor-1221	980	U	980	430	ug/Kg		05/25/16 13:34	05/27/16 13:11	2
Aroclor-1232	980	U	980	330	ug/Kg		05/25/16 13:34	05/27/16 13:11	2
Aroclor-1242	13000		980	570	ug/Kg		05/25/16 13:34	05/27/16 13:11	2
Aroclor-1248	980	U	980	390	ug/Kg		05/25/16 13:34	05/27/16 13:11	2
Aroclor-1254	980	U	980	240	ug/Kg		05/25/16 13:34	05/27/16 13:11	2
Aroclor-1260	5100		980	250	ug/Kg		05/25/16 13:34	05/27/16 13:11	2

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	96		10 - 191	05/25/16 13:34	05/27/16 13:11	2
Tetrachloro-m-xylene	92		23 - 160	05/25/16 13:34	05/27/16 13:11	2

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.026	J B	0.11	0.016	mg/Kg		05/26/16 15:00	05/27/16 16:32	1

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Client Sample ID: TW-09-01-LNAPL-052016

Lab Sample ID: 240-65173-10

Date Collected: 05/20/16 12:20

Matrix: Waste

Date Received: 05/21/16 09:40

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	470	U	470	180	ug/Kg		05/25/16 13:34	05/26/16 19:21	1
Aroclor-1221	470	U	470	210	ug/Kg		05/25/16 13:34	05/26/16 19:21	1
Aroclor-1232	470	U	470	160	ug/Kg		05/25/16 13:34	05/26/16 19:21	1
Aroclor-1242	470	U	470	270	ug/Kg		05/25/16 13:34	05/26/16 19:21	1
Aroclor-1248	470	U	470	190	ug/Kg		05/25/16 13:34	05/26/16 19:21	1
Aroclor-1254	470	U	470	110	ug/Kg		05/25/16 13:34	05/26/16 19:21	1
Aroclor-1260	470	U	470	120	ug/Kg		05/25/16 13:34	05/26/16 19:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	83		10 - 191	05/25/16 13:34	05/26/16 19:21	1
Tetrachloro-m-xylene	48		23 - 160	05/25/16 13:34	05/26/16 19:21	1

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Client Sample ID: MWW8-65-LNAPL-052016

Lab Sample ID: 240-65173-11

Date Collected: 05/20/16 12:45

Matrix: Waste

Date Received: 05/21/16 09:40

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	4700	U	4700	200	ug/Kg		05/26/16 10:38	05/26/16 21:11	1
Benzene	1200	U	1200	14	ug/Kg		05/26/16 10:38	05/26/16 21:11	1
Bromodichloromethane	1200	U	1200	12	ug/Kg		05/26/16 10:38	05/26/16 21:11	1
Bromoform	1200	U	1200	22	ug/Kg		05/26/16 10:38	05/26/16 21:11	1
Bromomethane	2400	U	2400	34	ug/Kg		05/26/16 10:38	05/26/16 21:11	1
2-Butanone (MEK)	4700	U	4700	51	ug/Kg		05/26/16 10:38	05/26/16 21:11	1
Carbon disulfide	1200	U	1200	14	ug/Kg		05/26/16 10:38	05/26/16 21:11	1
Carbon tetrachloride	1200	U	1200	7.5	ug/Kg		05/26/16 10:38	05/26/16 21:11	1
Chlorobenzene	1200	U	1200	7.5	ug/Kg		05/26/16 10:38	05/26/16 21:11	1
Chloroethane	2400	U	2400	72	ug/Kg		05/26/16 10:38	05/26/16 21:11	1
Chloroform	1200	U	1200	10	ug/Kg		05/26/16 10:38	05/26/16 21:11	1
Chloromethane	2400	U	2400	16	ug/Kg		05/26/16 10:38	05/26/16 21:11	1
cis-1,2-Dichloroethene	1200	U	1200	8.1	ug/Kg		05/26/16 10:38	05/26/16 21:11	1
cis-1,3-Dichloropropene	1200	U	1200	9.3	ug/Kg		05/26/16 10:38	05/26/16 21:11	1
Cyclohexane	2400	U *	2400	47	ug/Kg		05/26/16 10:38	05/26/16 21:11	1
Dibromochloromethane	1200	U	1200	14	ug/Kg		05/26/16 10:38	05/26/16 21:11	1
1,2-Dibromo-3-Chloropropane	1200	U	1200	59	ug/Kg		05/26/16 10:38	05/26/16 21:11	1
1,2-Dibromoethane	1200	U	1200	12	ug/Kg		05/26/16 10:38	05/26/16 21:11	1
1,2-Dichlorobenzene	1200	U	1200	10	ug/Kg		05/26/16 10:38	05/26/16 21:11	1
1,3-Dichlorobenzene	1200	U	1200	5.6	ug/Kg		05/26/16 10:38	05/26/16 21:11	1
1,4-Dichlorobenzene	1200	U	1200	9.4	ug/Kg		05/26/16 10:38	05/26/16 21:11	1
Dichlorodifluoromethane	2400	U	2400	19	ug/Kg		05/26/16 10:38	05/26/16 21:11	1
1,1-Dichloroethane	1200	U	1200	20	ug/Kg		05/26/16 10:38	05/26/16 21:11	1
1,2-Dichloroethane	1200	U	1200	12	ug/Kg		05/26/16 10:38	05/26/16 21:11	1
1,1-Dichloroethene	1200	U	1200	21	ug/Kg		05/26/16 10:38	05/26/16 21:11	1
1,2-Dichloropropane	1200	U	1200	9.6	ug/Kg		05/26/16 10:38	05/26/16 21:11	1
Ethylbenzene	970	J	1200	6.4	ug/Kg		05/26/16 10:38	05/26/16 21:11	1
2-Hexanone	4700	U	4700	24	ug/Kg		05/26/16 10:38	05/26/16 21:11	1
Isopropylbenzene	1700		1200	7.6	ug/Kg		05/26/16 10:38	05/26/16 21:11	1
Methyl acetate	2400	U	2400	29	ug/Kg		05/26/16 10:38	05/26/16 21:11	1
Methylcyclohexane	1800		1200	14	ug/Kg		05/26/16 10:38	05/26/16 21:11	1
Methylene Chloride	1200	U	1200	91	ug/Kg		05/26/16 10:38	05/26/16 21:11	1
4-Methyl-2-pentanone (MIBK)	4700	U	4700	56	ug/Kg		05/26/16 10:38	05/26/16 21:11	1
Methyl tert-butyl ether	4700	U	4700	8.4	ug/Kg		05/26/16 10:38	05/26/16 21:11	1
Styrene	1200	U	1200	6.6	ug/Kg		05/26/16 10:38	05/26/16 21:11	1
1,1,2,2-Tetrachloroethane	1200	U	1200	10	ug/Kg		05/26/16 10:38	05/26/16 21:11	1
Tetrachloroethene	1200	U	1200	14	ug/Kg		05/26/16 10:38	05/26/16 21:11	1
Toluene	160	J	1200	20	ug/Kg		05/26/16 10:38	05/26/16 21:11	1
trans-1,2-Dichloroethene	1200	U	1200	11	ug/Kg		05/26/16 10:38	05/26/16 21:11	1
trans-1,3-Dichloropropene	1200	U	1200	24	ug/Kg		05/26/16 10:38	05/26/16 21:11	1
1,2,4-Trichlorobenzene	1200	U	1200	8.6	ug/Kg		05/26/16 10:38	05/26/16 21:11	1
1,1,1-Trichloroethane	1200	U	1200	25	ug/Kg		05/26/16 10:38	05/26/16 21:11	1
1,1,2-Trichloroethane	1200	U	1200	14	ug/Kg		05/26/16 10:38	05/26/16 21:11	1
Trichloroethene	1200	U	1200	11	ug/Kg		05/26/16 10:38	05/26/16 21:11	1
Trichlorofluoromethane	2400	U	2400	19	ug/Kg		05/26/16 10:38	05/26/16 21:11	1
1,1,2-Trichloro-1,2,2-trifluoroethane	2400	U	2400	46	ug/Kg		05/26/16 10:38	05/26/16 21:11	1
Vinyl chloride	2400	U	2400	21	ug/Kg		05/26/16 10:38	05/26/16 21:11	1
Xylenes, Total	6900		2400	7.3	ug/Kg		05/26/16 10:38	05/26/16 21:11	1

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Client Sample ID: MWW8-65-LNAPL-052016

Lab Sample ID: 240-65173-11

Date Collected: 05/20/16 12:45

Matrix: Waste

Date Received: 05/21/16 09:40

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	83		26 - 141	05/26/16 10:38	05/26/16 21:11	1
Dibromofluoromethane (Surr)	82		30 - 122	05/26/16 10:38	05/26/16 21:11	1
1,2-Dichloroethane-d4 (Surr)	75		39 - 128	05/26/16 10:38	05/26/16 21:11	1
Toluene-d8 (Surr)	81		33 - 134	05/26/16 10:38	05/26/16 21:11	1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	490	U	490	190	ug/Kg		05/25/16 13:34	05/27/16 13:29	1
Aroclor-1221	490	U	490	220	ug/Kg		05/25/16 13:34	05/27/16 13:29	1
Aroclor-1232	490	U	490	170	ug/Kg		05/25/16 13:34	05/27/16 13:29	1
Aroclor-1242	490	U	490	280	ug/Kg		05/25/16 13:34	05/27/16 13:29	1
Aroclor-1248	1600		490	200	ug/Kg		05/25/16 13:34	05/27/16 13:29	1
Aroclor-1254	490	U	490	120	ug/Kg		05/25/16 13:34	05/27/16 13:29	1
Aroclor-1260	940		490	130	ug/Kg		05/25/16 13:34	05/27/16 13:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	120		10 - 191	05/25/16 13:34	05/27/16 13:29	1
Tetrachloro-m-xylene	99		23 - 160	05/25/16 13:34	05/27/16 13:29	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.024	J B	0.11	0.016	mg/Kg		05/26/16 15:00	05/27/16 16:34	1

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Client Sample ID: TW11-02-LNAPL-052016

Lab Sample ID: 240-65173-12

Date Collected: 05/20/16 13:15

Matrix: Waste

Date Received: 05/21/16 09:40

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	4600	U	4600	200	ug/Kg		05/26/16 10:38	05/26/16 21:34	1
Benzene	1100	U	1100	14	ug/Kg		05/26/16 10:38	05/26/16 21:34	1
Bromodichloromethane	1100	U	1100	11	ug/Kg		05/26/16 10:38	05/26/16 21:34	1
Bromoform	1100	U	1100	22	ug/Kg		05/26/16 10:38	05/26/16 21:34	1
Bromomethane	2300	U	2300	33	ug/Kg		05/26/16 10:38	05/26/16 21:34	1
2-Butanone (MEK)	440	J	4600	49	ug/Kg		05/26/16 10:38	05/26/16 21:34	1
Carbon disulfide	1100	U	1100	14	ug/Kg		05/26/16 10:38	05/26/16 21:34	1
Carbon tetrachloride	1100	U	1100	7.4	ug/Kg		05/26/16 10:38	05/26/16 21:34	1
Chlorobenzene	1100	U	1100	7.4	ug/Kg		05/26/16 10:38	05/26/16 21:34	1
Chloroethane	2300	U	2300	70	ug/Kg		05/26/16 10:38	05/26/16 21:34	1
Chloroform	1100	U	1100	10	ug/Kg		05/26/16 10:38	05/26/16 21:34	1
Chloromethane	2300	U	2300	16	ug/Kg		05/26/16 10:38	05/26/16 21:34	1
cis-1,2-Dichloroethene	1100	U	1100	7.9	ug/Kg		05/26/16 10:38	05/26/16 21:34	1
cis-1,3-Dichloropropene	1100	U	1100	9.1	ug/Kg		05/26/16 10:38	05/26/16 21:34	1
Cyclohexane	2300	U *	2300	46	ug/Kg		05/26/16 10:38	05/26/16 21:34	1
Dibromochloromethane	1100	U	1100	14	ug/Kg		05/26/16 10:38	05/26/16 21:34	1
1,2-Dibromo-3-Chloropropane	1100	U	1100	57	ug/Kg		05/26/16 10:38	05/26/16 21:34	1
1,2-Dibromoethane	1100	U	1100	11	ug/Kg		05/26/16 10:38	05/26/16 21:34	1
1,2-Dichlorobenzene	1100	U	1100	9.9	ug/Kg		05/26/16 10:38	05/26/16 21:34	1
1,3-Dichlorobenzene	1100	U	1100	5.5	ug/Kg		05/26/16 10:38	05/26/16 21:34	1
1,4-Dichlorobenzene	1100	U	1100	9.2	ug/Kg		05/26/16 10:38	05/26/16 21:34	1
Dichlorodifluoromethane	2300	U	2300	18	ug/Kg		05/26/16 10:38	05/26/16 21:34	1
1,1-Dichloroethane	1100	U	1100	20	ug/Kg		05/26/16 10:38	05/26/16 21:34	1
1,2-Dichloroethane	1100	U	1100	11	ug/Kg		05/26/16 10:38	05/26/16 21:34	1
1,1-Dichloroethene	1100	U	1100	21	ug/Kg		05/26/16 10:38	05/26/16 21:34	1
1,2-Dichloropropane	1100	U	1100	9.4	ug/Kg		05/26/16 10:38	05/26/16 21:34	1
Ethylbenzene	2700		1100	6.2	ug/Kg		05/26/16 10:38	05/26/16 21:34	1
2-Hexanone	4600	U	4600	23	ug/Kg		05/26/16 10:38	05/26/16 21:34	1
Isopropylbenzene	3000		1100	7.5	ug/Kg		05/26/16 10:38	05/26/16 21:34	1
Methyl acetate	2300	U	2300	29	ug/Kg		05/26/16 10:38	05/26/16 21:34	1
Methylcyclohexane	1500		1100	14	ug/Kg		05/26/16 10:38	05/26/16 21:34	1
Methylene Chloride	1100	U	1100	89	ug/Kg		05/26/16 10:38	05/26/16 21:34	1
4-Methyl-2-pentanone (MIBK)	4600	U	4600	55	ug/Kg		05/26/16 10:38	05/26/16 21:34	1
Methyl tert-butyl ether	4600	U	4600	8.2	ug/Kg		05/26/16 10:38	05/26/16 21:34	1
Styrene	1100	U	1100	6.4	ug/Kg		05/26/16 10:38	05/26/16 21:34	1
1,1,2,2-Tetrachloroethane	1100	U	1100	10	ug/Kg		05/26/16 10:38	05/26/16 21:34	1
Tetrachloroethene	1100	U	1100	14	ug/Kg		05/26/16 10:38	05/26/16 21:34	1
Toluene	510	J	1100	20	ug/Kg		05/26/16 10:38	05/26/16 21:34	1
trans-1,2-Dichloroethene	1100	U	1100	11	ug/Kg		05/26/16 10:38	05/26/16 21:34	1
trans-1,3-Dichloropropene	1100	U	1100	23	ug/Kg		05/26/16 10:38	05/26/16 21:34	1
1,2,4-Trichlorobenzene	1100	U	1100	8.4	ug/Kg		05/26/16 10:38	05/26/16 21:34	1
1,1,1-Trichloroethane	1100	U	1100	24	ug/Kg		05/26/16 10:38	05/26/16 21:34	1
1,1,2-Trichloroethane	1100	U	1100	14	ug/Kg		05/26/16 10:38	05/26/16 21:34	1
Trichloroethene	1100	U	1100	11	ug/Kg		05/26/16 10:38	05/26/16 21:34	1
Trichlorofluoromethane	2300	U	2300	18	ug/Kg		05/26/16 10:38	05/26/16 21:34	1
1,1,2-Trichloro-1,2,2-trifluoroethane	2300	U	2300	45	ug/Kg		05/26/16 10:38	05/26/16 21:34	1
Vinyl chloride	2300	U	2300	21	ug/Kg		05/26/16 10:38	05/26/16 21:34	1
Xylenes, Total	12000		2300	7.1	ug/Kg		05/26/16 10:38	05/26/16 21:34	1

TestAmerica Canton

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Client Sample ID: TW11-02-LNAPL-052016

Lab Sample ID: 240-65173-12

Date Collected: 05/20/16 13:15

Matrix: Waste

Date Received: 05/21/16 09:40

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	80		26 - 141	05/26/16 10:38	05/26/16 21:34	1
Dibromofluoromethane (Surr)	78		30 - 122	05/26/16 10:38	05/26/16 21:34	1
1,2-Dichloroethane-d4 (Surr)	70		39 - 128	05/26/16 10:38	05/26/16 21:34	1
Toluene-d8 (Surr)	79		33 - 134	05/26/16 10:38	05/26/16 21:34	1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	500	U	500	190	ug/Kg		05/25/16 13:34	05/27/16 13:47	1
Aroclor-1221	500	U	500	220	ug/Kg		05/25/16 13:34	05/27/16 13:47	1
Aroclor-1232	500	U	500	170	ug/Kg		05/25/16 13:34	05/27/16 13:47	1
Aroclor-1242	500	U	500	290	ug/Kg		05/25/16 13:34	05/27/16 13:47	1
Aroclor-1248	1400		500	200	ug/Kg		05/25/16 13:34	05/27/16 13:47	1
Aroclor-1254	500	U	500	120	ug/Kg		05/25/16 13:34	05/27/16 13:47	1
Aroclor-1260	500	U	500	130	ug/Kg		05/25/16 13:34	05/27/16 13:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	98		10 - 191	05/25/16 13:34	05/27/16 13:47	1
Tetrachloro-m-xylene	94		23 - 160	05/25/16 13:34	05/27/16 13:47	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.10	U	0.10	0.014	mg/Kg		05/25/16 12:55	05/26/16 08:38	1

TestAmerica Canton

Surrogate Summary

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Waste

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		BFB (26-141)	DBFM (30-122)	12DCE (39-128)	TOL (33-134)
240-65173-2	MWM2-29-LNAPL-052016	94	84	79	81
240-65173-3	TWM2-07-LNAPL-052016	83	83	76	85
240-65173-4	MWW10-01-LNAPL-052016	89	82	79	81
240-65173-4 MS	MWW10-01-LNAPL-052016	87	81	78	80
240-65173-4 MSD	MWW10-01-LNAPL-052016	93	89	77	84
240-65173-5	MWW10-08-LNAPL-052016	88	85	75	84
240-65173-6	TW-01-01-LNAPL-052016	83	73	70	80
240-65173-7	SB-46-14-LNAPL-052016	85	69	70	81
240-65173-8	SB-43-14-LNAPL-052016	91	78	73	91
240-65173-9	RWW8-129-LNAPL-052016	82	80	72	82
240-65173-11	MWW8-65-LNAPL-052016	83	82	75	81
240-65173-12	TW11-02-LNAPL-052016	80	78	70	79
LCS 240-232068/2-A	Lab Control Sample	97	86	81	99
MB 240-232068/1-A	Method Blank	87	89	80	94

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
12DCE = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Waste

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		FBP (57-134)	2FP (64-125)	NBZ (63-129)	PHL (44-140)	TPH (51-138)	TBP (31-148)
240-65173-2	MWM2-29-LNAPL-052016	104	83	102	71	113	108
240-65173-3	TWM2-07-LNAPL-052016	186 X	144 X	146 X	168 X	236 X	146
240-65173-4	MWW10-01-LNAPL-052016	137 X	113	131 X	102	157 X	90
240-65173-5	MWW10-08-LNAPL-052016	93	97	67	95	88	0 X
240-65173-6	TW-01-01-LNAPL-052016	87	75	112	80	101	100
240-65173-7	SB-46-14-LNAPL-052016	84	64	0 X	95	103	105
240-65173-8	SB-43-14-LNAPL-052016	123	90	128	107	132	123
240-65173-8 MS	SB-43-14-LNAPL-052016	98	88	0 X	79	112	141
240-65173-8 MSD	SB-43-14-LNAPL-052016	97	88	171 X	103	107	89
LCS 240-231939/11-A	Lab Control Sample	104	100	91	98	113	114
MB 240-231939/10-A	Method Blank	102	98	89	96	99	102

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPH = Terphenyl-d14 (Surr)
TBP = 2,4,6-Tribromophenol (Surr)

TestAmerica Canton

Surrogate Summary

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Waste

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	DCB2 (10-191)	TCX2 (23-160)
240-65173-1	MWM4-06R-LNAPL-052016	0 X	128
240-65173-2	MWM2-29-LNAPL-052016	478 X	292 X
240-65173-3	TWM2-07-LNAPL-052016	149	69
240-65173-4	MWW10-01-LNAPL-052016	211 X	139
240-65173-5	MWW10-08-LNAPL-052016	538 X	134
240-65173-6	TW-01-01-LNAPL-052016	1330 X	183 X
240-65173-7	SB-46-14-LNAPL-052016	706 X	236 X
240-65173-8	SB-43-14-LNAPL-052016	505 X	218 X
240-65173-9	RWW8-129-LNAPL-052016	96	92
240-65173-10	TW-09-01-LNAPL-052016	83	48
240-65173-11	MWW8-65-LNAPL-052016	120	99
240-65173-12	TW11-02-LNAPL-052016	98	94
240-65173-12 MS	TW11-02-LNAPL-052016	119	104
240-65173-12 MSD	TW11-02-LNAPL-052016	97	92
LCS 240-231933/16-A	Lab Control Sample	108	109
MB 240-231933/15-A	Method Blank	85	91

Surrogate Legend

DCB = DCB Decachlorobiphenyl

TCX = Tetrachloro-m-xylene

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 240-232068/1-A

Matrix: Waste

Analysis Batch: 232171

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 232068

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	4000	U	4000	170	ug/Kg		05/26/16 10:38	05/26/16 17:04	1
Benzene	1000	U	1000	12	ug/Kg		05/26/16 10:38	05/26/16 17:04	1
Bromodichloromethane	1000	U	1000	9.9	ug/Kg		05/26/16 10:38	05/26/16 17:04	1
Bromoform	1000	U	1000	19	ug/Kg		05/26/16 10:38	05/26/16 17:04	1
Bromomethane	2000	U	2000	29	ug/Kg		05/26/16 10:38	05/26/16 17:04	1
2-Butanone (MEK)	4000	U	4000	43	ug/Kg		05/26/16 10:38	05/26/16 17:04	1
Carbon disulfide	1000	U	1000	12	ug/Kg		05/26/16 10:38	05/26/16 17:04	1
Carbon tetrachloride	1000	U	1000	6.4	ug/Kg		05/26/16 10:38	05/26/16 17:04	1
Chlorobenzene	1000	U	1000	6.4	ug/Kg		05/26/16 10:38	05/26/16 17:04	1
Chloroethane	2000	U	2000	61	ug/Kg		05/26/16 10:38	05/26/16 17:04	1
Chloroform	1000	U	1000	8.8	ug/Kg		05/26/16 10:38	05/26/16 17:04	1
Chloromethane	2000	U	2000	14	ug/Kg		05/26/16 10:38	05/26/16 17:04	1
cis-1,2-Dichloroethene	1000	U	1000	6.9	ug/Kg		05/26/16 10:38	05/26/16 17:04	1
cis-1,3-Dichloropropene	1000	U	1000	7.9	ug/Kg		05/26/16 10:38	05/26/16 17:04	1
Cyclohexane	2000	U	2000	40	ug/Kg		05/26/16 10:38	05/26/16 17:04	1
Dibromochloromethane	1000	U	1000	12	ug/Kg		05/26/16 10:38	05/26/16 17:04	1
1,2-Dibromo-3-Chloropropane	1000	U	1000	50	ug/Kg		05/26/16 10:38	05/26/16 17:04	1
1,2-Dibromoethane	1000	U	1000	10	ug/Kg		05/26/16 10:38	05/26/16 17:04	1
1,2-Dichlorobenzene	1000	U	1000	8.6	ug/Kg		05/26/16 10:38	05/26/16 17:04	1
1,3-Dichlorobenzene	1000	U	1000	4.8	ug/Kg		05/26/16 10:38	05/26/16 17:04	1
1,4-Dichlorobenzene	1000	U	1000	8.0	ug/Kg		05/26/16 10:38	05/26/16 17:04	1
Dichlorodifluoromethane	2000	U	2000	16	ug/Kg		05/26/16 10:38	05/26/16 17:04	1
1,1-Dichloroethane	1000	U	1000	17	ug/Kg		05/26/16 10:38	05/26/16 17:04	1
1,2-Dichloroethane	1000	U	1000	10	ug/Kg		05/26/16 10:38	05/26/16 17:04	1
1,1-Dichloroethene	1000	U	1000	18	ug/Kg		05/26/16 10:38	05/26/16 17:04	1
1,2-Dichloropropane	1000	U	1000	8.2	ug/Kg		05/26/16 10:38	05/26/16 17:04	1
Ethylbenzene	1000	U	1000	5.4	ug/Kg		05/26/16 10:38	05/26/16 17:04	1
2-Hexanone	4000	U	4000	20	ug/Kg		05/26/16 10:38	05/26/16 17:04	1
Isopropylbenzene	1000	U	1000	6.5	ug/Kg		05/26/16 10:38	05/26/16 17:04	1
Methyl acetate	2000	U	2000	25	ug/Kg		05/26/16 10:38	05/26/16 17:04	1
Methylcyclohexane	1000	U	1000	12	ug/Kg		05/26/16 10:38	05/26/16 17:04	1
Methylene Chloride	1000	U	1000	77	ug/Kg		05/26/16 10:38	05/26/16 17:04	1
4-Methyl-2-pentanone (MIBK)	4000	U	4000	48	ug/Kg		05/26/16 10:38	05/26/16 17:04	1
Methyl tert-butyl ether	4000	U	4000	7.1	ug/Kg		05/26/16 10:38	05/26/16 17:04	1
Styrene	1000	U	1000	5.6	ug/Kg		05/26/16 10:38	05/26/16 17:04	1
1,1,2,2-Tetrachloroethane	1000	U	1000	8.9	ug/Kg		05/26/16 10:38	05/26/16 17:04	1
Tetrachloroethene	1000	U	1000	12	ug/Kg		05/26/16 10:38	05/26/16 17:04	1
Toluene	1000	U	1000	17	ug/Kg		05/26/16 10:38	05/26/16 17:04	1
trans-1,2-Dichloroethene	1000	U	1000	9.2	ug/Kg		05/26/16 10:38	05/26/16 17:04	1
trans-1,3-Dichloropropene	1000	U	1000	20	ug/Kg		05/26/16 10:38	05/26/16 17:04	1
1,2,4-Trichlorobenzene	1000	U	1000	7.3	ug/Kg		05/26/16 10:38	05/26/16 17:04	1
1,1,1-Trichloroethane	1000	U	1000	21	ug/Kg		05/26/16 10:38	05/26/16 17:04	1
1,1,2-Trichloroethane	1000	U	1000	12	ug/Kg		05/26/16 10:38	05/26/16 17:04	1
Trichloroethene	1000	U	1000	9.7	ug/Kg		05/26/16 10:38	05/26/16 17:04	1
Trichlorofluoromethane	2000	U	2000	16	ug/Kg		05/26/16 10:38	05/26/16 17:04	1
1,1,2-Trichloro-1,2,2-trifluoroethane	2000	U	2000	39	ug/Kg		05/26/16 10:38	05/26/16 17:04	1
Vinyl chloride	2000	U	2000	18	ug/Kg		05/26/16 10:38	05/26/16 17:04	1
Xylenes, Total	2000	U	2000	6.2	ug/Kg		05/26/16 10:38	05/26/16 17:04	1

TestAmerica Canton

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		26 - 141	05/26/16 10:38	05/26/16 17:04	1
Dibromofluoromethane (Surr)	89		30 - 122	05/26/16 10:38	05/26/16 17:04	1
1,2-Dichloroethane-d4 (Surr)	80		39 - 128	05/26/16 10:38	05/26/16 17:04	1
Toluene-d8 (Surr)	94		33 - 134	05/26/16 10:38	05/26/16 17:04	1

Lab Sample ID: LCS 240-232068/2-A

Matrix: Waste

Analysis Batch: 232171

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 232068

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	20000	14500		ug/Kg		73	16 - 156
Benzene	10000	10700		ug/Kg		107	70 - 120
Bromodichloromethane	10000	9960		ug/Kg		100	28 - 123
Bromoform	10000	8130		ug/Kg		81	10 - 120
Bromomethane	10000	8500		ug/Kg		85	10 - 120
2-Butanone (MEK)	20000	18200		ug/Kg		91	10 - 199
Carbon disulfide	10000	11700		ug/Kg		117	10 - 132
Carbon tetrachloride	10000	9800		ug/Kg		98	29 - 120
Chlorobenzene	10000	11400		ug/Kg		114	71 - 120
Chloroethane	10000	8790		ug/Kg		88	10 - 120
Chloroform	10000	10300		ug/Kg		103	63 - 120
Chloromethane	10000	7810		ug/Kg		78	25 - 120
cis-1,2-Dichloroethene	10000	10400		ug/Kg		104	60 - 125
cis-1,3-Dichloropropene	10000	10000		ug/Kg		100	25 - 120
Cyclohexane	10000	13100	*	ug/Kg		131	40 - 120
Dibromochloromethane	10000	8990		ug/Kg		90	22 - 120
1,2-Dibromo-3-Chloropropane	10000	10900		ug/Kg		109	10 - 129
1,2-Dibromoethane	10000	11500		ug/Kg		115	47 - 123
1,2-Dichlorobenzene	10000	10400		ug/Kg		104	68 - 120
1,3-Dichlorobenzene	10000	10600		ug/Kg		106	66 - 121
1,4-Dichlorobenzene	10000	10800		ug/Kg		108	65 - 120
Dichlorodifluoromethane	10000	4950		ug/Kg		50	10 - 120
1,1-Dichloroethane	10000	11500		ug/Kg		115	63 - 120
1,2-Dichloroethane	10000	9360		ug/Kg		94	68 - 120
1,1-Dichloroethene	10000	10800		ug/Kg		108	44 - 143
1,2-Dichloropropane	10000	10600		ug/Kg		106	73 - 120
Ethylbenzene	10000	11700		ug/Kg		117	66 - 120
2-Hexanone	20000	21000		ug/Kg		105	43 - 130
Isopropylbenzene	10000	11400		ug/Kg		114	61 - 123
Methyl acetate	50000	49900		ug/Kg		100	44 - 173
Methylcyclohexane	10000	9090		ug/Kg		91	41 - 133
Methylene Chloride	10000	9700		ug/Kg		97	27 - 172
4-Methyl-2-pentanone (MIBK)	20000	19900		ug/Kg		99	49 - 121
Methyl tert-butyl ether	10000	9770		ug/Kg		98	34 - 157
m-Xylene & p-Xylene	10000	11100		ug/Kg		111	67 - 120
o-Xylene	10000	11100		ug/Kg		111	68 - 120
Styrene	10000	11200		ug/Kg		112	60 - 120
1,1,2,2-Tetrachloroethane	10000	11000		ug/Kg		110	54 - 121
Tetrachloroethene	10000	11100		ug/Kg		111	58 - 131
Toluene	10000	11500		ug/Kg		115	66 - 123
trans-1,2-Dichloroethene	10000	11000		ug/Kg		110	58 - 121
trans-1,3-Dichloropropene	10000	10500		ug/Kg		105	22 - 122
1,2,4-Trichlorobenzene	10000	10300		ug/Kg		103	41 - 135
1,1,1-Trichloroethane	10000	10200		ug/Kg		102	38 - 122

TestAmerica Canton

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-232068/2-A

Matrix: Waste

Analysis Batch: 232171

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 232068

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,2-Trichloroethane	10000	10600		ug/Kg		106	74 - 120
Trichloroethene	10000	10500		ug/Kg		105	59 - 124
Trichlorofluoromethane	10000	8930		ug/Kg		89	17 - 145
1,1,2-Trichloro-1,2,2-trifluoroethane	10000	10800		ug/Kg		108	48 - 151
Vinyl chloride	10000	8650		ug/Kg		86	33 - 120
Xylenes, Total	20000	22200		ug/Kg		111	68 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	97		26 - 141
Dibromofluoromethane (Surr)	86		30 - 122
1,2-Dichloroethane-d4 (Surr)	81		39 - 128
Toluene-d8 (Surr)	99		33 - 134

Lab Sample ID: 240-65173-4 MS

Matrix: Waste

Analysis Batch: 232171

Client Sample ID: MWW10-01-LNAPL-052016

Prep Type: Total/NA

Prep Batch: 232068

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	4600	U F1	23000	15500		ug/Kg		68	10 - 142
Benzene	1100	U F1	11500	10300		ug/Kg		90	10 - 199
Bromodichloromethane	1100	U F1	11500	9830		ug/Kg		86	18 - 133
Bromoform	1100	U F1	11500	9290		ug/Kg		81	10 - 147
Bromomethane	2300	U F1	11500	8180		ug/Kg		71	10 - 151
2-Butanone (MEK)	410	J F1	23000	19700		ug/Kg		84	10 - 172
Carbon disulfide	1100	U F1	11500	9240		ug/Kg		80	10 - 155
Carbon tetrachloride	1100	U F1	11500	8480		ug/Kg		74	12 - 135
Chlorobenzene	1100	U F1	11500	10300		ug/Kg		90	47 - 120
Chloroethane	2300	U F1	11500	8800		ug/Kg		77	10 - 168
Chloroform	1100	U F1	11500	10200		ug/Kg		89	51 - 120
Chloromethane	2300	U F1	11500	8150		ug/Kg		71	16 - 120
cis-1,2-Dichloroethene	1100	U F1	11500	10200		ug/Kg		89	34 - 137
cis-1,3-Dichloropropene	1100	U F1	11500	10100		ug/Kg		88	19 - 121
Cyclohexane	130	J F1 F2 *	11500	10400		ug/Kg		90	10 - 154
Dibromochloromethane	1100	U F1	11500	8900		ug/Kg		77	10 - 128
1,2-Dibromo-3-Chloropropane	1100	U F1	11500	10100		ug/Kg		88	10 - 153
1,2-Dibromoethane	1100	U F1	11500	10700		ug/Kg		93	32 - 127
1,2-Dichlorobenzene	1100	U F1	11500	9840		ug/Kg		86	27 - 126
1,3-Dichlorobenzene	1100	U F1	11500	9410		ug/Kg		82	29 - 124
1,4-Dichlorobenzene	1100	U F1	11500	9530		ug/Kg		83	30 - 123
Dichlorodifluoromethane	2300	U F1	11500	4330		ug/Kg		38	10 - 120
1,1-Dichloroethane	1100	U F1	11500	10900		ug/Kg		94	18 - 160
1,2-Dichloroethane	1100	U F1	11500	9120		ug/Kg		79	25 - 150
1,1-Dichloroethene	1100	U F1	11500	10100		ug/Kg		88	10 - 179
1,2-Dichloropropane	1100	U F1	11500	11200		ug/Kg		97	58 - 120
Ethylbenzene	2700	F1	11500	12600		ug/Kg		86	27 - 143
2-Hexanone	4600	U F1	23000	20800		ug/Kg		90	21 - 141
Isopropylbenzene	3300	F1	11500	14100		ug/Kg		94	39 - 126

TestAmerica Canton

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-65173-4 MS

Matrix: Waste

Analysis Batch: 232171

Client Sample ID: MWW10-01-LNAPL-052016

Prep Type: Total/NA

Prep Batch: 232068

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl acetate	2300	U F1	57500	51200		ug/Kg		89	10 - 175
Methylcyclohexane	2700	F1	11500	11400		ug/Kg		76	11 - 156
Methylene Chloride	1100	U F1	11500	10100		ug/Kg		88	10 - 148
4-Methyl-2-pentanone (MIBK)	4600	U F1	23000	21400		ug/Kg		93	19 - 151
Methyl tert-butyl ether	4600	U F1	11500	10200		ug/Kg		89	26 - 159
m-Xylene & p-Xylene	8800	F1	11500	17900		ug/Kg		79	14 - 151
o-Xylene	6000	F1	11500	15800		ug/Kg		85	18 - 151
Styrene	1100	U F1	11500	10700		ug/Kg		93	31 - 137
1,1,2,2-Tetrachloroethane	1100	U F1	11500	13100		ug/Kg		114	16 - 158
Tetrachloroethene	1100	U F1	11500	8870		ug/Kg		77	19 - 153
Toluene	890	J F1	11500	10600		ug/Kg		84	10 - 168
trans-1,2-Dichloroethene	1100	U F1	11500	10500		ug/Kg		91	40 - 126
trans-1,3-Dichloropropene	1100	U F1	11500	10400		ug/Kg		91	10 - 136
1,2,4-Trichlorobenzene	1100	U F1	11500	8040		ug/Kg		70	10 - 136
1,1,1-Trichloroethane	1100	U F1	11500	9210		ug/Kg		80	10 - 159
1,1,2-Trichloroethane	1100	U F1	11500	12800		ug/Kg		111	34 - 152
Trichloroethene	1100	U F1	11500	9980		ug/Kg		87	10 - 193
Trichlorofluoromethane	2300	U F1	11500	7440		ug/Kg		65	10 - 157
1,1,2-Trichloro-1,2,2-trifluoroethane	2300	U F1	11500	9670		ug/Kg		84	23 - 168
Vinyl chloride	2300	U F1	11500	8380		ug/Kg		73	15 - 123
Xylenes, Total	15000		23000	33700		ug/Kg		82	16 - 150

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	87		26 - 141
Dibromofluoromethane (Surr)	81		30 - 122
1,2-Dichloroethane-d4 (Surr)	78		39 - 128
Toluene-d8 (Surr)	80		33 - 134

Lab Sample ID: 240-65173-4 MSD

Matrix: Waste

Analysis Batch: 232171

Client Sample ID: MWW10-01-LNAPL-052016

Prep Type: Total/NA

Prep Batch: 232068

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Acetone	4600	U F1	22500	15100		ug/Kg		67	10 - 142	3	30
Benzene	1100	U F1	11200	10400		ug/Kg		93	10 - 199	1	30
Bromodichloromethane	1100	U F1	11200	10300		ug/Kg		92	18 - 133	5	30
Bromoform	1100	U F1	11200	9330		ug/Kg		83	10 - 147	0	30
Bromomethane	2300	U F1	11200	8250		ug/Kg		73	10 - 151	1	30
2-Butanone (MEK)	410	J F1	22500	20400		ug/Kg		89	10 - 172	4	30
Carbon disulfide	1100	U F1	11200	9290		ug/Kg		83	10 - 155	0	30
Carbon tetrachloride	1100	U F1	11200	8270		ug/Kg		74	12 - 135	3	30
Chlorobenzene	1100	U F1	11200	10300		ug/Kg		92	47 - 120	0	30
Chloroethane	2300	U F1	11200	8580		ug/Kg		76	10 - 168	2	30
Chloroform	1100	U F1	11200	10100		ug/Kg		90	51 - 120	1	30
Chloromethane	2300	U F1	11200	7900		ug/Kg		70	16 - 120	3	30
cis-1,2-Dichloroethene	1100	U F1	11200	10800		ug/Kg		96	34 - 137	6	30
cis-1,3-Dichloropropene	1100	U F1	11200	11100		ug/Kg		99	19 - 121	10	30

TestAmerica Canton

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-65173-4 MSD

Matrix: Waste

Analysis Batch: 232171

Client Sample ID: MWW10-01-LNAPL-052016

Prep Type: Total/NA

Prep Batch: 232068

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyclohexane	130	J F1 F2 *	11200	6030	F2	ug/Kg		52	10 - 154	53	30
Dibromochloromethane	1100	U F1	11200	9380		ug/Kg		84	10 - 128	5	30
1,2-Dibromo-3-Chloropropane	1100	U F1	11200	13400		ug/Kg		119	10 - 153	28	30
1,2-Dibromoethane	1100	U F1	11200	11000		ug/Kg		98	32 - 127	3	30
1,2-Dichlorobenzene	1100	U F1	11200	10300		ug/Kg		92	27 - 126	5	30
1,3-Dichlorobenzene	1100	U F1	11200	9920		ug/Kg		88	29 - 124	5	30
1,4-Dichlorobenzene	1100	U F1	11200	10300		ug/Kg		92	30 - 123	8	30
Dichlorodifluoromethane	2300	U F1	11200	4070		ug/Kg		36	10 - 120	6	30
1,1-Dichloroethane	1100	U F1	11200	11800		ug/Kg		105	18 - 160	9	30
1,2-Dichloroethane	1100	U F1	11200	9260		ug/Kg		82	25 - 150	1	30
1,1-Dichloroethene	1100	U F1	11200	10200		ug/Kg		91	10 - 179	1	30
1,2-Dichloropropane	1100	U F1	11200	12000		ug/Kg		107	58 - 120	7	30
Ethylbenzene	2700	F1	11200	13100		ug/Kg		92	27 - 143	3	30
2-Hexanone	4600	U F1	22500	21400		ug/Kg		95	21 - 141	3	30
Isopropylbenzene	3300	F1	11200	14800		ug/Kg		102	39 - 126	4	30
Methyl acetate	2300	U F1	56200	52800		ug/Kg		94	10 - 175	3	30
Methylcyclohexane	2700	F1	11200	12200		ug/Kg		84	11 - 156	6	30
Methylene Chloride	1100	U F1	11200	10600		ug/Kg		94	10 - 148	4	30
4-Methyl-2-pentanone (MIBK)	4600	U F1	22500	22100		ug/Kg		98	19 - 151	3	30
Methyl tert-butyl ether	4600	U F1	11200	10200		ug/Kg		90	26 - 159	1	30
m-Xylene & p-Xylene	8800	F1	11200	18400		ug/Kg		85	14 - 151	3	30
o-Xylene	6000	F1	11200	16400		ug/Kg		93	18 - 151	4	30
Styrene	1100	U F1	11200	11500		ug/Kg		102	31 - 137	7	30
1,1,2,2-Tetrachloroethane	1100	U F1	11200	11100		ug/Kg		99	16 - 158	17	30
Tetrachloroethene	1100	U F1	11200	9020		ug/Kg		80	19 - 153	2	30
Toluene	890	J F1	11200	11000		ug/Kg		90	10 - 168	4	30
trans-1,2-Dichloroethene	1100	U F1	11200	10500		ug/Kg		93	40 - 126	0	30
trans-1,3-Dichloropropene	1100	U F1	11200	11100		ug/Kg		99	10 - 136	6	30
1,2,4-Trichlorobenzene	1100	U F1	11200	8680		ug/Kg		77	10 - 136	8	30
1,1,1-Trichloroethane	1100	U F1	11200	9520		ug/Kg		85	10 - 159	3	30
1,1,2-Trichloroethane	1100	U F1	11200	13100		ug/Kg		117	34 - 152	3	30
Trichloroethene	1100	U F1	11200	9980		ug/Kg		89	10 - 193	0	30
Trichlorofluoromethane	2300	U F1	11200	7380		ug/Kg		66	10 - 157	1	30
1,1,2-Trichloro-1,2,2-trifluoroethane	2300	U F1	11200	9860		ug/Kg		88	23 - 168	2	30
Vinyl chloride	2300	U F1	11200	8570		ug/Kg		76	15 - 123	2	30
Xylenes, Total	15000		22500	34800		ug/Kg		89	16 - 150	3	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	93		26 - 141
Dibromofluoromethane (Surr)	89		30 - 122
1,2-Dichloroethane-d4 (Surr)	77		39 - 128
Toluene-d8 (Surr)	84		33 - 134

TestAmerica Canton

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 240-231939/10-A

Matrix: Waste

Analysis Batch: 232030

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 231939

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	20000	U	20000	55	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
Acenaphthylene	20000	U	20000	84	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
Acetophenone	20000	U	20000	330	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
Anthracene	20000	U	20000	140	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
Atrazine	20000	U	20000	660	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
Benzaldehyde	20000	U	20000	410	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
Benzo[a]anthracene	20000	U	20000	84	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
Benzo[a]pyrene	20000	U	20000	140	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
Benzo[b]fluoranthene	20000	U	20000	140	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
Benzo[g,h,i]perylene	20000	U	20000	110	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
Benzo[k]fluoranthene	20000	U	20000	140	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
1,1'-Biphenyl	20000	U	20000	430	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
Bis(2-chloroethoxy)methane	20000	U	20000	960	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
Bis(2-chloroethyl)ether	20000	U	20000	250	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
Bis(2-ethylhexyl) phthalate	20000	U	20000	960	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
4-Bromophenyl phenyl ether	20000	U	20000	280	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
Butyl benzyl phthalate	20000	U	20000	220	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
Caprolactam	20000	U	20000	470	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
Carbazole	20000	U	20000	560	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
4-Chloroaniline	20000	U	20000	310	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
4-Chloro-3-methylphenol	20000	U	20000	3100	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
2-Chloronaphthalene	20000	U	20000	380	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
2-Chlorophenol	20000	U	20000	220	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
4-Chlorophenyl phenyl ether	20000	U	20000	220	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
Chrysene	20000	U	20000	59	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
Dibenz(a,h)anthracene	20000	U	20000	90	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
Dibenzofuran	20000	U	20000	50	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
3,3'-Dichlorobenzidine	96000	U	96000	290	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
2,4-Dichlorophenol	20000	U	20000	320	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
Diethyl phthalate	20000	U	20000	370	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
2,4-Dimethylphenol	20000	U	20000	410	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
Dimethyl phthalate	20000	U	20000	380	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
Di-n-butyl phthalate	20000	U	20000	300	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
4,6-Dinitro-2-methylphenol	96000	U	96000	2800	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
2,4-Dinitrophenol	96000	U	96000	2500	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
2,4-Dinitrotoluene	20000	U	20000	340	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
2,6-Dinitrotoluene	20000	U	20000	350	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
Di-n-octyl phthalate	20000	U	20000	660	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
Fluoranthene	20000	U	20000	56	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
Fluorene	20000	U	20000	78	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
Hexachlorobenzene	20000	U	20000	84	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
Hexachlorobutadiene	20000	U	20000	150	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
Hexachlorocyclopentadiene	96000	U	96000	170	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
Hexachloroethane	20000	U	20000	290	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
Indeno[1,2,3-cd]pyrene	20000	U	20000	120	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
Isophorone	20000	U	20000	210	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
2-Methylnaphthalene	20000	U	20000	59	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
2-Methylphenol	20000	U	20000	400	ug/Kg		05/25/16 14:07	05/26/16 10:16	1

TestAmerica Canton

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-231939/10-A

Matrix: Waste

Analysis Batch: 232030

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 231939

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3 & 4 Methylphenol	40000	U	40000	1200	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
Naphthalene	20000	U	20000	53	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
2-Nitroaniline	96000	U	96000	310	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
3-Nitroaniline	96000	U	96000	190	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
4-Nitroaniline	96000	U	96000	220	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
Nitrobenzene	20000	U	20000	380	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
2-Nitrophenol	20000	U	20000	200	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
4-Nitrophenol	96000	U	96000	4900	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
N-Nitrosodi-n-propylamine	20000	U	20000	460	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
N-Nitrosodiphenylamine	20000	U	20000	250	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
2,2'-oxybis[1-chloropropane]	20000	U	20000	310	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
Pentachlorophenol	20000	U	20000	2700	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
Phenanthrene	20000	U	20000	66	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
Phenol	20000	U	20000	340	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
Pyrene	20000	U	20000	60	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
2,4,5-Trichlorophenol	20000	U	20000	290	ug/Kg		05/25/16 14:07	05/26/16 10:16	1
2,4,6-Trichlorophenol	20000	U	20000	410	ug/Kg		05/25/16 14:07	05/26/16 10:16	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	102		57 - 134	05/25/16 14:07	05/26/16 10:16	1
2-Fluorophenol (Surr)	98		64 - 125	05/25/16 14:07	05/26/16 10:16	1
Nitrobenzene-d5 (Surr)	89		63 - 129	05/25/16 14:07	05/26/16 10:16	1
Phenol-d5 (Surr)	96		44 - 140	05/25/16 14:07	05/26/16 10:16	1
Terphenyl-d14 (Surr)	99		51 - 138	05/25/16 14:07	05/26/16 10:16	1
2,4,6-Tribromophenol (Surr)	102		31 - 148	05/25/16 14:07	05/26/16 10:16	1

Lab Sample ID: LCS 240-231939/11-A

Matrix: Waste

Analysis Batch: 232030

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 231939

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Acenaphthene	50000	53600		ug/Kg		107	70 - 120
Acenaphthylene	50000	55100		ug/Kg		110	66 - 120
Acetophenone	50000	38800		ug/Kg		78	62 - 120
Anthracene	50000	51700		ug/Kg		103	65 - 120
Atrazine	100000	110000		ug/Kg		110	69 - 126
Benzaldehyde	100000	73800		ug/Kg		74	10 - 130
Benzo[a]anthracene	50000	50700		ug/Kg		101	66 - 120
Benzo[a]pyrene	50000	58300		ug/Kg		117	66 - 120
Benzo[b]fluoranthene	50000	55300		ug/Kg		111	66 - 120
Benzo[g,h,i]perylene	50000	57000		ug/Kg		114	62 - 120
Benzo[k]fluoranthene	50000	59100		ug/Kg		118	69 - 120
1,1'-Biphenyl	50000	55800		ug/Kg		112	70 - 120
Bis(2-chloroethoxy)methane	50000	48500		ug/Kg		97	70 - 120
Bis(2-chloroethyl)ether	50000	51400		ug/Kg		103	59 - 135
Bis(2-ethylhexyl) phthalate	50000	51000		ug/Kg		102	61 - 120
4-Bromophenyl phenyl ether	50000	60400		ug/Kg		121	63 - 123
Butyl benzyl phthalate	50000	51600		ug/Kg		103	63 - 120

TestAmerica Canton

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-231939/11-A

Matrix: Waste

Analysis Batch: 232030

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 231939

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Caprolactam	100000	96600		ug/Kg		97	68 - 124
Carbazole	50000	50000		ug/Kg		100	68 - 120
4-Chloroaniline	50000	48900		ug/Kg		98	41 - 120
4-Chloro-3-methylphenol	50000	48900		ug/Kg		98	63 - 120
2-Chloronaphthalene	50000	54300		ug/Kg		109	70 - 120
2-Chlorophenol	50000	52200		ug/Kg		104	65 - 120
4-Chlorophenyl phenyl ether	50000	54800		ug/Kg		110	70 - 120
Chrysene	50000	51900		ug/Kg		104	67 - 120
Dibenz(a,h)anthracene	50000	57400		ug/Kg		115	61 - 120
Dibenzofuran	50000	54800		ug/Kg		110	63 - 120
3,3'-Dichlorobenzidine	100000	93300	J	ug/Kg		93	58 - 120
2,4-Dichlorophenol	50000	54100		ug/Kg		108	68 - 120
Diethyl phthalate	50000	48400		ug/Kg		97	64 - 120
2,4-Dimethylphenol	50000	48900		ug/Kg		98	57 - 120
Dimethyl phthalate	50000	54200		ug/Kg		108	72 - 120
Di-n-butyl phthalate	50000	55100		ug/Kg		110	68 - 120
4,6-Dinitro-2-methylphenol	100000	83200	J	ug/Kg		83	24 - 121
2,4-Dinitrophenol	100000	64000	J	ug/Kg		64	11 - 120
2,4-Dinitrotoluene	50000	54500		ug/Kg		109	63 - 124
2,6-Dinitrotoluene	50000	53500		ug/Kg		107	67 - 120
Di-n-octyl phthalate	50000	53000		ug/Kg		106	55 - 120
Fluoranthene	50000	52900		ug/Kg		106	68 - 120
Fluorene	50000	54000		ug/Kg		108	68 - 120
Hexachlorobenzene	50000	63100	*	ug/Kg		126	63 - 121
Hexachlorobutadiene	50000	54100		ug/Kg		108	71 - 120
Hexachlorocyclopentadiene	50000	29700	J	ug/Kg		59	21 - 120
Hexachloroethane	50000	50100		ug/Kg		100	70 - 120
Indeno[1,2,3-cd]pyrene	50000	58000		ug/Kg		116	64 - 120
Isophorone	50000	39100		ug/Kg		78	60 - 120
2-Methylnaphthalene	50000	58700		ug/Kg		117	68 - 120
2-Methylphenol	50000	52100		ug/Kg		104	66 - 120
3 & 4 Methylphenol	50000	49900		ug/Kg		100	65 - 120
Naphthalene	50000	54400		ug/Kg		109	63 - 120
2-Nitroaniline	50000	42600	J	ug/Kg		85	60 - 120
3-Nitroaniline	50000	45800	J	ug/Kg		92	55 - 121
4-Nitroaniline	50000	41600	J	ug/Kg		83	59 - 120
Nitrobenzene	50000	48200		ug/Kg		96	70 - 120
2-Nitrophenol	50000	55100		ug/Kg		110	65 - 124
4-Nitrophenol	100000	86900	J	ug/Kg		87	48 - 128
N-Nitrosodi-n-propylamine	50000	47100		ug/Kg		94	64 - 126
N-Nitrosodiphenylamine	100000	128000		ug/Kg		128	56 - 130
2,2'-oxybis[1-chloropropane]	50000	43700		ug/Kg		87	30 - 163
Pentachlorophenol	100000	98100		ug/Kg		98	57 - 120
Phenanthrene	50000	51900		ug/Kg		104	63 - 120
Phenol	50000	48800		ug/Kg		98	62 - 120
Pyrene	50000	54400		ug/Kg		109	63 - 120
2,4,5-Trichlorophenol	50000	56600		ug/Kg		113	71 - 120
2,4,6-Trichlorophenol	50000	53100		ug/Kg		106	70 - 120

TestAmerica Canton

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-231939/11-A

Matrix: Waste

Analysis Batch: 232030

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 231939

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl (Surr)	104		57 - 134
2-Fluorophenol (Surr)	100		64 - 125
Nitrobenzene-d5 (Surr)	91		63 - 129
Phenol-d5 (Surr)	98		44 - 140
Terphenyl-d14 (Surr)	113		51 - 138
2,4,6-Tribromophenol (Surr)	114		31 - 148

Lab Sample ID: 240-65173-8 MS

Matrix: Waste

Analysis Batch: 232030

Client Sample ID: SB-43-14-LNAPL-052016

Prep Type: Total/NA

Prep Batch: 231939

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Acenaphthene	71000	J	47200	95000	J	ug/Kg		51	10 - 200
Acenaphthylene	17000	J	47200	77500	J	ug/Kg		128	10 - 200
Acetophenone	500000	U F1	47200	149000	J F1	ug/Kg		316	50 - 130
Anthracene	36000	J	47200	84600	J	ug/Kg		104	10 - 200
Atrazine	500000	U	94300	96400	J	ug/Kg		102	50 - 130
Benzaldehyde	500000	U	94300	91700	J	ug/Kg		97	10 - 130
Benzo[a]anthracene	42000	J	47200	87300	J	ug/Kg		97	10 - 200
Benzo[a]pyrene	36000	J	47200	75900	J	ug/Kg		85	10 - 200
Benzo[b]fluoranthene	49000	J	47200	78300	J	ug/Kg		63	10 - 200
Benzo[g,h,i]perylene	32000	J	47200	77900	J	ug/Kg		97	10 - 200
Benzo[k]fluoranthene	500000	U	47200	63600	J	ug/Kg		135	10 - 200
1,1'-Biphenyl	83000	J F1	47200	103000	J F1	ug/Kg		43	50 - 130
Bis(2-chloroethoxy)methane	500000	U F1	47200	50000	J	ug/Kg		106	36 - 120
Bis(2-chloroethyl)ether	500000	U	47200	36500	J	ug/Kg		77	32 - 120
Bis(2-ethylhexyl) phthalate	110000	J	47200	139000	J	ug/Kg		55	10 - 200
4-Bromophenyl phenyl ether	500000	U	47200	45300	J	ug/Kg		96	44 - 120
Butyl benzyl phthalate	500000	U F1	47200	99400	J F1	ug/Kg		211	43 - 138
Caprolactam	500000	U F1	94300	470000	U F1	ug/Kg		0	50 - 130
Carbazole	500000	U F1	47200	108000	J F1	ug/Kg		229	10 - 162
4-Chloroaniline	500000	U F1 F2	47200	41000	J	ug/Kg		87	11 - 120
4-Chloro-3-methylphenol	500000	U	47200	470000	U	ug/Kg		NC	32 - 120
2-Chloronaphthalene	500000	U	47200	42600	J	ug/Kg		90	40 - 120
2-Chlorophenol	500000	U	47200	46900	J	ug/Kg		99	32 - 120
4-Chlorophenyl phenyl ether	500000	U F1 F2	47200	40600	J	ug/Kg		86	47 - 120
Chrysene	72000	J	47200	101000	J	ug/Kg		62	10 - 200
Dibenz(a,h)anthracene	500000	U	47200	58400	J	ug/Kg		124	10 - 200
Dibenzofuran	500000	U	47200	82000	J	ug/Kg		174	10 - 200
3,3'-Dichlorobenzidine	2400000	U	94300	69200	J	ug/Kg		73	10 - 120
2,4-Dichlorophenol	500000	U	47200	40900	J	ug/Kg		87	33 - 120
Diethyl phthalate	500000	U F1	47200	67500	J F1	ug/Kg		143	48 - 120
2,4-Dimethylphenol	500000	U F1	47200	71000	J F1	ug/Kg		150	19 - 120
Dimethyl phthalate	500000	U	47200	49800	J	ug/Kg		106	47 - 120
Di-n-butyl phthalate	500000	U F1	47200	131000	J F1	ug/Kg		277	31 - 145
4,6-Dinitro-2-methylphenol	2400000	U F1	94300	2300000	U F1	ug/Kg		0	10 - 120
2,4-Dinitrophenol	2400000	U F1	94300	2300000	U F1	ug/Kg		0	10 - 120
2,4-Dinitrotoluene	500000	U F1	47200	120000	J F1	ug/Kg		255	42 - 120

TestAmerica Canton

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-65173-8 MS

Matrix: Waste

Analysis Batch: 232030

Client Sample ID: SB-43-14-LNAPL-052016

Prep Type: Total/NA

Prep Batch: 231939

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,6-Dinitrotoluene	500000	U F1	47200	470000	U F1	ug/Kg		0	28 - 137
Di-n-octyl phthalate	500000	U F2	47200	43000	J	ug/Kg		91	10 - 182
Fluoranthene	150000	J	47200	181000	J	ug/Kg		61	10 - 200
Fluorene	130000	J F1	47200	123000	J F1	ug/Kg		-8	10 - 187
Hexachlorobenzene	500000	U *	47200	38600	J	ug/Kg		82	37 - 122
Hexachlorobutadiene	500000	U	47200	46600	J	ug/Kg		99	30 - 120
Hexachlorocyclopentadiene	2400000	U F1	47200	2300000	U F1	ug/Kg		0	10 - 120
Hexachloroethane	500000	U F1	47200	470000	U F1	ug/Kg		0	13 - 120
Indeno[1,2,3-cd]pyrene	500000	U	47200	62300	J	ug/Kg		132	10 - 200
Isophorone	500000	U F1	47200	89300	J F1	ug/Kg		189	32 - 129
2-Methylnaphthalene	1000000		47200	895000	4	ug/Kg		-274	10 - 200
2-Methylphenol	500000	U	47200	44600	J	ug/Kg		94	19 - 124
3 & 4 Methylphenol	990000	U	47200	45900	J	ug/Kg		97	27 - 120
Naphthalene	220000	J	47200	246000	J 4	ug/Kg		53	10 - 200
2-Nitroaniline	2400000	U F1	47200	96700	J F1	ug/Kg		205	31 - 141
3-Nitroaniline	2400000	U F1	47200	102000	J F1	ug/Kg		217	27 - 120
4-Nitroaniline	2400000	U F1	47200	2300000	U F1	ug/Kg		0	23 - 124
Nitrobenzene	500000	U F1	47200	47500	J	ug/Kg		101	33 - 120
2-Nitrophenol	500000	U F1	47200	118000	J F1	ug/Kg		249	17 - 120
4-Nitrophenol	2400000	U	94300	2300000	U	ug/Kg		NC	10 - 125
N-Nitrosodi-n-propylamine	500000	U F1	47200	59200	J F1	ug/Kg		126	30 - 121
N-Nitrosodiphenylamine	500000	U F1	94300	470000	U F1	ug/Kg		0	10 - 169
2,2'-oxybis[1-chloropropane]	500000	U	47200	38300	J	ug/Kg		81	50 - 130
Pentachlorophenol	500000	U F1	94300	234000	J F1	ug/Kg		248	10 - 182
Phenanthrene	270000	J	47200	310000	J 4	ug/Kg		80	10 - 200
Phenol	500000	U	47200	37900	J	ug/Kg		80	10 - 144
Pyrene	200000	J	47200	237000	J 4	ug/Kg		71	10 - 200
2,4,5-Trichlorophenol	500000	U	47200	34400	J	ug/Kg		73	32 - 120
2,4,6-Trichlorophenol	500000	U	47200	52000	J	ug/Kg		110	22 - 120

Surrogate	MS %Recovery	MS Qualifier	Limits
2-Fluorobiphenyl (Surr)	98		57 - 134
2-Fluorophenol (Surr)	88		64 - 125
Nitrobenzene-d5 (Surr)	0	X	63 - 129
Phenol-d5 (Surr)	79		44 - 140
Terphenyl-d14 (Surr)	112		51 - 138
2,4,6-Tribromophenol (Surr)	141		31 - 148

Lab Sample ID: 240-65173-8 MSD

Matrix: Waste

Analysis Batch: 232030

Client Sample ID: SB-43-14-LNAPL-052016

Prep Type: Total/NA

Prep Batch: 231939

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Acenaphthene	71000	J	49000	119000	J	ug/Kg		98	10 - 200	22	40
Acenaphthylene	17000	J	49000	73100	J	ug/Kg		114	10 - 200	6	40
Acetophenone	500000	U F1	49000	174000	J F1	ug/Kg		354	50 - 130	15	40
Anthracene	36000	J	49000	80100	J	ug/Kg		91	10 - 200	5	40
Atrazine	500000	U	98000	121000	J	ug/Kg		123	50 - 130	22	40

TestAmerica Canton

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-65173-8 MSD

Matrix: Waste

Analysis Batch: 232030

Client Sample ID: SB-43-14-LNAPL-052016

Prep Type: Total/NA

Prep Batch: 231939

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzaldehyde	500000	U	98000	91500	J	ug/Kg		93	10 - 130	0	40
Benzo[a]anthracene	42000	J	49000	105000	J	ug/Kg		130	10 - 200	19	40
Benzo[a]pyrene	36000	J	49000	79200	J	ug/Kg		89	10 - 200	4	40
Benzo[b]fluoranthene	49000	J	49000	84500	J	ug/Kg		73	10 - 200	8	40
Benzo[g,h,i]perylene	32000	J	49000	73800	J	ug/Kg		85	10 - 200	5	40
Benzo[k]fluoranthene	500000	U	49000	70300	J	ug/Kg		143	10 - 200	10	40
1,1'-Biphenyl	83000	J F1	49000	124000	J	ug/Kg		83	50 - 130	18	40
Bis(2-chloroethoxy)methane	500000	U F1	49000	64800	J F1	ug/Kg		132	36 - 120	26	40
Bis(2-chloroethyl)ether	500000	U	49000	53000	J	ug/Kg		108	32 - 120	37	40
Bis(2-ethylhexyl) phthalate	110000	J	49000	159000	J	ug/Kg		94	10 - 200	14	40
4-Bromophenyl phenyl ether	500000	U	49000	44100	J	ug/Kg		90	44 - 120	3	40
Butyl benzyl phthalate	500000	U F1	49000	93200	J F1	ug/Kg		190	43 - 138	6	40
Caprolactam	500000	U F1	98000	490000	U F1	ug/Kg		0	50 - 130	NC	40
Carbazole	500000	U F1	49000	119000	J F1	ug/Kg		243	10 - 162	10	40
4-Chloroaniline	500000	U F1 F2	49000	82900	J F1 F2	ug/Kg		169	11 - 120	68	40
4-Chloro-3-methylphenol	500000	U	49000	490000	U	ug/Kg		NC	32 - 120	NC	40
2-Chloronaphthalene	500000	U	49000	48300	J	ug/Kg		99	40 - 120	13	40
2-Chlorophenol	500000	U	49000	43000	J	ug/Kg		88	32 - 120	9	40
4-Chlorophenyl phenyl ether	500000	U F1 F2	49000	65100	J F1 F2	ug/Kg		133	47 - 120	46	40
Chrysene	72000	J	49000	111000	J	ug/Kg		81	10 - 200	10	40
Dibenz(a,h)anthracene	500000	U	49000	63100	J	ug/Kg		129	10 - 200	8	40
Dibenzofuran	500000	U	49000	91600	J	ug/Kg		187	10 - 200	11	40
3,3'-Dichlorobenzidine	2400000	U	98000	81800	J	ug/Kg		83	10 - 120	17	40
2,4-Dichlorophenol	500000	U	49000	44700	J	ug/Kg		91	33 - 120	9	40
Diethyl phthalate	500000	U F1	49000	60900	J F1	ug/Kg		124	48 - 120	10	40
2,4-Dimethylphenol	500000	U F1	49000	66600	J F1	ug/Kg		136	19 - 120	6	40
Dimethyl phthalate	500000	U	49000	54700	J	ug/Kg		112	47 - 120	9	40
Di-n-butyl phthalate	500000	U F1	49000	133000	J F1	ug/Kg		271	31 - 145	2	40
4,6-Dinitro-2-methylphenol	2400000	U F1	98000	2400000	U F1	ug/Kg		0	10 - 120	NC	40
2,4-Dinitrophenol	2400000	U F1	98000	2400000	U F1	ug/Kg		0	10 - 120	NC	40
2,4-Dinitrotoluene	500000	U F1	49000	490000	U F1	ug/Kg		0	42 - 120	NC	40
2,6-Dinitrotoluene	500000	U F1	49000	490000	U F1	ug/Kg		0	28 - 137	NC	40
Di-n-octyl phthalate	500000	U F2	49000	67500	J F2	ug/Kg		138	10 - 182	44	40
Fluoranthene	150000	J	49000	187000	J	ug/Kg		71	10 - 200	3	40
Fluorene	130000	J F1	49000	167000	J	ug/Kg		81	10 - 187	30	40
Hexachlorobenzene	500000	U *	49000	49900	J	ug/Kg		102	37 - 122	25	40
Hexachlorobutadiene	500000	U	49000	51700	J	ug/Kg		105	30 - 120	10	40
Hexachlorocyclopentadiene	2400000	U F1	49000	2400000	U F1	ug/Kg		0	10 - 120	NC	40
Hexachloroethane	500000	U F1	49000	490000	U F1	ug/Kg		0	13 - 120	NC	40
Indeno[1,2,3-cd]pyrene	500000	U	49000	70600	J	ug/Kg		144	10 - 200	13	40
Isophorone	500000	U F1	49000	490000	U F1	ug/Kg		0	32 - 129	NC	40
2-Methylnaphthalene	1000000		49000	1010000	4	ug/Kg		-28	10 - 200	12	40
2-Methylphenol	500000	U	49000	59300	J	ug/Kg		121	19 - 124	28	40
3 & 4 Methylphenol	990000	U	49000	48900	J	ug/Kg		100	27 - 120	6	40
Naphthalene	220000	J	49000	254000	J 4	ug/Kg		68	10 - 200	3	40
2-Nitroaniline	2400000	U F1	49000	2400000	U F1	ug/Kg		0	31 - 141	NC	40
3-Nitroaniline	2400000	U F1	49000	2400000	U F1	ug/Kg		0	27 - 120	NC	40
4-Nitroaniline	2400000	U F1	49000	78400	J F1	ug/Kg		160	23 - 124	NC	40

TestAmerica Canton

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-65173-8 MSD

Matrix: Waste

Analysis Batch: 232030

Client Sample ID: SB-43-14-LNAPL-052016

Prep Type: Total/NA

Prep Batch: 231939

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrobenzene	500000	U F1	49000	61900	J F1	ug/Kg		126	33 - 120	26	40
2-Nitrophenol	500000	U F1	49000	490000	U F1	ug/Kg		0	17 - 120	NC	40
4-Nitrophenol	2400000	U	98000	2400000	U	ug/Kg		NC	10 - 125	NC	40
N-Nitrosodi-n-propylamine	500000	U F1	49000	65100	J F1	ug/Kg		133	30 - 121	9	40
N-Nitrosodiphenylamine	500000	U F1	98000	490000	U F1	ug/Kg		0	10 - 169	NC	40
2,2'-oxybis[1-chloropropane]	500000	U	49000	52000	J	ug/Kg		106	50 - 130	30	40
Pentachlorophenol	500000	U F1	98000	291000	J F1	ug/Kg		297	10 - 182	22	40
Phenanthrene	270000	J	49000	311000	J 4	ug/Kg		79	10 - 200	0	40
Phenol	500000	U	49000	55300	J	ug/Kg		113	10 - 144	37	40
Pyrene	200000	J	49000	262000	J 4	ug/Kg		117	10 - 200	10	40
2,4,5-Trichlorophenol	500000	U	49000	27100	J	ug/Kg		55	32 - 120	24	40
2,4,6-Trichlorophenol	500000	U	49000	56300	J	ug/Kg		115	22 - 120	8	40

Surrogate	MSD %Recovery	MSD Qualifier	Limits
2-Fluorobiphenyl (Surr)	97		57 - 134
2-Fluorophenol (Surr)	88		64 - 125
Nitrobenzene-d5 (Surr)	171	X	63 - 129
Phenol-d5 (Surr)	103		44 - 140
Terphenyl-d14 (Surr)	107		51 - 138
2,4,6-Tribromophenol (Surr)	89		31 - 148

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 240-231933/15-A

Matrix: Waste

Analysis Batch: 232124

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 231933

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	500	U	500	190	ug/Kg		05/25/16 13:34	05/26/16 20:49	1
Aroclor-1221	500	U	500	220	ug/Kg		05/25/16 13:34	05/26/16 20:49	1
Aroclor-1232	500	U	500	170	ug/Kg		05/25/16 13:34	05/26/16 20:49	1
Aroclor-1242	500	U	500	290	ug/Kg		05/25/16 13:34	05/26/16 20:49	1
Aroclor-1248	500	U	500	200	ug/Kg		05/25/16 13:34	05/26/16 20:49	1
Aroclor-1254	500	U	500	120	ug/Kg		05/25/16 13:34	05/26/16 20:49	1
Aroclor-1260	500	U	500	130	ug/Kg		05/25/16 13:34	05/26/16 20:49	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	85		10 - 191	05/25/16 13:34	05/26/16 20:49	1
Tetrachloro-m-xylene	91		23 - 160	05/25/16 13:34	05/26/16 20:49	1

Lab Sample ID: LCS 240-231933/16-A

Matrix: Waste

Analysis Batch: 232124

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 231933

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aroclor-1016	10000	9840		ug/Kg		98	51 - 160
Aroclor-1260	10000	10000		ug/Kg		100	32 - 160

TestAmerica Canton

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: LCS 240-231933/16-A
Matrix: Waste
Analysis Batch: 232124

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 231933

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
DCB Decachlorobiphenyl	108		10 - 191
Tetrachloro-m-xylene	109		23 - 160

Lab Sample ID: 240-65173-12 MS
Matrix: Waste
Analysis Batch: 232210

Client Sample ID: TW11-02-LNAPL-052016
Prep Type: Total/NA
Prep Batch: 231933

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Aroclor-1016	500	U	9800	9540		ug/Kg		97	28 - 142
Aroclor-1260	500	U	9800	9960		ug/Kg		102	10 - 165
Surrogate	MS %Recovery	MS Qualifier	Limits						
DCB Decachlorobiphenyl	119		10 - 191						
Tetrachloro-m-xylene	104		23 - 160						

Lab Sample ID: 240-65173-12 MSD
Matrix: Waste
Analysis Batch: 232210

Client Sample ID: TW11-02-LNAPL-052016
Prep Type: Total/NA
Prep Batch: 231933

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Aroclor-1016	500	U	9520	8120		ug/Kg		85	28 - 142	16	30
Aroclor-1260	500	U	9520	9490		ug/Kg		100	10 - 165	5	30
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
DCB Decachlorobiphenyl	97		10 - 191								
Tetrachloro-m-xylene	92		23 - 160								

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 240-232737/1-A
Matrix: Waste
Analysis Batch: 232955

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 232737

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	1.0	U	1.0	0.48	mg/Kg		06/01/16 13:49	06/02/16 12:20	1
Arsenic	1.0	U	1.0	0.41	mg/Kg		06/01/16 13:49	06/02/16 12:20	1
Barium	20	U	20	0.41	mg/Kg		06/01/16 13:49	06/02/16 12:20	1
Beryllium	0.50	U	0.50	0.026	mg/Kg		06/01/16 13:49	06/02/16 12:20	1
Cadmium	0.20	U	0.20	0.021	mg/Kg		06/01/16 13:49	06/02/16 12:20	1
Chromium	0.0854	J	0.50	0.075	mg/Kg		06/01/16 13:49	06/02/16 12:20	1
Cobalt	5.0	U	5.0	0.047	mg/Kg		06/01/16 13:49	06/02/16 12:20	1
Copper	2.5	U	2.5	0.23	mg/Kg		06/01/16 13:49	06/02/16 12:20	1
Lead	0.30	U	0.30	0.20	mg/Kg		06/01/16 13:49	06/02/16 12:20	1
Manganese	0.379	J	1.5	0.084	mg/Kg		06/01/16 13:49	06/02/16 12:20	1
Nickel	4.0	U	4.0	0.080	mg/Kg		06/01/16 13:49	06/02/16 12:20	1
Selenium	0.50	U	0.50	0.34	mg/Kg		06/01/16 13:49	06/02/16 12:20	1
Silver	0.50	U	0.50	0.063	mg/Kg		06/01/16 13:49	06/02/16 12:20	1

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QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: MB 240-232737/1-A

Matrix: Waste

Analysis Batch: 232955

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 232737

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium	1.0	U	1.0	0.13	mg/Kg		06/01/16 13:49	06/02/16 12:20	1
Vanadium	5.0	U	5.0	0.20	mg/Kg		06/01/16 13:49	06/02/16 12:20	1
Zinc	2.0	U	2.0	0.56	mg/Kg		06/01/16 13:49	06/02/16 12:20	1

Lab Sample ID: LCS 240-232737/2-A

Matrix: Waste

Analysis Batch: 232955

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 232737

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	50.0	47.9		mg/Kg		96	80 - 120
Arsenic	200	196		mg/Kg		98	80 - 120
Barium	200	179		mg/Kg		90	80 - 120
Beryllium	5.00	4.65		mg/Kg		93	80 - 120
Cadmium	5.00	4.89		mg/Kg		98	80 - 120
Chromium	20.0	19.4		mg/Kg		97	80 - 120
Cobalt	50.0	48.2		mg/Kg		96	80 - 120
Copper	25.0	23.8		mg/Kg		95	80 - 120
Lead	50.0	48.1		mg/Kg		96	80 - 120
Manganese	50.0	47.7		mg/Kg		95	80 - 120
Nickel	50.0	49.3		mg/Kg		99	80 - 120
Selenium	200	195		mg/Kg		97	80 - 120
Silver	5.00	4.73		mg/Kg		95	80 - 120
Thallium	200	190		mg/Kg		95	80 - 120
Vanadium	50.0	47.5		mg/Kg		95	80 - 120
Zinc	50.0	50.1		mg/Kg		100	80 - 120

Method: 7471A - Mercury (CVAA)

Lab Sample ID: MB 240-231923/1-A

Matrix: Waste

Analysis Batch: 232039

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 231923

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.10	U	0.10	0.014	mg/Kg		05/25/16 15:00	05/26/16 07:40	1

Lab Sample ID: LCS 240-231923/2-A

Matrix: Waste

Analysis Batch: 232039

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 231923

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.833	0.914		mg/Kg		110	80 - 120

Lab Sample ID: MB 240-232130/1-A

Matrix: Waste

Analysis Batch: 232456

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 232130

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0218	J	0.10	0.014	mg/Kg		05/26/16 15:00	05/27/16 16:03	1

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QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Method: 7471A - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 240-232130/2-A
Matrix: Waste
Analysis Batch: 232456

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 232130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.833	0.865		mg/Kg		104	80 - 120

QC Association Summary

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

GC/MS VOA

Prep Batch: 232068

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-65173-2	MWM2-29-LNAPL-052016	Total/NA	Waste	5030B	
240-65173-3	TWM2-07-LNAPL-052016	Total/NA	Waste	5030B	
240-65173-4	MWW10-01-LNAPL-052016	Total/NA	Waste	5030B	
240-65173-4 MS	MWW10-01-LNAPL-052016	Total/NA	Waste	5030B	
240-65173-4 MSD	MWW10-01-LNAPL-052016	Total/NA	Waste	5030B	
240-65173-5	MWW10-08-LNAPL-052016	Total/NA	Waste	5030B	
240-65173-6	TW-01-01-LNAPL-052016	Total/NA	Waste	5030B	
240-65173-7	SB-46-14-LNAPL-052016	Total/NA	Waste	5030B	
240-65173-8	SB-43-14-LNAPL-052016	Total/NA	Waste	5030B	
240-65173-9	RWW8-129-LNAPL-052016	Total/NA	Waste	5030B	
240-65173-11	MWW8-65-LNAPL-052016	Total/NA	Waste	5030B	
240-65173-12	TW11-02-LNAPL-052016	Total/NA	Waste	5030B	
LCS 240-232068/2-A	Lab Control Sample	Total/NA	Waste	5030B	
MB 240-232068/1-A	Method Blank	Total/NA	Waste	5030B	

Analysis Batch: 232171

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-65173-2	MWM2-29-LNAPL-052016	Total/NA	Waste	8260B	232068
240-65173-3	TWM2-07-LNAPL-052016	Total/NA	Waste	8260B	232068
240-65173-4	MWW10-01-LNAPL-052016	Total/NA	Waste	8260B	232068
240-65173-4 MS	MWW10-01-LNAPL-052016	Total/NA	Waste	8260B	232068
240-65173-4 MSD	MWW10-01-LNAPL-052016	Total/NA	Waste	8260B	232068
240-65173-5	MWW10-08-LNAPL-052016	Total/NA	Waste	8260B	232068
240-65173-6	TW-01-01-LNAPL-052016	Total/NA	Waste	8260B	232068
240-65173-7	SB-46-14-LNAPL-052016	Total/NA	Waste	8260B	232068
240-65173-8	SB-43-14-LNAPL-052016	Total/NA	Waste	8260B	232068
240-65173-9	RWW8-129-LNAPL-052016	Total/NA	Waste	8260B	232068
240-65173-11	MWW8-65-LNAPL-052016	Total/NA	Waste	8260B	232068
240-65173-12	TW11-02-LNAPL-052016	Total/NA	Waste	8260B	232068
LCS 240-232068/2-A	Lab Control Sample	Total/NA	Waste	8260B	232068
MB 240-232068/1-A	Method Blank	Total/NA	Waste	8260B	232068

GC/MS Semi VOA

Prep Batch: 231939

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-65173-2	MWM2-29-LNAPL-052016	Total/NA	Waste	3580A	
240-65173-3	TWM2-07-LNAPL-052016	Total/NA	Waste	3580A	
240-65173-4	MWW10-01-LNAPL-052016	Total/NA	Waste	3580A	
240-65173-5	MWW10-08-LNAPL-052016	Total/NA	Waste	3580A	
240-65173-6	TW-01-01-LNAPL-052016	Total/NA	Waste	3580A	
240-65173-7	SB-46-14-LNAPL-052016	Total/NA	Waste	3580A	
240-65173-8	SB-43-14-LNAPL-052016	Total/NA	Waste	3580A	
240-65173-8 MS	SB-43-14-LNAPL-052016	Total/NA	Waste	3580A	
240-65173-8 MSD	SB-43-14-LNAPL-052016	Total/NA	Waste	3580A	
LCS 240-231939/11-A	Lab Control Sample	Total/NA	Waste	3580A	
MB 240-231939/10-A	Method Blank	Total/NA	Waste	3580A	

TestAmerica Canton

QC Association Summary

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

GC/MS Semi VOA (Continued)

Analysis Batch: 232030

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-65173-2	MWM2-29-LNAPL-052016	Total/NA	Waste	8270C	231939
240-65173-3	TWM2-07-LNAPL-052016	Total/NA	Waste	8270C	231939
240-65173-4	MWW10-01-LNAPL-052016	Total/NA	Waste	8270C	231939
240-65173-5	MWW10-08-LNAPL-052016	Total/NA	Waste	8270C	231939
240-65173-6	TW-01-01-LNAPL-052016	Total/NA	Waste	8270C	231939
240-65173-7	SB-46-14-LNAPL-052016	Total/NA	Waste	8270C	231939
240-65173-8	SB-43-14-LNAPL-052016	Total/NA	Waste	8270C	231939
240-65173-8 MS	SB-43-14-LNAPL-052016	Total/NA	Waste	8270C	231939
240-65173-8 MSD	SB-43-14-LNAPL-052016	Total/NA	Waste	8270C	231939
LCS 240-231939/11-A	Lab Control Sample	Total/NA	Waste	8270C	231939
MB 240-231939/10-A	Method Blank	Total/NA	Waste	8270C	231939

GC Semi VOA

Prep Batch: 231933

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-65173-1	MWM4-06R-LNAPL-052016	Total/NA	Waste	3580A	
240-65173-2	MWM2-29-LNAPL-052016	Total/NA	Waste	3580A	
240-65173-3	TWM2-07-LNAPL-052016	Total/NA	Waste	3580A	
240-65173-4	MWW10-01-LNAPL-052016	Total/NA	Waste	3580A	
240-65173-5	MWW10-08-LNAPL-052016	Total/NA	Waste	3580A	
240-65173-6	TW-01-01-LNAPL-052016	Total/NA	Waste	3580A	
240-65173-7	SB-46-14-LNAPL-052016	Total/NA	Waste	3580A	
240-65173-8	SB-43-14-LNAPL-052016	Total/NA	Waste	3580A	
240-65173-9	RWW8-129-LNAPL-052016	Total/NA	Waste	3580A	
240-65173-10	TW-09-01-LNAPL-052016	Total/NA	Waste	3580A	
240-65173-11	MWW8-65-LNAPL-052016	Total/NA	Waste	3580A	
240-65173-12	TW11-02-LNAPL-052016	Total/NA	Waste	3580A	
240-65173-12 MS	TW11-02-LNAPL-052016	Total/NA	Waste	3580A	
240-65173-12 MSD	TW11-02-LNAPL-052016	Total/NA	Waste	3580A	
LCS 240-231933/16-A	Lab Control Sample	Total/NA	Waste	3580A	
MB 240-231933/15-A	Method Blank	Total/NA	Waste	3580A	

Analysis Batch: 232124

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-65173-1	MWM4-06R-LNAPL-052016	Total/NA	Waste	8082	231933
240-65173-2	MWM2-29-LNAPL-052016	Total/NA	Waste	8082	231933
240-65173-3	TWM2-07-LNAPL-052016	Total/NA	Waste	8082	231933
240-65173-4	MWW10-01-LNAPL-052016	Total/NA	Waste	8082	231933
240-65173-5	MWW10-08-LNAPL-052016	Total/NA	Waste	8082	231933
240-65173-6	TW-01-01-LNAPL-052016	Total/NA	Waste	8082	231933
240-65173-7	SB-46-14-LNAPL-052016	Total/NA	Waste	8082	231933
240-65173-8	SB-43-14-LNAPL-052016	Total/NA	Waste	8082	231933
240-65173-10	TW-09-01-LNAPL-052016	Total/NA	Waste	8082	231933
LCS 240-231933/16-A	Lab Control Sample	Total/NA	Waste	8082	231933
MB 240-231933/15-A	Method Blank	Total/NA	Waste	8082	231933

Analysis Batch: 232210

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-65173-9	RWW8-129-LNAPL-052016	Total/NA	Waste	8082	231933

TestAmerica Canton

QC Association Summary

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

GC Semi VOA (Continued)

Analysis Batch: 232210 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-65173-11	MWW8-65-LNAPL-052016	Total/NA	Waste	8082	231933
240-65173-12	TW11-02-LNAPL-052016	Total/NA	Waste	8082	231933
240-65173-12 MS	TW11-02-LNAPL-052016	Total/NA	Waste	8082	231933
240-65173-12 MSD	TW11-02-LNAPL-052016	Total/NA	Waste	8082	231933

Metals

Prep Batch: 231923

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-65173-2	MWM2-29-LNAPL-052016	Total/NA	Waste	7471A	
240-65173-3	TWM2-07-LNAPL-052016	Total/NA	Waste	7471A	
240-65173-4	MWW10-01-LNAPL-052016	Total/NA	Waste	7471A	
240-65173-5	MWW10-08-LNAPL-052016	Total/NA	Waste	7471A	
240-65173-6	TW-01-01-LNAPL-052016	Total/NA	Waste	7471A	
240-65173-7	SB-46-14-LNAPL-052016	Total/NA	Waste	7471A	
240-65173-8	SB-43-14-LNAPL-052016	Total/NA	Waste	7471A	
240-65173-12	TW11-02-LNAPL-052016	Total/NA	Waste	7471A	
LCS 240-231923/2-A	Lab Control Sample	Total/NA	Waste	7471A	
MB 240-231923/1-A	Method Blank	Total/NA	Waste	7471A	

Analysis Batch: 232039

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-65173-2	MWM2-29-LNAPL-052016	Total/NA	Waste	7471A	231923
240-65173-3	TWM2-07-LNAPL-052016	Total/NA	Waste	7471A	231923
240-65173-4	MWW10-01-LNAPL-052016	Total/NA	Waste	7471A	231923
240-65173-5	MWW10-08-LNAPL-052016	Total/NA	Waste	7471A	231923
240-65173-6	TW-01-01-LNAPL-052016	Total/NA	Waste	7471A	231923
240-65173-7	SB-46-14-LNAPL-052016	Total/NA	Waste	7471A	231923
240-65173-8	SB-43-14-LNAPL-052016	Total/NA	Waste	7471A	231923
240-65173-12	TW11-02-LNAPL-052016	Total/NA	Waste	7471A	231923
LCS 240-231923/2-A	Lab Control Sample	Total/NA	Waste	7471A	231923
MB 240-231923/1-A	Method Blank	Total/NA	Waste	7471A	231923

Prep Batch: 232130

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-65173-9	RWW8-129-LNAPL-052016	Total/NA	Waste	7471A	
240-65173-11	MWW8-65-LNAPL-052016	Total/NA	Waste	7471A	
LCS 240-232130/2-A	Lab Control Sample	Total/NA	Waste	7471A	
MB 240-232130/1-A	Method Blank	Total/NA	Waste	7471A	

Analysis Batch: 232456

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-65173-9	RWW8-129-LNAPL-052016	Total/NA	Waste	7471A	232130
240-65173-11	MWW8-65-LNAPL-052016	Total/NA	Waste	7471A	232130
LCS 240-232130/2-A	Lab Control Sample	Total/NA	Waste	7471A	232130
MB 240-232130/1-A	Method Blank	Total/NA	Waste	7471A	232130

Prep Batch: 232737

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-65173-2	MWM2-29-LNAPL-052016	Total/NA	Waste	3050B	

TestAmerica Canton

QC Association Summary

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Metals (Continued)

Prep Batch: 232737 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-65173-3	TWM2-07-LNAPL-052016	Total/NA	Waste	3050B	
240-65173-4	MWW10-01-LNAPL-052016	Total/NA	Waste	3050B	
240-65173-5	MWW10-08-LNAPL-052016	Total/NA	Waste	3050B	
240-65173-6	TW-01-01-LNAPL-052016	Total/NA	Waste	3050B	
240-65173-7	SB-46-14-LNAPL-052016	Total/NA	Waste	3050B	
240-65173-8	SB-43-14-LNAPL-052016	Total/NA	Waste	3050B	
LCS 240-232737/2-A	Lab Control Sample	Total/NA	Waste	3050B	
MB 240-232737/1-A	Method Blank	Total/NA	Waste	3050B	

Analysis Batch: 232955

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-65173-2	MWM2-29-LNAPL-052016	Total/NA	Waste	6010B	232737
240-65173-2	MWM2-29-LNAPL-052016	Total/NA	Waste	6010B	232737
240-65173-3	TWM2-07-LNAPL-052016	Total/NA	Waste	6010B	232737
240-65173-3	TWM2-07-LNAPL-052016	Total/NA	Waste	6010B	232737
240-65173-4	MWW10-01-LNAPL-052016	Total/NA	Waste	6010B	232737
240-65173-4	MWW10-01-LNAPL-052016	Total/NA	Waste	6010B	232737
240-65173-5	MWW10-08-LNAPL-052016	Total/NA	Waste	6010B	232737
240-65173-5	MWW10-08-LNAPL-052016	Total/NA	Waste	6010B	232737
240-65173-6	TW-01-01-LNAPL-052016	Total/NA	Waste	6010B	232737
240-65173-6	TW-01-01-LNAPL-052016	Total/NA	Waste	6010B	232737
240-65173-7	SB-46-14-LNAPL-052016	Total/NA	Waste	6010B	232737
240-65173-7	SB-46-14-LNAPL-052016	Total/NA	Waste	6010B	232737
240-65173-8	SB-43-14-LNAPL-052016	Total/NA	Waste	6010B	232737
240-65173-8	SB-43-14-LNAPL-052016	Total/NA	Waste	6010B	232737
LCS 240-232737/2-A	Lab Control Sample	Total/NA	Waste	6010B	232737
MB 240-232737/1-A	Method Blank	Total/NA	Waste	6010B	232737

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Client Sample ID: MWM4-06R-LNAPL-052016

Date Collected: 05/20/16 08:30

Date Received: 05/21/16 09:40

Lab Sample ID: 240-65173-1

Matrix: Waste

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3580A			231933	05/25/16 13:34	SDE	TAL CAN
Total/NA	Analysis	8082		10	232124	05/26/16 16:41	LSH	TAL CAN

Client Sample ID: MWM2-29-LNAPL-052016

Date Collected: 05/20/16 09:00

Date Received: 05/21/16 09:40

Lab Sample ID: 240-65173-2

Matrix: Waste

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			232068	05/26/16 10:38	LAM	TAL CAN
Total/NA	Analysis	8260B		1	232171	05/26/16 18:11	TJL1	TAL CAN
Total/NA	Prep	3580A			231939	05/25/16 14:07	SDE	TAL CAN
Total/NA	Analysis	8270C		25	232030	05/26/16 18:28	JMG	TAL CAN
Total/NA	Prep	3580A			231933	05/25/16 13:34	SDE	TAL CAN
Total/NA	Analysis	8082		200	232124	05/26/16 16:59	LSH	TAL CAN
Total/NA	Prep	3050B			232737	06/01/16 13:49	DEE	TAL CAN
Total/NA	Analysis	6010B		1	232955	06/02/16 17:56	KLC	TAL CAN
Total/NA	Prep	3050B			232737	06/01/16 13:49	DEE	TAL CAN
Total/NA	Analysis	6010B		1	232955	06/03/16 07:04	KLC	TAL CAN
Total/NA	Prep	7471A			231923	05/25/16 15:00	DEE	TAL CAN
Total/NA	Analysis	7471A		1	232039	05/26/16 08:17	WKD	TAL CAN

Client Sample ID: TWM2-07-LNAPL-052016

Date Collected: 05/20/16 09:30

Date Received: 05/21/16 09:40

Lab Sample ID: 240-65173-3

Matrix: Waste

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			232068	05/26/16 10:38	LAM	TAL CAN
Total/NA	Analysis	8260B		1	232171	05/26/16 18:34	TJL1	TAL CAN
Total/NA	Prep	3580A			231939	05/25/16 14:07	SDE	TAL CAN
Total/NA	Analysis	8270C		25	232030	05/26/16 18:52	JMG	TAL CAN
Total/NA	Prep	3580A			231933	05/25/16 13:34	SDE	TAL CAN
Total/NA	Analysis	8082		1	232124	05/26/16 17:17	LSH	TAL CAN
Total/NA	Prep	3050B			232737	06/01/16 13:49	DEE	TAL CAN
Total/NA	Analysis	6010B		1	232955	06/02/16 18:00	KLC	TAL CAN
Total/NA	Prep	3050B			232737	06/01/16 13:49	DEE	TAL CAN
Total/NA	Analysis	6010B		1	232955	06/03/16 07:08	KLC	TAL CAN
Total/NA	Prep	7471A			231923	05/25/16 15:00	DEE	TAL CAN
Total/NA	Analysis	7471A		1	232039	05/26/16 08:19	WKD	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Client Sample ID: MWW10-01-LNAPL-052016

Lab Sample ID: 240-65173-4

Date Collected: 05/20/16 10:05

Matrix: Waste

Date Received: 05/21/16 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			232068	05/26/16 10:38	LAM	TAL CAN
Total/NA	Analysis	8260B		1	232171	05/26/16 18:55	TJL1	TAL CAN
Total/NA	Prep	3580A			231939	05/25/16 14:07	SDE	TAL CAN
Total/NA	Analysis	8270C		50	232030	05/26/16 19:15	JMG	TAL CAN
Total/NA	Prep	3580A			231933	05/25/16 13:34	SDE	TAL CAN
Total/NA	Analysis	8082		20	232124	05/26/16 17:34	LSH	TAL CAN
Total/NA	Prep	3050B			232737	06/01/16 13:49	DEE	TAL CAN
Total/NA	Analysis	6010B		1	232955	06/02/16 18:04	KLC	TAL CAN
Total/NA	Prep	3050B			232737	06/01/16 13:49	DEE	TAL CAN
Total/NA	Analysis	6010B		1	232955	06/03/16 07:12	KLC	TAL CAN
Total/NA	Prep	7471A			231923	05/25/16 15:00	DEE	TAL CAN
Total/NA	Analysis	7471A		1	232039	05/26/16 08:21	WKD	TAL CAN

Client Sample ID: MWW10-08-LNAPL-052016

Lab Sample ID: 240-65173-5

Date Collected: 05/20/16 10:25

Matrix: Waste

Date Received: 05/21/16 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			232068	05/26/16 10:38	LAM	TAL CAN
Total/NA	Analysis	8260B		1	232171	05/26/16 19:18	TJL1	TAL CAN
Total/NA	Prep	3580A			231939	05/25/16 14:07	SDE	TAL CAN
Total/NA	Analysis	8270C		50	232030	05/26/16 19:39	JMG	TAL CAN
Total/NA	Prep	3580A			231933	05/25/16 13:34	SDE	TAL CAN
Total/NA	Analysis	8082		20	232124	05/26/16 17:52	LSH	TAL CAN
Total/NA	Prep	3050B			232737	06/01/16 13:49	DEE	TAL CAN
Total/NA	Analysis	6010B		1	232955	06/02/16 18:08	KLC	TAL CAN
Total/NA	Prep	3050B			232737	06/01/16 13:49	DEE	TAL CAN
Total/NA	Analysis	6010B		1	232955	06/03/16 07:16	KLC	TAL CAN
Total/NA	Prep	7471A			231923	05/25/16 15:00	DEE	TAL CAN
Total/NA	Analysis	7471A		1	232039	05/26/16 08:23	WKD	TAL CAN

Client Sample ID: TW-01-01-LNAPL-052016

Lab Sample ID: 240-65173-6

Date Collected: 05/20/16 10:50

Matrix: Waste

Date Received: 05/21/16 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			232068	05/26/16 10:38	LAM	TAL CAN
Total/NA	Analysis	8260B		1	232171	05/26/16 19:41	TJL1	TAL CAN
Total/NA	Prep	3580A			231939	05/25/16 14:07	SDE	TAL CAN
Total/NA	Analysis	8270C		25	232030	05/26/16 20:02	JMG	TAL CAN
Total/NA	Prep	3580A			231933	05/25/16 13:34	SDE	TAL CAN
Total/NA	Analysis	8082		50	232124	05/26/16 18:10	LSH	TAL CAN
Total/NA	Prep	3050B			232737	06/01/16 13:49	DEE	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Client Sample ID: TW-01-01-LNAPL-052016

Lab Sample ID: 240-65173-6

Date Collected: 05/20/16 10:50

Matrix: Waste

Date Received: 05/21/16 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	6010B		1	232955	06/02/16 18:13	KLC	TAL CAN
Total/NA	Prep	3050B			232737	06/01/16 13:49	DEE	TAL CAN
Total/NA	Analysis	6010B		1	232955	06/03/16 07:21	KLC	TAL CAN
Total/NA	Prep	7471A			231923	05/25/16 15:00	DEE	TAL CAN
Total/NA	Analysis	7471A		1	232039	05/26/16 08:26	WKD	TAL CAN

Client Sample ID: SB-46-14-LNAPL-052016

Lab Sample ID: 240-65173-7

Date Collected: 05/20/16 11:05

Matrix: Waste

Date Received: 05/21/16 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			232068	05/26/16 10:38	LAM	TAL CAN
Total/NA	Analysis	8260B		5	232171	05/27/16 00:37	TJL1	TAL CAN
Total/NA	Prep	3580A			231939	05/25/16 14:07	SDE	TAL CAN
Total/NA	Analysis	8270C		25	232030	05/26/16 20:26	JMG	TAL CAN
Total/NA	Prep	3580A			231933	05/25/16 13:34	SDE	TAL CAN
Total/NA	Analysis	8082		200	232124	05/26/16 18:28	LSH	TAL CAN
Total/NA	Prep	3050B			232737	06/01/16 13:49	DEE	TAL CAN
Total/NA	Analysis	6010B		1	232955	06/02/16 18:17	KLC	TAL CAN
Total/NA	Prep	3050B			232737	06/01/16 13:49	DEE	TAL CAN
Total/NA	Analysis	6010B		1	232955	06/03/16 07:25	KLC	TAL CAN
Total/NA	Prep	7471A			231923	05/25/16 15:00	DEE	TAL CAN
Total/NA	Analysis	7471A		1	232039	05/26/16 08:33	WKD	TAL CAN

Client Sample ID: SB-43-14-LNAPL-052016

Lab Sample ID: 240-65173-8

Date Collected: 05/20/16 11:10

Matrix: Waste

Date Received: 05/21/16 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			232068	05/26/16 10:38	LAM	TAL CAN
Total/NA	Analysis	8260B		1	232171	05/26/16 20:27	TJL1	TAL CAN
Total/NA	Prep	3580A			231939	05/25/16 14:07	SDE	TAL CAN
Total/NA	Analysis	8270C		25	232030	05/26/16 17:18	JMG	TAL CAN
Total/NA	Prep	3580A			231933	05/25/16 13:34	SDE	TAL CAN
Total/NA	Analysis	8082		100	232124	05/26/16 18:45	LSH	TAL CAN
Total/NA	Prep	3050B			232737	06/01/16 13:49	DEE	TAL CAN
Total/NA	Analysis	6010B		1	232955	06/02/16 18:21	KLC	TAL CAN
Total/NA	Prep	3050B			232737	06/01/16 13:49	DEE	TAL CAN
Total/NA	Analysis	6010B		1	232955	06/03/16 07:29	KLC	TAL CAN
Total/NA	Prep	7471A			231923	05/25/16 15:00	DEE	TAL CAN
Total/NA	Analysis	7471A		1	232039	05/26/16 08:35	WKD	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Client Sample ID: RWW8-129-LNAPL-052016

Lab Sample ID: 240-65173-9

Date Collected: 05/20/16 11:35

Matrix: Waste

Date Received: 05/21/16 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			232068	05/26/16 10:38	LAM	TAL CAN
Total/NA	Analysis	8260B		1	232171	05/26/16 20:49	TJL1	TAL CAN
Total/NA	Prep	3580A			231933	05/25/16 13:34	SDE	TAL CAN
Total/NA	Analysis	8082		2	232210	05/27/16 13:11	LSH	TAL CAN
Total/NA	Prep	7471A			232130	05/26/16 15:00	DEE	TAL CAN
Total/NA	Analysis	7471A		1	232456	05/27/16 16:32	WKD	TAL CAN

Client Sample ID: TW-09-01-LNAPL-052016

Lab Sample ID: 240-65173-10

Date Collected: 05/20/16 12:20

Matrix: Waste

Date Received: 05/21/16 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3580A			231933	05/25/16 13:34	SDE	TAL CAN
Total/NA	Analysis	8082		1	232124	05/26/16 19:21	LSH	TAL CAN

Client Sample ID: MWW8-65-LNAPL-052016

Lab Sample ID: 240-65173-11

Date Collected: 05/20/16 12:45

Matrix: Waste

Date Received: 05/21/16 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			232068	05/26/16 10:38	LAM	TAL CAN
Total/NA	Analysis	8260B		1	232171	05/26/16 21:11	TJL1	TAL CAN
Total/NA	Prep	3580A			231933	05/25/16 13:34	SDE	TAL CAN
Total/NA	Analysis	8082		1	232210	05/27/16 13:29	LSH	TAL CAN
Total/NA	Prep	7471A			232130	05/26/16 15:00	DEE	TAL CAN
Total/NA	Analysis	7471A		1	232456	05/27/16 16:34	WKD	TAL CAN

Client Sample ID: TW11-02-LNAPL-052016

Lab Sample ID: 240-65173-12

Date Collected: 05/20/16 13:15

Matrix: Waste

Date Received: 05/21/16 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			232068	05/26/16 10:38	LAM	TAL CAN
Total/NA	Analysis	8260B		1	232171	05/26/16 21:34	TJL1	TAL CAN
Total/NA	Prep	3580A			231933	05/25/16 13:34	SDE	TAL CAN
Total/NA	Analysis	8082		1	232210	05/27/16 13:47	LSH	TAL CAN
Total/NA	Prep	7471A			231923	05/25/16 12:55	DEE	TAL CAN
Total/NA	Analysis	7471A		1	232039	05/26/16 08:38	WKD	TAL CAN

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TestAmerica Canton

Certification Summary

Client: ARCADIS U.S., Inc.
Project/Site: Racer Pontiac

TestAmerica Job ID: 240-65173-1

Laboratory: TestAmerica Canton

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	NELAP	9	01144CA	06-30-14 *
California	State Program	9	2927	04-30-17
Connecticut	State Program	1	PH-0590	12-31-17
Florida	NELAP	4	E87225	06-30-16 *
Illinois	NELAP	5	200004	07-31-16 *
Kansas	NELAP	7	E-10336	07-31-16 *
Kentucky (UST)	State Program	4	58	02-23-17
Kentucky (VW)	State Program	4	98016	12-31-16
L-A-B	DoD ELAP		L2315	07-18-16
Minnesota	NELAP	5	039-999-348	12-31-16
Nevada	State Program	9	OH-000482008A	07-31-16 *
New Jersey	NELAP	2	OH001	06-30-16 *
New York	NELAP	2	10975	03-31-17
Ohio VAP	State Program	5	CL0024	09-14-17
Oregon	NELAP	10	4062	02-23-17
Pennsylvania	NELAP	3	68-00340	08-31-16 *
Texas	NELAP	6	T104704517-15-5	08-31-16 *
USDA	Federal		P330-13-00319	11-26-16
Virginia	NELAP	3	460175	09-14-16
Washington	State Program	10	C971	01-12-17
West Virginia DEP	State Program	3	210	12-31-16
Wisconsin	State Program	5	999518190	08-31-16 *

* Certification renewal pending - certification considered valid.

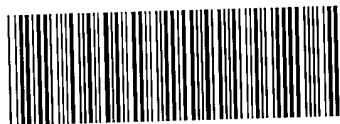
TestAmerica Canton

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

CHAIN OF CUSTODY AND RECEIVING DOCUMENTS



240-65173 Chain of Custody

TEST AMERICA
10448 Citation Drive
Suite 200
Brighton, MI 48116
Phone: 810.229.2763 Fax:

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

148672

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact		Project Manager: <u>Christi K. Ker</u>		Site Contact: <u>Scott Filipek</u>		Date: <u>5-20-16</u>		COC No: <u>1</u> of <u>1</u> COCs	
Company Name: <u>ARCADIS</u>		Tel/Fax: <u>832-239-0892</u>		Lab Contact: <u>Denise Pohl</u>		Carrier: <u>hand</u>		Sampler: <u>FILED</u>	
Address: <u>28550 Cabot Dr.</u>		City/State/Zip: <u>Novi, MI 48360</u>		Phone: <u>(248) 994-2240</u>		Fax: <u>(248) 994-2241</u>		For Lab Use Only:	
Project Name: <u>Racer, PNC</u>		Site: <u>Pontiac North Campus</u>		P O #		Analysis Turnaround Time		Walk-in Client:	
						☐ CALENDAR DAYS ☐ WORKING DAYS		Lab Sampling:	
						TAT if different from Below		Job / SDG No.:	
						☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day			
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	Sample Specific Notes:
MWM-4-06A-NAPL-052016	5-20-16	0830	G	L	1		X	X	
MWM-2-29-NAPL-052016	5-20-16	0900	G	L	3		X	X	
MWM-2-07-NAPL-052016	5-20-16	0930	G	L	3		X	X	
MWM-01-NAPL-052016	5-20-16	1005	G	L	3		X	X	
MWM-08-NAPL-052016	5-20-16	1025	G	L	3		X	X	
MWM-01-NAPL-052016	5-20-16	1050	G	L	3		X	X	
MWM-46-14-NAPL-052016	5-20-16	1105	G	L	3		X	X	
MWM-43-14-NAPL-052016	5-20-16	1110	G	L	3		X	X	
MWM-8-129-NAPL-052016	5-20-16	1135	G	L	1		X	X	
MWM-09-01-NAPL-052016	5-20-16	1220	G	L	1		X	X	
MWM-8-05-NAPL-052016	5-20-16	1245	G	L	1		X	X	
MWM-11-02-NAPL-052016	5-20-16	1315	G	L	1		X	X	
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4= HNO3; 5= NaOH; 6= Other									
Possible Hazard Identification: Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.									
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown									
Special Instructions/QC Requirements & Comments:									
Custody Seals Intact: ☐ Yes ☐ No		Custody Seal No.:		Cooler Temp. (°C): Obs'd: _____		Corr'd: _____		Therm ID No.:	
Relinquished by: <u>Scott Filipek</u>		Company: <u>ARCADIS</u>		Received by: <u>Denise Pohl</u>		Company: <u>TAL</u>		Date/Time: <u>5/20/16 1530</u>	
Relinquished by: <u>Denise Pohl</u>		Company: <u>TAL</u>		Received by: <u>Denise Pohl</u>		Company: <u>TAL</u>		Date/Time: <u>5/20/16 1535</u>	
Relinquished by: <u>Denise Pohl</u>		Company: <u>TAL</u>		Received in Laboratory by: <u>Denise Pohl</u>		Company: <u>TAL</u>		Date/Time: <u>5/20/16 9:40</u>	

Michigan



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TestAmerica Canton Sample Receipt Form/Narrative		Login #: <u>0573</u>
Canton Facility		
Client <u>Arrad 15</u>	Site Name	Cooler unpacked by: <u>R. J. Henderson</u>
Cooler Received on <u>5/21/2016</u>	Opened on <u>5/21/2016</u>	
FedEx: 1 st Grd ☒ Exp ☐ UPS ☐ FAS ☐ Stetson ☐ Client Drop Off ☐ TestAmerica Courier ☐ Other ☐		
Receipt After-hours: Drop-off Date/Time		Storage Location
TestAmerica Cooler # _____ Foam Box ☒ Client Cooler ☐ Box ☐ Other ☐		
Packing material used: Bubble Wrap ☐ Foam ☐ Plastic Bag ☐ None ☐ Other ☐		
COOLANT: Wet Ice ☐ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐		
1. Cooler temperature upon receipt ☐ See Multiple Cooler Form		
IR GUN# 48 (CF -1.9 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C		
IR GUN# 36 (CF -1.5 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C		
IR GUN# 18 (CF -0.5 °C) Observed Cooler Temp. <u>0.8</u> °C Corrected Cooler Temp. <u>0.3</u> °C		
2. Were custody seals on the outside of the cooler(s)? If Yes Quantity <u>1</u> ☒ Yes ☐ No		
-Were custody seals on the outside of the cooler(s) signed & dated? ☒ Yes ☐ No NA		
-Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? ☒ Yes ☐ No		
3. Shippers' packing slip attached to the cooler(s)? ☒ Yes ☐ No		
4. Did custody papers accompany the sample(s)? ☒ Yes ☐ No		
5. Were the custody papers relinquished & signed in the appropriate place? ☒ Yes ☐ No		
6. Was/were the person(s) who collected the samples clearly identified on the COC? ☒ Yes ☐ No		
7. Did all bottles arrive in good condition (Unbroken)? ☒ Yes ☐ No		
8. Could all bottle labels be reconciled with the COC? ☒ Yes ☐ No		
9. Were correct bottle(s) used for the test(s) indicated? ☒ Yes ☐ No		
10. Sufficient quantity received to perform indicated analyses? ☒ Yes ☐ No		
11. Are these work share samples? ☒ Yes ☐ No		
<i>If yes, Questions 12-16 have been checked at the originating laboratory.</i>		
12. Were sample(s) at the correct pH upon receipt? ☐ Yes ☒ No NA pH Strip Lot# <u>HC559158</u>		
13. Were VOAs on the COC? ☒ Yes ☐ No		
14. Were air bubbles >6 mm in any VOA vials? ☒ Yes ☐ No NA		
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # <u>covered</u> ☒ Yes ☐ No		
16. Was a LL Hg or Me Hg trip blank present? ☒ Yes ☐ No		
Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____		
Concerning _____		

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES	Samples processed by:
<u>COC TW-11-02 Marked for one container</u>	
<u>Received two</u>	
<u>Received 1x40mL TB not on COC - will log</u>	
18. SAMPLE CONDITION	
Sample(s) _____ were received after the recommended holding time had expired.	
Sample(s) _____ were received in a broken container.	
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)	
19. SAMPLE PRESERVATION	
Sample(s) _____ were further preserved in the laboratory.	
Time preserved: _____ Preservative(s) added/Lot number(s): _____	

ATTACHMENT 7

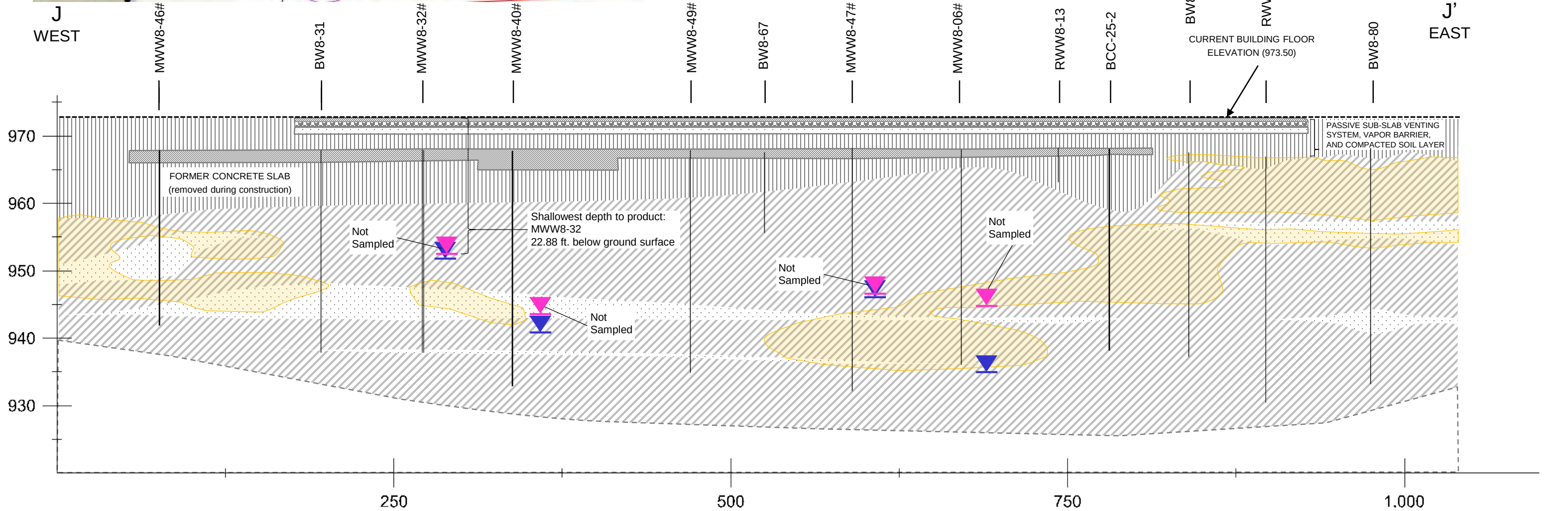
Cross Section J-J'





- KEY ISSUES**
- 1) VI – Methane evaluation conducted in 2004/2005 prior to USPS building construction. Passive venting system installed under building and parking lot to mitigate health & safety concerns (explosivity/flammability/asphyxiant properties). VI data collected 5' below grade along building perimeter in 2016. Methane below applicable criteria; Two locations exceed draft proposed Residential Screening Levels for benzene.
 - 2) LNAPL is stable and not migrating. LNAPL was recoverable via skimmers and MPE in 2004/2005 prior to building construction.

- COMPLETED INTERIM MEASURES**
- 1) Bulkhead Storm Sewer
 - 2) Multi-phase extraction (MPE) pilot test was completed at LNAPL Area 3 in 2005 prior to USPS building construction.
 - 3) Compacted soil layer (18”), vapor barrier, and passive sub-slab venting system installed during building construction.
- RECOMMENDED CORRECTIVE MEASURES**
- 1) Institutional Controls (see LNAPL Area 3 Decision Tree Note #7); USPS to maintain and operate passive venting system.



Note: The x-axis represents a straight-line distance. Wells encountered 10 feet of the line are projected to the cross-section.

Historical well location has been abandoned

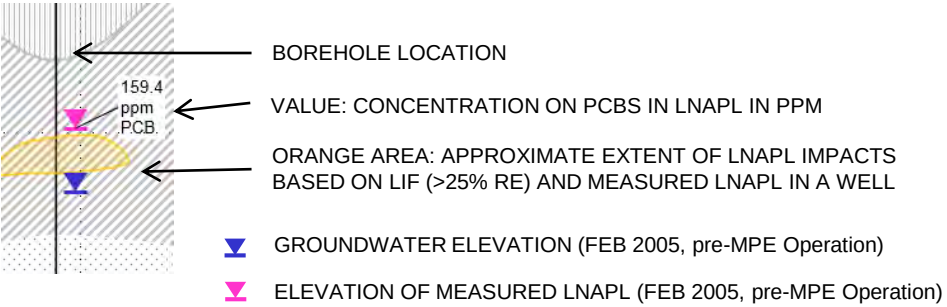
Please refer to Figure 1 (main plan view figure) for detailed symbology descriptions of symbols present on the aerial map.

Vertical Exaggeration: 5X

Generalized Stratigraphy

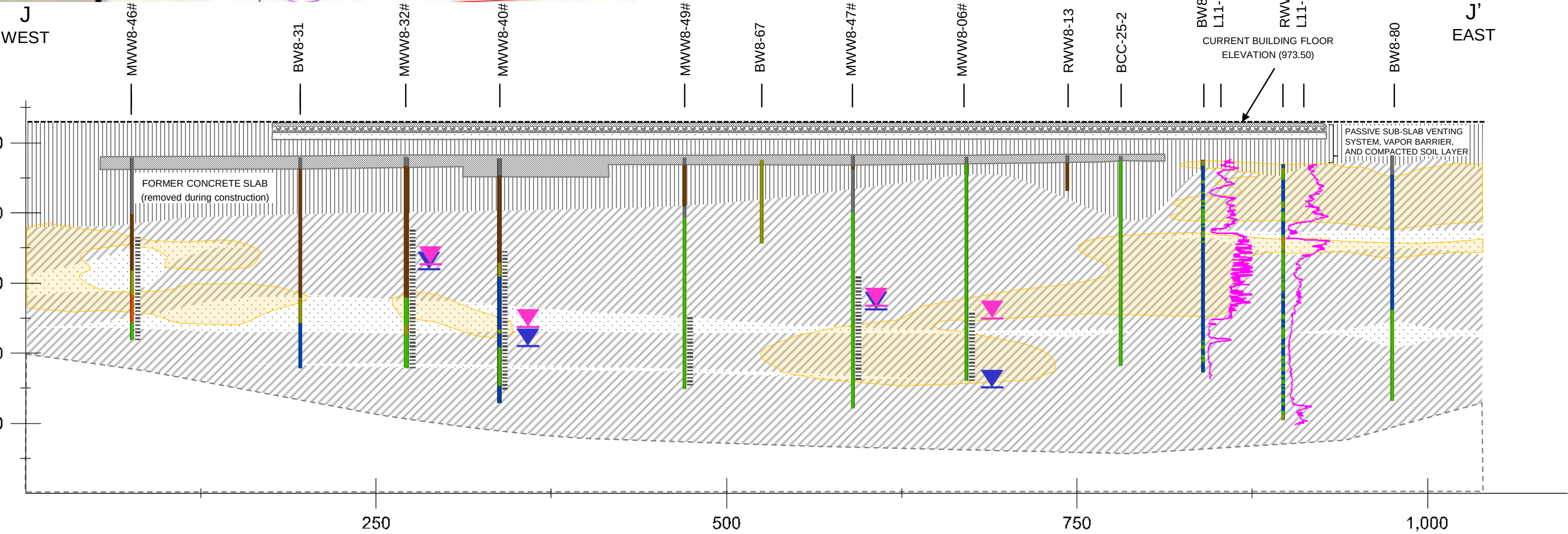
- CONCRETE
- FILL MATERIAL
- GLACIAL OUTWASH DEPOSITS COMPRISED PRIMARILY OF SANDS AND GRAVELS
- GLACIOLACUSTRINE DEPOSITS COMPRISED PRIMARILY OF SILTS AND CLAYS WITH THIN LENSES OF SANDS AND GRAVELS

- MDEQ – Michigan Department of Environmental Quality
- VI – Volatilization
- DC – Direct Contact
- ND – Non Detect
- PPM – Parts Per Million
- NSZD – Natural Source Zone Depletion



RACER TRUST
PONTIAC, MICHIGAN
PONTIAC NORTH CAMPUS

**LNAPL 3 OVERVIEW
CROSS SECTION J-J'**



Note: The x-axis represents a straight-line distance. Wells encountered 10 feet of the line are projected to the cross-section.

Historical well location has been abandoned

Please refer to Figure 1 (main plan view figure) for detailed symbology descriptions of symbols present on the aerial map.

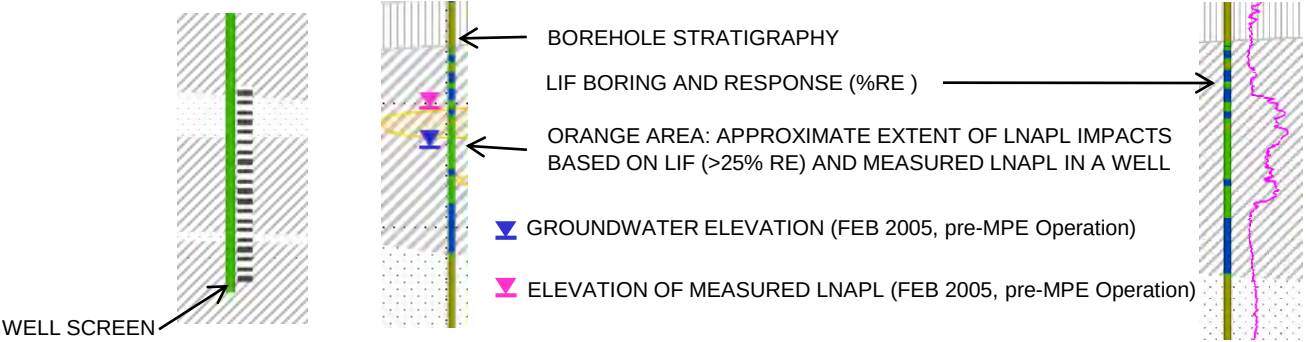
Vertical Exaggeration: 5X

Generalized Stratigraphy

- CONCRETE
- FILL MATERIAL
- GLACIAL OUTWASH DEPOSITS COMPRISED PRIMARILY OF SANDS AND GRAVELS
- GLACIOLACUSTRINE DEPOSITS COMPRISED PRIMARILY OF SILTS AND CLAYS WITH THIN LENSES OF SANDS AND GRAVELS

Borehole Stratigraphy

- FILL
- GRAVEL
- SAND
- SILT
- CLAY
- NO RECOVERY



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LNAPL 3 DETAILED CROSS SECTION J-J'