Phase II Environmental Site Assessment

A-1 Towing
King County Tax Parcel 3223049048
Des Moines, Washington

for
Washington State Department of Transportation
c/o HNTB Corporation

November 25, 2022

GeoEngineers
Earth Science + Technology

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GeoEngineers

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File No. 0180-393-00

November 25, 2022

Prepared for:

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CJW:PW:cdb

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1.0 INTRODUCTION AND BACKGROUND

This report describes the Phase II Environmental Site Assessment (ESA) activities conducted at the property located at King County Tax Parcel 3223049048 (the provided address of 18451 12th Avenue South in Des Moines, Washington does not map accurately) as part of the expansion of SR-509 (herein referred to as "site"). The property is owned by Washington State Department of Transportation (WSDOT) but is leased by a private party and WSDOT is evaluating environmental conditions. The approximate site location is shown in the attached Vicinity Map, Figure 1.

GeoEngineers, Inc. (GeoEngineers) reviewed a Phase II ESA prepared for the property (known as A-1 Towing and the Foreman Property) located at 18451 12th Avenue South in Des Moines, Washington by WSDOT, dated January 24, 2019. The Phase II ESA indicated that WSDOT purchased the property in 2000. A tenant (Mr. Foreman) conducted welding activities between 2000 and 2016, and the Washington State Patrol (WSP) used a portion of the property to dismantle seized vehicles in the summer of 2016. At the time of the report (January 2019), A-1 Towing leased the property as a towing yard, which included storge of vehicles throughout the site and repairing of vehicles within an existing garage structure. The Phase II report included a summary of the following activities:

- The Phase II ESA performed by WSDOT in 2016 following the termination of the lease to Mr. Foreman included soil sampling of areas with significant staining. Areas identified as Area A, B, C and D were sampled as part of the Phase II ESA. Results indicated the presence of lube oil and arsenic exceeding the Model Toxic Control Act (MTCA) Cleanup Levels (CULs) in Area B and C, respectively.
- In April 2017, WSDOT contracted Marine Vacuum Incorporated to clean up areas of the Site with trash, debris and soils with notable detectable analytes below MTCA Method A CULs. It is unclear from this statement as to what soils were actually removed and no additional details were provided.
- In January 2018, A-1 Towing graded Site soils including some that were contaminated. The soils were displaced from previously sampled areas A and B. A new stockpile was present following these activities just north of Area D.
- On March 15, 2018, WSDOT collected four additional soil samples from areas defined as Area A, B, and a new location. WSDOT collected a sample to determine if there was an indication of grading with known or suspected soil contamination, or where displaced/graded soils appeared to be consolidated into a stockpile generated by the lessee. Areas C and D did not have these indicators and did not warrant additional sampling. Sample results did not indicate results exceeding the MTCA Method A CULs.
- On September 20 and 21, 2018, Marine Vacuum Performed excavation activities to address the previously detected lube oil concentrations exceeding the MTCA Method A CULs and an area to remediate suspected contaminated materials in Area C and D. During site excavation activities soils were field screened using sight, olfactory and photoionization detector (PID) levels above 10 parts per million. Non-suspect soils were placed off to the side on a lined area and covered. On September 21, 2018, WSDOT collected two confirmation soil samples in locations where the soils had been removed. Laboratory analytical results were either non-detect or detected at concentrations less than MTCA Method A CULs. Following sample results, the stockpiled non-suspect soils were used to fill and grade the excavation areas.

- The January 24, 2019, Phase II ESA summary indicated that the known and suspected soils with contamination (approximately 8.4 cubic yards) were removed from the site and based on the analytical results no contamination remains on the property. WSDOT requested a no further action (NFA) determination from Washington State.
- Ecology responded to the request for a NFA determination indicating that additional information would be necessary including depth of samples, groundwater samples (if encountered) and more accurate sample location information (previous report had conflicting depictions).

The following sections describe our scope of services (prepared with approval by WSDOT), field activities, sampling results and opinions.

2.0 SCOPE OF SERVICES

Our general environmental scope of services was as follows:

- Prepared a Health and Safety Plan for use by GeoEngineers' personnel during the field activities.
- Coordinate the location of nine shallow proposed soil borings with one boring located at each historic background sample location SS-2, SS-3 and SS-4, which represent staining observed in Areas B, C and D, respectively (Area A does not appear to be of concern for additional assessment). Two additional borings were placed in each area based on the sample location map depicting rectangular areas of staining and or remedial excavations. At least one boring in each area will be advanced to groundwater or 15 feet below ground surface (bgs) and a groundwater monitoring well installed, if water is encountered. The additional borings will be placed in a manner to bracket the depicted area of concern. A total of nine shallow borings and three monitoring wells were proposed.
- Contact the Utility Notification Center public locating service. A private locating service will also be subcontracted to locate potential utilities.
- Retain a drilling subcontractor to advance nine direct push borings to a depth of 5 to 15 feet (bgs), dependent on field screening results, presence of groundwater and depth to native soils. If groundwater is encountered (reportedly as shallow as 3 feet bgs) at the former sample locations SS-2 through SS-4, a 2-inch-diameter polyvinyl chloride (PVC) casing monitoring well will be installed. Depths of the borings may be adjusted in an attempt to install a minimum of three wells to evaluate site specific groundwater flow direction. (Groundwater was not encountered during drilling activities and no wells were installed).
- Continuously sample push probes and visually classify and field screen (sheen, PID and odor) for potential laboratory analysis by a GeoEngineers representative. Visual classification of the soil samples is to be completed in general accordance with ASTM D 2488-90, the Standard Practice for Description and Identification of Soils.
- Collected two soil samples per boring for potential laboratory analysis based on field screening results and depth to groundwater.
- Submit the soil samples on a standard turnaround time (10 business days) for laboratory analysis of the following:
    - Gasoline-range petroleum hydrocarbons by Northwest Method NWTPH-Gx (Gx).

- Diesel- and lube-oil range petroleum hydrocarbons by Northwest Method NWTPH-Dx (Dx and Ox).
- Resource Conservation and Recovery Act (RCRA) eight metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver) by United States Environmental Protection Agency (EPA) Method 6020.
- Polycyclic aromatic hydrocarbons (PAHs) by EPA Method 8270.
- Volatile organic compounds (VOCs) by EPA Method 8260C.

- Coordinate disposal of investigation-derived waste (IDW) at an appropriate off-site facility. Collect one composite soil sample directly from the drum or during drilling for waste profiling purposes.
- Prepare a report including sample results tables, laboratory data, site figures and boring/sampling logs documenting results of the work performed at the site. The data will be tabulated and compared against MTCA CULs.
- Upload data to the Ecology Environmental Information Management (EIM) system as required.

3.0 SUBSURFACE CONDITIONS

Logs of borings are included in Appendix A. Soils were visually classified in general accordance with ASTM D 2488-94. Boring locations are shown in Exploration Locations, Figure 2.

3.1. Subsurface Soil Conditions

Surface conditions at the site consist primarily of fill gravel (from several inches up to 2 feet). Soils encountered during exploration activities consisted of sand, silt and varying gradations of sand and silt with occasional gravel to the maximum depth explored, 15 to 20 feet bgs.

3.2. Subsurface Groundwater Conditions

Soils observed during drilling were generally moist and groundwater was not encountered during drilling.

4.0 SOIL SAMPLING AND CHEMICAL ANALYTICAL RESULTS

A GeoEngineers' field representative collected soil samples continuously from each boring for field screening and potential laboratory analysis. Samples were field screened for evidence of petroleum and/or VOC-related impact using visual, water sheen and headspace vapor screening methods using a PID. Soil samples were collected based on field screening data. The soil samples were submitted for laboratory analysis of VOCs, Gx, Dx, Ox, PAHs and/or RCRA eight metals to Pace National. Soil chemical analytical data are presented in Tables 1 and 2. Laboratory analytical reports are attached in Appendix B.

4.1. Soil Sample Analytical Results

As previously noted, three areas of concern with previous sample results were identified for additional assessment identified as areas B, C and D (no concerns were expressed by Ecology for the need to further explore Area A). The following sections summarize the results of the additional borings and soil sampling performed in each area. Approximate locations of previous sampling performed by others and the sampling performed during this assessment are shown on Figure 2.

4.1.1. Area B

Area B is located off the southwest corner of the existing structure. Previous sample SS-2 indicated levels of arsenic (35 milligrams/kilogram [mg/kg]). Three borings (GEI-3, GEI-4 and MW-2) were performed within the identified Area B. Boring MW-2 was intended to be in the approximate location of previous sample SS-2 and planned to be installed as a monitoring well, but no groundwater was encountered to the maximum depth explored (15 feet bgs). Field screening the three boring locations did not indicate petroleum compounds or VOCs. One sample was analyzed from each boring. Soil sample results for the samples collected from each boring are as follows:

- Sample GEI-3 at 9-10 feet bgs was non-detect for Gx, Dx, Ox, VOCs and PAHs. Detected RCRA eight metals were at concentrations less than the MTCA Method A Cleanup Levels for Unrestricted Land Use.
- Sample GEI-4 at 2-3 feet bgs was non-detect for Gx, Dx and VOCs. Ox and PAHs and detected RCRA eight metals were at concentrations less than the MTCA Method A Cleanup Levels for Unrestricted Land Use.
- Sample MW-2 at 9-10 feet bgs was non-detect for Gx, Dx, Ox, VOCs and PAHs. Detected RCRA eight metals were at concentrations less than the MTCA Method A Cleanup Levels for Unrestricted Land Use.

4.1.2. Area C

Area C is located off the east side of the of the existing structure. Previous sample SS-3 indicated levels of lube oil at 31,000 mg/kg. Three borings (GEI-1, GEI-2 and MW-1) were performed within the identified Area C. Boring MW-1 was intended to be in the approximate location of previous sample SS-3 and planned to be installed as a monitoring well, but no groundwater was encountered to the maximum depth explored (20 feet bgs at boring GEI-1). Field screening the three boring locations did not indicate petroleum compounds or VOCs. One sample was analyzed from each boring. Soil sample results for the samples collected from each boring are as follows:

- Sample GEI-1 at 9-10 feet bgs was non-detect for Gx, Dx, Ox, VOCs and PAHs. Detected RCRA eight metals were at concentrations less than the MTCA Method A Cleanup Levels for Unrestricted Land Use.
- Sample GEI-2 at 9-10 feet bgs was non-detect for Gx, Dx, Ox, VOCs and PAHs. Detected RCRA eight metals were at concentrations less than the MTCA Method A Cleanup Levels for Unrestricted Land Use.
- Sample MW-1 at 2-3 feet bgs was non-detect for Gx, Dx, Ox, VOCs and PAHs. Detected RCRA eight metals were at concentrations less than the MTCA Method A Cleanup Levels for Unrestricted Land Use.

4.1.3. Area D

Area D is located off the north side of the existing structure. Previous observations indicated the presence of staining and groundwater in the exploration, which was not sampled. Three borings (GEI-4, GEI-6 and MW-3) were performed within the identified Area C. Boring MW-3 was intended to be in the approximate location of previous sample SS-4 and staining. MW-3 was planned to be installed as a monitoring well, but no groundwater was encountered to the maximum depth explored (15 feet bgs). Field screening the three boring locations did not indicate petroleum compounds or VOCs. One sample was analyzed from each boring. Soil sample results for the samples collected from each boring are as follows:

- Sample GEI-5 at 7-8 feet bgs was non-detect for Gx, Dx, Ox, VOCs and PAHs. Detected RCRA eight metals were at concentrations less than the MTCA Method A Cleanup Levels for Unrestricted Land Use.

- Sample GEI-6 at 7-8 feet bgs was non-detect for Gx, Dx, Ox, VOCs and PAHs. Detected RCRA eight metals were at concentrations less than the MTCA Method A Cleanup Levels for Unrestricted Land Use.
- Sample MW-3 at 2-3 feet bgs was non-detect for Gx, VOCs and PAHs. Detected Dx, Ox and RCRA eight metals were at concentrations less than the MTCA Method A Cleanup Levels for Unrestricted Land Use.

5.0 CONCLUSIONS

GeoEngineers performed additional sampling at three areas (Area B, C and D) located around the existing structure on the A-1 towing site to further evaluate the potential presence of contaminants related to past uses at the site. Results of the assessment did not identify concentrations of Gx, Dx, Ox, VOCs, PAHs and or RCRA eight metals at concentrations exceeding the MTCA Method A Cleanup Levels. Out of the nine soil samples analyzed, only two identified low concentrations of Dx, Ox and/or PAHs. Groundwater was not encountered at the maximum depth explored at the site of 15 to 20 feet bgs.

Based on the results of the assessment a No Further Action determination should be requested from Ecology.

6.0 LIMITATIONS

We have prepared this report for the exclusive use of WSDOT. Within the limitations of scope, schedule and budget, our services have been executed in accordance with generally accepted environmental science practices in this area at the time this report was prepared. The conclusions and opinions presented in this report are based on our professional knowledge, judgment, experience and discrete sample collection. Contaminants may be present in areas of the site not sampled or tested. No warranty or other conditions, express or implied, should be understood.

Please refer to Appendix C, Report Limitations and Guidelines for Use, for additional information regarding the use of this report.

TABLES

GeoEngineers

Table 1

Soil Chemical Analytical Results - Petroleum Hydrocarbons and VOCs
A-1 Towing
SeaTac, Washington

Boring/ Well ID	Sample ID	Date Collected	Depth (Feet Below Ground Surface)	Field Screening Observation		NWTPH-Gx (mg/kg)	NWTPH-Dx (mg/kg)		VOCs EPA Method 8260 (mg/kg)								
				Sheen	PID (ppm)	Gasoline	Diesel	Heavy Oil	Various	Anthracene	Acenapthene	Acenaphthylene	Benzo (a) anthracene	Benzo (a) pyrene	Benzo (b) fluoranthene	Benzo(g,h,i)perylene	Benzo (k) fluoranthene	Chrysene
GEI-1	GE-1 (9-10')	10/25/2021	9-10	NS	<1	<3.01	< 4.4	< 10.9	ND	< 0.00654	< 0.00654	< 0.00654	< 0.00654	< 0.00654	< 0.00654	< 0.00654	< 0.00654	< 0.00654
GEI-2	GEI-2 (9-10')	10/25/2021	9-10	NS	<1	<2.99	< 4.34	< 10.80	ND	< 0.00650	< 0.00650	< 0.00650	< 0.00650	< 0.00650	< 0.00650	< 0.00650	< 0.00650	< 0.00650
GEI-3	GEI-3 (9-10')	10/25/2021	9-10	NS	<1	<3.23	< 4.50	< 11.2	ND	< 0.00675	< 0.00675	< 0.00675	< 0.00675	< 0.00675	< 0.00675	< 0.00675	< 0.00675	< 0.00675
GEI-4	GEI-4 (2-3')	10/25/2021	2-3	NS	<1	<2.97	< 21.8	**166**	ND	< 0.00655	< 0.00655	< 0.00655	**0.0298**	**0.0363**	**0.0500**	**0.0306**	**0.0150**	**0.0354**
GEI-5	GEI-5 (7-8')	10/25/2021	7-8	NS	<1	<3.02	< 4.36	< 10.9	ND	< 0.00654	< 0.00654	< 0.00654	< 0.00654	< 0.00654	< 0.00654	< 0.00654	< 0.00654	< 0.00654
GEI-6	GEI-6 (7-8')	10/25/2021	7-8	NS	<1	<2.95	< 4.33	< 10.8	ND	< 0.00649	< 0.00649	< 0.00649	< 0.00649	< 0.00649	< 0.00649	< 0.00649	< 0.00649	< 0.00649
MW-1	MW-1 (2-3')	10/25/2021	2-3	NS	<1	<3.43	< 4.69	< 11.7	ND	< 0.00703	< 0.00703	< 0.00703	< 0.00703	< 0.00703	< 0.00703	< 0.00703	< 0.00703	< 0.00703
MW- 2	MW-2 (9-10')	10/25/2021	9-10	NS	<1	<3.08	< 4.43	< 11.1	ND	< 0.00665	< 0.00665	< 0.00665	< 0.00665	< 0.00665	< 0.00665	< 0.00665	< 0.00665	< 0.00665
MW- 3	MW-3 (2-3')	10/25/2021	2-3	NS	<1	<3.35	**5.55**	**24.3**	ND	< 0.00691	< 0.00691	< 0.00691	< 0.00691	< 0.00691	< 0.00691	< 0.00691	< 0.00691	< 0.00691
MTCA Method A Cleanup Levels for Unrestricted Land Use						800/1,000	2,000		Various	--	--	--	--	--	--	--	--	--

Boring/ Well ID	Sample ID	Date Collected	Depth (Feet Below Ground Surface)	Field Screening Observation		NWTPH-Gx (mg/kg)	NWTPH-Dx (mg/kg)				VOCs EPA Method 8260 (mg/kg)										Total cPAHs[1] (mg/kg)
				Sheen	PID (ppm)	Gasoline	Diesel		Heavy Oil		Various	Dibenz(a,h)anthracene		Fluoranthene		Fluorene		Indeno (1,2,3-cd) pyrene		Naphthalene		TEQ
GEI-1	GE-1 (9-10')	10/25/2021	9-10	NS	<1	<3.01	<	4.4	<	10.9	ND	<	0.00654	<	0.00654	<	0.00654	<	0.00654	<	0.0218	ND
GEI-2	GEI-2 (9-10')	10/25/2021	9-10	NS	<1	<2.99	<	4.34	<	10.80	ND	<	0.00650	<	0.00650	<	0.00650	<	0.00650	<	0.0217	ND
GEI-3	GEI-3 (9-10')	10/25/2021	9-10	NS	<1	<3.23	<	4.50	<	11.2	ND	<	0.00675	<	0.00675	<	0.00675	<	0.00675	<	0.0225	ND
GEI-4	GEI-4 (2-3')	10/25/2021	2-3	NS	<1	<2.97	<	22		**166**	ND		**0.00660**		**0.0622**	<	0.0066		**0.0325**	<	0.0218	**0.0223**
GEI-5	GEI-5 (7-8')	10/25/2021	7-8	NS	<1	<3.02	<	4.4	<	10.9	ND	<	0.00654	<	0.00654	<	0.00654	<	0.00654	<	0.02180	ND
GEI-6	GEI-6 (7-8')	10/25/2021	7-8	NS	<1	<2.95	<	4.3	<	10.8	ND	<	0.00649	<	0.00649	<	0.00649	<	0.00649	<	0.0216	ND
MW-1	MW-1 (2-3')	10/25/2021	2-3	NS	<1	<3.43	<	4.7	<	11.7	ND	<	0.00703	<	0.00703	<	0.00703	<	0.00703	<	0.02340	ND
MW- 2	MW-2 (9-10')	10/25/2021	9-10	NS	<1	<3.08	<	4.43	<	11.1	ND	<	0.00665	<	0.00665	<	0.00665	<	0.00665	<	0.0222	ND
MW- 3	MW-3 (2-3')	10/25/2021	2-3	NS	<1	<3.35		**5.6**		**24.3**	ND	<	0.00691	<	0.00691	<	0.00691	<	0.00691	<	0.023	ND
MTCA Method A Cleanup Levels for Unrestricted Land Use						800/1,000	2,000				Various			--		--		--		5	0.1

Boring/ Well ID	Sample ID	Date Collected	Depth (Feet Below Ground Surface)	1-Methyl-naphthalene		2-Methyl-naphthalene	
GEI-1	GE-1 (9-10')	10/25/2021	9-10	<	0.0218	<	0.0128
GEI-2	GEI-2 (9-10')	10/25/2021	9-10	<	0.0217	<	0.0217
GEI-3	GEI-3 (9-10')	10/25/2021	9-10	<	0.0225	<	0.0225
GEI-4	GEI-4 (2-3')	10/25/2021	2-3	<	0.0218	<	0.0218
GEI-5	GEI-5 (7-8')	10/25/2021	7-8	<	0.0218	<	0.0218
GEI-6	GEI-6 (7-8')	10/25/2021	7-8	<	0.0216	<	0.0216
MW-1	MW-1 (2-3')	10/25/2021	2-3	<	0.0234	<	0.0234
MW- 2	MW-2 (9-10')	10/25/2021	9-10	<	0.0222	<	0.0222
MW- 3	MW-3 (2-3')	10/25/2021	2-3	<	0.023	<	0.023
MTCA Method A Cleanup Levels for Unrestricted Land Use				--		--	

Boring/ Well ID	Sample ID	Date Collected	Depth (Feet Below Ground Surface)	Phenanthrene		Pyrene	
GEI-1	GE-1 (9-10')	10/25/2021	9-10	<	0.00654	<	0.00654
GEI-2	GEI-2 (9-10')	10/25/2021	9-10	<	0.00650	<	0.00650
GEI-3	GEI-3 (9-10')	10/25/2021	9-10	<	0.00675	<	0.00675
GEI-4	GEI-4 (2-3')	10/25/2021	2-3		**0.0244**		**0.0474**
GEI-5	GEI-5 (7-8')	10/25/2021	7-8	<	0.00654	<	0.00654
GEI-6	GEI-6 (7-8')	10/25/2021	7-8	<	0.00649	<	0.00649
MW-1	MW-1 (2-3')	10/25/2021	2-3	<	0.00703	<	0.00703
MW- 2	MW-2 (9-10')	10/25/2021	9-10	<	0.00665	<	0.00665
MW- 3	MW-3 (2-3')	10/25/2021	2-3	<	0.00691	<	0.00691
MTCA Method A Cleanup Levels for Unrestricted Land Use				--		--	

Notes:

[1]Carcinogenic Polycyclic Aromatic Hydrocarbons (cPAHs) analyzed by EPA Method 8270D/SIM. Total cPAHs calculated using the toxicity equivalency (TEQ) methodology specified in Washington Administrative Code (WAC) 173-340-780(8); cPAHs that were not detected were assigned half the value of the detection limit for these calculations. Not detected (ND) is indicated for samples which no cPAHs were detected.

<3.01 = analyte not detected at or less than the presented concentration

Bold = analyte was detected at a concentration above the laboratory reported detection limit

-- = not analyzed/no cleanup level

mg/kg = milligrams per kilogram; VOCs = volatile organic compounds

NS = no sheen; ppm = parts per million

PID = Photoionization Detector

ND = Not Detected

TEQ = toxic equivalency

EPA = Environmental Protection Agency

NWTPH = Northwest Total Petroleum Hydrocarbons

MTCA = Model Toxics Control Act

Table 2

Soil Chemical Analytical Results - Metals
A-1 Towing
SeaTac, Washington

Boring/ Well ID	Sample ID	Date Collected	Depth (Feet Below Ground Surface)	Metals EPA Method 6010D/7471B (mg/kg)							
				Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
GEI-1	GE-1 (9-10')	10/25/2021	9-10	**2.26**	**41.9**	< 1.09	**23.4**	< 2.2	< 0.0436	< 2.72	< 0.545
GEI-2	GEI-2 (9-10')	10/25/2021	9-10	**2.36**	**45.2**	< 1.08	**21.5**	< 2.17	< 0.0434	< 2.71	< 0.542
GEI-3	GEI-3 (9-10')	10/25/2021	9-10	**2.93**	**25.3**	< 1.12	**11.8**	< 2.25	< 0.0450	< 2.81	< 0.562
GEI-4	GEI-4 (2-3')	10/25/2021	2-3	**6.28**	**72.2**	< 1.09	**33.9**	**27.6**	**0.0731**	< 2.73	< 0.546
GEI-5	GEI-5 (7-8')	10/25/2021	7-8	**2.58**	**39.6**	< 1.09	**21.1**	< 2.18	< 0.0436	< 2.73	< 0.545
GEI-6	GEI-6 (7-8')	10/25/2021	7-8	**2.31**	**35.1**	< 1.08	**16.3**	< 2.16	< 0.0433	< 2.71	< 0.541
MW-1	MW-1 (2-3')	10/25/2021	2-3	**3.70**	**61.0**	< 1.17	**26.7**	< 2.34	< 0.0469	< 2.93	< 0.0586
MW- 2	MW-2 (9-10')	10/25/2021	9-10	**3.17**	**44.9**	< 1.11	**24.4**	< 2.22	< 0.0443	< 2.77	< 0.554
MW- 3	MW-3 (2-3')	10/25/2021	2-3	**7.77**	**58.8**	< 1.15	**41.6**	**3.16**	< 0.0460	< 2.88	< 0.575
MTCA Method A Cleanup Levels for Unrestricted Land Use				21	--	2	2,000	250	2	400	400
MTCA Cleanup Level for the Protection of Groundwater				--	1,600	--	--	--	--	5	14

Notes:

<1.09 = analyte not detected

Bold = analyte was detected at a concentration above the laboratory method detection limit

mg/kg = milligrams per kilogram

EPA = Environmental Protection Agency

MTCA = Model Toxics Control Act

FIGURES

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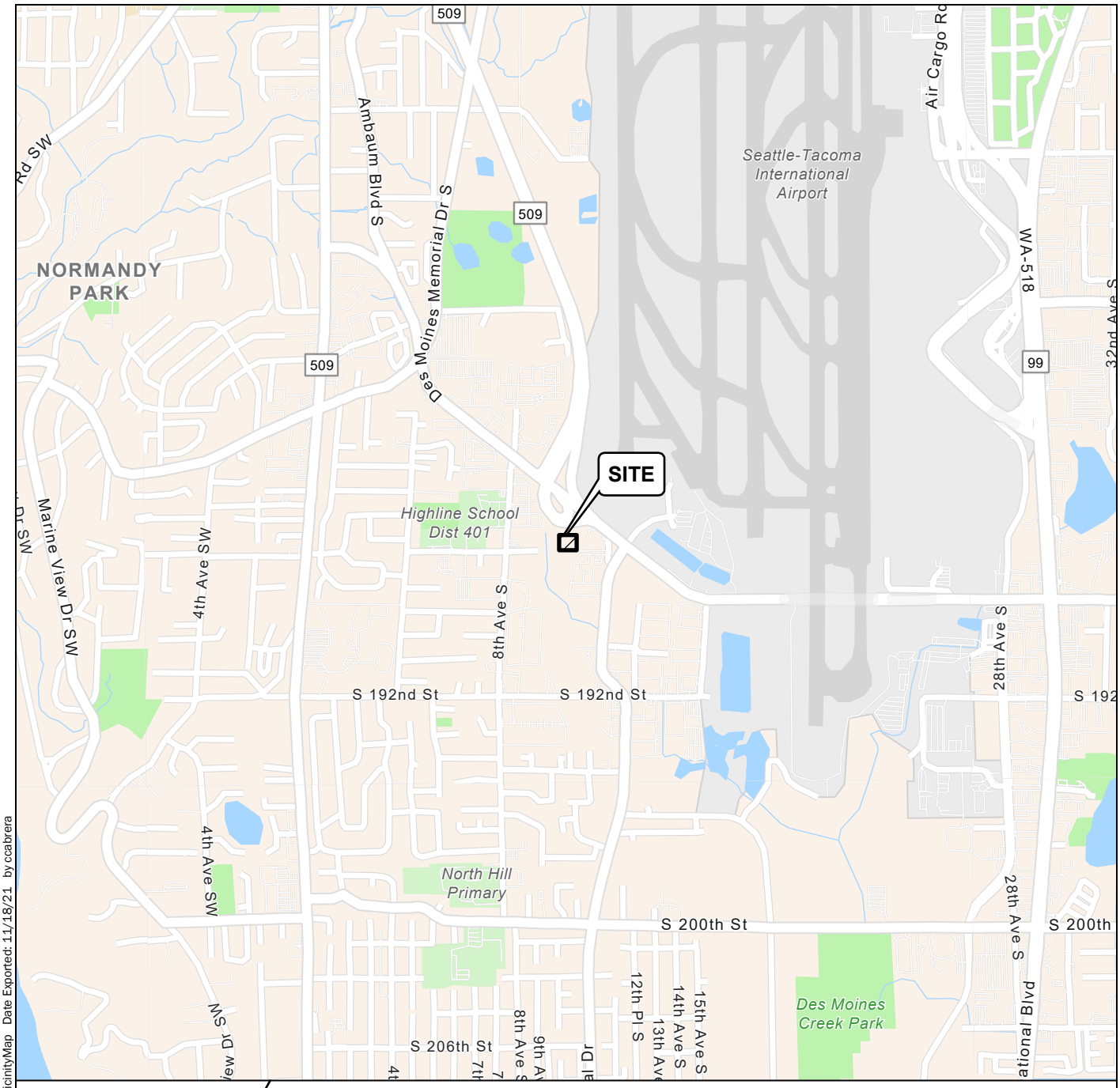

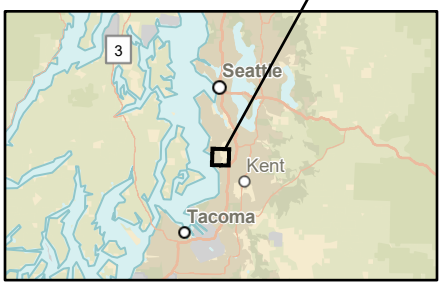

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Feet

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: ESRI

Projection: NAD 1983 UTM Zone 10N

Vicinity Map

WSDOT - A-1 Towing
SeaTac, Washington

GeoEngineers

Figure 1

P:\0\0180393\GIS\0180393Project\0180393Project.aprx\0180393300_F01_VicinityMap Date Exported: 11/18/21 by ccabrera

Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: ESRI Clarity

Projection: NAD 1983 UTM Zone 10N

Legend

- Boring Number and Approximate Location
- Monitoring Well Number and Approximate Location
- Previous WSDOT Explorations (2016)
- Drum Storage
- Assessment Area

N
W E
S

30 0 30
Feet

Exploration Locations

WSDOT - A-1 Towing
SeaTac, Washington

GeoEngineers

Figure 2

P:\0_0180393\GIS\0180393Project\0180393Project.aprx\0180393300_F02_ExplorationLocations Date Exported: 12/01/21 by ccabrera

APPENDICES

GeoEngineers

APPENDIX A
Boring Logs

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS GRAPH	SYMBOLS LETTER	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES
				GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES
	MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
MORE THAN 50% RETAINED ON NO. 200 SIEVE	SAND AND SANDY SOILS	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS
				SP	POORLY-GRADED SANDS, GRAVELLY SAND
	MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
				SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS, ROCK FLOUR, CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
MORE THAN 50% PASSING NO. 200 SIEVE	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS AND SILTS OF MEDIUM TO HIGH PLASTICITY
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: Multiple symbols are used to indicate borderline or dual soil classifications

ADDITIONAL MATERIAL SYMBOLS

SYMBOLS GRAPH	SYMBOLS LETTER	TYPICAL DESCRIPTIONS
	AC	Asphalt Concrete
	CC	Cement Concrete
	CR	Crushed Rock/ Quarry Spalls
	SOD	Sod/Forest Duff
	TS	Topsoil

Groundwater Contact

Measured groundwater level in exploration, well, or piezometer

Measured free product in well or piezometer

Graphic Log Contact

Distinct contact between soil strata

Approximate contact between soil strata

Material Description Contact

Contact between geologic units

Contact between soil of the same geologic unit

Sampler Symbol Descriptions

2.4-inch I.D. split barrel

Standard Penetration Test (SPT)

Shelby tube

Piston

Direct-Push

Bulk or grab

Continuous Coring

Blowcount is recorded for driven samplers as the number of blows required to advance sampler 12 inches (or distance noted). See exploration log for hammer weight and drop.

"P" indicates sampler pushed using the weight of the drill rig.

"WOH" indicates sampler pushed using the weight of the hammer.

Laboratory / Field Tests

%F	Percent fines
%G	Percent gravel
AL	Atterberg limits
CA	Chemical analysis
CP	Laboratory compaction test
CS	Consolidation test
DD	Dry density
DS	Direct shear
HA	Hydrometer analysis
MC	Moisture content
MD	Moisture content and dry density
Mohs	Mohs hardness scale
OC	Organic content
PM	Permeability or hydraulic conductivity
PI	Plasticity index
PL	Point load test
PP	Pocket penetrometer
SA	Sieve analysis
TX	Triaxial compression
UC	Unconfined compression
VS	Vane shear

Sheen Classification

NS	No Visible Sheen
SS	Slight Sheen
MS	Moderate Sheen
HS	Heavy Sheen

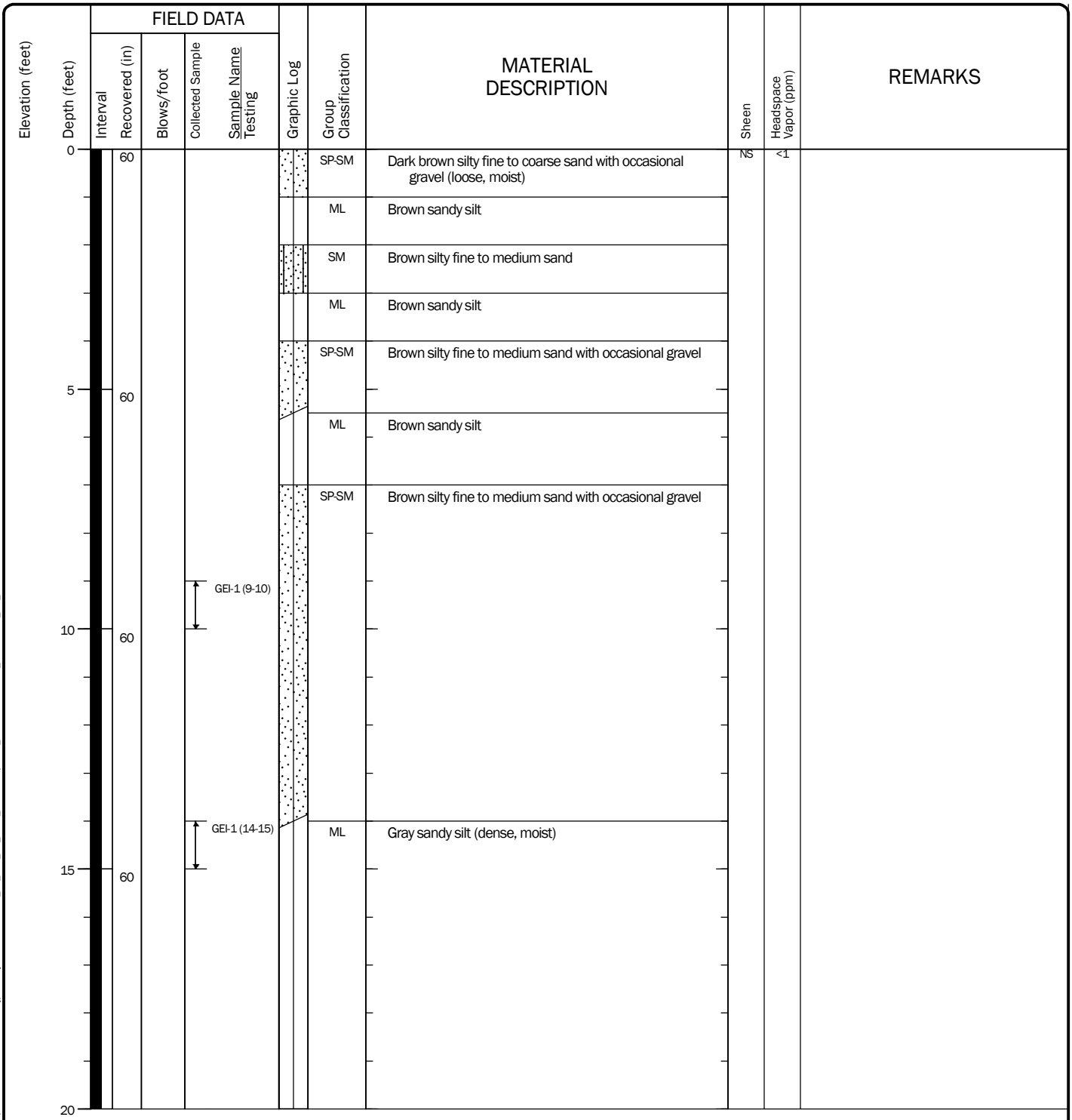
NOTE: The reader must refer to the discussion in the report text and the logs of explorations for a proper understanding of subsurface conditions. Descriptions on the logs apply only at the specific exploration locations and at the time the explorations were made; they are not warranted to be representative of subsurface conditions at other locations or times.

Key to Exploration Logs

GeoEngineers

Figure A-1

Drilled Start 10/25/2021 End 10/25/2021	Total Depth (ft) 20	Logged By DC Checked By CJW	Driller Holocene Drilling, Inc.	Drilling Method Direct-push	
Surface Elevation (ft) Vertical Datum Undetermined		Hammer Data		Drilling Equipment Geoprobe 7822T	
Easting (X) Northing (Y)		System Datum		Groundwater not observed at time of exploration	
Notes:					



Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on . Vertical approximated based on .

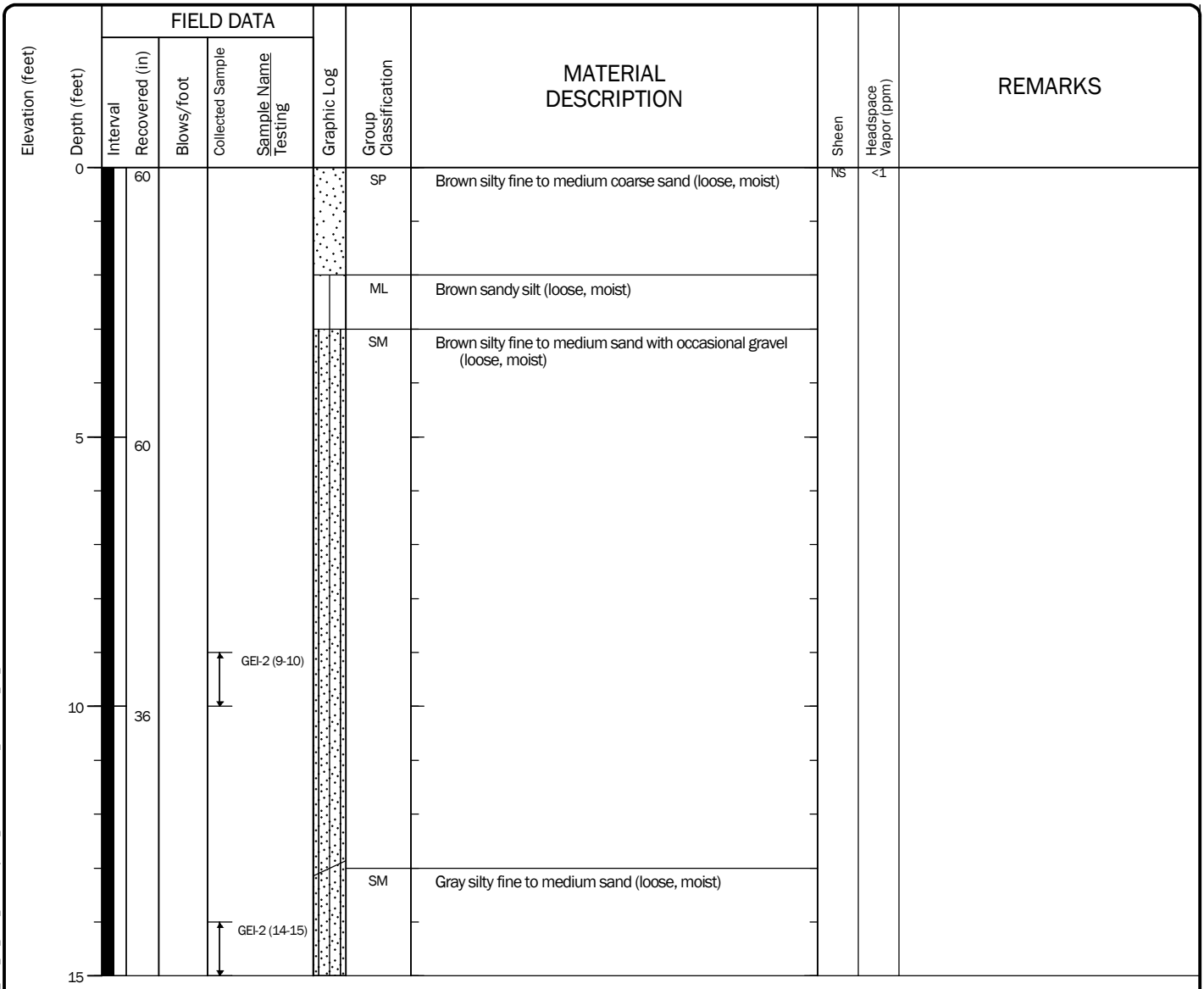
Log of Boring GEI-1

GeoEngineers

Project: A-1 Towing
Project Location: SeaTac, Washington
Project Number: 0180-393-00

Figure A-2
Sheet 1 of 1

Drilled Start 10/25/2021 End 10/25/2021	Total Depth (ft) 15	Logged By DC Checked By CJW	Driller Holocene Drilling, Inc.	Drilling Method Direct-push	
Surface Elevation (ft) Vertical Datum Undetermined		Hammer Data		Drilling Equipment Geoprobe 7822T	
Easting (X) Northing (Y)		System Datum		Groundwater not observed at time of exploration	
Notes:					



Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on . Vertical approximated based on .

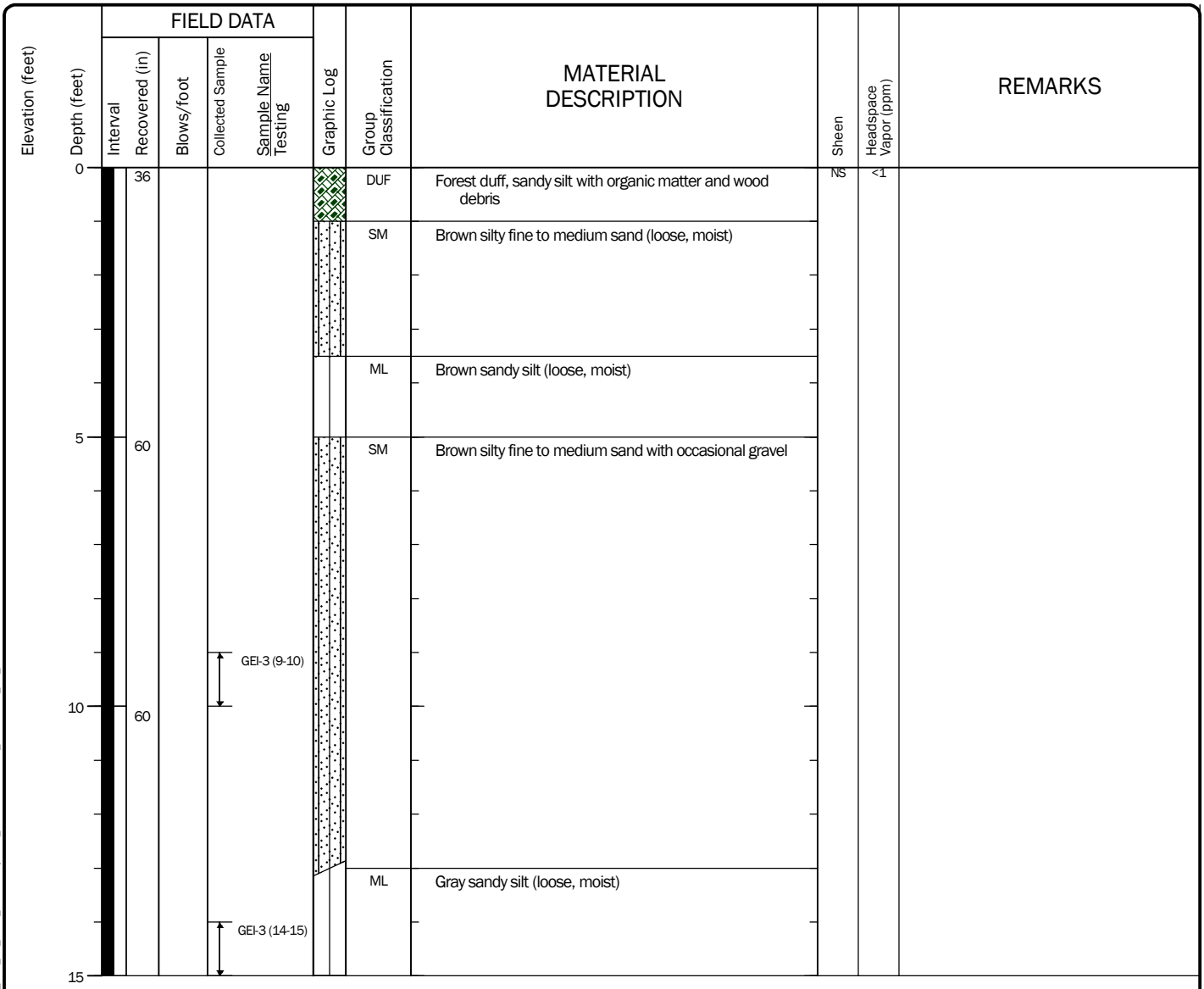
Log of Boring GEI-2

GeoEngineers

Project: A-1 Towing
Project Location: SeaTac, Washington
Project Number: 0180-393-00

Figure A-3
Sheet 1 of 1

Drilled Start 10/25/2021 End 10/25/2021	Total Depth (ft) 15	Logged By DC Checked By CJW	Driller Holocene Drilling, Inc.	Drilling Method Direct-push	
Surface Elevation (ft) Vertical Datum Undetermined		Hammer Data		Drilling Equipment Geoprobe 7822T	
Easting (X) Northing (Y)		System Datum		Groundwater not observed at time of exploration	
Notes:					



Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on . Vertical approximated based on .

Log of Boring GEI-3

GeoEngineers

Project: A-1 Towing
Project Location: SeaTac, Washington
Project Number: 0180-393-00

Figure A-4
Sheet 1 of 1

Drilled	Start 10/25/2021	End 10/25/2021	Total Depth (ft)	15	Logged By	DC	Checked By	CJW	Driller	Holocene Drilling, Inc.	Drilling Method	Direct-push
Surface Elevation (ft) Vertical Datum	Undetermined				Hammer Data				Drilling Equipment	Geoprobe 7822T		
Easting (X) Northing (Y)					System Datum				Groundwater not observed at time of exploration			

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		48					SP-SM	Brown silty fine to coarse sand with occasional gravel (loose, moist)	NS	<1	
						GEI-4 (2-3)						
								ML	Brown sandy silt			
								SM	Brown silty fine to medium sand with occasional gravel			
	5		60									
						GEI-4 (9-10)						
	10		60									
						GEI-4 (14-15)						
	15							ML	Gray sandy silt (loose, moist)			

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on . Vertical approximated based on .

Log of Boring GEI-4

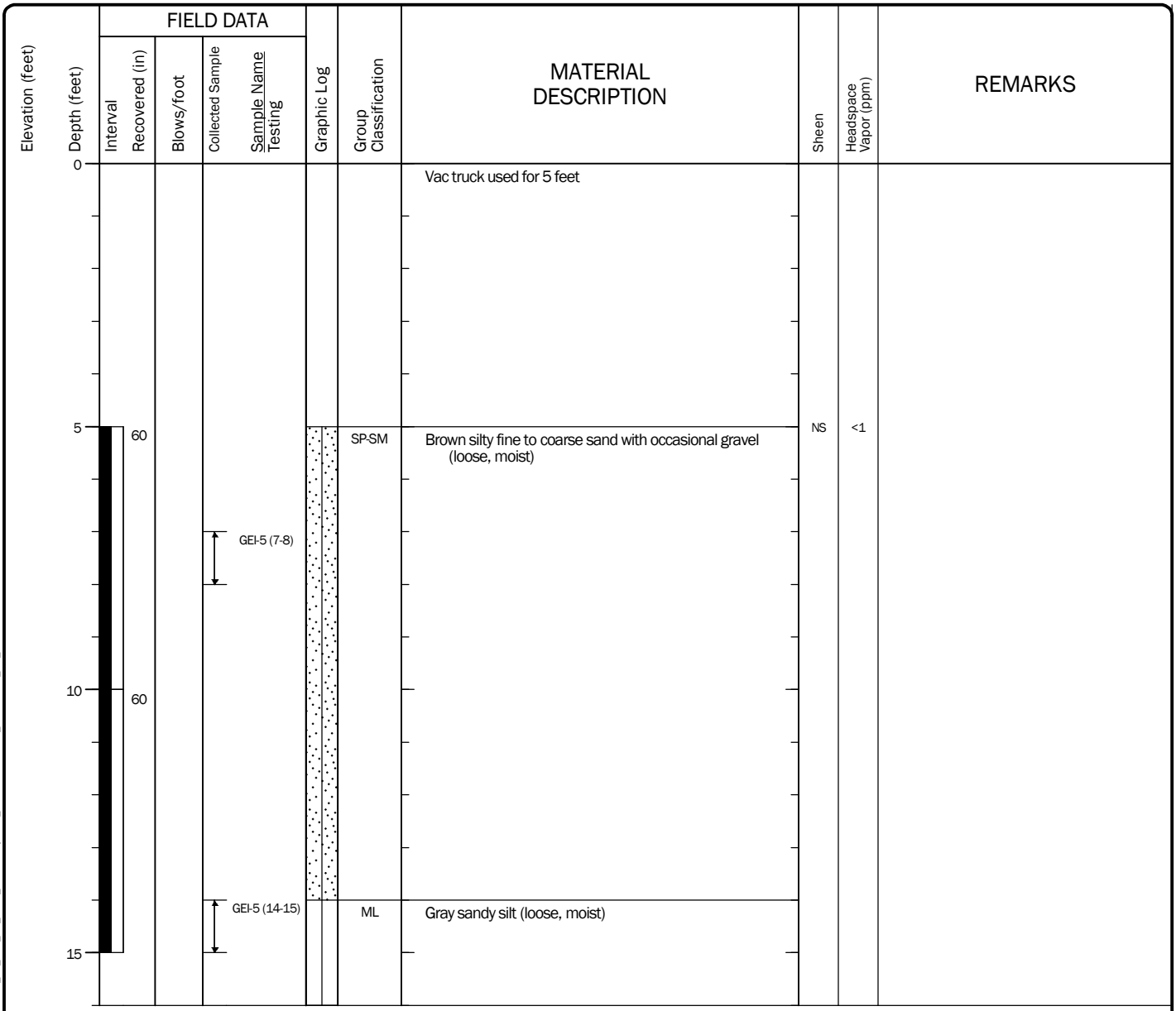
GeoEngineers

Project: A-1 Towing
Project Location: SeaTac, Washington
Project Number: 0180-393-00

Figure A-5
Sheet 1 of 1

Drilled Start 10/26/2021 End 10/26/2021	Total Depth (ft) 16	Logged By DC Checked By CJW	Driller Holocene Drilling, Inc.	Drilling Method Direct-push
Surface Elevation (ft) Vertical Datum Undetermined		Hammer Data	Drilling Equipment Geoprobe 7822T	
Easting (X) Northing (Y)		System Datum	Groundwater not observed at time of exploration	

Notes:



Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on . Vertical approximated based on .

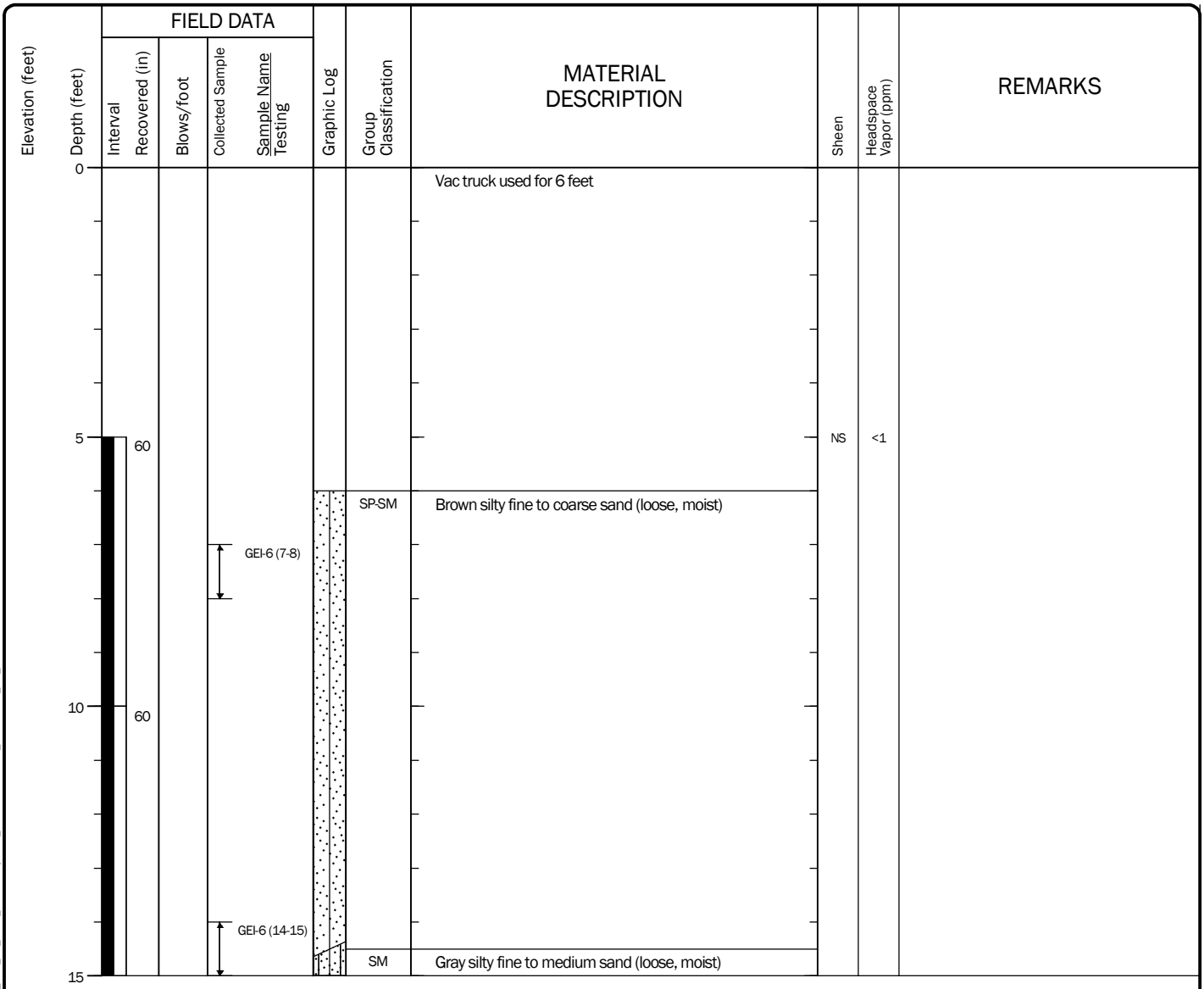
Log of Boring GEI-5

GeoEngineers

Project: A-1 Towing
Project Location: SeaTac, Washington
Project Number: 0180-393-00

Figure A-6
Sheet 1 of 1

Drilled Start 10/26/2021 End 10/26/2021	Total Depth (ft) 15	Logged By DC Checked By CJW	Driller Holocene Drilling, Inc.	Drilling Method Direct-push	
Surface Elevation (ft) Vertical Datum Undetermined		Hammer Data		Drilling Equipment Geoprobe 7822T	
Easting (X) Northing (Y)		System Datum		Groundwater not observed at time of exploration	
Notes:					



Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on . Vertical approximated based on .

Log of Boring GEI-6

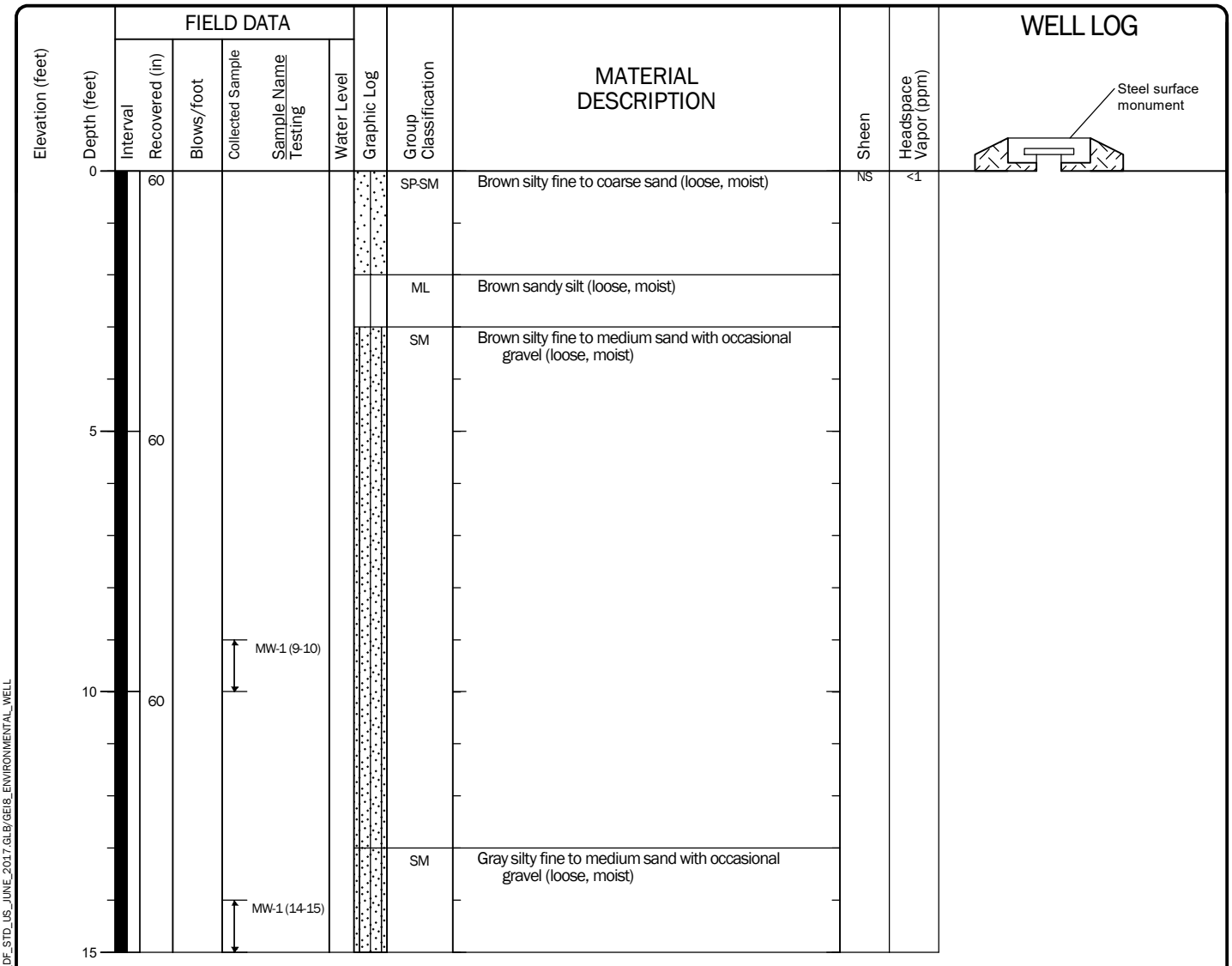
GeoEngineers

Project: A-1 Towing
Project Location: SeaTac, Washington
Project Number: 0180-393-00

Figure A-7
Sheet 1 of 1

Drilled Start 10/25/2021 End 10/25/2021	Total Depth (ft) 15	Logged By DC Checked By CJW	Driller Holocene Drilling, Inc.	Drilling Method Direct-push
Hammer Data		Drilling Equipment Geoprobe 7822T	A 2-in well was installed on 10/25/2021 to a depth of 15 ft.	
Surface Elevation (ft) Vertical Datum Undetermined		Top of Casing Elevation (ft)	Groundwater Date Measured	Depth to Water (ft) / Elevation (ft)
Easting (X) Northing (Y)		Horizontal Datum		

Notes:



Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on . Vertical approximated based on .

Log of Boring MW-1

GeoEngineers

Project: A-1 Towing
Project Location: SeaTac, Washington
Project Number: 0180-393-00

Figure A-8
Sheet 1 of 1

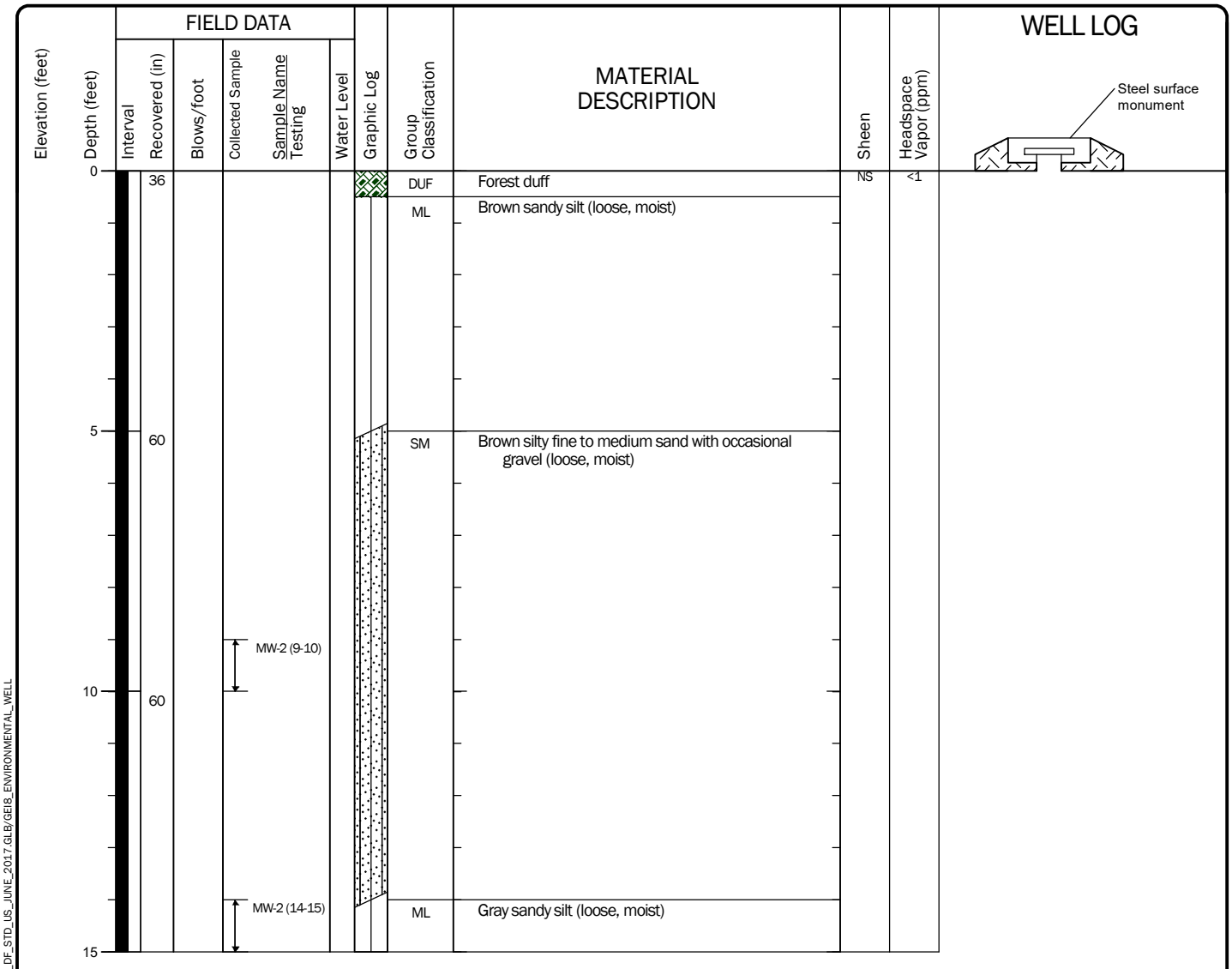
Drilled	Start	End	Total Depth (ft)	Logged By	Checked By	Driller	Drilling Method
	10/25/2021	10/25/2021	15	DC	CJW	Holocene Drilling, Inc.	Direct-push

Hammer Data		Drilling Equipment	Geoprobe 7822T
Surface Elevation (ft) Vertical Datum	Undetermined	Top of Casing Elevation (ft)	
Easting (X) Northing (Y)		Horizontal Datum	

A 2-in well was installed on 10/26/2021 to a depth of 15 ft.

Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)

Notes:



Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on . Vertical approximated based on .

Log of Boring MW-2

GeoEngineers

Project: A-1 Towing
Project Location: SeaTac, Washington
Project Number: 0180-393-00

Figure A-9
Sheet 1 of 1

Date:11/18/21 Path:P:\0\0180393\GINT\0180393000.GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_ENVIRONMENTAL_WELL

Drilled	Start 10/26/2021	End 10/26/2021	Total Depth (ft) 16	Logged By DC / Checked By CJW	Driller Holocene Drilling, Inc.	Drilling Method Direct-push

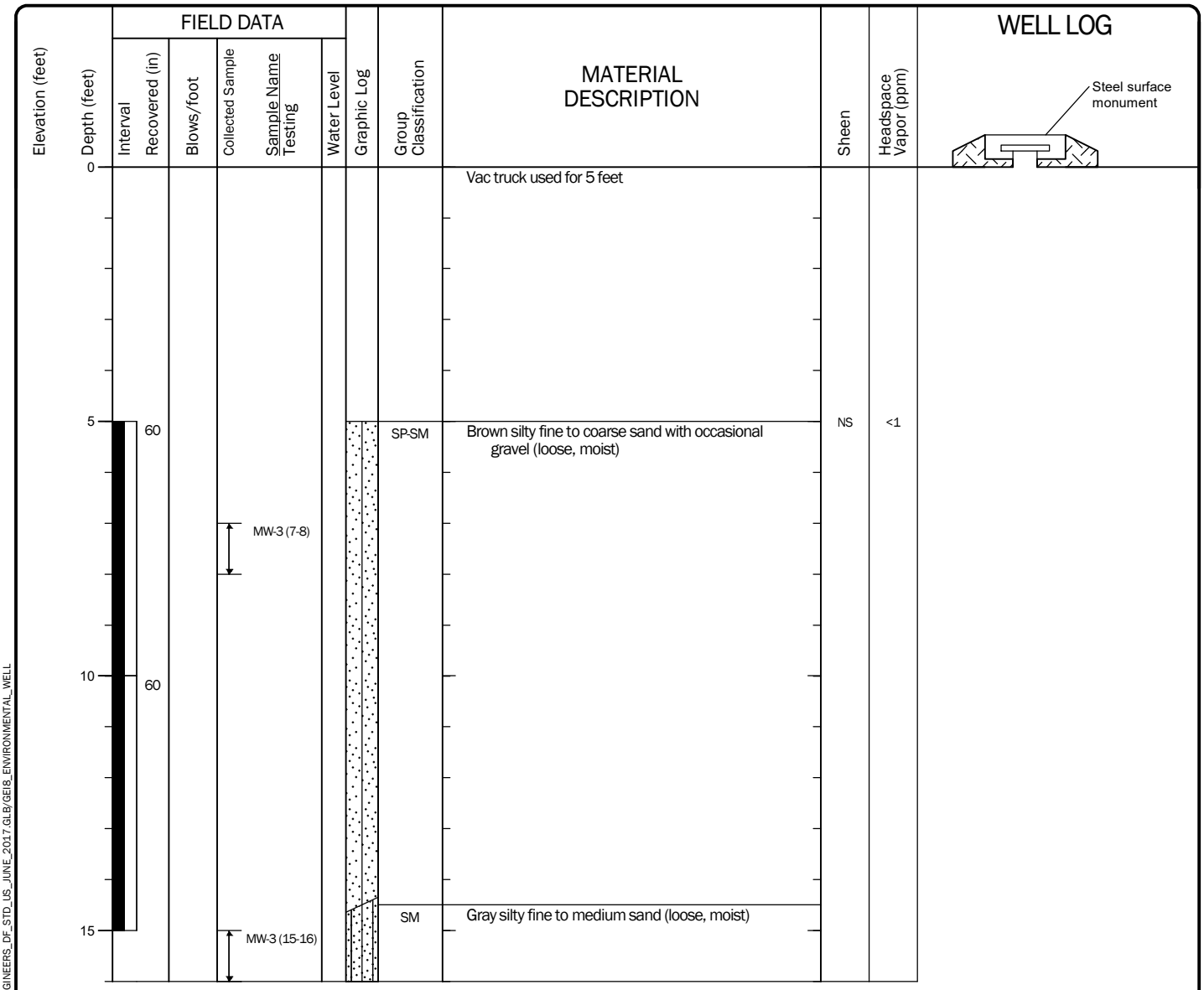
Hammer Data		Drilling Equipment	Geoprobe 7822T
Surface Elevation (ft) Vertical Datum	Undetermined	Top of Casing Elevation (ft)	
Easting (X) Northing (Y)		Horizontal Datum	

A 2-in well was installed on 10/26/2021 to a depth of 16 ft.

Groundwater

Date Measured	Depth to Water (ft)	Elevation (ft)

Notes:



Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on . Vertical approximated based on .

Log of Boring MW-3

GeoEngineers

Project: A-1 Towing
Project Location: SeaTac, Washington
Project Number: 0180-393-00

Figure A-10
Sheet 1 of 1

Date:11/18/21 Path:P:\0\0180393\GINT\0180393GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_ENVIRONMENTAL_WELL

APPENDIX B
Chemical Analytical Program

APPENDIX B
CHEMICAL ANALYTICAL PROGRAM

Analytical Methods

Chain-of-custody procedures were followed during the transport of the field samples to the analytical laboratory. The samples were held in cold storage pending extraction and/or analysis. The analytical results, analytical methods reference and laboratory quality control (QC) records are included in this appendix. The analytical results are also summarized in the text and tables of this report.

Analytical Data Review

The laboratory maintains an internal quality assurance program as documented in its laboratory quality assurance manual. The laboratory uses a combination of blanks, surrogate recoveries, duplicates, matrix spike recoveries, matrix spike duplicate recoveries, blank spike recoveries and blank spike duplicate recoveries to evaluate the validity of the analytical results. The laboratory also uses data quality goals for individual chemicals or groups of chemicals based on the long-term performance of the test methods. The data quality goals were included in the laboratory reports. The laboratory compared each group of samples with the existing data quality goals and noted any exceptions in the laboratory report. Data quality exceptions documented by the accredited laboratory were reviewed by GeoEngineers and are addressed in the data quality exception section of this appendix.

Analytical Data Review Summary

Quality controls were within required limits including duplicates. The data is of acceptable quality for their intended use.

ANALYTICAL REPORT

November 09, 2021

GeoEngineers- Portland, OR

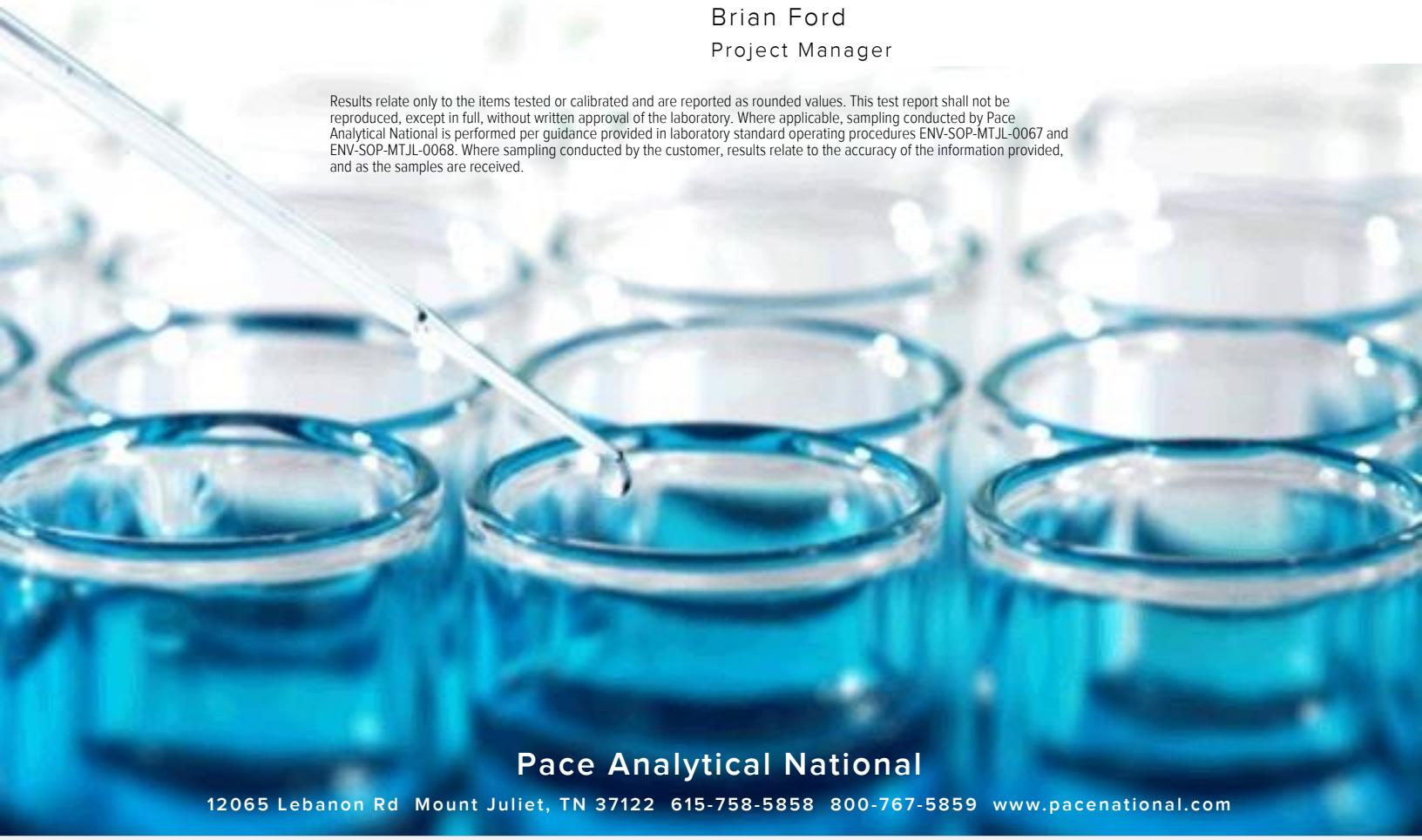
Sample Delivery Group:	L1423266
Samples Received:	10/27/2021
Project Number:	0180-393-00
Description:	WSDOT-A-1 Towing

Report To:

Cris Watkins
4000 Kruse Way Place
Bldg. 3, Suite 200
Lake Oswego, OR 97035

Entire Report Reviewed By:

Brian Ford
Project Manager



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

GEI-1-9-10 L1423266-01 Solid

Collected by: Dexter C. | Collected date/time: 10/25/21 11:20 | Received date/time: 10/27/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1765837	1	10/30/21 16:24	10/30/21 16:39	KDW	Mt. Juliet, TN
Mercury by Method 7471B	WG1766498	1	11/02/21 08:07	11/02/21 15:04	BMF	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1765966	5	11/02/21 12:22	11/03/21 18:25	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1765532	25	10/25/21 11:20	10/29/21 11:17	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1766323	1	10/25/21 11:20	10/31/21 03:56	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1766948	1	11/02/21 03:07	11/03/21 07:15	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1765811	1	10/30/21 01:41	10/30/21 13:00	AAT	Mt. Juliet, TN

GEI-2-9-10 L1423266-03 Solid

Collected by: Dexter C. | Collected date/time: 10/25/21 11:40 | Received date/time: 10/27/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1765837	1	10/30/21 16:24	10/30/21 16:39	KDW	Mt. Juliet, TN
Mercury by Method 7471B	WG1766498	1	11/02/21 08:07	11/02/21 15:07	BMF	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1765966	5	11/02/21 12:22	11/03/21 18:28	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1765532	25	10/25/21 11:40	10/29/21 11:38	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1766323	1	10/25/21 11:40	10/31/21 04:15	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1766948	1	11/02/21 03:07	11/03/21 06:11	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1765811	1	10/30/21 01:41	10/30/21 13:18	AAT	Mt. Juliet, TN

GEI-3-9-10 L1423266-05 Solid

Collected by: Dexter C. | Collected date/time: 10/25/21 13:45 | Received date/time: 10/27/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1765837	1	10/30/21 16:24	10/30/21 16:39	KDW	Mt. Juliet, TN
Mercury by Method 7471B	WG1766498	1	11/02/21 08:07	11/02/21 15:09	BMF	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1765966	5	11/02/21 12:22	11/03/21 18:32	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1765532	25	10/25/21 13:45	10/29/21 12:00	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1766323	1	10/25/21 13:45	10/31/21 04:34	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1766948	1	11/02/21 03:07	11/03/21 06:24	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1765811	1	10/30/21 01:41	10/30/21 13:35	AAT	Mt. Juliet, TN

MW-2-9-10 L1423266-11 Solid

Collected by: Dexter C. | Collected date/time: 10/25/21 14:00 | Received date/time: 10/27/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1765837	1	10/30/21 16:24	10/30/21 16:39	KDW	Mt. Juliet, TN
Mercury by Method 7471B	WG1766498	1	11/02/21 08:07	11/02/21 15:12	BMF	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1765966	5	11/02/21 12:22	11/03/21 18:35	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1765548	25	10/25/21 14:00	10/29/21 04:21	MGF	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1766323	1	10/25/21 14:00	10/31/21 04:53	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1766948	1	11/02/21 03:07	11/03/21 06:36	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1765811	1	10/30/21 01:41	10/30/21 13:52	AAT	Mt. Juliet, TN

GEI-4-2-3 L1423266-13 Solid

Collected by: Dexter C. | Collected date/time: 10/26/21 10:00 | Received date/time: 10/27/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1765837	1	10/30/21 16:24	10/30/21 16:39	KDW	Mt. Juliet, TN
Mercury by Method 7471B	WG1766498	1	11/02/21 08:07	11/02/21 15:15	BMF	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1765966	5	11/02/21 12:22	11/03/21 18:39	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1765548	25	10/26/21 10:00	10/29/21 04:43	MGF	Mt. Juliet, TN

GEI-4-2-3 L1423266-13 Solid

Collected by: Dexter C. | Collected date/time: 10/26/21 10:00 | Received date/time: 10/27/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1766323	1	10/26/21 10:00	10/31/21 05:12	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1766948	5	11/02/21 03:07	11/03/21 15:22	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1765811	1	10/30/21 01:41	10/30/21 16:11	AAT	Mt. Juliet, TN

MW-1-2-3 L1423266-14 Solid

Collected by: Dexter C. | Collected date/time: 10/26/21 10:20 | Received date/time: 10/27/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1765837	1	10/30/21 16:24	10/30/21 16:39	KDW	Mt. Juliet, TN
Mercury by Method 7471B	WG1766498	1	11/02/21 08:07	11/02/21 15:22	BMF	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1765966	5	11/02/21 12:22	11/03/21 18:42	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1765548	25	10/26/21 10:20	10/29/21 05:05	MGF	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1766323	1	10/26/21 10:20	10/31/21 05:31	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1766948	1	11/02/21 03:07	11/03/21 06:49	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1765811	1	10/30/21 01:41	10/30/21 14:27	AAT	Mt. Juliet, TN

GEI-5-7-8 L1423266-15 Solid

Collected by: Dexter C. | Collected date/time: 10/26/21 10:40 | Received date/time: 10/27/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1765837	1	10/30/21 16:24	10/30/21 16:39	KDW	Mt. Juliet, TN
Mercury by Method 7471B	WG1766498	1	11/02/21 08:07	11/02/21 15:25	BMF	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1765966	5	11/02/21 12:22	11/03/21 18:46	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1765548	25	10/26/21 10:40	10/29/21 05:27	MGF	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1766323	1	10/26/21 10:40	10/31/21 05:49	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1766948	1	11/02/21 03:07	11/03/21 07:02	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1765811	1	10/30/21 01:41	10/30/21 14:44	AAT	Mt. Juliet, TN

MW-3-2-3 L1423266-17 Solid

Collected by: Dexter C. | Collected date/time: 10/26/21 11:00 | Received date/time: 10/27/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1765837	1	10/30/21 16:24	10/30/21 16:39	KDW	Mt. Juliet, TN
Mercury by Method 7471B	WG1766498	1	11/02/21 08:07	11/02/21 15:27	BMF	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1765966	5	11/02/21 12:22	11/03/21 18:49	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1765548	25	10/26/21 11:00	10/29/21 05:49	MGF	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1766323	1	10/26/21 11:00	10/31/21 06:08	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1766948	1	11/02/21 03:07	11/03/21 07:54	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1765811	1	10/30/21 01:41	10/30/21 15:02	AAT	Mt. Juliet, TN

GEI-6-7-8 L1423266-20 Solid

Collected by: Dexter C. | Collected date/time: 10/26/21 12:05 | Received date/time: 10/27/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1765837	1	10/30/21 16:24	10/30/21 16:39	KDW	Mt. Juliet, TN
Mercury by Method 7471B	WG1766498	1	11/02/21 08:07	11/02/21 15:30	BMF	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1765966	5	11/02/21 12:22	11/03/21 18:52	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1765548	25	10/26/21 12:05	10/29/21 06:11	MGF	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1766323	1	10/26/21 12:05	10/31/21 06:27	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1766948	1	11/02/21 03:07	11/03/21 07:41	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1765811	1	10/30/21 01:41	10/30/21 15:19	AAT	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Brian Ford
Project Manager

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	91.8		1	10/30/2021 16:39	WG1765837

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0436	1	11/02/2021 15:04	WG1766498

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	2.26		1.09	5	11/03/2021 18:25	WG1765966
Barium	41.9		2.72	5	11/03/2021 18:25	WG1765966
Cadmium	ND		1.09	5	11/03/2021 18:25	WG1765966
Chromium	23.4		5.45	5	11/03/2021 18:25	WG1765966
Lead	ND		2.18	5	11/03/2021 18:25	WG1765966
Selenium	ND		2.72	5	11/03/2021 18:25	WG1765966
Silver	ND		0.545	5	11/03/2021 18:25	WG1765966

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Gasoline Range Organics-NWTPH	ND		3.01	25	10/29/2021 11:17	WG1765532
(S) a,a,a-Trifluorotoluene(FID)	*119*		*77.0-120*		*10/29/2021 11:17*	WG1765532

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0607	1	10/31/2021 03:56	WG1766323
Acrylonitrile	ND	C3	0.0152	1	10/31/2021 03:56	WG1766323
Benzene	ND		0.00121	1	10/31/2021 03:56	WG1766323
Bromobenzene	ND		0.0152	1	10/31/2021 03:56	WG1766323
Bromodichloromethane	ND		0.00303	1	10/31/2021 03:56	WG1766323
Bromoform	ND		0.0303	1	10/31/2021 03:56	WG1766323
Bromomethane	ND		0.0152	1	10/31/2021 03:56	WG1766323
n-Butylbenzene	ND		0.0152	1	10/31/2021 03:56	WG1766323
sec-Butylbenzene	ND		0.0152	1	10/31/2021 03:56	WG1766323
tert-Butylbenzene	ND		0.00607	1	10/31/2021 03:56	WG1766323
Carbon tetrachloride	ND		0.00607	1	10/31/2021 03:56	WG1766323
Chlorobenzene	ND		0.00303	1	10/31/2021 03:56	WG1766323
Chlorodibromomethane	ND		0.00303	1	10/31/2021 03:56	WG1766323
Chloroethane	ND		0.00607	1	10/31/2021 03:56	WG1766323
Chloroform	ND		0.00303	1	10/31/2021 03:56	WG1766323
Chloromethane	ND		0.0152	1	10/31/2021 03:56	WG1766323
2-Chlorotoluene	ND		0.00303	1	10/31/2021 03:56	WG1766323
4-Chlorotoluene	ND		0.00607	1	10/31/2021 03:56	WG1766323
1,2-Dibromo-3-Chloropropane	ND		0.0303	1	10/31/2021 03:56	WG1766323
1,2-Dibromoethane	ND		0.00303	1	10/31/2021 03:56	WG1766323
Dibromomethane	ND		0.00607	1	10/31/2021 03:56	WG1766323
1,2-Dichlorobenzene	ND		0.00607	1	10/31/2021 03:56	WG1766323
1,3-Dichlorobenzene	ND		0.00607	1	10/31/2021 03:56	WG1766323
1,4-Dichlorobenzene	ND		0.00607	1	10/31/2021 03:56	WG1766323
Dichlorodifluoromethane	ND		0.00303	1	10/31/2021 03:56	WG1766323
1,1-Dichloroethane	ND		0.00303	1	10/31/2021 03:56	WG1766323
1,2-Dichloroethane	ND		0.00303	1	10/31/2021 03:56	WG1766323

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1-Dichloroethene	ND		0.00303	1	10/31/2021 03:56	WG1766323
cis-1,2-Dichloroethene	ND		0.00303	1	10/31/2021 03:56	WG1766323
trans-1,2-Dichloroethene	ND		0.00607	1	10/31/2021 03:56	WG1766323
1,2-Dichloropropane	ND		0.00607	1	10/31/2021 03:56	WG1766323
1,1-Dichloropropene	ND		0.00303	1	10/31/2021 03:56	WG1766323
1,3-Dichloropropane	ND		0.00607	1	10/31/2021 03:56	WG1766323
cis-1,3-Dichloropropene	ND		0.00303	1	10/31/2021 03:56	WG1766323
trans-1,3-Dichloropropene	ND		0.00607	1	10/31/2021 03:56	WG1766323
2,2-Dichloropropane	ND		0.00303	1	10/31/2021 03:56	WG1766323
Di-isopropyl ether	ND		0.00121	1	10/31/2021 03:56	WG1766323
Ethylbenzene	ND		0.00303	1	10/31/2021 03:56	WG1766323
Hexachloro-1,3-butadiene	ND		0.0303	1	10/31/2021 03:56	WG1766323
Isopropylbenzene	ND		0.00303	1	10/31/2021 03:56	WG1766323
p-Isopropyltoluene	ND		0.00607	1	10/31/2021 03:56	WG1766323
2-Butanone (MEK)	ND		0.121	1	10/31/2021 03:56	WG1766323
Methylene Chloride	ND		0.0303	1	10/31/2021 03:56	WG1766323
4-Methyl-2-pentanone (MIBK)	ND		0.0303	1	10/31/2021 03:56	WG1766323
Methyl tert-butyl ether	ND		0.00121	1	10/31/2021 03:56	WG1766323
Naphthalene	ND		0.0152	1	10/31/2021 03:56	WG1766323
n-Propylbenzene	ND		0.00607	1	10/31/2021 03:56	WG1766323
Styrene	ND		0.0152	1	10/31/2021 03:56	WG1766323
1,1,1,2-Tetrachloroethane	ND		0.00303	1	10/31/2021 03:56	WG1766323
1,1,2,2-Tetrachloroethane	ND		0.00303	1	10/31/2021 03:56	WG1766323
1,1,2-Trichlorotrifluoroethane	ND		0.00303	1	10/31/2021 03:56	WG1766323
Tetrachloroethene	ND		0.00303	1	10/31/2021 03:56	WG1766323
Toluene	ND		0.00607	1	10/31/2021 03:56	WG1766323
1,2,3-Trichlorobenzene	ND	C4	0.0152	1	10/31/2021 03:56	WG1766323
1,2,4-Trichlorobenzene	ND		0.0152	1	10/31/2021 03:56	WG1766323
1,1,1-Trichloroethane	ND		0.00303	1	10/31/2021 03:56	WG1766323
1,1,2-Trichloroethane	ND		0.00303	1	10/31/2021 03:56	WG1766323
Trichloroethene	ND		0.00121	1	10/31/2021 03:56	WG1766323
Trichlorofluoromethane	ND		0.00303	1	10/31/2021 03:56	WG1766323
1,2,3-Trichloropropane	ND		0.0152	1	10/31/2021 03:56	WG1766323
1,2,4-Trimethylbenzene	ND		0.00607	1	10/31/2021 03:56	WG1766323
1,2,3-Trimethylbenzene	ND		0.00607	1	10/31/2021 03:56	WG1766323
1,3,5-Trimethylbenzene	ND		0.00607	1	10/31/2021 03:56	WG1766323
Vinyl chloride	ND		0.00303	1	10/31/2021 03:56	WG1766323
Xylenes, Total	ND		0.00789	1	10/31/2021 03:56	WG1766323
(S) Toluene-d8	*104*		*75.0-131*		*10/31/2021 03:56*	WG1766323
(S) 4-Bromofluorobenzene	*99.6*		*67.0-138*		*10/31/2021 03:56*	WG1766323
(S) 1,2-Dichloroethane-d4	*103*		*70.0-130*		*10/31/2021 03:56*	WG1766323

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.36	1	11/03/2021 07:15	WG1766948
Residual Range Organics (RRO)	ND		10.9	1	11/03/2021 07:15	WG1766948
(S) o-Terphenyl	*53.8*		*18.0-148*		*11/03/2021 07:15*	WG1766948

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00654	1	10/30/2021 13:00	WG1765811
Acenaphthene	ND		0.00654	1	10/30/2021 13:00	WG1765811
Acenaphthylene	ND		0.00654	1	10/30/2021 13:00	WG1765811
Benzo(a)anthracene	ND		0.00654	1	10/30/2021 13:00	WG1765811
Benzo(a)pyrene	ND		0.00654	1	10/30/2021 13:00	WG1765811
Benzo(b)fluoranthene	ND		0.00654	1	10/30/2021 13:00	WG1765811
Benzo(g,h,i)perylene	ND		0.00654	1	10/30/2021 13:00	WG1765811
Benzo(k)fluoranthene	ND		0.00654	1	10/30/2021 13:00	WG1765811
Chrysene	ND		0.00654	1	10/30/2021 13:00	WG1765811
Dibenz(a,h)anthracene	ND		0.00654	1	10/30/2021 13:00	WG1765811
Fluoranthene	ND		0.00654	1	10/30/2021 13:00	WG1765811
Fluorene	ND		0.00654	1	10/30/2021 13:00	WG1765811
Indeno(1,2,3-cd)pyrene	ND		0.00654	1	10/30/2021 13:00	WG1765811
Naphthalene	ND		0.0218	1	10/30/2021 13:00	WG1765811
Phenanthrene	ND		0.00654	1	10/30/2021 13:00	WG1765811
Pyrene	ND		0.00654	1	10/30/2021 13:00	WG1765811
1-Methylnaphthalene	ND		0.0218	1	10/30/2021 13:00	WG1765811
2-Methylnaphthalene	ND		0.0218	1	10/30/2021 13:00	WG1765811
2-Chloronaphthalene	ND		0.0218	1	10/30/2021 13:00	WG1765811
(S) Nitrobenzene-d5	*85.9*		*14.0-149*		*10/30/2021 13:00*	WG1765811
(S) 2-Fluorobiphenyl	*70.0*		*34.0-125*		*10/30/2021 13:00*	WG1765811
(S) p-Terphenyl-d14	*110*		*23.0-120*		*10/30/2021 13:00*	WG1765811

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.3		1	10/30/2021 16:39	WG1765837

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0434	1	11/02/2021 15:07	WG1766498

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	2.36		1.08	5	11/03/2021 18:28	WG1765966
Barium	45.2		2.71	5	11/03/2021 18:28	WG1765966
Cadmium	ND		1.08	5	11/03/2021 18:28	WG1765966
Chromium	21.5		5.42	5	11/03/2021 18:28	WG1765966
Lead	ND		2.17	5	11/03/2021 18:28	WG1765966
Selenium	ND		2.71	5	11/03/2021 18:28	WG1765966
Silver	ND		0.542	5	11/03/2021 18:28	WG1765966

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Gasoline Range Organics-NWTPH	ND		2.99	25	10/29/2021 11:38	WG1765532
(S) a,a,a-Trifluorotoluene(FID)	*119*		*77.0-120*		*10/29/2021 11:38*	WG1765532

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0594	1	10/31/2021 04:15	WG1766323
Acrylonitrile	ND	C3	0.0148	1	10/31/2021 04:15	WG1766323
Benzene	ND		0.00119	1	10/31/2021 04:15	WG1766323
Bromobenzene	ND		0.0148	1	10/31/2021 04:15	WG1766323
Bromodichloromethane	ND		0.00297	1	10/31/2021 04:15	WG1766323
Bromoform	ND		0.0297	1	10/31/2021 04:15	WG1766323
Bromomethane	ND		0.0148	1	10/31/2021 04:15	WG1766323
n-Butylbenzene	ND		0.0148	1	10/31/2021 04:15	WG1766323
sec-Butylbenzene	ND		0.0148	1	10/31/2021 04:15	WG1766323
tert-Butylbenzene	ND		0.00594	1	10/31/2021 04:15	WG1766323
Carbon tetrachloride	ND		0.00594	1	10/31/2021 04:15	WG1766323
Chlorobenzene	ND		0.00297	1	10/31/2021 04:15	WG1766323
Chlorodibromomethane	ND		0.00297	1	10/31/2021 04:15	WG1766323
Chloroethane	ND		0.00594	1	10/31/2021 04:15	WG1766323
Chloroform	ND		0.00297	1	10/31/2021 04:15	WG1766323
Chloromethane	ND		0.0148	1	10/31/2021 04:15	WG1766323
2-Chlorotoluene	ND		0.00297	1	10/31/2021 04:15	WG1766323
4-Chlorotoluene	ND		0.00594	1	10/31/2021 04:15	WG1766323
1,2-Dibromo-3-Chloropropane	ND		0.0297	1	10/31/2021 04:15	WG1766323
1,2-Dibromoethane	ND		0.00297	1	10/31/2021 04:15	WG1766323
Dibromomethane	ND		0.00594	1	10/31/2021 04:15	WG1766323
1,2-Dichlorobenzene	ND		0.00594	1	10/31/2021 04:15	WG1766323
1,3-Dichlorobenzene	ND		0.00594	1	10/31/2021 04:15	WG1766323
1,4-Dichlorobenzene	ND		0.00594	1	10/31/2021 04:15	WG1766323
Dichlorodifluoromethane	ND		0.00297	1	10/31/2021 04:15	WG1766323
1,1-Dichloroethane	ND		0.00297	1	10/31/2021 04:15	WG1766323
1,2-Dichloroethane	ND		0.00297	1	10/31/2021 04:15	WG1766323

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1-Dichloroethene	ND		0.00297	1	10/31/2021 04:15	WG1766323
cis-1,2-Dichloroethene	ND		0.00297	1	10/31/2021 04:15	WG1766323
trans-1,2-Dichloroethene	ND		0.00594	1	10/31/2021 04:15	WG1766323
1,2-Dichloropropane	ND		0.00594	1	10/31/2021 04:15	WG1766323
1,1-Dichloropropene	ND		0.00297	1	10/31/2021 04:15	WG1766323
1,3-Dichloropropane	ND		0.00594	1	10/31/2021 04:15	WG1766323
cis-1,3-Dichloropropene	ND		0.00297	1	10/31/2021 04:15	WG1766323
trans-1,3-Dichloropropene	ND		0.00594	1	10/31/2021 04:15	WG1766323
2,2-Dichloropropane	ND		0.00297	1	10/31/2021 04:15	WG1766323
Di-isopropyl ether	ND		0.00119	1	10/31/2021 04:15	WG1766323
Ethylbenzene	ND		0.00297	1	10/31/2021 04:15	WG1766323
Hexachloro-1,3-butadiene	ND		0.0297	1	10/31/2021 04:15	WG1766323
Isopropylbenzene	ND		0.00297	1	10/31/2021 04:15	WG1766323
p-Isopropyltoluene	ND		0.00594	1	10/31/2021 04:15	WG1766323
2-Butanone (MEK)	ND		0.119	1	10/31/2021 04:15	WG1766323
Methylene Chloride	ND		0.0297	1	10/31/2021 04:15	WG1766323
4-Methyl-2-pentanone (MIBK)	ND		0.0297	1	10/31/2021 04:15	WG1766323
Methyl tert-butyl ether	ND		0.00119	1	10/31/2021 04:15	WG1766323
Naphthalene	ND		0.0148	1	10/31/2021 04:15	WG1766323
n-Propylbenzene	ND		0.00594	1	10/31/2021 04:15	WG1766323
Styrene	ND		0.0148	1	10/31/2021 04:15	WG1766323
1,1,1,2-Tetrachloroethane	ND		0.00297	1	10/31/2021 04:15	WG1766323
1,1,2,2-Tetrachloroethane	ND		0.00297	1	10/31/2021 04:15	WG1766323
1,1,2-Trichlorotrifluoroethane	ND		0.00297	1	10/31/2021 04:15	WG1766323
Tetrachloroethene	ND		0.00297	1	10/31/2021 04:15	WG1766323
Toluene	ND		0.00594	1	10/31/2021 04:15	WG1766323
1,2,3-Trichlorobenzene	ND	C4	0.0148	1	10/31/2021 04:15	WG1766323
1,2,4-Trichlorobenzene	ND		0.0148	1	10/31/2021 04:15	WG1766323
1,1,1-Trichloroethane	ND		0.00297	1	10/31/2021 04:15	WG1766323
1,1,2-Trichloroethane	ND		0.00297	1	10/31/2021 04:15	WG1766323
Trichloroethene	ND		0.00119	1	10/31/2021 04:15	WG1766323
Trichlorofluoromethane	ND		0.00297	1	10/31/2021 04:15	WG1766323
1,2,3-Trichloropropane	ND		0.0148	1	10/31/2021 04:15	WG1766323
1,2,4-Trimethylbenzene	ND		0.00594	1	10/31/2021 04:15	WG1766323
1,2,3-Trimethylbenzene	ND		0.00594	1	10/31/2021 04:15	WG1766323
1,3,5-Trimethylbenzene	ND		0.00594	1	10/31/2021 04:15	WG1766323
Vinyl chloride	ND		0.00297	1	10/31/2021 04:15	WG1766323
Xylenes, Total	ND		0.00772	1	10/31/2021 04:15	WG1766323
(S) Toluene-d8	*104*		*75.0-131*		*10/31/2021 04:15*	WG1766323
(S) 4-Bromofluorobenzene	*96.9*		*67.0-138*		*10/31/2021 04:15*	WG1766323
(S) 1,2-Dichloroethane-d4	*100*		*70.0-130*		*10/31/2021 04:15*	WG1766323

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.34	1	11/03/2021 06:11	WG1766948
Residual Range Organics (RRO)	ND		10.8	1	11/03/2021 06:11	WG1766948
(S) o-Terphenyl	*37.8*		*18.0-148*		*11/03/2021 06:11*	WG1766948

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00650	1	10/30/2021 13:18	WG1765811
Acenaphthene	ND		0.00650	1	10/30/2021 13:18	WG1765811
Acenaphthylene	ND		0.00650	1	10/30/2021 13:18	WG1765811
Benzo(a)anthracene	ND		0.00650	1	10/30/2021 13:18	WG1765811
Benzo(a)pyrene	ND		0.00650	1	10/30/2021 13:18	WG1765811
Benzo(b)fluoranthene	ND		0.00650	1	10/30/2021 13:18	WG1765811
Benzo(g,h,i)perylene	ND		0.00650	1	10/30/2021 13:18	WG1765811
Benzo(k)fluoranthene	ND		0.00650	1	10/30/2021 13:18	WG1765811
Chrysene	ND		0.00650	1	10/30/2021 13:18	WG1765811
Dibenz(a,h)anthracene	ND		0.00650	1	10/30/2021 13:18	WG1765811
Fluoranthene	ND		0.00650	1	10/30/2021 13:18	WG1765811
Fluorene	ND		0.00650	1	10/30/2021 13:18	WG1765811
Indeno(1,2,3-cd)pyrene	ND		0.00650	1	10/30/2021 13:18	WG1765811
Naphthalene	ND		0.0217	1	10/30/2021 13:18	WG1765811
Phenanthrene	ND		0.00650	1	10/30/2021 13:18	WG1765811
Pyrene	ND		0.00650	1	10/30/2021 13:18	WG1765811
1-Methylnaphthalene	ND		0.0217	1	10/30/2021 13:18	WG1765811
2-Methylnaphthalene	ND		0.0217	1	10/30/2021 13:18	WG1765811
2-Chloronaphthalene	ND		0.0217	1	10/30/2021 13:18	WG1765811
(S) Nitrobenzene-d5	*98.0*		*14.0-149*		*10/30/2021 13:18*	WG1765811
(S) 2-Fluorobiphenyl	*77.9*		*34.0-125*		*10/30/2021 13:18*	WG1765811
(S) p-Terphenyl-d14	*96.1*		*23.0-120*		*10/30/2021 13:18*	WG1765811

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	89.0		1	10/30/2021 16:39	WG1765837

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0450	1	11/02/2021 15:09	WG1766498

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	2.93		1.12	5	11/03/2021 18:32	WG1765966
Barium	25.3		2.81	5	11/03/2021 18:32	WG1765966
Cadmium	ND		1.12	5	11/03/2021 18:32	WG1765966
Chromium	11.8		5.62	5	11/03/2021 18:32	WG1765966
Lead	ND		2.25	5	11/03/2021 18:32	WG1765966
Selenium	ND		2.81	5	11/03/2021 18:32	WG1765966
Silver	ND		0.562	5	11/03/2021 18:32	WG1765966

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Gasoline Range Organics-NWTPH	ND		3.23	25	10/29/2021 12:00	WG1765532
(S) a,a,a-Trifluorotoluene(FID)	*119*		*77.0-120*		*10/29/2021 12:00*	WG1765532

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0646	1	10/31/2021 04:34	WG1766323
Acrylonitrile	ND	C3	0.0161	1	10/31/2021 04:34	WG1766323
Benzene	ND		0.00129	1	10/31/2021 04:34	WG1766323
Bromobenzene	ND		0.0161	1	10/31/2021 04:34	WG1766323
Bromodichloromethane	ND		0.00323	1	10/31/2021 04:34	WG1766323
Bromoform	ND		0.0323	1	10/31/2021 04:34	WG1766323
Bromomethane	ND		0.0161	1	10/31/2021 04:34	WG1766323
n-Butylbenzene	ND		0.0161	1	10/31/2021 04:34	WG1766323
sec-Butylbenzene	ND		0.0161	1	10/31/2021 04:34	WG1766323
tert-Butylbenzene	ND		0.00646	1	10/31/2021 04:34	WG1766323
Carbon tetrachloride	ND		0.00646	1	10/31/2021 04:34	WG1766323
Chlorobenzene	ND		0.00323	1	10/31/2021 04:34	WG1766323
Chlorodibromomethane	ND		0.00323	1	10/31/2021 04:34	WG1766323
Chloroethane	ND		0.00646	1	10/31/2021 04:34	WG1766323
Chloroform	ND		0.00323	1	10/31/2021 04:34	WG1766323
Chloromethane	ND		0.0161	1	10/31/2021 04:34	WG1766323
2-Chlorotoluene	ND		0.00323	1	10/31/2021 04:34	WG1766323
4-Chlorotoluene	ND		0.00646	1	10/31/2021 04:34	WG1766323
1,2-Dibromo-3-Chloropropane	ND		0.0323	1	10/31/2021 04:34	WG1766323
1,2-Dibromoethane	ND		0.00323	1	10/31/2021 04:34	WG1766323
Dibromomethane	ND		0.00646	1	10/31/2021 04:34	WG1766323
1,2-Dichlorobenzene	ND		0.00646	1	10/31/2021 04:34	WG1766323
1,3-Dichlorobenzene	ND		0.00646	1	10/31/2021 04:34	WG1766323
1,4-Dichlorobenzene	ND		0.00646	1	10/31/2021 04:34	WG1766323
Dichlorodifluoromethane	ND		0.00323	1	10/31/2021 04:34	WG1766323
1,1-Dichloroethane	ND		0.00323	1	10/31/2021 04:34	WG1766323
1,2-Dichloroethane	ND		0.00323	1	10/31/2021 04:34	WG1766323

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1-Dichloroethene	ND		0.00323	1	10/31/2021 04:34	WG1766323
cis-1,2-Dichloroethene	ND		0.00323	1	10/31/2021 04:34	WG1766323
trans-1,2-Dichloroethene	ND		0.00646	1	10/31/2021 04:34	WG1766323
1,2-Dichloropropane	ND		0.00646	1	10/31/2021 04:34	WG1766323
1,1-Dichloropropene	ND		0.00323	1	10/31/2021 04:34	WG1766323
1,3-Dichloropropane	ND		0.00646	1	10/31/2021 04:34	WG1766323
cis-1,3-Dichloropropene	ND		0.00323	1	10/31/2021 04:34	WG1766323
trans-1,3-Dichloropropene	ND		0.00646	1	10/31/2021 04:34	WG1766323
2,2-Dichloropropane	ND		0.00323	1	10/31/2021 04:34	WG1766323
Di-isopropyl ether	ND		0.00129	1	10/31/2021 04:34	WG1766323
Ethylbenzene	ND		0.00323	1	10/31/2021 04:34	WG1766323
Hexachloro-1,3-butadiene	ND		0.0323	1	10/31/2021 04:34	WG1766323
Isopropylbenzene	ND		0.00323	1	10/31/2021 04:34	WG1766323
p-Isopropyltoluene	ND		0.00646	1	10/31/2021 04:34	WG1766323
2-Butanone (MEK)	ND		0.129	1	10/31/2021 04:34	WG1766323
Methylene Chloride	ND		0.0323	1	10/31/2021 04:34	WG1766323
4-Methyl-2-pentanone (MIBK)	ND		0.0323	1	10/31/2021 04:34	WG1766323
Methyl tert-butyl ether	ND		0.00129	1	10/31/2021 04:34	WG1766323
Naphthalene	ND		0.0161	1	10/31/2021 04:34	WG1766323
n-Propylbenzene	ND		0.00646	1	10/31/2021 04:34	WG1766323
Styrene	ND		0.0161	1	10/31/2021 04:34	WG1766323
1,1,1,2-Tetrachloroethane	ND		0.00323	1	10/31/2021 04:34	WG1766323
1,1,2,2-Tetrachloroethane	ND		0.00323	1	10/31/2021 04:34	WG1766323
1,1,2-Trichlorotrifluoroethane	ND		0.00323	1	10/31/2021 04:34	WG1766323
Tetrachloroethene	ND		0.00323	1	10/31/2021 04:34	WG1766323
Toluene	ND		0.00646	1	10/31/2021 04:34	WG1766323
1,2,3-Trichlorobenzene	ND	C4	0.0161	1	10/31/2021 04:34	WG1766323
1,2,4-Trichlorobenzene	ND		0.0161	1	10/31/2021 04:34	WG1766323
1,1,1-Trichloroethane	ND		0.00323	1	10/31/2021 04:34	WG1766323
1,1,2-Trichloroethane	ND		0.00323	1	10/31/2021 04:34	WG1766323
Trichloroethene	ND		0.00129	1	10/31/2021 04:34	WG1766323
Trichlorofluoromethane	ND		0.00323	1	10/31/2021 04:34	WG1766323
1,2,3-Trichloropropane	ND		0.0161	1	10/31/2021 04:34	WG1766323
1,2,4-Trimethylbenzene	ND		0.00646	1	10/31/2021 04:34	WG1766323
1,2,3-Trimethylbenzene	ND		0.00646	1	10/31/2021 04:34	WG1766323
1,3,5-Trimethylbenzene	ND		0.00646	1	10/31/2021 04:34	WG1766323
Vinyl chloride	ND		0.00323	1	10/31/2021 04:34	WG1766323
Xylenes, Total	ND		0.00839	1	10/31/2021 04:34	WG1766323
(S) Toluene-d8	*104*		*75.0-131*		*10/31/2021 04:34*	WG1766323
(S) 4-Bromofluorobenzene	*99.4*		*67.0-138*		*10/31/2021 04:34*	WG1766323
(S) 1,2-Dichloroethane-d4	*99.4*		*70.0-130*		*10/31/2021 04:34*	WG1766323

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.50	1	11/03/2021 06:24	WG1766948
Residual Range Organics (RRO)	ND		11.2	1	11/03/2021 06:24	WG1766948
(S) o-Terphenyl	*45.3*		*18.0-148*		*11/03/2021 06:24*	WG1766948

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00675	1	10/30/2021 13:35	WG1765811
Acenaphthene	ND		0.00675	1	10/30/2021 13:35	WG1765811
Acenaphthylene	ND		0.00675	1	10/30/2021 13:35	WG1765811
Benzo(a)anthracene	ND		0.00675	1	10/30/2021 13:35	WG1765811
Benzo(a)pyrene	ND		0.00675	1	10/30/2021 13:35	WG1765811
Benzo(b)fluoranthene	ND		0.00675	1	10/30/2021 13:35	WG1765811
Benzo(g,h,i)perylene	ND		0.00675	1	10/30/2021 13:35	WG1765811
Benzo(k)fluoranthene	ND		0.00675	1	10/30/2021 13:35	WG1765811
Chrysene	ND		0.00675	1	10/30/2021 13:35	WG1765811
Dibenz(a,h)anthracene	ND		0.00675	1	10/30/2021 13:35	WG1765811
Fluoranthene	ND		0.00675	1	10/30/2021 13:35	WG1765811
Fluorene	ND		0.00675	1	10/30/2021 13:35	WG1765811
Indeno(1,2,3-cd)pyrene	ND		0.00675	1	10/30/2021 13:35	WG1765811
Naphthalene	ND		0.0225	1	10/30/2021 13:35	WG1765811
Phenanthrene	ND		0.00675	1	10/30/2021 13:35	WG1765811
Pyrene	ND		0.00675	1	10/30/2021 13:35	WG1765811
1-Methylnaphthalene	ND		0.0225	1	10/30/2021 13:35	WG1765811
2-Methylnaphthalene	ND		0.0225	1	10/30/2021 13:35	WG1765811
2-Chloronaphthalene	ND		0.0225	1	10/30/2021 13:35	WG1765811
(S) Nitrobenzene-d5	*93.3*		*14.0-149*		*10/30/2021 13:35*	WG1765811
(S) 2-Fluorobiphenyl	*75.9*		*34.0-125*		*10/30/2021 13:35*	WG1765811
(S) p-Terphenyl-d14	*96.6*		*23.0-120*		*10/30/2021 13:35*	WG1765811

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	90.2		1	10/30/2021 16:39	WG1765837

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0443	1	11/02/2021 15:12	WG1766498

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	3.17		1.11	5	11/03/2021 18:35	WG1765966
Barium	44.9		2.77	5	11/03/2021 18:35	WG1765966
Cadmium	ND		1.11	5	11/03/2021 18:35	WG1765966
Chromium	24.4		5.54	5	11/03/2021 18:35	WG1765966
Lead	ND		2.22	5	11/03/2021 18:35	WG1765966
Selenium	ND		2.77	5	11/03/2021 18:35	WG1765966
Silver	ND		0.554	5	11/03/2021 18:35	WG1765966

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Gasoline Range Organics-NWTPH	ND		3.08	25	10/29/2021 04:21	WG1765548
(S) a,a,a-Trifluorotoluene(FID)	*91.8*		*77.0-120*		*10/29/2021 04:21*	WG1765548

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0616	1	10/31/2021 04:53	WG1766323
Acrylonitrile	ND	C3	0.0154	1	10/31/2021 04:53	WG1766323
Benzene	ND		0.00123	1	10/31/2021 04:53	WG1766323
Bromobenzene	ND		0.0154	1	10/31/2021 04:53	WG1766323
Bromodichloromethane	ND		0.00308	1	10/31/2021 04:53	WG1766323
Bromoform	ND		0.0308	1	10/31/2021 04:53	WG1766323
Bromomethane	ND		0.0154	1	10/31/2021 04:53	WG1766323
n-Butylbenzene	ND		0.0154	1	10/31/2021 04:53	WG1766323
sec-Butylbenzene	ND		0.0154	1	10/31/2021 04:53	WG1766323
tert-Butylbenzene	ND		0.00616	1	10/31/2021 04:53	WG1766323
Carbon tetrachloride	ND		0.00616	1	10/31/2021 04:53	WG1766323
Chlorobenzene	ND		0.00308	1	10/31/2021 04:53	WG1766323
Chlorodibromomethane	ND		0.00308	1	10/31/2021 04:53	WG1766323
Chloroethane	ND		0.00616	1	10/31/2021 04:53	WG1766323
Chloroform	ND		0.00308	1	10/31/2021 04:53	WG1766323
Chloromethane	ND		0.0154	1	10/31/2021 04:53	WG1766323
2-Chlorotoluene	ND		0.00308	1	10/31/2021 04:53	WG1766323
4-Chlorotoluene	ND		0.00616	1	10/31/2021 04:53	WG1766323
1,2-Dibromo-3-Chloropropane	ND		0.0308	1	10/31/2021 04:53	WG1766323
1,2-Dibromoethane	ND		0.00308	1	10/31/2021 04:53	WG1766323
Dibromomethane	ND		0.00616	1	10/31/2021 04:53	WG1766323
1,2-Dichlorobenzene	ND		0.00616	1	10/31/2021 04:53	WG1766323
1,3-Dichlorobenzene	ND		0.00616	1	10/31/2021 04:53	WG1766323
1,4-Dichlorobenzene	ND		0.00616	1	10/31/2021 04:53	WG1766323
Dichlorodifluoromethane	ND		0.00308	1	10/31/2021 04:53	WG1766323
1,1-Dichloroethane	ND		0.00308	1	10/31/2021 04:53	WG1766323
1,2-Dichloroethane	ND		0.00308	1	10/31/2021 04:53	WG1766323

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1-Dichloroethene	ND		0.00308	1	10/31/2021 04:53	WG1766323
cis-1,2-Dichloroethene	ND		0.00308	1	10/31/2021 04:53	WG1766323
trans-1,2-Dichloroethene	ND		0.00616	1	10/31/2021 04:53	WG1766323
1,2-Dichloropropane	ND		0.00616	1	10/31/2021 04:53	WG1766323
1,1-Dichloropropene	ND		0.00308	1	10/31/2021 04:53	WG1766323
1,3-Dichloropropane	ND		0.00616	1	10/31/2021 04:53	WG1766323
cis-1,3-Dichloropropene	ND		0.00308	1	10/31/2021 04:53	WG1766323
trans-1,3-Dichloropropene	ND		0.00616	1	10/31/2021 04:53	WG1766323
2,2-Dichloropropane	ND		0.00308	1	10/31/2021 04:53	WG1766323
Di-isopropyl ether	ND		0.00123	1	10/31/2021 04:53	WG1766323
Ethylbenzene	ND		0.00308	1	10/31/2021 04:53	WG1766323
Hexachloro-1,3-butadiene	ND		0.0308	1	10/31/2021 04:53	WG1766323
Isopropylbenzene	ND		0.00308	1	10/31/2021 04:53	WG1766323
p-Isopropyltoluene	ND		0.00616	1	10/31/2021 04:53	WG1766323
2-Butanone (MEK)	ND		0.123	1	10/31/2021 04:53	WG1766323
Methylene Chloride	ND		0.0308	1	10/31/2021 04:53	WG1766323
4-Methyl-2-pentanone (MIBK)	ND		0.0308	1	10/31/2021 04:53	WG1766323
Methyl tert-butyl ether	ND		0.00123	1	10/31/2021 04:53	WG1766323
Naphthalene	ND		0.0154	1	10/31/2021 04:53	WG1766323
n-Propylbenzene	ND		0.00616	1	10/31/2021 04:53	WG1766323
Styrene	ND		0.0154	1	10/31/2021 04:53	WG1766323
1,1,1,2-Tetrachloroethane	ND		0.00308	1	10/31/2021 04:53	WG1766323
1,1,2,2-Tetrachloroethane	ND		0.00308	1	10/31/2021 04:53	WG1766323
1,1,2-Trichlorotrifluoroethane	ND		0.00308	1	10/31/2021 04:53	WG1766323
Tetrachloroethene	ND		0.00308	1	10/31/2021 04:53	WG1766323
Toluene	ND		0.00616	1	10/31/2021 04:53	WG1766323
1,2,3-Trichlorobenzene	ND	C4	0.0154	1	10/31/2021 04:53	WG1766323
1,2,4-Trichlorobenzene	ND		0.0154	1	10/31/2021 04:53	WG1766323
1,1,1-Trichloroethane	ND		0.00308	1	10/31/2021 04:53	WG1766323
1,1,2-Trichloroethane	ND		0.00308	1	10/31/2021 04:53	WG1766323
Trichloroethene	ND		0.00123	1	10/31/2021 04:53	WG1766323
Trichlorofluoromethane	ND		0.00308	1	10/31/2021 04:53	WG1766323
1,2,3-Trichloropropane	ND		0.0154	1	10/31/2021 04:53	WG1766323
1,2,4-Trimethylbenzene	ND		0.00616	1	10/31/2021 04:53	WG1766323
1,2,3-Trimethylbenzene	ND		0.00616	1	10/31/2021 04:53	WG1766323
1,3,5-Trimethylbenzene	ND		0.00616	1	10/31/2021 04:53	WG1766323
Vinyl chloride	ND		0.00308	1	10/31/2021 04:53	WG1766323
Xylenes, Total	ND		0.00801	1	10/31/2021 04:53	WG1766323
(S) Toluene-d8	*104*		*75.0-131*		*10/31/2021 04:53*	WG1766323
(S) 4-Bromofluorobenzene	*100*		*67.0-138*		*10/31/2021 04:53*	WG1766323
(S) 1,2-Dichloroethane-d4	*101*		*70.0-130*		*10/31/2021 04:53*	WG1766323

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.43	1	11/03/2021 06:36	WG1766948
Residual Range Organics (RRO)	ND		11.1	1	11/03/2021 06:36	WG1766948
(S) o-Terphenyl	*45.8*		*18.0-148*		*11/03/2021 06:36*	WG1766948

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00665	1	10/30/2021 13:52	WG1765811
Acenaphthene	ND		0.00665	1	10/30/2021 13:52	WG1765811
Acenaphthylene	ND		0.00665	1	10/30/2021 13:52	WG1765811
Benzo(a)anthracene	ND		0.00665	1	10/30/2021 13:52	WG1765811
Benzo(a)pyrene	ND		0.00665	1	10/30/2021 13:52	WG1765811
Benzo(b)fluoranthene	ND		0.00665	1	10/30/2021 13:52	WG1765811
Benzo(g,h,i)perylene	ND		0.00665	1	10/30/2021 13:52	WG1765811
Benzo(k)fluoranthene	ND		0.00665	1	10/30/2021 13:52	WG1765811
Chrysene	ND		0.00665	1	10/30/2021 13:52	WG1765811
Dibenz(a,h)anthracene	ND		0.00665	1	10/30/2021 13:52	WG1765811
Fluoranthene	ND		0.00665	1	10/30/2021 13:52	WG1765811
Fluorene	ND		0.00665	1	10/30/2021 13:52	WG1765811
Indeno(1,2,3-cd)pyrene	ND		0.00665	1	10/30/2021 13:52	WG1765811
Naphthalene	ND		0.0222	1	10/30/2021 13:52	WG1765811
Phenanthrene	ND		0.00665	1	10/30/2021 13:52	WG1765811
Pyrene	ND		0.00665	1	10/30/2021 13:52	WG1765811
1-Methylnaphthalene	ND		0.0222	1	10/30/2021 13:52	WG1765811
2-Methylnaphthalene	ND		0.0222	1	10/30/2021 13:52	WG1765811
2-Chloronaphthalene	ND		0.0222	1	10/30/2021 13:52	WG1765811
(S) Nitrobenzene-d5	*94.9*		*14.0-149*		*10/30/2021 13:52*	WG1765811
(S) 2-Fluorobiphenyl	*81.7*		*34.0-125*		*10/30/2021 13:52*	WG1765811
(S) p-Terphenyl-d14	*95.1*		*23.0-120*		*10/30/2021 13:52*	WG1765811

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	91.6		1	10/30/2021 16:39	WG1765837

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	0.0731		0.0437	1	11/02/2021 15:15	WG1766498

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	6.28		1.09	5	11/03/2021 18:39	WG1765966
Barium	72.2		2.73	5	11/03/2021 18:39	WG1765966
Cadmium	ND		1.09	5	11/03/2021 18:39	WG1765966
Chromium	33.9		5.46	5	11/03/2021 18:39	WG1765966
Lead	27.6		2.18	5	11/03/2021 18:39	WG1765966
Selenium	ND		2.73	5	11/03/2021 18:39	WG1765966
Silver	ND		0.546	5	11/03/2021 18:39	WG1765966

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Gasoline Range Organics-NWTPH	ND		2.97	25	10/29/2021 04:43	WG1765548
(S) a,a,a-Trifluorotoluene(FID)	*94.7*		*77.0-120*		*10/29/2021 04:43*	WG1765548

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0594	1	10/31/2021 05:12	WG1766323
Acrylonitrile	ND	C3	0.0148	1	10/31/2021 05:12	WG1766323
Benzene	ND		0.00119	1	10/31/2021 05:12	WG1766323
Bromobenzene	ND		0.0148	1	10/31/2021 05:12	WG1766323
Bromodichloromethane	ND		0.00297	1	10/31/2021 05:12	WG1766323
Bromoform	ND		0.0297	1	10/31/2021 05:12	WG1766323
Bromomethane	ND		0.0148	1	10/31/2021 05:12	WG1766323
n-Butylbenzene	ND		0.0148	1	10/31/2021 05:12	WG1766323
sec-Butylbenzene	ND		0.0148	1	10/31/2021 05:12	WG1766323
tert-Butylbenzene	ND		0.00594	1	10/31/2021 05:12	WG1766323
Carbon tetrachloride	ND		0.00594	1	10/31/2021 05:12	WG1766323
Chlorobenzene	ND		0.00297	1	10/31/2021 05:12	WG1766323
Chlorodibromomethane	ND		0.00297	1	10/31/2021 05:12	WG1766323
Chloroethane	ND		0.00594	1	10/31/2021 05:12	WG1766323
Chloroform	ND		0.00297	1	10/31/2021 05:12	WG1766323
Chloromethane	ND		0.0148	1	10/31/2021 05:12	WG1766323
2-Chlorotoluene	ND		0.00297	1	10/31/2021 05:12	WG1766323
4-Chlorotoluene	ND		0.00594	1	10/31/2021 05:12	WG1766323
1,2-Dibromo-3-Chloropropane	ND		0.0297	1	10/31/2021 05:12	WG1766323
1,2-Dibromoethane	ND		0.00297	1	10/31/2021 05:12	WG1766323
Dibromomethane	ND		0.00594	1	10/31/2021 05:12	WG1766323
1,2-Dichlorobenzene	ND		0.00594	1	10/31/2021 05:12	WG1766323
1,3-Dichlorobenzene	ND		0.00594	1	10/31/2021 05:12	WG1766323
1,4-Dichlorobenzene	ND		0.00594	1	10/31/2021 05:12	WG1766323
Dichlorodifluoromethane	ND		0.00297	1	10/31/2021 05:12	WG1766323
1,1-Dichloroethane	ND		0.00297	1	10/31/2021 05:12	WG1766323
1,2-Dichloroethane	ND		0.00297	1	10/31/2021 05:12	WG1766323

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1-Dichloroethene	ND		0.00297	1	10/31/2021 05:12	WG1766323
cis-1,2-Dichloroethene	ND		0.00297	1	10/31/2021 05:12	WG1766323
trans-1,2-Dichloroethene	ND		0.00594	1	10/31/2021 05:12	WG1766323
1,2-Dichloropropane	ND		0.00594	1	10/31/2021 05:12	WG1766323
1,1-Dichloropropene	ND		0.00297	1	10/31/2021 05:12	WG1766323
1,3-Dichloropropane	ND		0.00594	1	10/31/2021 05:12	WG1766323
cis-1,3-Dichloropropene	ND		0.00297	1	10/31/2021 05:12	WG1766323
trans-1,3-Dichloropropene	ND		0.00594	1	10/31/2021 05:12	WG1766323
2,2-Dichloropropane	ND		0.00297	1	10/31/2021 05:12	WG1766323
Di-isopropyl ether	ND		0.00119	1	10/31/2021 05:12	WG1766323
Ethylbenzene	ND		0.00297	1	10/31/2021 05:12	WG1766323
Hexachloro-1,3-butadiene	ND		0.0297	1	10/31/2021 05:12	WG1766323
Isopropylbenzene	ND		0.00297	1	10/31/2021 05:12	WG1766323
p-Isopropyltoluene	ND		0.00594	1	10/31/2021 05:12	WG1766323
2-Butanone (MEK)	ND		0.119	1	10/31/2021 05:12	WG1766323
Methylene Chloride	ND		0.0297	1	10/31/2021 05:12	WG1766323
4-Methyl-2-pentanone (MIBK)	ND		0.0297	1	10/31/2021 05:12	WG1766323
Methyl tert-butyl ether	ND		0.00119	1	10/31/2021 05:12	WG1766323
Naphthalene	ND		0.0148	1	10/31/2021 05:12	WG1766323
n-Propylbenzene	ND		0.00594	1	10/31/2021 05:12	WG1766323
Styrene	ND		0.0148	1	10/31/2021 05:12	WG1766323
1,1,1,2-Tetrachloroethane	ND		0.00297	1	10/31/2021 05:12	WG1766323
1,1,2,2-Tetrachloroethane	ND		0.00297	1	10/31/2021 05:12	WG1766323
1,1,2-Trichlorotrifluoroethane	ND		0.00297	1	10/31/2021 05:12	WG1766323
Tetrachloroethene	ND		0.00297	1	10/31/2021 05:12	WG1766323
Toluene	ND		0.00594	1	10/31/2021 05:12	WG1766323
1,2,3-Trichlorobenzene	ND	C4	0.0148	1	10/31/2021 05:12	WG1766323
1,2,4-Trichlorobenzene	ND		0.0148	1	10/31/2021 05:12	WG1766323
1,1,1-Trichloroethane	ND		0.00297	1	10/31/2021 05:12	WG1766323
1,1,2-Trichloroethane	ND		0.00297	1	10/31/2021 05:12	WG1766323
Trichloroethene	ND		0.00119	1	10/31/2021 05:12	WG1766323
Trichlorofluoromethane	ND		0.00297	1	10/31/2021 05:12	WG1766323
1,2,3-Trichloropropane	ND		0.0148	1	10/31/2021 05:12	WG1766323
1,2,4-Trimethylbenzene	ND		0.00594	1	10/31/2021 05:12	WG1766323
1,2,3-Trimethylbenzene	ND		0.00594	1	10/31/2021 05:12	WG1766323
1,3,5-Trimethylbenzene	ND		0.00594	1	10/31/2021 05:12	WG1766323
Vinyl chloride	ND		0.00297	1	10/31/2021 05:12	WG1766323
Xylenes, Total	ND		0.00772	1	10/31/2021 05:12	WG1766323
(S) Toluene-d8	*104*		*75.0-131*		*10/31/2021 05:12*	WG1766323
(S) 4-Bromofluorobenzene	*101*		*67.0-138*		*10/31/2021 05:12*	WG1766323
(S) 1,2-Dichloroethane-d4	*105*		*70.0-130*		*10/31/2021 05:12*	WG1766323

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		21.8	5	11/03/2021 15:22	WG1766948
Residual Range Organics (RRO)	166		54.6	5	11/03/2021 15:22	WG1766948
(S) o-Terphenyl	*60.1*		*18.0-148*		*11/03/2021 15:22*	WG1766948

Sample Narrative:

L1423266-13 WG1766948: Cannot run at lower dilution due to viscosity of extract

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00655	1	10/30/2021 16:11	WG1765811
Acenaphthene	ND		0.00655	1	10/30/2021 16:11	WG1765811
Acenaphthylene	ND		0.00655	1	10/30/2021 16:11	WG1765811
Benzo(a)anthracene	0.0298		0.00655	1	10/30/2021 16:11	WG1765811
Benzo(a)pyrene	0.0363		0.00655	1	10/30/2021 16:11	WG1765811
Benzo(b)fluoranthene	0.0500		0.00655	1	10/30/2021 16:11	WG1765811
Benzo(g,h,i)perylene	0.0306		0.00655	1	10/30/2021 16:11	WG1765811
Benzo(k)fluoranthene	0.0150		0.00655	1	10/30/2021 16:11	WG1765811
Chrysene	0.0354		0.00655	1	10/30/2021 16:11	WG1765811
Dibenz(a,h)anthracene	0.00660		0.00655	1	10/30/2021 16:11	WG1765811
Fluoranthene	0.0622		0.00655	1	10/30/2021 16:11	WG1765811
Fluorene	ND		0.00655	1	10/30/2021 16:11	WG1765811
Indeno(1,2,3-cd)pyrene	0.0325		0.00655	1	10/30/2021 16:11	WG1765811
Naphthalene	ND		0.0218	1	10/30/2021 16:11	WG1765811
Phenanthrene	0.0244		0.00655	1	10/30/2021 16:11	WG1765811
Pyrene	0.0474		0.00655	1	10/30/2021 16:11	WG1765811
1-Methylnaphthalene	ND		0.0218	1	10/30/2021 16:11	WG1765811
2-Methylnaphthalene	ND		0.0218	1	10/30/2021 16:11	WG1765811
2-Chloronaphthalene	ND		0.0218	1	10/30/2021 16:11	WG1765811
(S) Nitrobenzene-d5	*113*		*14.0-149*		*10/30/2021 16:11*	WG1765811
(S) 2-Fluorobiphenyl	*81.7*		*34.0-125*		*10/30/2021 16:11*	WG1765811
(S) p-Terphenyl-d14	*99.3*		*23.0-120*		*10/30/2021 16:11*	WG1765811

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	85.4		1	10/30/2021 16:39	WG1765837

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0469	1	11/02/2021 15:22	WG1766498

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	3.70		1.17	5	11/03/2021 18:42	WG1765966
Barium	61.0		2.93	5	11/03/2021 18:42	WG1765966
Cadmium	ND		1.17	5	11/03/2021 18:42	WG1765966
Chromium	26.7		5.86	5	11/03/2021 18:42	WG1765966
Lead	ND		2.34	5	11/03/2021 18:42	WG1765966
Selenium	ND		2.93	5	11/03/2021 18:42	WG1765966
Silver	ND		0.586	5	11/03/2021 18:42	WG1765966

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Gasoline Range Organics-NWTPH	ND		3.43	25	10/29/2021 05:05	WG1765548
(S) a,a,a-Trifluorotoluene(FID)	*88.3*		*77.0-120*		*10/29/2021 05:05*	WG1765548

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0686	1	10/31/2021 05:31	WG1766323
Acrylonitrile	ND	C3	0.0171	1	10/31/2021 05:31	WG1766323
Benzene	ND		0.00137	1	10/31/2021 05:31	WG1766323
Bromobenzene	ND		0.0171	1	10/31/2021 05:31	WG1766323
Bromodichloromethane	ND		0.00343	1	10/31/2021 05:31	WG1766323
Bromoform	ND		0.0343	1	10/31/2021 05:31	WG1766323
Bromomethane	ND		0.0171	1	10/31/2021 05:31	WG1766323
n-Butylbenzene	ND		0.0171	1	10/31/2021 05:31	WG1766323
sec-Butylbenzene	ND		0.0171	1	10/31/2021 05:31	WG1766323
tert-Butylbenzene	ND		0.00686	1	10/31/2021 05:31	WG1766323
Carbon tetrachloride	ND		0.00686	1	10/31/2021 05:31	WG1766323
Chlorobenzene	ND		0.00343	1	10/31/2021 05:31	WG1766323
Chlorodibromomethane	ND		0.00343	1	10/31/2021 05:31	WG1766323
Chloroethane	ND		0.00686	1	10/31/2021 05:31	WG1766323
Chloroform	ND		0.00343	1	10/31/2021 05:31	WG1766323
Chloromethane	ND		0.0171	1	10/31/2021 05:31	WG1766323
2-Chlorotoluene	ND		0.00343	1	10/31/2021 05:31	WG1766323
4-Chlorotoluene	ND		0.00686	1	10/31/2021 05:31	WG1766323
1,2-Dibromo-3-Chloropropane	ND		0.0343	1	10/31/2021 05:31	WG1766323
1,2-Dibromoethane	ND		0.00343	1	10/31/2021 05:31	WG1766323
Dibromomethane	ND		0.00686	1	10/31/2021 05:31	WG1766323
1,2-Dichlorobenzene	ND		0.00686	1	10/31/2021 05:31	WG1766323
1,3-Dichlorobenzene	ND		0.00686	1	10/31/2021 05:31	WG1766323
1,4-Dichlorobenzene	ND		0.00686	1	10/31/2021 05:31	WG1766323
Dichlorodifluoromethane	ND		0.00343	1	10/31/2021 05:31	WG1766323
1,1-Dichloroethane	ND		0.00343	1	10/31/2021 05:31	WG1766323
1,2-Dichloroethane	ND		0.00343	1	10/31/2021 05:31	WG1766323

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1-Dichloroethene	ND		0.00343	1	10/31/2021 05:31	WG1766323
cis-1,2-Dichloroethene	ND		0.00343	1	10/31/2021 05:31	WG1766323
trans-1,2-Dichloroethene	ND		0.00686	1	10/31/2021 05:31	WG1766323
1,2-Dichloropropane	ND		0.00686	1	10/31/2021 05:31	WG1766323
1,1-Dichloropropene	ND		0.00343	1	10/31/2021 05:31	WG1766323
1,3-Dichloropropane	ND		0.00686	1	10/31/2021 05:31	WG1766323
cis-1,3-Dichloropropene	ND		0.00343	1	10/31/2021 05:31	WG1766323
trans-1,3-Dichloropropene	ND		0.00686	1	10/31/2021 05:31	WG1766323
2,2-Dichloropropane	ND		0.00343	1	10/31/2021 05:31	WG1766323
Di-isopropyl ether	ND		0.00137	1	10/31/2021 05:31	WG1766323
Ethylbenzene	ND		0.00343	1	10/31/2021 05:31	WG1766323
Hexachloro-1,3-butadiene	ND		0.0343	1	10/31/2021 05:31	WG1766323
Isopropylbenzene	ND		0.00343	1	10/31/2021 05:31	WG1766323
p-Isopropyltoluene	ND		0.00686	1	10/31/2021 05:31	WG1766323
2-Butanone (MEK)	ND		0.137	1	10/31/2021 05:31	WG1766323
Methylene Chloride	ND		0.0343	1	10/31/2021 05:31	WG1766323
4-Methyl-2-pentanone (MIBK)	ND		0.0343	1	10/31/2021 05:31	WG1766323
Methyl tert-butyl ether	ND		0.00137	1	10/31/2021 05:31	WG1766323
Naphthalene	ND		0.0171	1	10/31/2021 05:31	WG1766323
n-Propylbenzene	ND		0.00686	1	10/31/2021 05:31	WG1766323
Styrene	ND		0.0171	1	10/31/2021 05:31	WG1766323
1,1,1,2-Tetrachloroethane	ND		0.00343	1	10/31/2021 05:31	WG1766323
1,1,2,2-Tetrachloroethane	ND		0.00343	1	10/31/2021 05:31	WG1766323
1,1,2-Trichlorotrifluoroethane	ND		0.00343	1	10/31/2021 05:31	WG1766323
Tetrachloroethene	ND		0.00343	1	10/31/2021 05:31	WG1766323
Toluene	ND		0.00686	1	10/31/2021 05:31	WG1766323
1,2,3-Trichlorobenzene	ND	C4	0.0171	1	10/31/2021 05:31	WG1766323
1,2,4-Trichlorobenzene	ND		0.0171	1	10/31/2021 05:31	WG1766323
1,1,1-Trichloroethane	ND		0.00343	1	10/31/2021 05:31	WG1766323
1,1,2-Trichloroethane	ND		0.00343	1	10/31/2021 05:31	WG1766323
Trichloroethene	ND		0.00137	1	10/31/2021 05:31	WG1766323
Trichlorofluoromethane	ND		0.00343	1	10/31/2021 05:31	WG1766323
1,2,3-Trichloropropane	ND		0.0171	1	10/31/2021 05:31	WG1766323
1,2,4-Trimethylbenzene	ND		0.00686	1	10/31/2021 05:31	WG1766323
1,2,3-Trimethylbenzene	ND		0.00686	1	10/31/2021 05:31	WG1766323
1,3,5-Trimethylbenzene	ND		0.00686	1	10/31/2021 05:31	WG1766323
Vinyl chloride	ND		0.00343	1	10/31/2021 05:31	WG1766323
Xylenes, Total	ND		0.00892	1	10/31/2021 05:31	WG1766323
(S) Toluene-d8	*105*		*75.0-131*		*10/31/2021 05:31*	WG1766323
(S) 4-Bromofluorobenzene	*100*		*67.0-138*		*10/31/2021 05:31*	WG1766323
(S) 1,2-Dichloroethane-d4	*101*		*70.0-130*		*10/31/2021 05:31*	WG1766323

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.69	1	11/03/2021 06:49	WG1766948
Residual Range Organics (RRO)	ND		11.7	1	11/03/2021 06:49	WG1766948
(S) o-Terphenyl	*32.5*		*18.0-148*		*11/03/2021 06:49*	WG1766948

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00703	1	10/30/2021 14:27	WG1765811
Acenaphthene	ND		0.00703	1	10/30/2021 14:27	WG1765811
Acenaphthylene	ND		0.00703	1	10/30/2021 14:27	WG1765811
Benzo(a)anthracene	ND		0.00703	1	10/30/2021 14:27	WG1765811
Benzo(a)pyrene	ND		0.00703	1	10/30/2021 14:27	WG1765811
Benzo(b)fluoranthene	ND		0.00703	1	10/30/2021 14:27	WG1765811
Benzo(g,h,i)perylene	ND		0.00703	1	10/30/2021 14:27	WG1765811
Benzo(k)fluoranthene	ND		0.00703	1	10/30/2021 14:27	WG1765811
Chrysene	ND		0.00703	1	10/30/2021 14:27	WG1765811
Dibenz(a,h)anthracene	ND		0.00703	1	10/30/2021 14:27	WG1765811
Fluoranthene	ND		0.00703	1	10/30/2021 14:27	WG1765811
Fluorene	ND		0.00703	1	10/30/2021 14:27	WG1765811
Indeno(1,2,3-cd)pyrene	ND		0.00703	1	10/30/2021 14:27	WG1765811
Naphthalene	ND		0.0234	1	10/30/2021 14:27	WG1765811
Phenanthrene	ND		0.00703	1	10/30/2021 14:27	WG1765811
Pyrene	ND		0.00703	1	10/30/2021 14:27	WG1765811
1-Methylnaphthalene	ND		0.0234	1	10/30/2021 14:27	WG1765811
2-Methylnaphthalene	ND		0.0234	1	10/30/2021 14:27	WG1765811
2-Chloronaphthalene	ND		0.0234	1	10/30/2021 14:27	WG1765811
(S) Nitrobenzene-d5	*85.6*		*14.0-149*		*10/30/2021 14:27*	WG1765811
(S) 2-Fluorobiphenyl	*75.7*		*34.0-125*		*10/30/2021 14:27*	WG1765811
(S) p-Terphenyl-d14	*89.7*		*23.0-120*		*10/30/2021 14:27*	WG1765811

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	91.7		1	10/30/2021 16:39	WG1765837

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0436	1	11/02/2021 15:25	WG1766498

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	2.58		1.09	5	11/03/2021 18:46	WG1765966
Barium	39.6		2.73	5	11/03/2021 18:46	WG1765966
Cadmium	ND		1.09	5	11/03/2021 18:46	WG1765966
Chromium	21.1		5.45	5	11/03/2021 18:46	WG1765966
Lead	ND		2.18	5	11/03/2021 18:46	WG1765966
Selenium	ND		2.73	5	11/03/2021 18:46	WG1765966
Silver	ND		0.545	5	11/03/2021 18:46	WG1765966

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Gasoline Range Organics-NWTPH	ND		3.02	25	10/29/2021 05:27	WG1765548
(S) a,a,a-Trifluorotoluene(FID)	*94.5*		*77.0-120*		*10/29/2021 05:27*	WG1765548

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0604	1	10/31/2021 05:49	WG1766323
Acrylonitrile	ND	C3	0.0151	1	10/31/2021 05:49	WG1766323
Benzene	ND		0.00121	1	10/31/2021 05:49	WG1766323
Bromobenzene	ND		0.0151	1	10/31/2021 05:49	WG1766323
Bromodichloromethane	ND		0.00302	1	10/31/2021 05:49	WG1766323
Bromoform	ND		0.0302	1	10/31/2021 05:49	WG1766323
Bromomethane	ND		0.0151	1	10/31/2021 05:49	WG1766323
n-Butylbenzene	ND		0.0151	1	10/31/2021 05:49	WG1766323
sec-Butylbenzene	ND		0.0151	1	10/31/2021 05:49	WG1766323
tert-Butylbenzene	ND		0.00604	1	10/31/2021 05:49	WG1766323
Carbon tetrachloride	ND		0.00604	1	10/31/2021 05:49	WG1766323
Chlorobenzene	ND		0.00302	1	10/31/2021 05:49	WG1766323
Chlorodibromomethane	ND		0.00302	1	10/31/2021 05:49	WG1766323
Chloroethane	ND		0.00604	1	10/31/2021 05:49	WG1766323
Chloroform	ND		0.00302	1	10/31/2021 05:49	WG1766323
Chloromethane	ND		0.0151	1	10/31/2021 05:49	WG1766323
2-Chlorotoluene	ND		0.00302	1	10/31/2021 05:49	WG1766323
4-Chlorotoluene	ND		0.00604	1	10/31/2021 05:49	WG1766323
1,2-Dibromo-3-Chloropropane	ND		0.0302	1	10/31/2021 05:49	WG1766323
1,2-Dibromoethane	ND		0.00302	1	10/31/2021 05:49	WG1766323
Dibromomethane	ND		0.00604	1	10/31/2021 05:49	WG1766323
1,2-Dichlorobenzene	ND		0.00604	1	10/31/2021 05:49	WG1766323
1,3-Dichlorobenzene	ND		0.00604	1	10/31/2021 05:49	WG1766323
1,4-Dichlorobenzene	ND		0.00604	1	10/31/2021 05:49	WG1766323
Dichlorodifluoromethane	ND		0.00302	1	10/31/2021 05:49	WG1766323
1,1-Dichloroethane	ND		0.00302	1	10/31/2021 05:49	WG1766323
1,2-Dichloroethane	ND		0.00302	1	10/31/2021 05:49	WG1766323

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1-Dichloroethene	ND		0.00302	1	10/31/2021 05:49	WG1766323
cis-1,2-Dichloroethene	ND		0.00302	1	10/31/2021 05:49	WG1766323
trans-1,2-Dichloroethene	ND		0.00604	1	10/31/2021 05:49	WG1766323
1,2-Dichloropropane	ND		0.00604	1	10/31/2021 05:49	WG1766323
1,1-Dichloropropene	ND		0.00302	1	10/31/2021 05:49	WG1766323
1,3-Dichloropropane	ND		0.00604	1	10/31/2021 05:49	WG1766323
cis-1,3-Dichloropropene	ND		0.00302	1	10/31/2021 05:49	WG1766323
trans-1,3-Dichloropropene	ND		0.00604	1	10/31/2021 05:49	WG1766323
2,2-Dichloropropane	ND		0.00302	1	10/31/2021 05:49	WG1766323
Di-isopropyl ether	ND		0.00121	1	10/31/2021 05:49	WG1766323
Ethylbenzene	ND		0.00302	1	10/31/2021 05:49	WG1766323
Hexachloro-1,3-butadiene	ND		0.0302	1	10/31/2021 05:49	WG1766323
Isopropylbenzene	ND		0.00302	1	10/31/2021 05:49	WG1766323
p-Isopropyltoluene	ND		0.00604	1	10/31/2021 05:49	WG1766323
2-Butanone (MEK)	ND		0.121	1	10/31/2021 05:49	WG1766323
Methylene Chloride	ND		0.0302	1	10/31/2021 05:49	WG1766323
4-Methyl-2-pentanone (MIBK)	ND		0.0302	1	10/31/2021 05:49	WG1766323
Methyl tert-butyl ether	ND		0.00121	1	10/31/2021 05:49	WG1766323
Naphthalene	ND		0.0151	1	10/31/2021 05:49	WG1766323
n-Propylbenzene	ND		0.00604	1	10/31/2021 05:49	WG1766323
Styrene	ND		0.0151	1	10/31/2021 05:49	WG1766323
1,1,1,2-Tetrachloroethane	ND		0.00302	1	10/31/2021 05:49	WG1766323
1,1,2,2-Tetrachloroethane	ND		0.00302	1	10/31/2021 05:49	WG1766323
1,1,2-Trichlorotrifluoroethane	ND		0.00302	1	10/31/2021 05:49	WG1766323
Tetrachloroethene	ND		0.00302	1	10/31/2021 05:49	WG1766323
Toluene	ND		0.00604	1	10/31/2021 05:49	WG1766323
1,2,3-Trichlorobenzene	ND	C4	0.0151	1	10/31/2021 05:49	WG1766323
1,2,4-Trichlorobenzene	ND		0.0151	1	10/31/2021 05:49	WG1766323
1,1,1-Trichloroethane	ND		0.00302	1	10/31/2021 05:49	WG1766323
1,1,2-Trichloroethane	ND		0.00302	1	10/31/2021 05:49	WG1766323
Trichloroethene	ND		0.00121	1	10/31/2021 05:49	WG1766323
Trichlorofluoromethane	ND		0.00302	1	10/31/2021 05:49	WG1766323
1,2,3-Trichloropropane	ND		0.0151	1	10/31/2021 05:49	WG1766323
1,2,4-Trimethylbenzene	ND		0.00604	1	10/31/2021 05:49	WG1766323
1,2,3-Trimethylbenzene	ND		0.00604	1	10/31/2021 05:49	WG1766323
1,3,5-Trimethylbenzene	ND		0.00604	1	10/31/2021 05:49	WG1766323
Vinyl chloride	ND		0.00302	1	10/31/2021 05:49	WG1766323
Xylenes, Total	ND		0.00785	1	10/31/2021 05:49	WG1766323
(S) Toluene-d8	*104*		*75.0-131*		*10/31/2021 05:49*	WG1766323
(S) 4-Bromofluorobenzene	*100*		*67.0-138*		*10/31/2021 05:49*	WG1766323
(S) 1,2-Dichloroethane-d4	*101*		*70.0-130*		*10/31/2021 05:49*	WG1766323

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.36	1	11/03/2021 07:02	WG1766948
Residual Range Organics (RRO)	ND		10.9	1	11/03/2021 07:02	WG1766948
(S) o-Terphenyl	*31.1*		*18.0-148*		*11/03/2021 07:02*	WG1766948

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00654	1	10/30/2021 14:44	WG1765811
Acenaphthene	ND		0.00654	1	10/30/2021 14:44	WG1765811
Acenaphthylene	ND		0.00654	1	10/30/2021 14:44	WG1765811
Benzo(a)anthracene	ND		0.00654	1	10/30/2021 14:44	WG1765811
Benzo(a)pyrene	ND		0.00654	1	10/30/2021 14:44	WG1765811
Benzo(b)fluoranthene	ND		0.00654	1	10/30/2021 14:44	WG1765811
Benzo(g,h,i)perylene	ND		0.00654	1	10/30/2021 14:44	WG1765811
Benzo(k)fluoranthene	ND		0.00654	1	10/30/2021 14:44	WG1765811
Chrysene	ND		0.00654	1	10/30/2021 14:44	WG1765811
Dibenz(a,h)anthracene	ND		0.00654	1	10/30/2021 14:44	WG1765811
Fluoranthene	ND		0.00654	1	10/30/2021 14:44	WG1765811
Fluorene	ND		0.00654	1	10/30/2021 14:44	WG1765811
Indeno(1,2,3-cd)pyrene	ND		0.00654	1	10/30/2021 14:44	WG1765811
Naphthalene	ND		0.0218	1	10/30/2021 14:44	WG1765811
Phenanthrene	ND		0.00654	1	10/30/2021 14:44	WG1765811
Pyrene	ND		0.00654	1	10/30/2021 14:44	WG1765811
1-Methylnaphthalene	ND		0.0218	1	10/30/2021 14:44	WG1765811
2-Methylnaphthalene	ND		0.0218	1	10/30/2021 14:44	WG1765811
2-Chloronaphthalene	ND		0.0218	1	10/30/2021 14:44	WG1765811
(S) Nitrobenzene-d5	*86.5*		*14.0-149*		*10/30/2021 14:44*	WG1765811
(S) 2-Fluorobiphenyl	*71.6*		*34.0-125*		*10/30/2021 14:44*	WG1765811
(S) p-Terphenyl-d14	*97.4*		*23.0-120*		*10/30/2021 14:44*	WG1765811

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	86.9		1	10/30/2021 16:39	WG1765837

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0460	1	11/02/2021 15:27	WG1766498

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	7.77		1.15	5	11/03/2021 18:49	WG1765966
Barium	58.8		2.88	5	11/03/2021 18:49	WG1765966
Cadmium	ND		1.15	5	11/03/2021 18:49	WG1765966
Chromium	41.6		5.75	5	11/03/2021 18:49	WG1765966
Lead	3.16		2.30	5	11/03/2021 18:49	WG1765966
Selenium	ND		2.88	5	11/03/2021 18:49	WG1765966
Silver	ND		0.575	5	11/03/2021 18:49	WG1765966

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Gasoline Range Organics-NWTPH	ND		3.35	25	10/29/2021 05:49	WG1765548
(S) a,a,a-Trifluorotoluene(FID)	*94.3*		*77.0-120*		*10/29/2021 05:49*	WG1765548

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0669	1	10/31/2021 06:08	WG1766323
Acrylonitrile	ND	C3	0.0167	1	10/31/2021 06:08	WG1766323
Benzene	ND		0.00134	1	10/31/2021 06:08	WG1766323
Bromobenzene	ND		0.0167	1	10/31/2021 06:08	WG1766323
Bromodichloromethane	ND		0.00335	1	10/31/2021 06:08	WG1766323
Bromoform	ND		0.0335	1	10/31/2021 06:08	WG1766323
Bromomethane	ND		0.0167	1	10/31/2021 06:08	WG1766323
n-Butylbenzene	ND		0.0167	1	10/31/2021 06:08	WG1766323
sec-Butylbenzene	ND		0.0167	1	10/31/2021 06:08	WG1766323
tert-Butylbenzene	ND		0.00669	1	10/31/2021 06:08	WG1766323
Carbon tetrachloride	ND		0.00669	1	10/31/2021 06:08	WG1766323
Chlorobenzene	ND		0.00335	1	10/31/2021 06:08	WG1766323
Chlorodibromomethane	ND		0.00335	1	10/31/2021 06:08	WG1766323
Chloroethane	ND		0.00669	1	10/31/2021 06:08	WG1766323
Chloroform	ND		0.00335	1	10/31/2021 06:08	WG1766323
Chloromethane	ND		0.0167	1	10/31/2021 06:08	WG1766323
2-Chlorotoluene	ND		0.00335	1	10/31/2021 06:08	WG1766323
4-Chlorotoluene	ND		0.00669	1	10/31/2021 06:08	WG1766323
1,2-Dibromo-3-Chloropropane	ND		0.0335	1	10/31/2021 06:08	WG1766323
1,2-Dibromoethane	ND		0.00335	1	10/31/2021 06:08	WG1766323
Dibromomethane	ND		0.00669	1	10/31/2021 06:08	WG1766323
1,2-Dichlorobenzene	ND		0.00669	1	10/31/2021 06:08	WG1766323
1,3-Dichlorobenzene	ND		0.00669	1	10/31/2021 06:08	WG1766323
1,4-Dichlorobenzene	ND		0.00669	1	10/31/2021 06:08	WG1766323
Dichlorodifluoromethane	ND		0.00335	1	10/31/2021 06:08	WG1766323
1,1-Dichloroethane	ND		0.00335	1	10/31/2021 06:08	WG1766323
1,2-Dichloroethane	ND		0.00335	1	10/31/2021 06:08	WG1766323

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1-Dichloroethene	ND		0.00335	1	10/31/2021 06:08	WG1766323
cis-1,2-Dichloroethene	ND		0.00335	1	10/31/2021 06:08	WG1766323
trans-1,2-Dichloroethene	ND		0.00669	1	10/31/2021 06:08	WG1766323
1,2-Dichloropropane	ND		0.00669	1	10/31/2021 06:08	WG1766323
1,1-Dichloropropene	ND		0.00335	1	10/31/2021 06:08	WG1766323
1,3-Dichloropropane	ND		0.00669	1	10/31/2021 06:08	WG1766323
cis-1,3-Dichloropropene	ND		0.00335	1	10/31/2021 06:08	WG1766323
trans-1,3-Dichloropropene	ND		0.00669	1	10/31/2021 06:08	WG1766323
2,2-Dichloropropane	ND		0.00335	1	10/31/2021 06:08	WG1766323
Di-isopropyl ether	ND		0.00134	1	10/31/2021 06:08	WG1766323
Ethylbenzene	ND		0.00335	1	10/31/2021 06:08	WG1766323
Hexachloro-1,3-butadiene	ND		0.0335	1	10/31/2021 06:08	WG1766323
Isopropylbenzene	ND		0.00335	1	10/31/2021 06:08	WG1766323
p-Isopropyltoluene	ND		0.00669	1	10/31/2021 06:08	WG1766323
2-Butanone (MEK)	ND		0.134	1	10/31/2021 06:08	WG1766323
Methylene Chloride	ND		0.0335	1	10/31/2021 06:08	WG1766323
4-Methyl-2-pentanone (MIBK)	ND		0.0335	1	10/31/2021 06:08	WG1766323
Methyl tert-butyl ether	ND		0.00134	1	10/31/2021 06:08	WG1766323
Naphthalene	ND		0.0167	1	10/31/2021 06:08	WG1766323
n-Propylbenzene	ND		0.00669	1	10/31/2021 06:08	WG1766323
Styrene	ND		0.0167	1	10/31/2021 06:08	WG1766323
1,1,1,2-Tetrachloroethane	ND		0.00335	1	10/31/2021 06:08	WG1766323
1,1,2,2-Tetrachloroethane	ND		0.00335	1	10/31/2021 06:08	WG1766323
1,1,2-Trichlorotrifluoroethane	ND		0.00335	1	10/31/2021 06:08	WG1766323
Tetrachloroethene	ND		0.00335	1	10/31/2021 06:08	WG1766323
Toluene	ND		0.00669	1	10/31/2021 06:08	WG1766323
1,2,3-Trichlorobenzene	ND	C4	0.0167	1	10/31/2021 06:08	WG1766323
1,2,4-Trichlorobenzene	ND		0.0167	1	10/31/2021 06:08	WG1766323
1,1,1-Trichloroethane	ND		0.00335	1	10/31/2021 06:08	WG1766323
1,1,2-Trichloroethane	ND		0.00335	1	10/31/2021 06:08	WG1766323
Trichloroethene	ND		0.00134	1	10/31/2021 06:08	WG1766323
Trichlorofluoromethane	ND		0.00335	1	10/31/2021 06:08	WG1766323
1,2,3-Trichloropropane	ND		0.0167	1	10/31/2021 06:08	WG1766323
1,2,4-Trimethylbenzene	ND		0.00669	1	10/31/2021 06:08	WG1766323
1,2,3-Trimethylbenzene	ND		0.00669	1	10/31/2021 06:08	WG1766323
1,3,5-Trimethylbenzene	ND		0.00669	1	10/31/2021 06:08	WG1766323
Vinyl chloride	ND		0.00335	1	10/31/2021 06:08	WG1766323
Xylenes, Total	ND		0.00870	1	10/31/2021 06:08	WG1766323
(S) Toluene-d8	*102*		*75.0-131*		*10/31/2021 06:08*	WG1766323
(S) 4-Bromofluorobenzene	*101*		*67.0-138*		*10/31/2021 06:08*	WG1766323
(S) 1,2-Dichloroethane-d4	*107*		*70.0-130*		*10/31/2021 06:08*	WG1766323

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	5.55		4.60	1	11/03/2021 07:54	WG1766948
Residual Range Organics (RRO)	24.3		11.5	1	11/03/2021 07:54	WG1766948
(S) o-Terphenyl	*61.6*		*18.0-148*		*11/03/2021 07:54*	WG1766948

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00691	1	10/30/2021 15:02	WG1765811
Acenaphthene	ND		0.00691	1	10/30/2021 15:02	WG1765811
Acenaphthylene	ND		0.00691	1	10/30/2021 15:02	WG1765811
Benzo(a)anthracene	ND		0.00691	1	10/30/2021 15:02	WG1765811
Benzo(a)pyrene	ND		0.00691	1	10/30/2021 15:02	WG1765811
Benzo(b)fluoranthene	ND		0.00691	1	10/30/2021 15:02	WG1765811
Benzo(g,h,i)perylene	ND		0.00691	1	10/30/2021 15:02	WG1765811
Benzo(k)fluoranthene	ND		0.00691	1	10/30/2021 15:02	WG1765811
Chrysene	ND		0.00691	1	10/30/2021 15:02	WG1765811
Dibenz(a,h)anthracene	ND		0.00691	1	10/30/2021 15:02	WG1765811
Fluoranthene	ND		0.00691	1	10/30/2021 15:02	WG1765811
Fluorene	ND		0.00691	1	10/30/2021 15:02	WG1765811
Indeno(1,2,3-cd)pyrene	ND		0.00691	1	10/30/2021 15:02	WG1765811
Naphthalene	ND		0.0230	1	10/30/2021 15:02	WG1765811
Phenanthrene	ND		0.00691	1	10/30/2021 15:02	WG1765811
Pyrene	ND		0.00691	1	10/30/2021 15:02	WG1765811
1-Methylnaphthalene	ND		0.0230	1	10/30/2021 15:02	WG1765811
2-Methylnaphthalene	ND		0.0230	1	10/30/2021 15:02	WG1765811
2-Chloronaphthalene	ND		0.0230	1	10/30/2021 15:02	WG1765811
(S) Nitrobenzene-d5	*77.8*		*14.0-149*		*10/30/2021 15:02*	WG1765811
(S) 2-Fluorobiphenyl	*62.6*		*34.0-125*		*10/30/2021 15:02*	WG1765811
(S) p-Terphenyl-d14	*80.0*		*23.0-120*		*10/30/2021 15:02*	WG1765811

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.4		1	10/30/2021 16:39	WG1765837

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Mercury	ND		0.0433	1	11/02/2021 15:30	WG1766498

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Arsenic	2.31		1.08	5	11/03/2021 18:52	WG1765966
Barium	35.1		2.71	5	11/03/2021 18:52	WG1765966
Cadmium	ND		1.08	5	11/03/2021 18:52	WG1765966
Chromium	16.3		5.41	5	11/03/2021 18:52	WG1765966
Lead	ND		2.16	5	11/03/2021 18:52	WG1765966
Selenium	ND		2.71	5	11/03/2021 18:52	WG1765966
Silver	ND		0.541	5	11/03/2021 18:52	WG1765966

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Gasoline Range Organics-NWTPH	ND		2.95	25	10/29/2021 06:11	WG1765548
(S) a,a,a-Trifluorotoluene(FID)	*94.3*		*77.0-120*		*10/29/2021 06:11*	WG1765548

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg		date / time	
Acetone	ND		0.0590	1	10/31/2021 06:27	WG1766323
Acrylonitrile	ND	C3	0.0147	1	10/31/2021 06:27	WG1766323
Benzene	ND		0.00118	1	10/31/2021 06:27	WG1766323
Bromobenzene	ND		0.0147	1	10/31/2021 06:27	WG1766323
Bromodichloromethane	ND		0.00295	1	10/31/2021 06:27	WG1766323
Bromoform	ND		0.0295	1	10/31/2021 06:27	WG1766323
Bromomethane	ND		0.0147	1	10/31/2021 06:27	WG1766323
n-Butylbenzene	ND		0.0147	1	10/31/2021 06:27	WG1766323
sec-Butylbenzene	ND		0.0147	1	10/31/2021 06:27	WG1766323
tert-Butylbenzene	ND		0.00590	1	10/31/2021 06:27	WG1766323
Carbon tetrachloride	ND		0.00590	1	10/31/2021 06:27	WG1766323
Chlorobenzene	ND		0.00295	1	10/31/2021 06:27	WG1766323
Chlorodibromomethane	ND		0.00295	1	10/31/2021 06:27	WG1766323
Chloroethane	ND		0.00590	1	10/31/2021 06:27	WG1766323
Chloroform	ND		0.00295	1	10/31/2021 06:27	WG1766323
Chloromethane	ND		0.0147	1	10/31/2021 06:27	WG1766323
2-Chlorotoluene	ND		0.00295	1	10/31/2021 06:27	WG1766323
4-Chlorotoluene	ND		0.00590	1	10/31/2021 06:27	WG1766323
1,2-Dibromo-3-Chloropropane	ND		0.0295	1	10/31/2021 06:27	WG1766323
1,2-Dibromoethane	ND		0.00295	1	10/31/2021 06:27	WG1766323
Dibromomethane	ND		0.00590	1	10/31/2021 06:27	WG1766323
1,2-Dichlorobenzene	ND		0.00590	1	10/31/2021 06:27	WG1766323
1,3-Dichlorobenzene	ND		0.00590	1	10/31/2021 06:27	WG1766323
1,4-Dichlorobenzene	ND		0.00590	1	10/31/2021 06:27	WG1766323
Dichlorodifluoromethane	ND		0.00295	1	10/31/2021 06:27	WG1766323
1,1-Dichloroethane	ND		0.00295	1	10/31/2021 06:27	WG1766323
1,2-Dichloroethane	ND		0.00295	1	10/31/2021 06:27	WG1766323

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1-Dichloroethene	ND		0.00295	1	10/31/2021 06:27	WG1766323
cis-1,2-Dichloroethene	ND		0.00295	1	10/31/2021 06:27	WG1766323
trans-1,2-Dichloroethene	ND		0.00590	1	10/31/2021 06:27	WG1766323
1,2-Dichloropropane	ND		0.00590	1	10/31/2021 06:27	WG1766323
1,1-Dichloropropene	ND		0.00295	1	10/31/2021 06:27	WG1766323
1,3-Dichloropropane	ND		0.00590	1	10/31/2021 06:27	WG1766323
cis-1,3-Dichloropropene	ND		0.00295	1	10/31/2021 06:27	WG1766323
trans-1,3-Dichloropropene	ND		0.00590	1	10/31/2021 06:27	WG1766323
2,2-Dichloropropane	ND		0.00295	1	10/31/2021 06:27	WG1766323
Di-isopropyl ether	ND		0.00118	1	10/31/2021 06:27	WG1766323
Ethylbenzene	ND		0.00295	1	10/31/2021 06:27	WG1766323
Hexachloro-1,3-butadiene	ND		0.0295	1	10/31/2021 06:27	WG1766323
Isopropylbenzene	ND		0.00295	1	10/31/2021 06:27	WG1766323
p-Isopropyltoluene	ND		0.00590	1	10/31/2021 06:27	WG1766323
2-Butanone (MEK)	ND		0.118	1	10/31/2021 06:27	WG1766323
Methylene Chloride	ND		0.0295	1	10/31/2021 06:27	WG1766323
4-Methyl-2-pentanone (MIBK)	ND		0.0295	1	10/31/2021 06:27	WG1766323
Methyl tert-butyl ether	ND		0.00118	1	10/31/2021 06:27	WG1766323
Naphthalene	ND		0.0147	1	10/31/2021 06:27	WG1766323
n-Propylbenzene	ND		0.00590	1	10/31/2021 06:27	WG1766323
Styrene	ND		0.0147	1	10/31/2021 06:27	WG1766323
1,1,1,2-Tetrachloroethane	ND		0.00295	1	10/31/2021 06:27	WG1766323
1,1,2,2-Tetrachloroethane	ND		0.00295	1	10/31/2021 06:27	WG1766323
1,1,2-Trichlorotrifluoroethane	ND		0.00295	1	10/31/2021 06:27	WG1766323
Tetrachloroethene	ND		0.00295	1	10/31/2021 06:27	WG1766323
Toluene	ND		0.00590	1	10/31/2021 06:27	WG1766323
1,2,3-Trichlorobenzene	ND	C4	0.0147	1	10/31/2021 06:27	WG1766323
1,2,4-Trichlorobenzene	ND		0.0147	1	10/31/2021 06:27	WG1766323
1,1,1-Trichloroethane	ND		0.00295	1	10/31/2021 06:27	WG1766323
1,1,2-Trichloroethane	ND		0.00295	1	10/31/2021 06:27	WG1766323
Trichloroethene	ND		0.00118	1	10/31/2021 06:27	WG1766323
Trichlorofluoromethane	ND		0.00295	1	10/31/2021 06:27	WG1766323
1,2,3-Trichloropropane	ND		0.0147	1	10/31/2021 06:27	WG1766323
1,2,4-Trimethylbenzene	ND		0.00590	1	10/31/2021 06:27	WG1766323
1,2,3-Trimethylbenzene	ND		0.00590	1	10/31/2021 06:27	WG1766323
1,3,5-Trimethylbenzene	ND		0.00590	1	10/31/2021 06:27	WG1766323
Vinyl chloride	ND		0.00295	1	10/31/2021 06:27	WG1766323
Xylenes, Total	ND		0.00767	1	10/31/2021 06:27	WG1766323
(S) Toluene-d8	*103*		*75.0-131*		*10/31/2021 06:27*	WG1766323
(S) 4-Bromofluorobenzene	*96.5*		*67.0-138*		*10/31/2021 06:27*	WG1766323
(S) 1,2-Dichloroethane-d4	*101*		*70.0-130*		*10/31/2021 06:27*	WG1766323

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	ND		4.33	1	11/03/2021 07:41	WG1766948
Residual Range Organics (RRO)	ND		10.8	1	11/03/2021 07:41	WG1766948
(S) o-Terphenyl	*48.8*		*18.0-148*		*11/03/2021 07:41*	WG1766948

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00649	1	10/30/2021 15:19	WG1765811
Acenaphthene	ND		0.00649	1	10/30/2021 15:19	WG1765811
Acenaphthylene	ND		0.00649	1	10/30/2021 15:19	WG1765811
Benzo(a)anthracene	ND		0.00649	1	10/30/2021 15:19	WG1765811
Benzo(a)pyrene	ND		0.00649	1	10/30/2021 15:19	WG1765811
Benzo(b)fluoranthene	ND		0.00649	1	10/30/2021 15:19	WG1765811
Benzo(g,h,i)perylene	ND		0.00649	1	10/30/2021 15:19	WG1765811
Benzo(k)fluoranthene	ND		0.00649	1	10/30/2021 15:19	WG1765811
Chrysene	ND		0.00649	1	10/30/2021 15:19	WG1765811
Dibenz(a,h)anthracene	ND		0.00649	1	10/30/2021 15:19	WG1765811
Fluoranthene	ND		0.00649	1	10/30/2021 15:19	WG1765811
Fluorene	ND		0.00649	1	10/30/2021 15:19	WG1765811
Indeno(1,2,3-cd)pyrene	ND		0.00649	1	10/30/2021 15:19	WG1765811
Naphthalene	ND		0.0216	1	10/30/2021 15:19	WG1765811
Phenanthrene	ND		0.00649	1	10/30/2021 15:19	WG1765811
Pyrene	ND		0.00649	1	10/30/2021 15:19	WG1765811
1-Methylnaphthalene	ND		0.0216	1	10/30/2021 15:19	WG1765811
2-Methylnaphthalene	ND		0.0216	1	10/30/2021 15:19	WG1765811
2-Chloronaphthalene	ND		0.0216	1	10/30/2021 15:19	WG1765811
(S) Nitrobenzene-d5	*99.3*		*14.0-149*		*10/30/2021 15:19*	WG1765811
(S) 2-Fluorobiphenyl	*86.3*		*34.0-125*		*10/30/2021 15:19*	WG1765811
(S) p-Terphenyl-d14	*121*	J1	*23.0-120*		*10/30/2021 15:19*	WG1765811

Method Blank (MB)

(MB) R3723681-1 10/30/21 16:39

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.00100			

L1423266-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1423266-05 10/30/21 16:39 • (DUP) R3723681-3 10/30/21 16:39

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	89.0	89.2	1	0.237		10

Laboratory Control Sample (LCS)

(LCS) R3723681-2 10/30/21 16:39

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) R3724558-1 11/02/21 14:52

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Mercury	U		0.0180	0.0400

Laboratory Control Sample (LCS)

(LCS) R3724558-2 11/02/21 14:54

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	0.500	0.509	102	80.0-120	

L1423622-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1423622-05 11/02/21 14:57 • (MS) R3724558-3 11/02/21 14:59 • (MSD) R3724558-4 11/02/21 15:02

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.669	ND	0.790	0.736	111	103	1	75.0-125			7.13	20

QUALITY CONTROL SUMMARY

L1423266-01,03,05,11,13,14,15,17,20

Method Blank (MB)

(MB) R3725162-1 11/03/21 17:52

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.100	1.00
Barium	U		0.152	2.50
Cadmium	U		0.0855	1.00
Chromium	U		0.297	5.00
Lead	U		0.0990	2.00
Selenium	0.208	J	0.180	2.50
Silver	U		0.0865	0.500

Laboratory Control Sample (LCS)

(LCS) R3725162-2 11/03/21 17:55

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	91.7	91.7	80.0-120	
Barium	100	90.8	90.8	80.0-120	
Cadmium	100	101	101	80.0-120	
Chromium	100	96.7	96.7	80.0-120	
Lead	100	93.1	93.1	80.0-120	
Selenium	100	98.2	98.2	80.0-120	
Silver	20.0	19.7	98.4	80.0-120	

L1423646-29 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1423646-29 11/03/21 17:59 • (MS) R3725162-5 11/03/21 18:09 • (MSD) R3725162-6 11/03/21 18:12

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	100	29.6	112	116	82.6	85.9	5	75.0-125			2.90	20
Barium	100	382	476	502	94.4	120	5	75.0-125			5.33	20
Cadmium	100	ND	91.5	98.6	90.9	98.0	5	75.0-125			7.48	20
Chromium	100	26.3	113	115	86.4	88.8	5	75.0-125			2.09	20
Lead	100	19.4	106	110	86.2	91.0	5	75.0-125			4.46	20
Selenium	100	ND	91.3	98.2	90.2	97.1	5	75.0-125			7.27	20
Silver	20.0	ND	17.6	18.6	88.2	93.0	5	75.0-125			5.36	20

Method Blank (MB)

(MB) R3725739-3 10/29/21 04:36

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPHG C6 - C12	U		0.848	2.50
(S) a,a,a-Trifluorotoluene(FID)	*117*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3725739-2 10/29/21 03:47

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPHG C6 - C12	5.50	6.17	112	71.0-124	
(S) a,a,a-Trifluorotoluene(FID)			*104*	*77.0-120*	

L1423058-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1423058-01 10/29/21 08:23 • (MS) R3725739-6 10/29/21 13:48 • (MSD) R3725739-7 10/29/21 14:10

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Gasoline Range Organics-NWTPH	162	ND	199	188	123	117	25	50.0-150			5.36	27
(S) a,a,a-Trifluorotoluene(FID)					*110*	*109*		*77.0-120*				

Method Blank (MB)

(MB) R3723041-2 10/29/21 03:49

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Gasoline Range Organics-NWTPH	U		0.848	2.50
(S) a,a,a-Trifluorotoluene(FID)	*93.8*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3723041-1 10/29/21 03:05

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Gasoline Range Organics-NWTPH	5.50	5.75	105	71.0-124	
(S) a,a,a-Trifluorotoluene(FID)			*100*	*77.0-120*	

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Method Blank (MB)

(MB) R3725864-2 10/31/21 00:10

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0365	0.0500
Acrylonitrile	U		0.00361	0.0125
Benzene	U		0.000467	0.00100
Bromobenzene	U		0.000900	0.0125
Bromodichloromethane	U		0.000725	0.00250
Bromoform	U		0.00117	0.0250
Bromomethane	U		0.00197	0.0125
n-Butylbenzene	U		0.00525	0.0125
sec-Butylbenzene	U		0.00288	0.0125
tert-Butylbenzene	U		0.00195	0.00500
Carbon tetrachloride	U		0.000898	0.00500
Chlorobenzene	U		0.000210	0.00250
Chlorodibromomethane	U		0.000612	0.00250
Chloroethane	U		0.00170	0.00500
Chloroform	U		0.00103	0.00250
Chloromethane	U		0.00435	0.0125
2-Chlorotoluene	U		0.000865	0.00250
4-Chlorotoluene	U		0.000450	0.00500
1,2-Dibromo-3-Chloropropane	U		0.00390	0.0250
1,2-Dibromoethane	U		0.000648	0.00250
Dibromomethane	U		0.000750	0.00500
1,2-Dichlorobenzene	U		0.000425	0.00500
1,3-Dichlorobenzene	U		0.000600	0.00500
1,4-Dichlorobenzene	U		0.000700	0.00500
Dichlorodifluoromethane	U		0.00161	0.00250
1,1-Dichloroethane	U		0.000491	0.00250
1,2-Dichloroethane	U		0.000649	0.00250
1,1-Dichloroethene	U		0.000606	0.00250
cis-1,2-Dichloroethene	U		0.000734	0.00250
trans-1,2-Dichloroethene	U		0.00104	0.00500
1,2-Dichloropropane	U		0.00142	0.00500
1,1-Dichloropropene	U		0.000809	0.00250
1,3-Dichloropropane	U		0.000501	0.00500
cis-1,3-Dichloropropene	U		0.000757	0.00250
trans-1,3-Dichloropropene	U		0.00114	0.00500
2,2-Dichloropropane	U		0.00138	0.00250
Di-isopropyl ether	U		0.000410	0.00100
Ethylbenzene	U		0.000737	0.00250
Hexachloro-1,3-butadiene	U		0.00600	0.0250
Isopropylbenzene	U		0.000425	0.00250

Method Blank (MB)

(MB) R3725864-2 10/31/21 00:10

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
p-Isopropyltoluene	U		0.00255	0.00500
2-Butanone (MEK)	0.0821	J	0.0635	0.100
Methylene Chloride	U		0.00664	0.0250
4-Methyl-2-pentanone (MIBK)	U		0.00228	0.0250
Methyl tert-butyl ether	U		0.000350	0.00100
Naphthalene	U		0.00488	0.0125
n-Propylbenzene	U		0.000950	0.00500
Styrene	U		0.000229	0.0125
1,1,1,2-Tetrachloroethane	U		0.000948	0.00250
1,1,2,2-Tetrachloroethane	U		0.000695	0.00250
Tetrachloroethene	U		0.000896	0.00250
Toluene	U		0.00130	0.00500
1,1,2-Trichlorotrifluoroethane	U		0.000754	0.00250
1,2,3-Trichlorobenzene	U		0.00733	0.0125
1,2,4-Trichlorobenzene	U		0.00440	0.0125
1,1,1-Trichloroethane	U		0.000923	0.00250
1,1,2-Trichloroethane	U		0.000597	0.00250
Trichloroethene	U		0.000584	0.00100
Trichlorofluoromethane	U		0.000827	0.00250
1,2,3-Trichloropropane	U		0.00162	0.0125
1,2,3-Trimethylbenzene	U		0.00158	0.00500
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
Vinyl chloride	U		0.00116	0.00250
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	*103*			*75.0-131*
(S) 4-Bromofluorobenzene	*100*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*107*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3725864-1 10/30/21 23:13

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	0.625	0.554	88.6	10.0-160	
Acrylonitrile	0.625	0.518	82.9	45.0-153	
Benzene	0.125	0.112	89.6	70.0-123	
Bromobenzene	0.125	0.125	100	73.0-121	
Bromodichloromethane	0.125	0.115	92.0	73.0-121	

Laboratory Control Sample (LCS)

(LCS) R3725864-1 10/30/21 23:13

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Bromoform	0.125	0.112	89.6	64.0-132	
Bromomethane	0.125	0.114	91.2	56.0-147	
n-Butylbenzene	0.125	0.109	87.2	68.0-135	
sec-Butylbenzene	0.125	0.108	86.4	74.0-130	
tert-Butylbenzene	0.125	0.111	88.8	75.0-127	
Carbon tetrachloride	0.125	0.113	90.4	66.0-128	
Chlorobenzene	0.125	0.115	92.0	76.0-128	
Chlorodibromomethane	0.125	0.110	88.0	74.0-127	
Chloroethane	0.125	0.121	96.8	61.0-134	
Chloroform	0.125	0.114	91.2	72.0-123	
Chloromethane	0.125	0.133	106	51.0-138	
2-Chlorotoluene	0.125	0.117	93.6	75.0-124	
4-Chlorotoluene	0.125	0.114	91.2	75.0-124	
1,2-Dibromo-3-Chloropropane	0.125	0.104	83.2	59.0-130	
1,2-Dibromoethane	0.125	0.117	93.6	74.0-128	
Dibromomethane	0.125	0.125	100	75.0-122	
1,2-Dichlorobenzene	0.125	0.115	92.0	76.0-124	
1,3-Dichlorobenzene	0.125	0.114	91.2	76.0-125	
1,4-Dichlorobenzene	0.125	0.112	89.6	77.0-121	
Dichlorodifluoromethane	0.125	0.107	85.6	43.0-156	
1,1-Dichloroethane	0.125	0.115	92.0	70.0-127	
1,2-Dichloroethane	0.125	0.128	102	65.0-131	
1,1-Dichloroethene	0.125	0.110	88.0	65.0-131	
cis-1,2-Dichloroethene	0.125	0.113	90.4	73.0-125	
trans-1,2-Dichloroethene	0.125	0.105	84.0	71.0-125	
1,2-Dichloropropane	0.125	0.117	93.6	74.0-125	
1,1-Dichloropropene	0.125	0.120	96.0	73.0-125	
1,3-Dichloropropane	0.125	0.120	96.0	80.0-125	
cis-1,3-Dichloropropene	0.125	0.121	96.8	76.0-127	
trans-1,3-Dichloropropene	0.125	0.124	99.2	73.0-127	
2,2-Dichloropropane	0.125	0.0921	73.7	59.0-135	
Di-isopropyl ether	0.125	0.116	92.8	60.0-136	
Ethylbenzene	0.125	0.107	85.6	74.0-126	
Hexachloro-1,3-butadiene	0.125	0.145	116	57.0-150	
Isopropylbenzene	0.125	0.106	84.8	72.0-127	
p-Isopropyltoluene	0.125	0.101	80.8	72.0-133	
2-Butanone (MEK)	0.625	0.531	85.0	30.0-160	
Methylene Chloride	0.125	0.111	88.8	68.0-123	
4-Methyl-2-pentanone (MIBK)	0.625	0.603	96.5	56.0-143	
Methyl tert-butyl ether	0.125	0.111	88.8	66.0-132	

Laboratory Control Sample (LCS)

(LCS) R3725864-1 10/30/21 23:13

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Naphthalene	0.125	0.116	92.8	59.0-130	
n-Propylbenzene	0.125	0.111	88.8	74.0-126	
Styrene	0.125	0.107	85.6	72.0-127	
1,1,1,2-Tetrachloroethane	0.125	0.104	83.2	74.0-129	
1,1,2,2-Tetrachloroethane	0.125	0.109	87.2	68.0-128	
Tetrachloroethene	0.125	0.123	98.4	70.0-136	
Toluene	0.125	0.113	90.4	75.0-121	
1,1,2-Trichlorotrifluoroethane	0.125	0.122	97.6	61.0-139	
1,2,3-Trichlorobenzene	0.125	0.126	101	59.0-139	
1,2,4-Trichlorobenzene	0.125	0.128	102	62.0-137	
1,1,1-Trichloroethane	0.125	0.107	85.6	69.0-126	
1,1,2-Trichloroethane	0.125	0.120	96.0	78.0-123	
Trichloroethene	0.125	0.126	101	76.0-126	
Trichlorofluoromethane	0.125	0.113	90.4	61.0-142	
1,2,3-Trichloropropane	0.125	0.113	90.4	67.0-129	
1,2,3-Trimethylbenzene	0.125	0.105	84.0	74.0-124	
1,2,4-Trimethylbenzene	0.125	0.103	82.4	70.0-126	
1,3,5-Trimethylbenzene	0.125	0.106	84.8	73.0-127	
Vinyl chloride	0.125	0.125	100	63.0-134	
Xylenes, Total	0.375	0.325	86.7	72.0-127	
(S) Toluene-d8			*103*	*75.0-131*	
(S) 4-Bromofluorobenzene			*101*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*108*	*70.0-130*	

Method Blank (MB)

(MB) R3724440-1 11/02/21 07:41

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
(S) o-Terphenyl	*53.8*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3724440-2 11/02/21 07:54

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Diesel Range Organics (DRO)	50.0	32.2	64.4	50.0-150	
(S) o-Terphenyl			*70.6*	*18.0-148*	

L1423415-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1423415-01 11/02/21 16:57 • (MS) R3724440-3 11/02/21 17:10 • (MSD) R3724440-4 11/02/21 17:22

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	47.8	ND	33.5	42.3	53.9	71.3	5	50.0-150		J3	23.2	20
(S) o-Terphenyl					*129*	*62.5*		*18.0-148*				

Method Blank (MB)

(MB) R3723791-2 10/30/21 10:59

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00230	0.00600
Acenaphthene	U		0.00209	0.00600
Acenaphthylene	U		0.00216	0.00600
Benzo(a)anthracene	U		0.00173	0.00600
Benzo(a)pyrene	U		0.00179	0.00600
Benzo(b)fluoranthene	U		0.00153	0.00600
Benzo(g,h,i)perylene	U		0.00177	0.00600
Benzo(k)fluoranthene	U		0.00215	0.00600
Chrysene	U		0.00232	0.00600
Dibenz(a,h)anthracene	U		0.00172	0.00600
Fluoranthene	U		0.00227	0.00600
Fluorene	U		0.00205	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600
Naphthalene	U		0.00408	0.0200
Phenanthrene	U		0.00231	0.00600
Pyrene	U		0.00200	0.00600
1-Methylnaphthalene	U		0.00449	0.0200
2-Methylnaphthalene	U		0.00427	0.0200
2-Chloronaphthalene	U		0.00466	0.0200
(S) Nitrobenzene-d5	*105*			*14.0-149*
(S) 2-Fluorobiphenyl	*87.4*			*34.0-125*
(S) p-Terphenyl-d14	*109*			*23.0-120*

Laboratory Control Sample (LCS)

(LCS) R3723791-1 10/30/21 10:42

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0587	73.4	50.0-126	
Acenaphthene	0.0800	0.0587	73.4	50.0-120	
Acenaphthylene	0.0800	0.0573	71.6	50.0-120	
Benzo(a)anthracene	0.0800	0.0587	73.4	45.0-120	
Benzo(a)pyrene	0.0800	0.0532	66.5	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0611	76.4	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0611	76.4	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0601	75.1	49.0-125	
Chrysene	0.0800	0.0615	76.9	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0610	76.3	47.0-125	
Fluoranthene	0.0800	0.0596	74.5	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R3723791-1 10/30/21 10:42

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0620	77.5	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0590	73.8	46.0-125	
Naphthalene	0.0800	0.0582	72.8	50.0-120	
Phenanthrene	0.0800	0.0627	78.4	47.0-120	
Pyrene	0.0800	0.0593	74.1	43.0-123	
1-Methylnaphthalene	0.0800	0.0548	68.5	51.0-121	
2-Methylnaphthalene	0.0800	0.0538	67.3	50.0-120	
2-Chloronaphthalene	0.0800	0.0555	69.4	50.0-120	
(S) Nitrobenzene-d5			*107*	*14.0-149*	
(S) 2-Fluorobiphenyl			*79.1*	*34.0-125*	
(S) p-Terphenyl-d14			*103*	*23.0-120*	

L1422174-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1422174-01 10/30/21 16:46 • (MS) R3723791-3 10/30/21 17:04 • (MSD) R3723791-4 10/30/21 17:21

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Anthracene	0.0760	0.00867	0.0599	0.0670	67.4	76.8	1	10.0-145			11.2	30
Acenaphthene	0.0760	ND	0.0537	0.0618	63.3	73.9	1	14.0-127			14.0	27
Acenaphthylene	0.0760	ND	0.0555	0.0625	73.0	82.2	1	21.0-124			11.9	25
Benzo(a)anthracene	0.0760	0.0208	0.0739	0.0757	69.9	72.2	1	10.0-139			2.41	30
Benzo(a)pyrene	0.0760	0.0134	0.0567	0.0634	57.0	65.8	1	10.0-141			11.2	31
Benzo(b)fluoranthene	0.0760	0.0366	0.0795	0.0783	56.4	54.9	1	10.0-140			1.52	36
Benzo(g,h,i)perylene	0.0760	0.0259	0.0604	0.0733	45.4	62.4	1	10.0-140			19.3	33
Benzo(k)fluoranthene	0.0760	0.00795	0.0550	0.0627	61.9	72.0	1	10.0-137			13.1	31
Chrysene	0.0760	0.0322	0.0986	0.0974	87.4	85.8	1	10.0-145			1.22	30
Dibenz(a,h)anthracene	0.0760	ND	0.0479	0.0656	56.6	79.9	1	10.0-132		J3	31.2	31
Fluoranthene	0.0760	0.0456	0.0859	0.0880	53.0	55.8	1	10.0-153			2.42	33
Fluorene	0.0760	ND	0.0620	0.0633	81.6	83.3	1	11.0-130			2.08	29
Indeno(1,2,3-cd)pyrene	0.0760	0.0145	0.0627	0.0731	63.4	77.1	1	10.0-137			15.3	32
Naphthalene	0.0760	0.0545	0.0884	0.0944	44.6	52.5	1	10.0-135			6.56	27
Phenanthrene	0.0760	0.137	0.160	0.145	30.3	10.5	1	10.0-144			9.84	31
Pyrene	0.0760	0.0469	0.0944	0.0809	62.5	44.7	1	10.0-148			15.4	35
1-Methylnaphthalene	0.0760	0.0965	0.119	0.123	29.6	34.9	1	10.0-142			3.31	28
2-Methylnaphthalene	0.0760	0.121	0.143	0.138	28.9	22.4	1	10.0-137			3.56	28
2-Chloronaphthalene	0.0760	ND	0.0497	0.0601	65.4	79.1	1	29.0-120			18.9	24
(S) Nitrobenzene-d5					*114*	*128*		*14.0-149*				
(S) 2-Fluorobiphenyl					*81.2*	*84.2*		*34.0-125*				
(S) p-Terphenyl-d14					*98.9*	*104*		*23.0-120*				

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
C3	The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Method sensitivity check is acceptable.
C4	The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Data is likely to show a low bias concerning the result.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J3	The associated batch QC was outside the established quality control range for precision.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Co[redacted]/Address:	Billing Information:	Pres Chk	Analysis / Container / Preservative	Chain of Custody Page 1 of 3
GeoEngineers- Portland, OR 4000 Kruse Way Place Bldg. 3, Suite 200 Lake Oswego, OR 97035	Accounts Payable (Marlee Johnston) 17425 NE Union Hill Rd, Suite 250 Redmond, WA 98052			Pace Analytical® 12065 Lebanon Rd Mount Juliet, TN 37122 Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf
Report to: Cris Watkins	Email To: cwatkins@geoengineers.com			SDG # L1423266 J226
Project Description:	City/State Collected: Seatac, WA	Please Circle: PT MT CT ET		Acctnum: GEOENGPOR Template: T197917 Prelogin: P882161 PM: 110 - Brian Ford PB: Shipped Via:
Phone: 503-603-6661	Client Project # 0180-393-00	Lab Project # GEOENGPOR-018039300		
Collected by (print): Dexter Chan	Site/Facility ID #	P.O. #		
Collected by (signature): [signature] Immediately Packed on Ice N ___ Y X	*Rush?* (Lab MUST Be Notified) ___ Same Day ___ Five Day ___ Next Day ___ 5 Day (Rad Only) ___ Two Day X 10 Day (Rad Only) ___ Three Day	Quote # Date Results Needed		

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	NWTPHDX no silica 8ozClr-NoPres	NWTPHDX w/ silica 8ozClr-NoPres	NWTPHGX 40mlAmb/MeOH10ml/Syr	PAHs 8270ESIM 8ozClr-NoPres	RCRA8 Metals 6020 4ozClr-NoPres	VOCs 8260D 40mlAmb/MeOH10ml/Syr	Hold			Remarks	Sample # (lab only)
GEI-1-9-10		SS	9-10	10/26/21	1120	3							X				-01
GEI-1-14-15		SS	14-15	↓	1125	↓							X				-02
GEI-2-9-10		SS	9-10		1142								X				-03
GEI-2-14-15		SS	14-15		1145								X				-04
GEI-3-9-10		SS	9-10		~~1245~~								X				-05
GEI-3-14-15		SS	14-15		1250								X				-06
GEI-4-9-10		SS	9-10		1430 ~~1355~~								X				-07
GEI-4-14-15		SS	14-15		1432 ~~1300~~								X				-08
MW-1-9-10		SS	9-10		1225								X				-09
MW-1-14-15		SS	14-15	↓	1230	↓							X				-10

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other________

Remarks:

pH ______ Temp ______

Flow ______ Other ______

Samples returned via: __ UPS __ FedEx __ Courier ________

Tracking # 5217 3314 1922

Sample Receipt Checklist

COC Seal Present/Intact:	NP __Y __N
COC Signed/Accurate:	✓Y __N
Bottles arrive intact:	✓Y __N
Correct bottles used:	✓Y __N
Sufficient volume sent:	✓Y __N
If Applicable	
VOA Zero Headspace:	__Y __N
Preservation Correct/Checked:	__Y __N
RAD Screen <0.5 mR/hr:	✓Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR 1432 5	
[signature]	10/26/21	1500			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 1.7+0=1.7 °C Bottles Received: 63	If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) [signature]	Date: 10/27/21 Time: 930	Hold: Condition: NCF / OK

Company Name/Address:
GeoEngineers- Portland, OR

4000 Kruse Way Place
Bldg. 3, Suite 200
Lake Oswego, OR 97035

Billing Information:
Accounts Payable (Marlee Johnston)
17425 NE Union Hill Rd, Suite 250
Redmond, WA 98052

Pres Chk

Report to: Cris Watkins

Email To: cwatkins@geoengineers.com

Project Description:

City/State Collected: Seattle, WA

Please Circle: PT MT CT ET

Phone: 503-603-6661

Client Project # 0180-393-00

Lab Project # GEOENGPOR-018039300

Collected by (print): Dexter Chen

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day X 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

No. of Cntrs

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	NWTPHDX no silica 8ozClr-NoPres	NWTPHDX w/ silica 8ozClr-NoPres	NWTPHGX 40mlAmb/MeOH10ml/Syr	PAHs 8270ESIM 8ozClr-NoPres	RCRA8 Metals 6020 4ozClr-NoPres	VOCs 8260D 40mlAmb/MeOH10ml/Syr	HOLD			Remarks	Sample # (lab only)
MW-2-9-10		SS	9-10	10/25/21	1400	3							X				-11
MW-2-14-15		SS	14-15	10/25/21	1405								X				-12
GEI-4-2-3		SS	2-3	10/26/21	1000								X				-13
MW-1-2-3		SS	2-3		1020								X				-14
GEI-5-7-8		SS	7-8		1040								X				-15
GEI-5-15-16		SS	15-16		1045								X				-16
MW-3-2-3		SS	2-3		1100								X				-17
MW-3-7-8		SS	7-8		1105								X				-18
MW-3-14-15		SS	14-15		1110								X				-19
GEI-6-7-8		SS	7-8		1205								X				-20

Chain of Custody Page 2 of 3

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SDG # 423268

Table #

Acctnum: GEOENGPOR

Template: T197917

Prelogin: P882161

PM: 110 - Brian Ford

PB:

Shipped Via:

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking # "

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N
RAD Screen <0.5 mR/hr: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCl / MeoH TBR	If preservation required by Login: Date/Time
[signature]	10/26/21	1520			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 3.3R °C Bottles Received: 1.7+0=17 63	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 10/27/21 Time: 930	Hold: Condition: NCF / OK

Company/Address:
GeoEngineers- Portland, OR

4000 Kruse Way Place
Bldg. 3, Suite 200
Lake Oswego, OR 97035

Billing Information:
Accounts Payable (Marlee Johnston)
17425 NE Union Hill Rd, Suite 250
Redmond, WA 98052

Pres Chk

Report to: **Cris Watkins**

Email To: **cwatkins@geoengineers.com**

Project Description:

City/State Collected: Seattle, WA

Please Circle: PT MT CT ET

Phone: **503-603-6661**

Client Project # **0180-393-00**

Lab Project # **GEOENGPOR-018039300**

Collected by (print): Dexter Chan

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ____ Y ____

Rush? (Lab MUST Be Notified)
____ Same Day ____ Five Day
____ Next Day ____ 5 Day (Rad Only)
____ Two Day ~~X~~ 10 Day (Rad Only)
____ Three Day

Date Results Needed

Quote #

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	NWTPHDX no silica 8ozClr-NoPres	NWTPHDX w/ silica 8ozClr-NoPres	NWTPHGX 40mlAmb/MeOH10ml/Syr	PAHs 8270ESIM 8ozClr-NoPres	RCRA8 Metals 6020 4ozClr-NoPres	VOCs 8260D 40mlAmb/MeOH10ml/Syr	HOLD			Remarks	Sample # (lab only)
GEI-6-14-15		SS	14-15	10/26/21	1210	3							X				-21

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

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SDG # 1423266

Table #

Acctnum: **GEOENGPOR**

Template: **T197917**

Prelogin: **P882161**

PM: **110 - Brian Ford**

PB:

Shipped Via:

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist

COC Seal Present/Intact:	NP	Y	N
COC Signed/Accurate:		Y	N
Bottles arrive intact:		Y	N
Correct bottles used:		Y	N
Sufficient volume sent:		Y	N
If Applicable			
VOA Zero Headspace:		Y	N
Preservation Correct/Checked:		Y	N
RAD Screen <0.5 mR/hr:		Y	N

Relinquished by : (Signature)	Date: 10/26/21	Time: 1500	Received by: (Signature)	Trip Blank Received: Yes / No HCl / MeoH TBR	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 1.7 °C Bottles Received: 5 63	If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 10/27/21 Time: 930	Hold: Condition: NCF / OK

Brian Ford

From: Cris J. Watkins <cwatkins@geoengineers.com>
Sent: Thursday, October 28, 2021 5:54 PM
To: Brian Ford
Cc: Phil D. Welker
Subject: RE: updated analysis request FW: L1423266 Proj 0180-393-00 Hold Samples Received

Also – please update the project name to WSDOT-A-1 Towing. Thanks,

Cris J. Watkins
Senior Environmental Scientist | GeoEngineers, Inc.
Telephone: 503.603.6687
Mobile: 971.235.6147

From: Cris J. Watkins
Sent: Thursday, October 28, 2021 3:53 PM
To: Brian Ford <Brian.Ford@pacelabs.com>
Cc: Phil D. Welker <pwelker@geoengineers.com>
Subject: updated analysis request FW: L1423266 Proj 0180-393-00 Hold Samples Received

Hey Brian,

Can you run the following samples on a 5-day TAT:

GEI-1-9-10
GEI-2-9-10
GEI-3-9-10
GEI-4-2-3
GEI-5-7-8
GEI-6-7-8
MW-1-2-3
MW-2-9-10
MW-3-2-3

We will run Dx-no silica, Gx, PAHs, RCRA 8 and VOCs.

Thanks,

Cris J. Watkins
Senior Environmental Scientist | GeoEngineers, Inc.
Telephone: 503.603.6687
Mobile: 971.235.6147

From: Brian Ford <Brian.Ford@pacelabs.com>
Sent: Thursday, October 28, 2021 8:22 AM
To: Cris J. Watkins <cwatkins@geoengineers.com>
Subject: L1423266 Proj 0180-393-00 Hold Samples Received

[EXTERNAL]

Thanks,

Brian Ford
Project Manager 2 / Pace National
12065 Lebanon Road | Mt. Juliet, TN 37122
Office: 615.773.9772
brian.ford@pacelabs.com

APPENDIX C
Report Limitations and Guidelines for Use

APPENDIX C
REPORT LIMITATIONS AND GUIDELINES FOR USE[1]

This appendix provides information to help you manage your risks with respect to the use of this report.

Read These Provisions Closely

Some clients, design professionals, and contractors may not recognize that the geoscience practices (geotechnical engineering, geology and environmental science) are far less exact than other engineering and natural science disciplines. This lack of understanding can create unrealistic expectations that could lead to disappointments, claims and disputes. GeoEngineers includes these explanatory "limitations" provisions in our reports to help reduce such risks. Please confer with GeoEngineers if you are unclear how these "Report Limitations and Guidelines for Use" apply to your project or site.

Environmental Services Are Performed for Specific Purposes, Persons and Projects

This report has been prepared for the exclusive use of the WSDOT, their authorized agents and regulatory agencies. This report is not intended for use by others, and the information contained herein is not applicable to other sites.

GeoEngineers structures our services to meet the specific needs of our clients. For example, an environmental site assessment or remedial action study conducted for a property owner may not fulfill the needs of a prospective purchaser of the same property. Because each environmental study is unique, each environmental report is unique, prepared solely for the specific client and project site. No one except WSDOT should rely on this plan without first conferring with GeoEngineers. This report should not be applied for any purpose or project except the one originally contemplated.

This Environmental Report Is Based on a Unique Set of Project-Specific Factors

This report applies to the King County Tax Parcel 3223049048 project located in Des Moines, Washington. GeoEngineers considered a number of unique, project-specific factors when establishing the scope of services for this project and report. Unless GeoEngineers specifically indicates otherwise, do not rely on this report if it was:

- Not prepared for you,
- Not prepared for your project,
- Not prepared for the specific site explored, or
- Completed before important project changes were made.

If important changes are made after the date of this remedial action plan, GeoEngineers should be given the opportunity to review our interpretations and recommendations and provide written modifications or confirmation, as appropriate.

---

[1] Developed based on material provided by Geoprofessional Business Association (GBA), Professional Firms Practicing in the GeoSciences, www.geoprofesional.org.

Reliance Conditions for Third Parties

No third party may rely on the product of our services unless GeoEngineers agrees in advance, and in writing to such reliance. This is to provide our firm with reasonable protection against open-ended liability claims by third parties with whom there would otherwise be no contractual limits to their actions.

Environmental Regulations Are Always Evolving

Some substances may be present in the site vicinity in quantities or under conditions that may have led, or may lead, to contamination of the subject site, but are not included in current local, state or federal regulatory definitions of hazardous substances or do not otherwise present current potential liability. GeoEngineers cannot be responsible if the standards for appropriate inquiry, or regulatory definitions of hazardous substance, change or if more stringent environmental standards are developed in the future.

Subsurface Conditions Can Change

This report is based on conditions that existed at the time our site studies were performed. The findings and conclusions of this report may be affected by the passage of time, by manmade events such as construction on or adjacent to the site, by new releases of hazardous substances, or by natural events such as floods, earthquakes, slope instability or groundwater fluctuations. Always contact GeoEngineers before applying this report to determine if it is still applicable.

Soil and Groundwater End Use

The cleanup levels referenced in this report are site- and situation-specific. The cleanup levels may not be applicable for other sites or for other on-site uses of the affected media (soil and/or groundwater). Note that hazardous substances may be present in some of the Site soil and/or groundwater at detectable concentrations that are less than the referenced cleanup levels. GeoEngineers should be contacted prior to the export of soil or groundwater from the subject Site or reuse of the affected media on Site to evaluate the potential for associated environmental liabilities. We cannot be responsible for potential environmental liability arising out of the transfer of soil and/or groundwater from the subject site to another location or its reuse on site in instances that we were not aware of or could not control.

Biological Pollutants

GeoEngineers' Scope of Work specifically excludes the investigation, detection, prevention or assessment of the presence of Biological Pollutants. Accordingly, this report does not include any interpretations, recommendations, findings, or conclusions regarding the detecting, assessing, preventing or abating of Biological Pollutants and no conclusions or inferences should be drawn regarding Biological Pollutants, as they may relate to this project. The term "Biological Pollutants" includes, but is not limited to, molds, fungi, spores, bacteria, and viruses, and/or any of their byproducts.

If the Client desires these specialized services, they should be obtained from a consultant who offers services in this specialized field.

Do Not Redraw the Exploration Logs

Environmental scientists prepare final boring and testing logs based upon their interpretation of field logs and laboratory data. To prevent errors or omissions, the logs included in an environmental report should never be redrawn for inclusion in other design drawings. Only photographic or electronic reproduction is acceptable, but recognize that separating logs from the report can elevate risk.

Geotechnical, Geologic and Environmental Reports Should Not Be Interchanged

The equipment, techniques and personnel used to perform an environmental study differ significantly from those used to perform a geotechnical or geologic study and vice versa. For that reason, a geotechnical engineering or geologic report does not usually relate any environmental findings, conclusions or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. Similarly, environmental reports are not used to address geotechnical or geologic concerns regarding a specific project.

Most Environmental Findings Are Professional Opinions

Our interpretations of subsurface conditions are based on field observations and chemical analytical data from the sampling locations at the site documented in past reports. Site exploration identifies subsurface conditions only at those points where subsurface tests are conducted or samples are taken. GeoEngineers reviewed field and laboratory data and then applied our professional judgment to render an opinion about subsurface conditions throughout the site. Actual subsurface conditions may differ – sometimes significantly – from those indicated in this report. There is always a potential that areas of contamination exist in portions of the site that were not sampled or tested during this or previous studies. Our remedial action plan, conclusions and interpretations should not be construed as a warranty of the subsurface conditions.

GeoEngineers

Phase II Environmental Site Assessment, Soil Sampling Report
State Route (SR) 509
Foreman Property 18451 12th Avenue South

Prepared for

Washington State Department of Transportation
SR 509 Project Office

Prepared by

Headquarters Hazardous Materials and Solid Waste Program
Environmental Services Office

Washington State Department of Transportation

January 24, 2019

Table of Contents

Acronyms and Abbreviations

ASTM E 1903-11	American Society for Testing and Materials Standard Practice for Environmental Site Assessments: Phase II Environmental Assessment Process, Designation: E 1903-11
bgs	Below ground surface
CUL	Cleanup Level
Ecology	Washington State Department of Ecology
ESA	Environmental Site Assessment
ESO	Environmental Services Office
HazMat Program	Hazardous Materials and Solid Waste Program
HQ	Headquarters
MTCA	Model Toxics Control Act
NFA	No Further Action
NWR	Northwest Region
RCRA	Resource Conservation and Recovery Act
WAC	Washington Administrative Code
WSDOT	Washington State Department of Transportation

1.0 INTRODUCTION

The Washington State Department of Transportation (WSDOT) Headquarters (HQ) Hazardous Materials and Solid Waste (HazMat) Program prepared this Phase II Environmental Site Assessment (ESA) Report to provide a summary of information associated with soil investigation and excavation activities within existing unconstructed WSDOT right-of-way (ROW) at 18451 12th Avenue South in Des Moines, WA (Site) (See Appendix 1).. The Site is associated with the WSDOT 509 Project Office in support of the future construction of the State Route (SR) 509 Roadway Project.

The Phase II ESA soil sampling activities assesses soil conditions within the property and confirms the presence or absence of contaminated soil after cleanup activities. A contractor, Marine Vacuum Incorporated (Marine Vac.) remediated two areas of confirmed and suspected contaminated materials.

HazMat conducted this Phase II ESA in general accordance with the American Society for Testing and Materials Standard Practice for Environmental Site Assessments (ASTM): Phase II Environmental Site Assessment Process, Designation: E 1903-11 (ASTM 1903-1) and the WSDOT Environmental Manual (EM) 31-11, Chapter 447.

1.1 SITE INFORMATION

The following sections provide information pertaining to the background, physical, geological and hydrogeological setting of the site.

1.1.1 Physical Setting and Historical Background

WSDOT purchased this Site as part of the future SR 509 Project, and leased the property to tenants since 2000. The Site is located near the intersection of Des Moines Memorial Drive and South 188 Street and the intersection of SR 509 and South 188 Street. The previous tenant, Mr. Foreman, conducted welding activities on this property from 2000 through 2016. In the summer of 2016, WSDOT allowed the Washington State Patrol (WSP) to use a portion of the property to dismantle seized vehicles. Currently, A-1 Towing leases the property as a towing yard, which includes parking vehicles throughout the site and repairing the vehicles within the garage structure.

1.2.1 Geologic and Hydrogeologic Setting

Based upon review available information near the Site vicinity, soils from surface to six feet (ft.) below ground surface (bgs) are defined as poorly graded sand, medium dense, olive gray, moist and homogenous. Soils from six to 10 ft. are defined as poorly graded sand, medium dense, olive gray, moist, and homogeneous. Soils from 10 to 15 ft. are defined as silty sand, dense, grayish brown, moist, and homogenous.

Groundwater depth varied across the Site; although, it was encountered as shallow as three ft. bgs in select locations.

2.0 BACKGROUND INFORMATION

The following provides a chronological order of the relevant events that led up to the cleanup of contaminated soils on the Site. The background describes two separate sample events prior to the contaminated soil remedial activities and confirmation sampling.

In October 2016, WSDOT Northwest Region (NWR) Real Estate Services (RES) requested the WSDOT NWR Hazardous Materials Specialist to perform a limited Phase II Environmental Site Assessment (ESA) after MR. Foreman's lease terminated. WSDOT NWR sampled four locations (A, B, C, & D) (See Appendix 1) of suspected contaminated soil identified on the property. NWR HazMat identified two relatively large heavily stained areas, numerous small stains located on the north end of the site, and abandoned solid waste debris and trash scattered throughout. WSDOT collected a total of four representative samples (SS1 in Area A, SS2 in Area B, SS3 in Area C, and SS4 in Area D). WSDOT collected samples in areas where large stains were evident (A and C), numerous small stains (D), unusual odors (A-D), and solid wastes like trash and debris were abandoned (B and D). The soil samples were analyzed using the following methods:

- Northwest Total Petroleum Hydrocarbons - Method NWTPH – Benzene, Toluene, Ethylbenzene, and Xylene (BTEX))
- Diesel and Heavy Oil - Method NWTPH (Dx)
- SVOCs - EPA Method 8270
- RCRA 8 Metals - EPA Method 6010

Analytical results of one the four soil samples indicated that that lube range petroleum hydrocarbons were detected at a concentration greater than current Model Toxics Control Act (MTCA) Method A cleanup level (CUL) of 2,000 milligrams per kilograms (SS-3 31,000 mg/kg). WSDOT considered this asphalt. The analytical results of another sample indicated that arsenic were detected at a concentration greater the current MTCA Method A CUL of 20 milligrams per kilograms (SS-2 35 mg/kg). The remaining analytes sampled were either non-detect or below MTCA Method A cleanup levels. Based upon the sample results, field remediation of contaminated soils was needed in area B (SS-2) and C (SS-3).

In April 2017, WSDOT contracted Marine Vacuum Incorporated (Marine Vac.) to cleanup areas on the Site with trash, debris, and soils with notable detectable analytes below MTCA Method A CULs.

In January 2018 A-1 Towing, the lessee, graded and displaced Site soils. Some soils were contaminated. The soils were displaced from previously sampled areas A and B. There also was a new stockpile located just north of area D.

On March 15, 2018, WSDOT Headquarters (HQ) HazMat Program collected four soil samples (SS1a, SS2a, SS3a, and SS4a) on the Site in areas previously defined as A, B, and in a new location. The HazMat Program collected a sample if there was an indication of grading with known or suspected soil contamination, or where displaced/graded soils appeared to be consolidated into a stock pile generated by the lessee. Areas C and D did not have these indicators and did not warrant additional sampling. The stock pile location is just north of area D and was estimated to contain approximately 25 cubic yards of material.

The analytical results from the March 2018 investigative sampling, individual chemical constituents detected in each soil sample were analyzed using:

- NWTPH-Gx,
- NWTPH-Dx,
- Volatiles EPA Method 8260C,
- Semi-Volatiles Method 8270D,
- Total metals EPA Method 6010D.

No sample results were above MTCA Method A cleanup standards.

3.0 FIELD INVESTIGATION

On September 21, 2018, HQ HazMat collected two soil confirmation samples (Fcl1 and Fcl2) using a pre-cleaned stainless steel spoon. HQ HazMat decontaminated the stainless steel spoon with a phosphate free cleaner (Alconox) and rinsed it with distilled water between the confirmation sample locations. HQ HazMat collected the two confirmation samples in areas remediated where:

- Soils were previously identified in concentrations that exceeded MTCA Method A cleanup levels (CULs) for lube oil; and
- Numerous stains were located throughout the area.

The Fcl1 confirmation sample was collected at the bottom from the center of where the crushed asphalt was removed.

The depth of the excavation trench for the 2nd confirmation sample could not safely be accessed. Therefore, the Fcl2 confirmation sample was collected from soil excavated with a backhoe bucket taken from the center of the bottom of the excavation.

4.0 ANALYTICAL SAMPLING RESULTS

The analytical data was reviewed and deemed acceptable. The individual chemical constituents in each soil sample was evaluated against the MTCA Method A cleanup levels for unrestricted land use. The sample results were below MTCA Method A cleanup levels. All chemical results from each of the soil sample events are presented in its entirety in Appendix 3. All of the soil samples were delivered to OnSite Environmental Incorporated located in Redmond, WA.

The analytical results from the September 2018 confirmation samples, individual constituents detected in each soil sample was evaluated against:

- NWTPH-Dx
- Semi-Volatiles EPA Method 8260C
- MTCA Metals

The laboratory analytical results from the two confirmation samples were either non-detect or at concentrations below MTCA Method A CULs.

5.0FIELD ACTIVITIES

On September 20 and 21, 2018, Marine Vac. conducted excavation activities to address lube oil concentrations exceeding MTCA Method A CULs. Additionally, Marine Vac. excavated an area to remediate suspected contaminated materials (See Appendix 1 areas C and D). During site cleanup activities, excavated soils were segregated based on field screening results. Soils included in the direct haul to Marine Vac. for disposal as contaminated included soils based up sight, olfactory indicators, and/or had Photoionization Indication Detector (PID) levels above 10 ppm. The non-suspect soils were placed off to the side in a designated area lined and covered with 6 mil polyethylene sheeting. On September 24, 2018, Marine Vac. filled and graded the excavation areas with the existing non-suspect soils.

A total of about 8.4 cubic yards of suspected and/or confirmed contaminated material was excavated and transported for disposal by Marine Vac. Waste disposal receipts are located in Appendix 4.

No groundwater was encountered during cleanup activities.

6.0 SUMMARY AND CONCLUSIONS

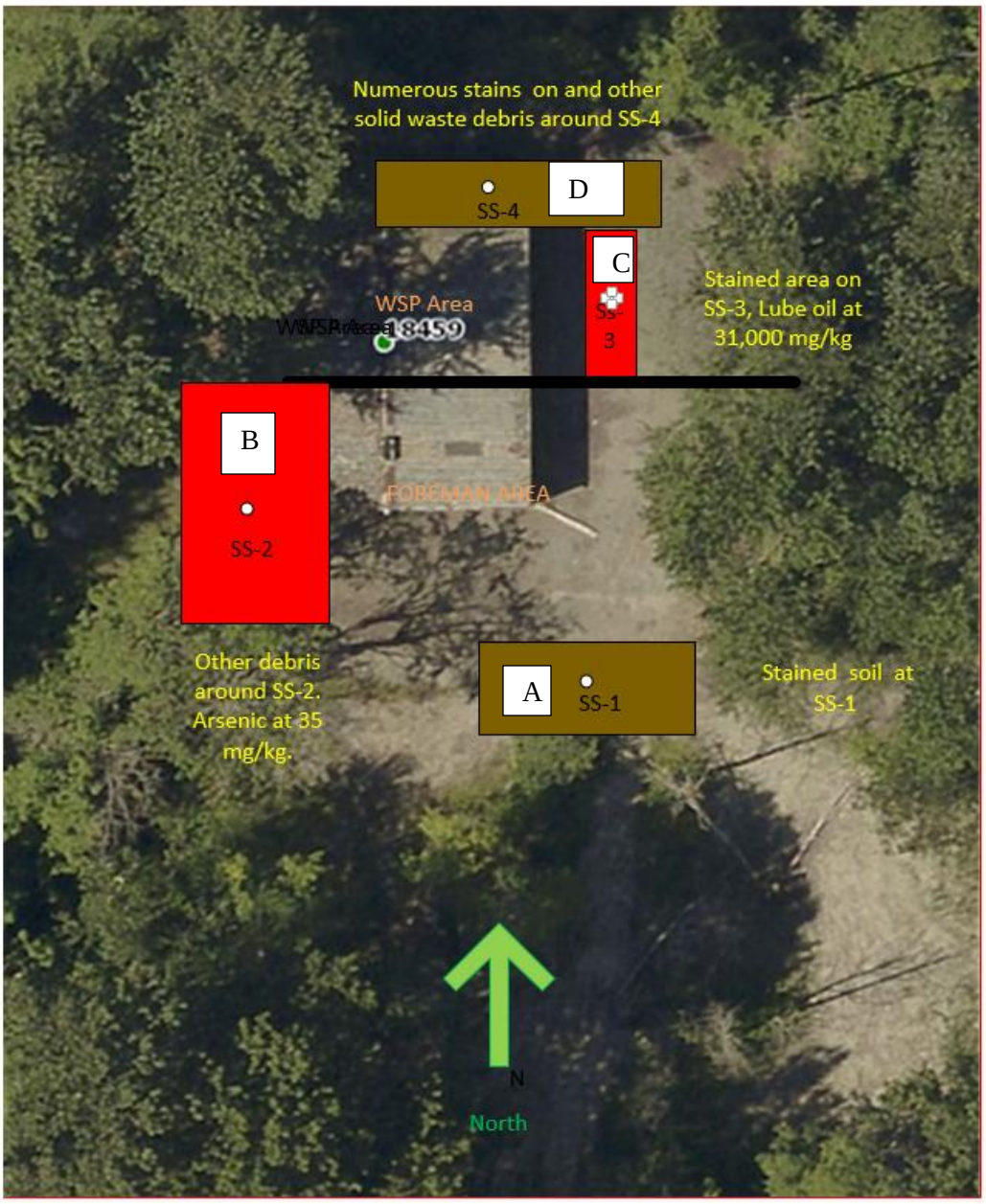
WSDOT completed soil investigation and excavation activities within the Site. WSDOT investigated the soils on the Site at the end of an existing long term lease and also after the new lessee displaced and graded soils. Confirmed and suspect contamination existed on the site. Approximately 8.4 cubic yards of confirmed and suspected contaminated soil was disposed. Based on the laboratory analytical results from the confirmation sample locations, it was determined that no contamination remains on the property.

Based on the cleanup activities and the laboratory analytical results, it appears that the subsequent environmental investigation removed the confirmed or suspected contamination; therefore, with no immediate threat to human health or the environment no additional environmental investigation appears warranted at this time. WSDOT recommends Washington State Department of Ecology to accept this Site as a No Further Action.

APPENDIX 1 – VICINITY MAP and SAMPLE POINTS & BACKGROUND

VICINITY MAP WITH SAMPLE POINTS

BACKGROUND AREA



◯ Sample locations

APPENDIX 2 SUMMARY TABLES

BACKGROUND CONDITION

Sample Collected (10/2016)	Gasoline mg/kg	Diesel mg/kg	Lube Oil mg/kg	Benzene mg/kg	Chromium mg/kg	Arsenic mg/kg
SS 1	ND	ND	1900	ND	48	ND
SS 2	ND	ND	220	0.022 (0.03)	46	**35**
SS 3	ND	ND	**31,000**	ND	22	ND
SS 4 *MTCA Method A Cleanup levels mg/kg*	ND *30 mg/kg with Benzene 100 mg/kg without Benzene*	ND *2000 mg/kg*	60 *2000 mg/kg*	ND *0.03*	42 *100 mg/kg(replaced by values for III (2000) and VI (19))*	ND *20 mg/kg*

MARCH 2018 INVESTIGATION

Sample Collected (10/2016)	Gasoline mg/kg	Diesel mg/kg	Lube Oil mg/kg	Benzene mg/kg	Chromium mg/kg	Arsenic mg/kg
SS 1	ND	ND	82	ND	41	ND
SS 2	ND	58	370	ND	52	ND
SS 3 (STOCKPILE)	ND	ND	470	ND	47	ND
SS 4 (STOCKPILE)	ND	ND	260	ND	60	ND
MTCA Method A Cleanup levels mg/kg	*30 mg/kg with Benzene 100 mg/kg without Benzene*	*2000 mg/kg*	*2000 mg/kg*	*0.03 mg/kg*	*100 mg/kg(replaced by values for III (2000) and VI (19))*	*5 mg/kg*

CONFIRMATION SAMPLE

Sample Collected 8/21/2018	Lube Oil
FC1-1 (Baseline ss3)	590
FC1-2 (Baseline ss4)	ND
MTCA Method A cleanup level mg/kg	*2000 mg/kg*

APPENDIX 3 LABORATORY REPORTS

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

November 8, 2016

Patrick Svoboda
WSDOT
15700 Dayton Avenue North
NB82-138
P.O. Box 330310
Seattle, WA 98133-9710

Re: Analytical Data for Project SR 509 - 12th Street
Laboratory Reference No. 1610-295

Dear Pat:

Enclosed are the analytical results and associated quality control data for samples submitted on October 26, 2016.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

Case Narrative

Samples were collected on October 25, 2016 and received by the laboratory on October 26, 2016. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

NWTPH Gx/BTEX Analysis

Per EPA Method 5035A, samples were received by the laboratory in pre-weighed 40 mL VOA vials within 48 hours of sample collection. They were stored in a freezer at between -7°C and -20°C until extraction or analysis.

Semivolatiles EPA 8270D/SIM Analysis

Sample SS 4 had one surrogate recovery out of control limits. This was due to a large co-eluting non-target analyte peak, tentatively identified as 2-butoxy ethanol by spectral library search.

The Spike Blank/Spike Blank Duplicate had one recovery slightly above control limits, due to a small upward bias in the instruments' calibration and the sample was non-detect for this analyte. No further action was taken.

Please note that any other QA/QC issues associated with these extractions and analyses will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

NWTPH-Gx/BTEX

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Soil Sample 1**					
Laboratory ID:	10-295-01					
Benzene	**ND**	0.020	EPA 8021B	10-28-16	10-31-16	
Toluene	**ND**	0.051	EPA 8021B	10-28-16	10-31-16	
Ethyl Benzene	**ND**	0.051	EPA 8021B	10-28-16	10-31-16	
m,p-Xylene	**ND**	0.051	EPA 8021B	10-28-16	10-31-16	
o-Xylene	**ND**	0.051	EPA 8021B	10-28-16	10-31-16	
Gasoline	**ND**	5.1	NWTPH-Gx	10-28-16	10-31-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*91*	*63-124*				
Client ID:	**Soil Sample 2**					
Laboratory ID:	10-295-02					
Benzene	**0.022**	0.020	EPA 8021B	10-28-16	11-1-16	
Toluene	**ND**	0.094	EPA 8021B	10-28-16	11-1-16	
Ethyl Benzene	**ND**	0.094	EPA 8021B	10-28-16	11-1-16	
m,p-Xylene	**ND**	0.094	EPA 8021B	10-28-16	11-1-16	
o-Xylene	**ND**	0.094	EPA 8021B	10-28-16	11-1-16	
Gasoline	**ND**	9.4	NWTPH-Gx	10-28-16	11-1-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*80*	*63-124*				
Client ID:	**Soil Sample 3**					
Laboratory ID:	10-295-03					
Benzene	**ND**	0.020	EPA 8021B	10-28-16	11-1-16	
Toluene	**ND**	0.048	EPA 8021B	10-28-16	11-1-16	
Ethyl Benzene	**ND**	0.048	EPA 8021B	10-28-16	11-1-16	
m,p-Xylene	**ND**	0.048	EPA 8021B	10-28-16	11-1-16	
o-Xylene	**ND**	0.048	EPA 8021B	10-28-16	11-1-16	
Gasoline	**ND**	4.8	NWTPH-Gx	10-28-16	11-1-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*86*	*63-124*				

Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

NWTPH-Gx/BTEX

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS 4**					
Laboratory ID:	10-295-04					
Benzene	**ND**	0.020	EPA 8021B	10-28-16	11-1-16	
Toluene	**ND**	0.055	EPA 8021B	10-28-16	11-1-16	
Ethyl Benzene	**ND**	0.055	EPA 8021B	10-28-16	11-1-16	
m,p-Xylene	**ND**	0.055	EPA 8021B	10-28-16	11-1-16	
o-Xylene	**ND**	0.055	EPA 8021B	10-28-16	11-1-16	
Gasoline	**ND**	5.5	NWTPH-Gx	10-28-16	11-1-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*89*	*63-124*				

Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

NWTPH-Gx/BTEX
QUALITY CONTROL

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1028S1					
Benzene	**ND**	0.020	EPA 8021B	10-28-16	10-28-16	
Toluene	**ND**	0.050	EPA 8021B	10-28-16	10-28-16	
Ethyl Benzene	**ND**	0.050	EPA 8021B	10-28-16	10-28-16	
m,p-Xylene	**ND**	0.050	EPA 8021B	10-28-16	10-28-16	
o-Xylene	**ND**	0.050	EPA 8021B	10-28-16	10-28-16	
Gasoline	**ND**	5.0	NWTPH-Gx	10-28-16	10-28-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*90*	*63-124*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	10-293-16										
	ORIG	DUP									
Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Toluene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Ethyl Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
m,p-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
o-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*100*	*95*	*63-124*			
SPIKE BLANKS											
Laboratory ID:	SB1028S1										
	SB	SBD	SB	SBD		SB	SBD				
Benzene	**0.929**	**0.914**	1.00	1.00		**93**	**91**	70-124	2	12	
Toluene	**0.935**	**0.927**	1.00	1.00		**94**	**93**	73-119	1	12	
Ethyl Benzene	**0.953**	**0.942**	1.00	1.00		**95**	**94**	74-117	1	12	
m,p-Xylene	**0.905**	**0.907**	1.00	1.00		**91**	**91**	75-117	0	13	
o-Xylene	**0.943**	**0.932**	1.00	1.00		**94**	**93**	75-116	1	12	
Surrogate:											
Fluorobenzene						*95*	*91*	*63-124*			

Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

NWTPH-Dx

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Soil Sample 1**					
Laboratory ID:	10-295-01					
Diesel Range Organics	**ND**	550	NWTPH-Dx	10-28-16	10-28-16	U1
Lube Oil	**1900**	56	NWTPH-Dx	10-28-16	10-28-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*84*	*50-150*				
Client ID:	**Soil Sample 2**					
Laboratory ID:	10-295-02					
Diesel Range Organics	**ND**	46	NWTPH-Dx	10-28-16	10-28-16	U1
Lube Oil Range Organics	**220**	70	NWTPH-Dx	10-28-16	10-28-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*107*	*50-150*				
Client ID:	**Soil Sample 3**					
Laboratory ID:	10-295-03					
Diesel Range Organics	**ND**	6000	NWTPH-Dx	10-28-16	10-31-16	U1
Lube Oil	**31000**	1100	NWTPH-Dx	10-28-16	10-31-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*---*	*50-150*				S
Client ID:	**SS 4**					
Laboratory ID:	10-295-04					
Diesel Range Organics	**ND**	30	NWTPH-Dx	10-28-16	10-28-16	
Lube Oil Range Organics	**60**	59	NWTPH-Dx	10-28-16	10-28-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*99*	*50-150*				

Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

NWTPH-Dx
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1028S1					
Diesel Range Organics	**ND**	25	NWTPH-Dx	10-28-16	10-28-16	
Lube Oil Range Organics	**ND**	50	NWTPH-Dx	10-28-16	10-28-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*97*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	10-295-01									
	ORIG	DUP								
Diesel Range	**ND**	**ND**	NA	NA		NA	NA	NA	NA	U1
Lube Oil	**1670**	**1670**	NA	NA		NA	NA	0	NA	
Surrogate:										
o-Terphenyl						*84* *100*	*50-150*			

Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

SEMIVOLATILES EPA 8270D/SIM
page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Soil Sample 1**					
Laboratory ID:	10-295-01					
n-Nitrosodimethylamine	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Pyridine	**ND**	0.37	EPA 8270D	11-2-16	11-3-16	
Phenol	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Aniline	**ND**	0.19	EPA 8270D	11-2-16	11-3-16	
bis(2-Chloroethyl)ether	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2-Chlorophenol	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
1,3-Dichlorobenzene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
1,4-Dichlorobenzene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Benzyl alcohol	**ND**	0.19	EPA 8270D	11-2-16	11-3-16	
1,2-Dichlorobenzene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2-Methylphenol (o-Cresol)	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
bis(2-Chloroisopropyl)ether	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
n-Nitroso-di-n-propylamine	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Hexachloroethane	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Nitrobenzene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Isophorone	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2-Nitrophenol	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2,4-Dimethylphenol	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
bis(2-Chloroethoxy)methane	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2,4-Dichlorophenol	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
1,2,4-Trichlorobenzene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Naphthalene	**ND**	0.0075	EPA 8270D/SIM	11-2-16	11-3-16	
4-Chloroaniline	**ND**	0.19	EPA 8270D	11-2-16	11-3-16	
Hexachlorobutadiene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
4-Chloro-3-methylphenol	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2-Methylnaphthalene	**0.0099**	0.0075	EPA 8270D/SIM	11-2-16	11-3-16	
1-Methylnaphthalene	**ND**	0.0075	EPA 8270D/SIM	11-2-16	11-3-16	
Hexachlorocyclopentadiene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2,4,6-Trichlorophenol	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2,3-Dichloroaniline	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2,4,5-Trichlorophenol	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2-Chloronaphthalene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2-Nitroaniline	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
1,4-Dinitrobenzene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Dimethylphthalate	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
1,3-Dinitrobenzene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2,6-Dinitrotoluene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
1,2-Dinitrobenzene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Acenaphthylene	**ND**	0.0075	EPA 8270D/SIM	11-2-16	11-3-16	
3-Nitroaniline	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	

Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

SEMIVOLATILES EPA 8270D/SIM
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Soil Sample 1**					
Laboratory ID:	10-295-01					
2,4-Dinitrophenol	**ND**	0.19	EPA 8270D	11-2-16	11-3-16	
Acenaphthene	**ND**	0.0075	EPA 8270D/SIM	11-2-16	11-3-16	
4-Nitrophenol	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2,4-Dinitrotoluene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Dibenzofuran	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2,3,5,6-Tetrachlorophenol	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
2,3,4,6-Tetrachlorophenol	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Diethylphthalate	**ND**	0.19	EPA 8270D	11-2-16	11-3-16	
4-Chlorophenyl-phenylether	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
4-Nitroaniline	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Fluorene	**0.0088**	0.0075	EPA 8270D/SIM	11-2-16	11-3-16	
4,6-Dinitro-2-methylphenol	**ND**	0.19	EPA 8270D	11-2-16	11-3-16	
n-Nitrosodiphenylamine	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
1,2-Diphenylhydrazine	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
4-Bromophenyl-phenylether	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Hexachlorobenzene	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Pentachlorophenol	**ND**	0.19	EPA 8270D	11-2-16	11-3-16	
Phenanthrene	**0.014**	0.0075	EPA 8270D/SIM	11-2-16	11-3-16	
Anthracene	**ND**	0.0075	EPA 8270D/SIM	11-2-16	11-3-16	
Carbazole	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Di-n-butylphthalate	**ND**	0.19	EPA 8270D	11-2-16	11-3-16	
Fluoranthene	**0.011**	0.0075	EPA 8270D/SIM	11-2-16	11-3-16	
Benzidine	**ND**	0.37	EPA 8270D	11-2-16	11-3-16	
Pyrene	**0.018**	0.0075	EPA 8270D/SIM	11-2-16	11-3-16	
Butylbenzylphthalate	**0.053**	0.037	EPA 8270D	11-2-16	11-3-16	
bis-2-Ethylhexyladipate	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
3,3'-Dichlorobenzidine	**ND**	0.19	EPA 8270D	11-2-16	11-3-16	
Benzo[a]anthracene	**ND**	0.015	EPA 8270D/SIM	11-2-16	11-4-16	
Chrysene	**ND**	0.015	EPA 8270D/SIM	11-2-16	11-4-16	
bis(2-Ethylhexyl)phthalate	**0.26**	0.037	EPA 8270D	11-2-16	11-3-16	
Di-n-octylphthalate	**ND**	0.037	EPA 8270D	11-2-16	11-3-16	
Benzo[b]fluoranthene	**ND**	0.015	EPA 8270D/SIM	11-2-16	11-4-16	
Benzo(j,k)fluoranthene	**ND**	0.015	EPA 8270D/SIM	11-2-16	11-4-16	
Benzo[a]pyrene	**ND**	0.015	EPA 8270D/SIM	11-2-16	11-4-16	
Indeno[1,2,3-cd]pyrene	**ND**	0.015	EPA 8270D/SIM	11-2-16	11-4-16	
Dibenz[a,h]anthracene	**ND**	0.015	EPA 8270D/SIM	11-2-16	11-4-16	
Benzo[g,h,i]perylene	**ND**	0.015	EPA 8270D/SIM	11-2-16	11-4-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*51*	*18 - 109*				
Phenol-d6	*63*	*25 - 111*				
Nitrobenzene-d5	*64*	*22 - 113*				
2-Fluorobiphenyl	*82*	*30 - 114*				
2,4,6-Tribromophenol	*88*	*22 - 116*				
Terphenyl-d14	*78*	*33 - 114*				

Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Soil Sample 2**					
Laboratory ID:	10-295-02					
n-Nitrosodimethylamine	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Pyridine	**ND**	0.46	EPA 8270D	11-2-16	11-3-16	
Phenol	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Aniline	**ND**	0.23	EPA 8270D	11-2-16	11-3-16	
bis(2-Chloroethyl)ether	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2-Chlorophenol	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
1,3-Dichlorobenzene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
1,4-Dichlorobenzene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Benzyl alcohol	**0.30**	0.23	EPA 8270D	11-2-16	11-3-16	
1,2-Dichlorobenzene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2-Methylphenol (o-Cresol)	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
bis(2-Chloroisopropyl)ether	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
n-Nitroso-di-n-propylamine	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Hexachloroethane	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Nitrobenzene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Isophorone	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2-Nitrophenol	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2,4-Dimethylphenol	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
bis(2-Chloroethoxy)methane	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2,4-Dichlorophenol	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
1,2,4-Trichlorobenzene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Naphthalene	**0.044**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
4-Chloroaniline	**ND**	0.23	EPA 8270D	11-2-16	11-3-16	
Hexachlorobutadiene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
4-Chloro-3-methylphenol	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2-Methylnaphthalene	**0.026**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
1-Methylnaphthalene	**0.014**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Hexachlorocyclopentadiene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2,4,6-Trichlorophenol	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2,3-Dichloroaniline	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2,4,5-Trichlorophenol	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2-Chloronaphthalene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2-Nitroaniline	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
1,4-Dinitrobenzene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Dimethylphthalate	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
1,3-Dinitrobenzene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2,6-Dinitrotoluene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
1,2-Dinitrobenzene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Acenaphthylene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
3-Nitroaniline	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Soil Sample 2**					
Laboratory ID:	10-295-02					
2,4-Dinitrophenol	**ND**	0.23	EPA 8270D	11-2-16	11-3-16	
Acenaphthene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
4-Nitrophenol	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2,4-Dinitrotoluene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Dibenzofuran	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2,3,5,6-Tetrachlorophenol	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
2,3,4,6-Tetrachlorophenol	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Diethylphthalate	**ND**	0.23	EPA 8270D	11-2-16	11-3-16	
4-Chlorophenyl-phenylether	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
4-Nitroaniline	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Fluorene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
4,6-Dinitro-2-methylphenol	**ND**	0.23	EPA 8270D	11-2-16	11-3-16	
n-Nitrosodiphenylamine	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
1,2-Diphenylhydrazine	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
4-Bromophenyl-phenylether	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Hexachlorobenzene	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Pentachlorophenol	**ND**	0.23	EPA 8270D	11-2-16	11-3-16	
Phenanthrene	**0.012**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Anthracene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Carbazole	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Di-n-butylphthalate	**ND**	0.23	EPA 8270D	11-2-16	11-3-16	
Fluoranthene	**0.0098**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Benzidine	**ND**	0.46	EPA 8270D	11-2-16	11-3-16	
Pyrene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Butylbenzylphthalate	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
bis-2-Ethylhexyladipate	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
3,3'-Dichlorobenzidine	**ND**	0.23	EPA 8270D	11-2-16	11-3-16	
Benzo[a]anthracene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Chrysene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
bis(2-Ethylhexyl)phthalate	**0.059**	0.046	EPA 8270D	11-2-16	11-3-16	
Di-n-octylphthalate	**ND**	0.046	EPA 8270D	11-2-16	11-3-16	
Benzo[b]fluoranthene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Benzo(j,k)fluoranthene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Benzo[a]pyrene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Indeno[1,2,3-cd]pyrene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Dibenz[a,h]anthracene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Benzo[g,h,i]perylene	**ND**	0.0093	EPA 8270D/SIM	11-2-16	11-3-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*28*	*18 - 109*				
Phenol-d6	*29*	*25 - 111*				
Nitrobenzene-d5	*49*	*22 - 113*				
2-Fluorobiphenyl	*57*	*30 - 114*				
2,4,6-Tribromophenol	*51*	*22 - 116*				
Terphenyl-d14	*57*	*33 - 114*				

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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Soil Sample 3**					
Laboratory ID:	10-295-03					
n-Nitrosodimethylamine	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Pyridine	**ND**	1.8	EPA 8270D	11-2-16	11-4-16	
Phenol	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Aniline	**ND**	0.92	EPA 8270D	11-2-16	11-4-16	
bis(2-Chloroethyl)ether	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2-Chlorophenol	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
1,3-Dichlorobenzene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
1,4-Dichlorobenzene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Benzyl alcohol	**ND**	0.92	EPA 8270D	11-2-16	11-4-16	
1,2-Dichlorobenzene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2-Methylphenol (o-Cresol)	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
bis(2-Chloroisopropyl)ether	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
n-Nitroso-di-n-propylamine	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Hexachloroethane	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Nitrobenzene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Isophorone	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2-Nitrophenol	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2,4-Dimethylphenol	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
bis(2-Chloroethoxy)methane	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2,4-Dichlorophenol	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
1,2,4-Trichlorobenzene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Naphthalene	**0.011**	0.0074	EPA 8270D/SIM	11-2-16	11-3-16	
4-Chloroaniline	**ND**	0.92	EPA 8270D	11-2-16	11-4-16	
Hexachlorobutadiene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
4-Chloro-3-methylphenol	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2-Methylnaphthalene	**0.042**	0.0074	EPA 8270D/SIM	11-2-16	11-3-16	
1-Methylnaphthalene	**0.030**	0.0074	EPA 8270D/SIM	11-2-16	11-3-16	
Hexachlorocyclopentadiene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2,4,6-Trichlorophenol	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2,3-Dichloroaniline	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2,4,5-Trichlorophenol	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2-Chloronaphthalene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2-Nitroaniline	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
1,4-Dinitrobenzene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Dimethylphthalate	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
1,3-Dinitrobenzene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2,6-Dinitrotoluene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
1,2-Dinitrobenzene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Acenaphthylene	**ND**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
3-Nitroaniline	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Soil Sample 3**					
Laboratory ID:	10-295-03					
2,4-Dinitrophenol	**ND**	0.92	EPA 8270D	11-2-16	11-4-16	
Acenaphthene	**ND**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
4-Nitrophenol	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2,4-Dinitrotoluene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Dibenzofuran	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2,3,5,6-Tetrachlorophenol	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
2,3,4,6-Tetrachlorophenol	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Diethylphthalate	**ND**	0.92	EPA 8270D	11-2-16	11-4-16	
4-Chlorophenyl-phenylether	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
4-Nitroaniline	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Fluorene	**0.15**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
4,6-Dinitro-2-methylphenol	**ND**	0.92	EPA 8270D	11-2-16	11-4-16	
n-Nitrosodiphenylamine	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
1,2-Diphenylhydrazine	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
4-Bromophenyl-phenylether	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Hexachlorobenzene	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Pentachlorophenol	**ND**	0.92	EPA 8270D	11-2-16	11-4-16	
Phenanthrene	**ND**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
Anthracene	**ND**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
Carbazole	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Di-n-butylphthalate	**ND**	0.92	EPA 8270D	11-2-16	11-4-16	
Fluoranthene	**0.18**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
Benzidine	**ND**	1.8	EPA 8270D	11-2-16	11-4-16	
Pyrene	**0.30**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
Butylbenzylphthalate	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
bis-2-Ethylhexyladipate	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
3,3'-Dichlorobenzidine	**ND**	0.92	EPA 8270D	11-2-16	11-4-16	
Benzo[a]anthracene	**0.21**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
Chrysene	**ND**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
bis(2-Ethylhexyl)phthalate	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Di-n-octylphthalate	**ND**	0.18	EPA 8270D	11-2-16	11-4-16	
Benzo[b]fluoranthene	**ND**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
Benzo(j,k)fluoranthene	**ND**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
Benzo[a]pyrene	**0.12**	0.037	EPA 8270D/SIM	11-2-16	11-4-16	
Indeno[1,2,3-cd]pyrene	**0.078**	0.037	EPA 8270D/SIM	11-2-16	11-4-16	
Dibenz[a,h]anthracene	**ND**	0.037	EPA 8270D/SIM	11-2-16	11-4-16	
Benzo[g,h,i]perylene	**0.15**	0.15	EPA 8270D/SIM	11-2-16	11-4-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*53*	*18 - 109*				
Phenol-d6	*62*	*25 - 111*				
Nitrobenzene-d5	*67*	*22 - 113*				
2-Fluorobiphenyl	*68*	*30 - 114*				
2,4,6-Tribromophenol	*76*	*22 - 116*				
Terphenyl-d14	*38*	*33 - 114*				

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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS 4**					
Laboratory ID:	10-295-04					
n-Nitrosodimethylamine	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Pyridine	**ND**	0.40	EPA 8270D	11-2-16	11-7-16	
Phenol	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Aniline	**ND**	0.20	EPA 8270D	11-2-16	11-7-16	
bis(2-Chloroethyl)ether	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2-Chlorophenol	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
1,3-Dichlorobenzene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
1,4-Dichlorobenzene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Benzyl alcohol	**ND**	0.20	EPA 8270D	11-2-16	11-7-16	
1,2-Dichlorobenzene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2-Methylphenol (o-Cresol)	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
bis(2-Chloroisopropyl)ether	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
n-Nitroso-di-n-propylamine	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Hexachloroethane	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Nitrobenzene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Isophorone	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2-Nitrophenol	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2,4-Dimethylphenol	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
bis(2-Chloroethoxy)methane	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2,4-Dichlorophenol	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
1,2,4-Trichlorobenzene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Naphthalene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
4-Chloroaniline	**ND**	0.20	EPA 8270D	11-2-16	11-7-16	
Hexachlorobutadiene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
4-Chloro-3-methylphenol	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2-Methylnaphthalene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
1-Methylnaphthalene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Hexachlorocyclopentadiene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2,4,6-Trichlorophenol	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2,3-Dichloroaniline	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2,4,5-Trichlorophenol	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2-Chloronaphthalene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2-Nitroaniline	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
1,4-Dinitrobenzene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Dimethylphthalate	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
1,3-Dinitrobenzene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2,6-Dinitrotoluene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
1,2-Dinitrobenzene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Acenaphthylene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
3-Nitroaniline	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	

Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

SEMIVOLATILES EPA 8270D/SIM
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS 4**					
Laboratory ID:	10-295-04					
2,4-Dinitrophenol	**ND**	0.20	EPA 8270D	11-2-16	11-7-16	
Acenaphthene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
4-Nitrophenol	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2,4-Dinitrotoluene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Dibenzofuran	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2,3,5,6-Tetrachlorophenol	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
2,3,4,6-Tetrachlorophenol	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Diethylphthalate	**ND**	0.20	EPA 8270D	11-2-16	11-7-16	
4-Chlorophenyl-phenylether	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
4-Nitroaniline	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Fluorene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
4,6-Dinitro-2-methylphenol	**ND**	0.20	EPA 8270D	11-2-16	11-7-16	
n-Nitrosodiphenylamine	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
1,2-Diphenylhydrazine	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
4-Bromophenyl-phenylether	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Hexachlorobenzene	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Pentachlorophenol	**ND**	0.20	EPA 8270D	11-2-16	11-7-16	
Phenanthrene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Anthracene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Carbazole	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Di-n-butylphthalate	**ND**	0.20	EPA 8270D	11-2-16	11-7-16	
Fluoranthene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Benzidine	**ND**	0.40	EPA 8270D	11-2-16	11-7-16	
Pyrene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Butylbenzylphthalate	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
bis-2-Ethylhexyladipate	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
3,3'-Dichlorobenzidine	**ND**	0.20	EPA 8270D	11-2-16	11-7-16	
Benzo[a]anthracene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Chrysene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
bis(2-Ethylhexyl)phthalate	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Di-n-octylphthalate	**ND**	0.040	EPA 8270D	11-2-16	11-7-16	
Benzo[b]fluoranthene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Benzo(j,k)fluoranthene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Benzo[a]pyrene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Indeno[1,2,3-cd]pyrene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Dibenz[a,h]anthracene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Benzo[g,h,i]perylene	**ND**	0.0079	EPA 8270D/SIM	11-2-16	11-7-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*1.6*	*18 - 109*				Q
Phenol-d6	*75*	*25 - 111*				
Nitrobenzene-d5	*78*	*22 - 113*				
2-Fluorobiphenyl	*83*	*30 - 114*				
2,4,6-Tribromophenol	*92*	*22 - 116*				
Terphenyl-d14	*85*	*33 - 114*				

Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

SEMIVOLATILES EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1102S1					
n-Nitrosodimethylamine	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Pyridine	**ND**	0.33	EPA 8270D	11-2-16	11-3-16	
Phenol	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Aniline	**ND**	0.17	EPA 8270D	11-2-16	11-3-16	
bis(2-Chloroethyl)ether	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2-Chlorophenol	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
1,3-Dichlorobenzene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
1,4-Dichlorobenzene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Benzyl alcohol	**ND**	0.17	EPA 8270D	11-2-16	11-3-16	
1,2-Dichlorobenzene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2-Methylphenol (o-Cresol)	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
bis(2-Chloroisopropyl)ether	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
n-Nitroso-di-n-propylamine	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Hexachloroethane	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Nitrobenzene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Isophorone	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2-Nitrophenol	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2,4-Dimethylphenol	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
bis(2-Chloroethoxy)methane	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2,4-Dichlorophenol	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
1,2,4-Trichlorobenzene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Naphthalene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
4-Chloroaniline	**ND**	0.17	EPA 8270D	11-2-16	11-3-16	
Hexachlorobutadiene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
4-Chloro-3-methylphenol	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Hexachlorocyclopentadiene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2,4,6-Trichlorophenol	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2,3-Dichloroaniline	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2,4,5-Trichlorophenol	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2-Chloronaphthalene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2-Nitroaniline	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
1,4-Dinitrobenzene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Dimethylphthalate	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
1,3-Dinitrobenzene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2,6-Dinitrotoluene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
1,2-Dinitrobenzene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Acenaphthylene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
3-Nitroaniline	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	

Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

SEMIVOLATILES EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1102S1					
2,4-Dinitrophenol	**ND**	0.17	EPA 8270D	11-2-16	11-3-16	
Acenaphthene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
4-Nitrophenol	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2,4-Dinitrotoluene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Dibenzofuran	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2,3,5,6-Tetrachlorophenol	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
2,3,4,6-Tetrachlorophenol	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Diethylphthalate	**ND**	0.17	EPA 8270D	11-2-16	11-3-16	
4-Chlorophenyl-phenylether	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
4-Nitroaniline	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Fluorene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
4,6-Dinitro-2-methylphenol	**ND**	0.17	EPA 8270D	11-2-16	11-3-16	
n-Nitrosodiphenylamine	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
1,2-Diphenylhydrazine	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
4-Bromophenyl-phenylether	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Hexachlorobenzene	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Pentachlorophenol	**ND**	0.17	EPA 8270D	11-2-16	11-3-16	
Phenanthrene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Anthracene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Carbazole	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Di-n-butylphthalate	**ND**	0.17	EPA 8270D	11-2-16	11-3-16	
Fluoranthene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Benzidine	**ND**	0.33	EPA 8270D	11-2-16	11-3-16	
Pyrene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Butylbenzylphthalate	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
bis-2-Ethylhexyladipate	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
3,3'-Dichlorobenzidine	**ND**	0.17	EPA 8270D	11-2-16	11-3-16	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Chrysene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
bis(2-Ethylhexyl)phthalate	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Di-n-octylphthalate	**ND**	0.033	EPA 8270D	11-2-16	11-3-16	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Benzo(j,k)fluoranthene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Indeno[1,2,3-cd]pyrene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Benzo[g,h,i]perylene	**ND**	0.0067	EPA 8270D/SIM	11-2-16	11-3-16	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*69*	*18 - 109*				
Phenol-d6	*70*	*25 - 111*				
Nitrobenzene-d5	*72*	*22 - 113*				
2-Fluorobiphenyl	*74*	*30 - 114*				
2,4,6-Tribromophenol	*76*	*22 - 116*				
Terphenyl-d14	*81*	*33 - 114*				

Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

SEMIVOLATILES EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1102S1									
	SB	SBD	SB	SBD	SB	SBD				
Phenol	**1.07**	**1.02**	1.33	1.33	80	77	37 - 107	5	39	
2-Chlorophenol	**1.08**	**1.01**	1.33	1.33	81	76	36 - 107	7	40	
1,4-Dichlorobenzene	**0.503**	**0.485**	0.667	0.667	75	73	28 - 108	4	41	
n-Nitroso-di-n-propylamine	**0.488**	**0.465**	0.667	0.667	73	70	28 - 113	5	33	
1,2,4-Trichlorobenzene	**0.505**	**0.489**	0.667	0.667	76	73	33 - 106	3	38	
4-Chloro-3-methylphenol	**1.15**	**1.11**	1.33	1.33	86	83	52 - 106	4	30	
Acenaphthene	**0.525**	**0.510**	0.667	0.667	79	76	52 - 90	3	30	
4-Nitrophenol	**1.44**	**1.48**	1.33	1.33	108	111	30 - 109	3	32	I
2,4-Dinitrotoluene	**0.576**	**0.569**	0.667	0.667	86	85	50 - 101	1	32	
Pentachlorophenol	**0.981**	**0.855**	1.33	1.33	74	64	21 - 114	14	40	
Pyrene	**0.590**	**0.592**	0.667	0.667	88	89	52 - 104	0	30	
Surrogate:										
2-Fluorophenol					*79*	*75*	*18 - 109*			
Phenol-d6					*84*	*78*	*25 - 111*			
Nitrobenzene-d5					*81*	*76*	*22 - 113*			
2-Fluorobiphenyl					*87*	*80*	*30 - 114*			
2,4,6-Tribromophenol					*90*	*94*	*22 - 116*			
Terphenyl-d14					*95*	*92*	*33 - 114*			

Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

TOTAL METALS
EPA 6010C/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-295-01					
Client ID:	**Soil Sample 1**					
Arsenic	**ND**	11	6010C	10-27-16	10-27-16	
Barium	**79**	2.8	6010C	10-27-16	10-27-16	
Cadmium	**ND**	0.56	6010C	10-27-16	10-27-16	
Chromium	**48**	0.56	6010C	10-27-16	10-27-16	
Lead	**6.2**	5.6	6010C	10-27-16	10-27-16	
Mercury	**ND**	0.28	7471B	10-27-16	10-27-16	
Selenium	**ND**	11	6010C	10-27-16	10-27-16	
Silver	**ND**	1.1	6010C	10-27-16	10-27-16	
Lab ID:	10-295-02					
Client ID:	**Soil Sample 2**					
Arsenic	**35**	14	6010C	10-27-16	10-27-16	
Barium	**170**	3.5	6010C	10-27-16	10-27-16	
Cadmium	**0.77**	0.70	6010C	10-27-16	10-27-16	
Chromium	**45**	0.70	6010C	10-27-16	10-27-16	
Lead	**37**	7.0	6010C	10-27-16	10-27-16	
Mercury	**ND**	0.35	7471B	10-27-16	10-27-16	
Selenium	**ND**	14	6010C	10-27-16	10-27-16	
Silver	**ND**	1.4	6010C	10-27-16	10-27-16	

Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

TOTAL METALS
EPA 6010C/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-295-03					
Client ID:	**Soil Sample 3**					
Arsenic	**ND**	11	6010C	10-27-16	10-27-16	
Barium	**55**	2.8	6010C	10-27-16	10-27-16	
Cadmium	**ND**	0.55	6010C	10-27-16	10-27-16	
Chromium	**22**	0.55	6010C	10-27-16	10-27-16	
Lead	**45**	5.5	6010C	10-27-16	10-27-16	
Mercury	**ND**	0.28	7471B	10-27-16	10-27-16	
Selenium	**ND**	11	6010C	10-27-16	10-27-16	
Silver	**ND**	1.1	6010C	10-27-16	10-27-16	
Lab ID:	10-295-04					
Client ID:	**SS 4**					
Arsenic	**ND**	12	6010C	10-27-16	10-27-16	
Barium	**73**	3.0	6010C	10-27-16	10-27-16	
Cadmium	**ND**	0.59	6010C	10-27-16	10-27-16	
Chromium	**42**	0.59	6010C	10-27-16	10-27-16	
Lead	**ND**	5.9	6010C	10-27-16	10-27-16	
Mercury	**ND**	0.30	7471B	10-27-16	10-27-16	
Selenium	**ND**	12	6010C	10-27-16	10-27-16	
Silver	**ND**	1.2	6010C	10-27-16	10-27-16	

Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

TOTAL METALS
EPA 6010C/7471B
METHOD BLANK QUALITY CONTROL

Date Extracted: 10-27-16
Date Analyzed: 10-27-16

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB1027SM1,MB1027SM2&MB1027S1

Analyte	Method	Result	PQL
Arsenic	6010C	**ND**	10
Barium	6010C	**ND**	2.5
Cadmium	6010C	**ND**	0.50
Chromium	6010C	**ND**	0.50
Lead	6010C	**ND**	5.0
Mercury	7471B	**ND**	0.25
Selenium	6010C	**ND**	10
Silver	6010C	**ND**	1.0

Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

TOTAL METALS
EPA 6010C/7471B
DUPLICATE QUALITY CONTROL

Date Extracted: 10-27-16
Date Analyzed: 10-27-16

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-289-02

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	10	
Barium	**47.1**	**46.5**	1	2.5	
Cadmium	**ND**	**ND**	NA	0.50	
Chromium	**50.1**	**48.5**	3	0.50	
Lead	**ND**	**ND**	NA	5.0	
Mercury	**ND**	**ND**	NA	0.25	
Selenium	**ND**	**ND**	NA	10	
Silver	**ND**	**ND**	NA	1.0	

Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

TOTAL METALS
EPA 6010C/7471B
MS/MSD QUALITY CONTROL

Date Extracted: 10-27-16
Date Analyzed: 10-27-16

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-289-02

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**92.3**	92	**91.8**	92	0	
Barium	100	**148**	101	**142**	95	4	
Cadmium	50.0	**48.7**	97	**48.3**	97	1	
Chromium	100	**135**	85	**137**	86	1	
Lead	250	**265**	106	**250**	100	6	
Mercury	0.500	**0.535**	107	**0.542**	108	1	
Selenium	100	**92.3**	92	**91.9**	92	0	
Silver	25.0	**20.8**	83	**21.0**	84	1	

Date of Report: November 8, 2016
Samples Submitted: October 26, 2016
Laboratory Reference: 1610-295
Project: SR 509 - 12th Street

% MOISTURE

Date Analyzed: 10-27-16

Client ID	Lab ID	% Moisture
Soil Sample 1	10-295-01	11
Soil Sample 2	10-295-02	28
Soil Sample 3	10-295-03	10
SS 4	10-295-04	16

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

Chain of Custody

Page (of)

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Laboratory Number: 10-295

Company: WSDOT
Project Number:
Project Name: SR509 - 12TH St
Project Manager: PAT SVOBODA
Sampled by: WSDOT

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☑ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs) SVOCs	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A							% Moisture
1	Soil Sample 1	10/25/16	3:10	SOIL	3		X		X			X						X				NO						X
2	Soil Sample 2	10/25/16	3:20																			DX						X
3	Soil Sample 3	10/25/16	3:30																									X
4	SS 4	10/25/16	3:45																									X

	Signature	Company	Date	Time
Relinquished	Patti Svoboda	WSDOT	10/26/2016	8:15A
Received	Diane Wyatt	SPEEDY	10-26-16	8:15A
Relinquished	Diane Wyatt	SPEEDY	10-26-16	11:10A
Received		ONE	10/26/16	1110
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☐ Level IV ☐ Electronic Data Deliverables (EDDs) ☐ _____

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

March 27, 2018

Patrick Svoboda
WSDOT
15700 Dayton Avenue North
NB82-138
P.O. Box 330310
Seattle, WA 98133-9710

Re: Analytical Data for Project SR509 Foreman Property
Laboratory Reference No. 1803-152

Dear Pat:

Enclosed are the analytical results and associated quality control data for samples submitted on March 16, 2018.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

Case Narrative

Samples were collected on March 15, 2018 and received by the laboratory on March 16, 2018. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Semivolatiles EPA 8270D/SIM Analysis

The spike blank duplicate had one recovery slightly above control limits. The samples were non-detect for this analyte, further action was taken.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

NWTPH-Gx

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS1 N A'**					
Laboratory ID:	03-152-01					
Gasoline	**ND**	7.3	NWTPH-Gx	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*101*	*66-130*				
Client ID:	**SS2**					
Laboratory ID:	03-152-02					
Gasoline	**ND**	12	NWTPH-Gx	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*97*	*66-130*				
Client ID:	**SS3**					
Laboratory ID:	03-152-03					
Gasoline	**ND**	5.4	NWTPH-Gx	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*95*	*66-130*				
Client ID:	**SS4**					
Laboratory ID:	03-152-04					
Gasoline	**ND**	10	NWTPH-Gx	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*97*	*66-130*				

Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

NWTPH-Gx
QUALITY CONTROL

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0319S1					
Gasoline	**ND**	5.0	NWTPH-Gx	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*86*	*66-130*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	03-145-01										
	ORIG	DUP									
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*95*	*97*	*66-130*			

Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

NWTPH-Dx

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS1 N A'**					
Laboratory ID:	03-152-01					
Diesel Range Organics	**ND**	35	NWTPH-Dx	3-19-18	3-19-18	
Lube Oil Range Organics	**82**	71	NWTPH-Dx	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*92*	*50-150*				
Client ID:	**SS2**					
Laboratory ID:	03-152-02					
Diesel Range Organics	**58**	34	NWTPH-Dx	3-19-18	3-19-18	N
Lube Oil Range Organics	**370**	68	NWTPH-Dx	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*86*	*50-150*				
Client ID:	**SS3**					
Laboratory ID:	03-152-03					
Diesel Range Organics	**ND**	60	NWTPH-Dx	3-19-18	3-20-18	
Lube Oil	**470**	120	NWTPH-Dx	3-19-18	3-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*89*	*50-150*				
Client ID:	**SS4**					
Laboratory ID:	03-152-04					
Diesel Range Organics	**ND**	33	NWTPH-Dx	3-19-18	3-19-18	U1
Lube Oil	**260**	61	NWTPH-Dx	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*79*	*50-150*				

Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

NWTPH-Dx
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0319S1					
Diesel Range Organics	**ND**	25	NWTPH-Dx	3-19-18	3-19-18	
Lube Oil Range Organics	**ND**	50	NWTPH-Dx	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*97*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	03-145-01										
	ORIG	DUP									
Diesel Range Organics	**64.2**	**42.0**	NA	NA		NA		NA	42	NA	
Lube Oil Range Organics	**188**	**137**	NA	NA		NA		NA	31	NA	
Surrogate:											
o-Terphenyl						*88*	*81*	*50-150*			

Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

VOLATILES EPA 8260C
page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS1 N A'**					
Laboratory ID:	03-152-01					
Dichlorodifluoromethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Chloromethane	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
Vinyl Chloride	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Bromomethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Chloroethane	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
Trichlorofluoromethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloroethene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Acetone	0.023	0.0054	EPA 8260C	3-19-18	3-19-18	
Iodomethane	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
Carbon Disulfide	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Methylene Chloride	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Vinyl Acetate	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
2,2-Dichloropropane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
2-Butanone	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
Bromochloromethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Chloroform	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Carbon Tetrachloride	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloropropene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Benzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2-Dichloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Trichloroethene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2-Dichloropropane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Dibromomethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Bromodichloromethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
2-Chloroethyl Vinyl Ether	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Methyl Isobutyl Ketone	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
Toluene	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	

Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

VOLATILES EPA 8260C
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS1 N A'**					
Laboratory ID:	03-152-01					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Tetrachloroethene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,3-Dichloropropane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
2-Hexanone	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
Dibromochloromethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2-Dibromoethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Chlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Ethylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
m,p-Xylene	ND	0.0022	EPA 8260C	3-19-18	3-19-18	
o-Xylene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Styrene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Bromoform	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
Isopropylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Bromobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
n-Propylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
2-Chlorotoluene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
4-Chlorotoluene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,3,5-Trimethylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
tert-Butylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2,4-Trimethylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
sec-Butylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
p-Isopropyltoluene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
n-Butylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2-Dibromo-3-chloropropane	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Hexachlorobutadiene	ND	0.0054	EPA 8260C	3-19-18	3-19-18	
Naphthalene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*120*	*75-131*				
Toluene-d8	*119*	*83-130*				
4-Bromofluorobenzene	*115*	*78-130*				

Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

VOLATILES EPA 8260C
page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS2**					
Laboratory ID:	03-152-02					
Dichlorodifluoromethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Chloromethane	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
Vinyl Chloride	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Bromomethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Chloroethane	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
Trichlorofluoromethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloroethene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Acetone	0.0075	0.0063	EPA 8260C	3-19-18	3-19-18	
Iodomethane	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
Carbon Disulfide	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Methylene Chloride	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
(trans) 1,2-Dichloroethene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Methyl t-Butyl Ether	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloroethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Vinyl Acetate	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
2,2-Dichloropropane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
(cis) 1,2-Dichloroethene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
2-Butanone	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
Bromochloromethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Chloroform	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,1,1-Trichloroethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Carbon Tetrachloride	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloropropene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Benzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,2-Dichloroethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Trichloroethene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,2-Dichloropropane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Dibromomethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Bromodichloromethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
2-Chloroethyl Vinyl Ether	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
(cis) 1,3-Dichloropropene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Methyl Isobutyl Ketone	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
Toluene	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
(trans) 1,3-Dichloropropene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	

Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

VOLATILES EPA 8260C
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS2**					
Laboratory ID:	03-152-02					
1,1,2-Trichloroethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Tetrachloroethene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,3-Dichloropropane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
2-Hexanone	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
Dibromochloromethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,2-Dibromoethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Chlorobenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,1,1,2-Tetrachloroethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Ethylbenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
m,p-Xylene	ND	0.0025	EPA 8260C	3-19-18	3-19-18	
o-Xylene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Styrene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Bromoform	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
Isopropylbenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Bromobenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,1,2,2-Tetrachloroethane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,2,3-Trichloropropane	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
n-Propylbenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
2-Chlorotoluene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
4-Chlorotoluene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,3,5-Trimethylbenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
tert-Butylbenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,2,4-Trimethylbenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
sec-Butylbenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,3-Dichlorobenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
p-Isopropyltoluene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,4-Dichlorobenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,2-Dichlorobenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
n-Butylbenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,2-Dibromo-3-chloropropane	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
1,2,4-Trichlorobenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Hexachlorobutadiene	ND	0.0063	EPA 8260C	3-19-18	3-19-18	
Naphthalene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
1,2,3-Trichlorobenzene	ND	0.0013	EPA 8260C	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*107*	*75-131*				
Toluene-d8	*104*	*83-130*				
4-Bromofluorobenzene	*100*	*78-130*				

Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS3**					
Laboratory ID:	03-152-03					
Dichlorodifluoromethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Chloromethane	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
Vinyl Chloride	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Bromomethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Chloroethane	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
Trichlorofluoromethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloroethene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Acetone	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
Iodomethane	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
Carbon Disulfide	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Methylene Chloride	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Vinyl Acetate	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
2,2-Dichloropropane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
2-Butanone	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
Bromochloromethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Chloroform	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Carbon Tetrachloride	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloropropene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Benzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2-Dichloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Trichloroethene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2-Dichloropropane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Dibromomethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Bromodichloromethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
2-Chloroethyl Vinyl Ether	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Methyl Isobutyl Ketone	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
Toluene	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS3**					
Laboratory ID:	03-152-03					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Tetrachloroethene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,3-Dichloropropane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
2-Hexanone	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
Dibromochloromethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2-Dibromoethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Chlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Ethylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
m,p-Xylene	ND	0.0022	EPA 8260C	3-19-18	3-19-18	
o-Xylene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Styrene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Bromoform	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
Isopropylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Bromobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
n-Propylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
2-Chlorotoluene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
4-Chlorotoluene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,3,5-Trimethylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
tert-Butylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2,4-Trimethylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
sec-Butylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
p-Isopropyltoluene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
n-Butylbenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2-Dibromo-3-chloropropane	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Hexachlorobutadiene	ND	0.0055	EPA 8260C	3-19-18	3-19-18	
Naphthalene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260C	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*123*	*75-131*				
Toluene-d8	*119*	*83-130*				
4-Bromofluorobenzene	*115*	*78-130*				

Date of Report: March 27, 2018
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Project: SR509 Foreman Property

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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS4**					
Laboratory ID:	03-152-04					
Dichlorodifluoromethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Chloromethane	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
Vinyl Chloride	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Bromomethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Chloroethane	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
Trichlorofluoromethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloroethene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Acetone	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
Iodomethane	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
Carbon Disulfide	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Methylene Chloride	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
(trans) 1,2-Dichloroethene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Methyl t-Butyl Ether	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloroethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Vinyl Acetate	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
2,2-Dichloropropane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
(cis) 1,2-Dichloroethene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
2-Butanone	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
Bromochloromethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Chloroform	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,1,1-Trichloroethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Carbon Tetrachloride	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloropropene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Benzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,2-Dichloroethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Trichloroethene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,2-Dichloropropane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Dibromomethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Bromodichloromethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
2-Chloroethyl Vinyl Ether	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
(cis) 1,3-Dichloropropene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Methyl Isobutyl Ketone	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
Toluene	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
(trans) 1,3-Dichloropropene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	

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Project: SR509 Foreman Property

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS4**					
Laboratory ID:	03-152-04					
1,1,2-Trichloroethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Tetrachloroethene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,3-Dichloropropane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
2-Hexanone	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
Dibromochloromethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,2-Dibromoethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Chlorobenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,1,1,2-Tetrachloroethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Ethylbenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
m,p-Xylene	ND	0.0032	EPA 8260C	3-19-18	3-19-18	
o-Xylene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Styrene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Bromoform	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
Isopropylbenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Bromobenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,1,2,2-Tetrachloroethane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,2,3-Trichloropropane	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
n-Propylbenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
2-Chlorotoluene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
4-Chlorotoluene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,3,5-Trimethylbenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
tert-Butylbenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,2,4-Trimethylbenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
sec-Butylbenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,3-Dichlorobenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
p-Isopropyltoluene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,4-Dichlorobenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,2-Dichlorobenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
n-Butylbenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,2-Dibromo-3-chloropropane	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
1,2,4-Trichlorobenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Hexachlorobutadiene	ND	0.0081	EPA 8260C	3-19-18	3-19-18	
Naphthalene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
1,2,3-Trichlorobenzene	ND	0.0016	EPA 8260C	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*119*	*75-131*				
Toluene-d8	*121*	*83-130*				
4-Bromofluorobenzene	*118*	*78-130*				

Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

VOLATILES by EPA 8260C
METHOD BLANK QUALITY CONTROL
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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0319S1					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Chloromethane	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
Vinyl Chloride	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Bromomethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Chloroethane	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Acetone	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
Iodomethane	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
Carbon Disulfide	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Methylene Chloride	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Vinyl Acetate	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
2-Butanone	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
Bromochloromethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Chloroform	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Benzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Trichloroethene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Dibromomethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Bromodichloromethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
Toluene	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	

Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

VOLATILES by EPA 8260C
METHOD BLANK QUALITY CONTROL
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0319S1					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Tetrachloroethene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
2-Hexanone	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
Dibromochloromethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Chlorobenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Ethylbenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
m,p-Xylene	ND	0.0020	EPA 8260C	3-19-18	3-19-18	
o-Xylene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Styrene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Bromoform	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
Isopropylbenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Bromobenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
n-Propylbenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
2-Chlorotoluene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
4-Chlorotoluene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
tert-Butylbenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
sec-Butylbenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
n-Butylbenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	3-19-18	3-19-18	
Naphthalene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	3-19-18	3-19-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*103*	*75-131*				
Toluene-d8	*102*	*83-130*				
4-Bromofluorobenzene	*103*	*78-130*				

Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

VOLATILES by EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0319S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**0.0518**	**0.0521**	0.0500	0.0500	104	104	58-126	1	20	
Benzene	**0.0538**	**0.0549**	0.0500	0.0500	108	110	72-122	2	19	
Trichloroethene	**0.0503**	**0.0497**	0.0500	0.0500	101	99	75-120	1	20	
Toluene	**0.0506**	**0.0503**	0.0500	0.0500	101	101	78-123	1	19	
Chlorobenzene	**0.0453**	**0.0456**	0.0500	0.0500	91	91	75-120	1	18	
Surrogate:										
Dibromofluoromethane					*109*	*103*	*75-131*			
Toluene-d8					*109*	*99*	*83-130*			
4-Bromofluorobenzene					*105*	*99*	*78-130*			

Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

SEMIVOLATILES EPA 8270D/SIM
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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS1 N A'**					
Laboratory ID:	03-152-01					
n-Nitrosodimethylamine	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Pyridine	**ND**	0.47	EPA 8270D	3-21-18	3-22-18	
Phenol	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Aniline	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroethyl)ether	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2-Chlorophenol	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
1,3-Dichlorobenzene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
1,4-Dichlorobenzene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Benzyl alcohol	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
1,2-Dichlorobenzene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2-Methylphenol (o-Cresol)	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroisopropyl)ether	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
n-Nitroso-di-n-propylamine	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Hexachloroethane	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Nitrobenzene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Isophorone	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2-Nitrophenol	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2,4-Dimethylphenol	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroethoxy)methane	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2,4-Dichlorophenol	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
1,2,4-Trichlorobenzene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Naphthalene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
4-Chloroaniline	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
Hexachlorobutadiene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
4-Chloro-3-methylphenol	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2-Methylnaphthalene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
1-Methylnaphthalene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Hexachlorocyclopentadiene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2,4,6-Trichlorophenol	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2,3-Dichloroaniline	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2,4,5-Trichlorophenol	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2-Chloronaphthalene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2-Nitroaniline	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
1,4-Dinitrobenzene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Dimethylphthalate	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
1,3-Dinitrobenzene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2,6-Dinitrotoluene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
1,2-Dinitrobenzene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Acenaphthylene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
3-Nitroaniline	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	

Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS1 N A'**					
Laboratory ID:	03-152-01					
2,4-Dinitrophenol	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
Acenaphthene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
4-Nitrophenol	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2,4-Dinitrotoluene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Dibenzofuran	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2,3,5,6-Tetrachlorophenol	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
2,3,4,6-Tetrachlorophenol	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Diethylphthalate	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
4-Chlorophenyl-phenylether	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
4-Nitroaniline	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Fluorene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
4,6-Dinitro-2-methylphenol	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
n-Nitrosodiphenylamine	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
1,2-Diphenylhydrazine	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
4-Bromophenyl-phenylether	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Hexachlorobenzene	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Pentachlorophenol	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
Phenanthrene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Anthracene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Carbazole	**ND**	0.047	EPA 8270D	3-21-18	3-22-18	
Di-n-butylphthalate	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
Fluoranthene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Benzidine	**ND**	0.47	EPA 8270D	3-21-18	3-22-18	
Pyrene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Butylbenzylphthalate	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
bis-2-Ethylhexyladipate	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
3,3'-Dichlorobenzidine	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
Benzo[a]anthracene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Chrysene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
bis(2-Ethylhexyl)phthalate	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
Di-n-octylphthalate	**ND**	0.24	EPA 8270D	3-21-18	3-22-18	
Benzo[b]fluoranthene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo(j,k)fluoranthene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo[a]pyrene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Indeno[1,2,3-cd]pyrene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Dibenz[a,h]anthracene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo[g,h,i]perylene	**ND**	0.0094	EPA 8270D/SIM	3-21-18	3-22-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*68*	*18 - 113*				
Phenol-d6	*71*	*19 - 119*				
Nitrobenzene-d5	*71*	*19 - 119*				
2-Fluorobiphenyl	*78*	*33 - 109*				
2,4,6-Tribromophenol	*80*	*19 - 121*				
Terphenyl-d14	*74*	*30 - 116*				

Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS2**					
Laboratory ID:	03-152-02					
n-Nitrosodimethylamine	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Pyridine	**ND**	0.46	EPA 8270D	3-21-18	3-22-18	
Phenol	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Aniline	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroethyl)ether	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2-Chlorophenol	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
1,3-Dichlorobenzene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
1,4-Dichlorobenzene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Benzyl alcohol	**2.9**	1.1	EPA 8270D	3-21-18	3-23-18	
1,2-Dichlorobenzene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2-Methylphenol (o-Cresol)	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroisopropyl)ether	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
n-Nitroso-di-n-propylamine	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Hexachloroethane	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Nitrobenzene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Isophorone	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2-Nitrophenol	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2,4-Dimethylphenol	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroethoxy)methane	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2,4-Dichlorophenol	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
1,2,4-Trichlorobenzene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Naphthalene	**0.016**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
4-Chloroaniline	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
Hexachlorobutadiene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
4-Chloro-3-methylphenol	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2-Methylnaphthalene	**ND**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
1-Methylnaphthalene	**ND**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Hexachlorocyclopentadiene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2,4,6-Trichlorophenol	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2,3-Dichloroaniline	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2,4,5-Trichlorophenol	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2-Chloronaphthalene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2-Nitroaniline	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
1,4-Dinitrobenzene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Dimethylphthalate	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
1,3-Dinitrobenzene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2,6-Dinitrotoluene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
1,2-Dinitrobenzene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Acenaphthylene	**ND**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
3-Nitroaniline	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS2**					
Laboratory ID:	03-152-02					
2,4-Dinitrophenol	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
Acenaphthene	**ND**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
4-Nitrophenol	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2,4-Dinitrotoluene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Dibenzofuran	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2,3,5,6-Tetrachlorophenol	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
2,3,4,6-Tetrachlorophenol	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Diethylphthalate	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
4-Chlorophenyl-phenylether	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
4-Nitroaniline	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Fluorene	**ND**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
4,6-Dinitro-2-methylphenol	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
n-Nitrosodiphenylamine	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
1,2-Diphenylhydrazine	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
4-Bromophenyl-phenylether	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Hexachlorobenzene	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Pentachlorophenol	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
Phenanthrene	**0.014**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Anthracene	**ND**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Carbazole	**ND**	0.046	EPA 8270D	3-21-18	3-22-18	
Di-n-butylphthalate	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
Fluoranthene	**0.028**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Benzidine	**ND**	0.46	EPA 8270D	3-21-18	3-22-18	
Pyrene	**0.023**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Butylbenzylphthalate	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
bis-2-Ethylhexyladipate	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
3,3'-Dichlorobenzidine	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
Benzo[a]anthracene	**ND**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Chrysene	**0.022**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
bis(2-Ethylhexyl)phthalate	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
Di-n-octylphthalate	**ND**	0.23	EPA 8270D	3-21-18	3-22-18	
Benzo[b]fluoranthene	**0.028**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo(j,k)fluoranthene	**ND**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo[a]pyrene	**0.012**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Indeno[1,2,3-cd]pyrene	**0.012**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Dibenz[a,h]anthracene	**ND**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo[g,h,i]perylene	**0.020**	0.0091	EPA 8270D/SIM	3-21-18	3-22-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*61*	*18 - 113*				
Phenol-d6	*67*	*19 - 119*				
Nitrobenzene-d5	*67*	*19 - 119*				
2-Fluorobiphenyl	*77*	*33 - 109*				
2,4,6-Tribromophenol	*79*	*19 - 121*				
Terphenyl-d14	*76*	*30 - 116*				

Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS3**					
Laboratory ID:	03-152-03					
n-Nitrosodimethylamine	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Pyridine	**ND**	0.40	EPA 8270D	3-21-18	3-22-18	
Phenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Aniline	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroethyl)ether	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Chlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,3-Dichlorobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,4-Dichlorobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Benzyl alcohol	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
1,2-Dichlorobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Methylphenol (o-Cresol)	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroisopropyl)ether	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
n-Nitroso-di-n-propylamine	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Hexachloroethane	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Nitrobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Isophorone	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Nitrophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,4-Dimethylphenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroethoxy)methane	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,4-Dichlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,2,4-Trichlorobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Naphthalene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
4-Chloroaniline	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Hexachlorobutadiene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
4-Chloro-3-methylphenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Methylnaphthalene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
1-Methylnaphthalene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Hexachlorocyclopentadiene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,4,6-Trichlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,3-Dichloroaniline	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,4,5-Trichlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Chloronaphthalene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Nitroaniline	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,4-Dinitrobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Dimethylphthalate	**0.12**	0.040	EPA 8270D	3-21-18	3-22-18	
1,3-Dinitrobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,6-Dinitrotoluene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,2-Dinitrobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Acenaphthylene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
3-Nitroaniline	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	

Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS3**					
Laboratory ID:	03-152-03					
2,4-Dinitrophenol	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Acenaphthene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
4-Nitrophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,4-Dinitrotoluene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Dibenzofuran	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,3,5,6-Tetrachlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,3,4,6-Tetrachlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Diethylphthalate	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
4-Chlorophenyl-phenylether	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
4-Nitroaniline	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Fluorene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
4,6-Dinitro-2-methylphenol	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
n-Nitrosodiphenylamine	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,2-Diphenylhydrazine	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
4-Bromophenyl-phenylether	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Hexachlorobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Pentachlorophenol	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Phenanthrene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Anthracene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Carbazole	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Di-n-butylphthalate	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Fluoranthene	**0.013**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Benzidine	**ND**	0.40	EPA 8270D	3-21-18	3-22-18	
Pyrene	**0.012**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Butylbenzylphthalate	**0.51**	0.20	EPA 8270D	3-21-18	3-22-18	
bis-2-Ethylhexyladipate	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
3,3'-Dichlorobenzidine	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Benzo[a]anthracene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Chrysene	**0.0092**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
bis(2-Ethylhexyl)phthalate	**0.25**	0.20	EPA 8270D	3-21-18	3-22-18	
Di-n-octylphthalate	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Benzo[b]fluoranthene	**0.011**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo(j,k)fluoranthene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo[a]pyrene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Indeno[1,2,3-cd]pyrene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Dibenz[a,h]anthracene	**ND**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo[g,h,i]perylene	**0.014**	0.0080	EPA 8270D/SIM	3-21-18	3-22-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*55*	*18 - 113*				
Phenol-d6	*68*	*19 - 119*				
Nitrobenzene-d5	*61*	*19 - 119*				
2-Fluorobiphenyl	*76*	*33 - 109*				
2,4,6-Tribromophenol	*80*	*19 - 121*				
Terphenyl-d14	*77*	*30 - 116*				

Date of Report: March 27, 2018
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Laboratory Reference: 1803-152
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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS4**					
Laboratory ID:	03-152-04					
n-Nitrosodimethylamine	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Pyridine	**ND**	0.40	EPA 8270D	3-21-18	3-22-18	
Phenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Aniline	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroethyl)ether	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Chlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,3-Dichlorobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,4-Dichlorobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Benzyl alcohol	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
1,2-Dichlorobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Methylphenol (o-Cresol)	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroisopropyl)ether	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
n-Nitroso-di-n-propylamine	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Hexachloroethane	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Nitrobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Isophorone	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Nitrophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,4-Dimethylphenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
bis(2-Chloroethoxy)methane	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,4-Dichlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,2,4-Trichlorobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Naphthalene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
4-Chloroaniline	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Hexachlorobutadiene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
4-Chloro-3-methylphenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Methylnaphthalene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
1-Methylnaphthalene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Hexachlorocyclopentadiene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,4,6-Trichlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,3-Dichloroaniline	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,4,5-Trichlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Chloronaphthalene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2-Nitroaniline	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,4-Dinitrobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Dimethylphthalate	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,3-Dinitrobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,6-Dinitrotoluene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,2-Dinitrobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Acenaphthylene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
3-Nitroaniline	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	

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Laboratory Reference: 1803-152
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS4**					
Laboratory ID:	03-152-04					
2,4-Dinitrophenol	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Acenaphthene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
4-Nitrophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,4-Dinitrotoluene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Dibenzofuran	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,3,5,6-Tetrachlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
2,3,4,6-Tetrachlorophenol	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Diethylphthalate	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
4-Chlorophenyl-phenylether	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
4-Nitroaniline	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Fluorene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
4,6-Dinitro-2-methylphenol	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
n-Nitrosodiphenylamine	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
1,2-Diphenylhydrazine	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
4-Bromophenyl-phenylether	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Hexachlorobenzene	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Pentachlorophenol	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Phenanthrene	**0.0097**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Anthracene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Carbazole	**ND**	0.040	EPA 8270D	3-21-18	3-22-18	
Di-n-butylphthalate	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Fluoranthene	**0.012**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Benzidine	**ND**	0.40	EPA 8270D	3-21-18	3-22-18	
Pyrene	**0.013**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Butylbenzylphthalate	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
bis-2-Ethylhexyladipate	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
3,3'-Dichlorobenzidine	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Benzo[a]anthracene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Chrysene	**0.0084**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
bis(2-Ethylhexyl)phthalate	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Di-n-octylphthalate	**ND**	0.20	EPA 8270D	3-21-18	3-22-18	
Benzo[b]fluoranthene	**0.011**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo(j,k)fluoranthene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo[a]pyrene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Indeno[1,2,3-cd]pyrene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Dibenz[a,h]anthracene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Benzo[g,h,i]perylene	**ND**	0.0081	EPA 8270D/SIM	3-21-18	3-22-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*63*	*18 - 113*				
Phenol-d6	*67*	*19 - 119*				
Nitrobenzene-d5	*68*	*19 - 119*				
2-Fluorobiphenyl	*75*	*33 - 109*				
2,4,6-Tribromophenol	*74*	*19 - 121*				
Terphenyl-d14	*71*	*30 - 116*				

Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

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METHOD BLANK QUALITY CONTROL
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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0321S1					
n-Nitrosodimethylamine	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Pyridine	**ND**	0.33	EPA 8270D	3-21-18	3-21-18	
Phenol	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Aniline	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
bis(2-Chloroethyl)ether	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2-Chlorophenol	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
1,3-Dichlorobenzene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
1,4-Dichlorobenzene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Benzyl alcohol	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
1,2-Dichlorobenzene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2-Methylphenol (o-Cresol)	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
bis(2-Chloroisopropyl)ether	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
n-Nitroso-di-n-propylamine	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Hexachloroethane	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Nitrobenzene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Isophorone	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2-Nitrophenol	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2,4-Dimethylphenol	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
bis(2-Chloroethoxy)methane	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2,4-Dichlorophenol	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
1,2,4-Trichlorobenzene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Naphthalene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
4-Chloroaniline	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
Hexachlorobutadiene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
4-Chloro-3-methylphenol	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Hexachlorocyclopentadiene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2,4,6-Trichlorophenol	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2,3-Dichloroaniline	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2,4,5-Trichlorophenol	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2-Chloronaphthalene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2-Nitroaniline	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
1,4-Dinitrobenzene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Dimethylphthalate	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
1,3-Dinitrobenzene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2,6-Dinitrotoluene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
1,2-Dinitrobenzene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Acenaphthylene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
3-Nitroaniline	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	

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Laboratory Reference: 1803-152
Project: SR509 Foreman Property

SEMIVOLATILES EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0321S1					
2,4-Dinitrophenol	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
Acenaphthene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
4-Nitrophenol	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2,4-Dinitrotoluene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Dibenzofuran	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2,3,5,6-Tetrachlorophenol	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
2,3,4,6-Tetrachlorophenol	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Diethylphthalate	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
4-Chlorophenyl-phenylether	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
4-Nitroaniline	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Fluorene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
4,6-Dinitro-2-methylphenol	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
n-Nitrosodiphenylamine	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
1,2-Diphenylhydrazine	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
4-Bromophenyl-phenylether	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Hexachlorobenzene	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Pentachlorophenol	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
Phenanthrene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Anthracene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Carbazole	**ND**	0.033	EPA 8270D	3-21-18	3-21-18	
Di-n-butylphthalate	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
Fluoranthene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Benzidine	**ND**	0.33	EPA 8270D	3-21-18	3-21-18	
Pyrene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Butylbenzylphthalate	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
bis-2-Ethylhexyladipate	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
3,3'-Dichlorobenzidine	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Chrysene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
bis(2-Ethylhexyl)phthalate	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
Di-n-octylphthalate	**ND**	0.17	EPA 8270D	3-21-18	3-21-18	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Benzo(j,k)fluoranthene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Indeno[1,2,3-cd]pyrene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Benzo[g,h,i]perylene	**ND**	0.0067	EPA 8270D/SIM	3-21-18	3-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*85*	*18 - 113*				
Phenol-d6	*86*	*19 - 119*				
Nitrobenzene-d5	*85*	*19 - 119*				
2-Fluorobiphenyl	*89*	*33 - 109*				
2,4,6-Tribromophenol	*85*	*19 - 121*				
Terphenyl-d14	*81*	*30 - 116*				

Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

SEMIVOLATILES EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0321S1									
	SB	SBD	SB	SBD	SB	SBD				
Phenol	**1.11**	**1.15**	1.33	1.33	83	86	39 - 109	4	36	
2-Chlorophenol	**1.18**	**1.28**	1.33	1.33	89	96	42 - 105	8	35	
1,4-Dichlorobenzene	**0.561**	**0.613**	0.667	0.667	84	92	31 - 103	9	37	
n-Nitroso-di-n-propylamine	**0.598**	**0.615**	0.667	0.667	90	92	36 - 104	3	34	
1,2,4-Trichlorobenzene	**0.601**	**0.618**	0.667	0.667	90	93	32 - 104	3	38	
4-Chloro-3-methylphenol	**1.17**	**1.21**	1.33	1.33	88	91	48 - 107	3	31	
Acenaphthene	**0.554**	**0.597**	0.667	0.667	83	90	38 - 102	7	33	
4-Nitrophenol	**1.21**	**1.23**	1.33	1.33	91	92	27 - 121	2	35	
2,4-Dinitrotoluene	**0.551**	**0.582**	0.667	0.667	83	87	36 - 103	5	34	
Pentachlorophenol	**1.43**	**1.53**	1.33	1.33	108	115	21 - 114	7	37	I
Pyrene	**0.585**	**0.619**	0.667	0.667	88	93	46 - 108	6	31	
Surrogate:										
2-Fluorophenol					*86*	*90*	*18 - 113*			
Phenol-d6					*87*	*90*	*19 - 119*			
Nitrobenzene-d5					*84*	*87*	*19 - 119*			
2-Fluorobiphenyl					*85*	*86*	*33 - 109*			
2,4,6-Tribromophenol					*90*	*92*	*19 - 121*			
Terphenyl-d14					*83*	*86*	*30 - 116*			

Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	03-152-01					
Client ID:	**SS1 N A'**					
Arsenic	**ND**	14	6010D	3-21-18	3-21-18	
Barium	**84**	3.5	6010D	3-21-18	3-21-18	
Cadmium	**ND**	0.71	6010D	3-21-18	3-21-18	
Chromium	**41**	0.71	6010D	3-21-18	3-21-18	
Lead	**ND**	7.1	6010D	3-21-18	3-21-18	
Mercury	**ND**	0.35	7471B	3-19-18	3-19-18	
Selenium	**ND**	14	6010D	3-21-18	3-21-18	
Silver	**ND**	1.4	6010D	3-21-18	3-21-18	
Lab ID:	03-152-02					
Client ID:	**SS2**					
Arsenic	**ND**	14	6010D	3-21-18	3-21-18	
Barium	**110**	3.4	6010D	3-21-18	3-21-18	
Cadmium	**ND**	0.68	6010D	3-21-18	3-21-18	
Chromium	**52**	0.68	6010D	3-21-18	3-21-18	
Lead	**53**	6.8	6010D	3-21-18	3-21-18	
Mercury	**ND**	0.34	7471B	3-19-18	3-19-18	
Selenium	**ND**	14	6010D	3-21-18	3-21-18	
Silver	**ND**	1.4	6010D	3-21-18	3-21-18	

Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	03-152-03					
Client ID:	**SS3**					
Arsenic	**ND**	12	6010D	3-21-18	3-21-18	
Barium	**61**	3.0	6010D	3-21-18	3-21-18	
Cadmium	**ND**	0.60	6010D	3-21-18	3-21-18	
Chromium	**47**	0.60	6010D	3-21-18	3-21-18	
Lead	**27**	6.0	6010D	3-21-18	3-21-18	
Mercury	**ND**	0.30	7471B	3-19-18	3-19-18	
Selenium	**ND**	12	6010D	3-21-18	3-21-18	
Silver	**ND**	1.2	6010D	3-21-18	3-21-18	
Lab ID:	03-152-04					
Client ID:	**SS4**					
Arsenic	**ND**	12	6010D	3-21-18	3-21-18	
Barium	**160**	3.0	6010D	3-21-18	3-21-18	
Cadmium	**ND**	0.61	6010D	3-21-18	3-21-18	
Chromium	**60**	0.61	6010D	3-21-18	3-21-18	
Lead	**23**	6.1	6010D	3-21-18	3-21-18	
Mercury	**ND**	0.30	7471B	3-19-18	3-19-18	
Selenium	**ND**	12	6010D	3-21-18	3-21-18	
Silver	**ND**	1.2	6010D	3-21-18	3-21-18	

Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

TOTAL METALS
EPA 6010D
METHOD BLANK QUALITY CONTROL

Date Extracted: 3-21-18
Date Analyzed: 3-21-18

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0321SM1

Analyte	Method	Result	PQL
Arsenic	6010D	**ND**	10
Barium	6010D	**ND**	2.5
Cadmium	6010D	**ND**	0.50
Chromium	6010D	**ND**	0.50
Lead	6010D	**ND**	5.0
Selenium	6010D	**ND**	10
Silver	6010D	**ND**	1.0

Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

TOTAL MERCURY
EPA 7471B
METHOD BLANK QUALITY CONTROL

Date Extracted:	3-19-18
Date Analyzed:	3-19-18
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB0319S1

Analyte	Method	Result	PQL
Mercury	7471B	**ND**	0.25

Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

TOTAL METALS
EPA 6010D
DUPLICATE QUALITY CONTROL

Date Extracted: 3-21-18
Date Analyzed: 3-21-18

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 03-145-02

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	10	
Barium	**83.0**	**68.1**	20	2.5	
Cadmium	**ND**	**ND**	NA	0.50	
Chromium	**30.1**	**36.9**	20	0.50	
Lead	**57.3**	**49.0**	16	5.0	
Selenium	**ND**	**ND**	NA	10	
Silver	**ND**	**ND**	NA	1.0	

Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

TOTAL MERCURY
EPA 7471B
DUPLICATE QUALITY CONTROL

Date Extracted: 3-19-18
Date Analyzed: 3-19-18

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 03-145-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Mercury	**ND**	**ND**	NA	0.25	

Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

TOTAL METALS
EPA 6010D
MS/MSD QUALITY CONTROL

Date Extracted: 3-21-18
Date Analyzed: 3-21-18

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 03-145-02

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**95.4**	95	**90.7**	91	5	
Barium	100	**175**	92	**181**	98	4	
Cadmium	50.0	**46.4**	93	**45.9**	92	1	
Chromium	100	**123**	93	**122**	92	1	
Lead	250	**291**	93	**290**	93	0	
Selenium	100	**97.3**	97	**94.8**	95	3	
Silver	25.0	**19.3**	77	**18.8**	75	3	

Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

TOTAL MERCURY
EPA 7471B
MS/MSD QUALITY CONTROL

Date Extracted: 3-19-18
Date Analyzed: 3-19-18

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 03-145-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Mercury	0.500	**0.510**	102	**0.490**	98	4	

Date of Report: March 27, 2018
Samples Submitted: March 16, 2018
Laboratory Reference: 1803-152
Project: SR509 Foreman Property

% MOISTURE

Date Analyzed: 3-19-18

Client ID	Lab ID	% Moisture
SS1 N A'	03-152-01	29
SS2	03-152-02	27
SS3	03-152-03	16
SS4	03-152-04	18

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a sulfuric acid/silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

OnSite Environmental Inc.

Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Page 1 of 1

Laboratory Number: 03-152

Company: WSDOT
Project Number:
Project Name: SR509 Foreman Property
Project Manager: PATRICK SVOBODA
Sampled by:

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☑ Standard (7 Days) (TPH analysis 5 Days)
☐ ________ (other)

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/~~BTEX~~	NWTPH-~~Gx~~ Dx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	% Moisture
1	SS1 NA	3/15/18	12:30	S	5		✓	✓		✓			✓						✓				✓
2	SS2	3/15/18	1:00	↓	↓		✓	✓		✓			✓						✓				↓
3	SS3	3/15/18	2:00	↓	↓		✓	✓		✓			✓						✓				↓
4	SS4	3/15/18	2:15	↓	↓		✓	✓		✓			✓						✓				↓

	Signature	Company	Date	Time
Relinquished	[signature]	WSDOT	3/16/18	8:30
Received	Eileen Clark	Alpha	3/16/18	8:30
Relinquished	Eileen Clark	Alpha	3/16/18	11:23
Received	[signature]	OSE	3/16/18	11:23
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

September 24, 2018

Patrick Svoboda
WSDOT
15700 Dayton Avenue North
NB82-138
P.O. Box 330310
Seattle, WA 98133-9710

Re: Analytical Data for Project Foreman
Laboratory Reference No. 1809-229

Dear Pat:

Enclosed are the analytical results and associated quality control data for samples submitted on September 21, 2018.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

Case Narrative

Samples were collected on September 20 and 21, 2018 and received by the laboratory on September 21, 2018. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

September 24, 2018

Patrick Svoboda
WSDOT
15700 Dayton Avenue North
NB82-138
P.O. Box 330310
Seattle, WA 98133-9710

Re: Analytical Data for Project Foreman
Laboratory Reference No. 1809-229

Dear Pat:

Enclosed are the analytical results and associated quality control data for samples submitted on September 21, 2018.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

Case Narrative

Samples were collected on September 20 and 21, 2018 and received by the laboratory on September 21, 2018. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FC1-1**					
Laboratory ID:	09-229-01					
Diesel Range Organics	**ND**	41	NWTPH-Dx	9-21-18	9-21-18	U1
Lube Oil	**590**	57	NWTPH-Dx	9-21-18	9-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*88*	*50-150*				
Client ID:	**FC1-2**					
Laboratory ID:	09-229-02					
Diesel Range Organics	**ND**	27	NWTPH-Dx	9-21-18	9-21-18	
Lube Oil Range Organics	**ND**	54	NWTPH-Dx	9-21-18	9-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*81*	*50-150*				

Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0921S3					
Diesel Range Organics	**ND**	25	NWTPH-Dx	9-21-18	9-21-18	
Lube Oil Range Organics	**ND**	50	NWTPH-Dx	9-21-18	9-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*88*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	09-217-01										
	ORIG	DUP									
Diesel Range	**ND**	**ND**	NA	NA		NA		NA	NA	NA	
Lube Oil Range Organics	**178**	**164**	NA	NA		NA		NA	8	NA	
Surrogate:											
o-Terphenyl						*82*	*80*	*50-150*			

Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

SEMIVOLATILE ORGANICS EPA 8270D/SIM
page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FC1-1**					
Laboratory ID:	09-229-01					
n-Nitrosodimethylamine	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Pyridine	**ND**	3.8	EPA 8270D	9-21-18	9-21-18	
Phenol	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Aniline	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
bis(2-Chloroethyl)ether	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2-Chlorophenol	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
1,3-Dichlorobenzene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
1,4-Dichlorobenzene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Benzyl alcohol	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
1,2-Dichlorobenzene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2-Methylphenol (o-Cresol)	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
bis(2-Chloroisopropyl)ether	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
n-Nitroso-di-n-propylamine	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Hexachloroethane	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Nitrobenzene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Isophorone	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2-Nitrophenol	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2,4-Dimethylphenol	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
bis(2-Chloroethoxy)methane	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2,4-Dichlorophenol	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
1,2,4-Trichlorobenzene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Naphthalene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
4-Chloroaniline	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
Hexachlorobutadiene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
4-Chloro-3-methylphenol	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2-Methylnaphthalene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
1-Methylnaphthalene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Hexachlorocyclopentadiene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2,4,6-Trichlorophenol	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2,3-Dichloroaniline	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2,4,5-Trichlorophenol	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2-Chloronaphthalene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2-Nitroaniline	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
1,4-Dinitrobenzene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Dimethylphthalate	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
1,3-Dinitrobenzene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2,6-Dinitrotoluene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
1,2-Dinitrobenzene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Acenaphthylene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
3-Nitroaniline	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	

Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FC1-1**					
Laboratory ID:	09-229-01					
2,4-Dinitrophenol	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
Acenaphthene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
4-Nitrophenol	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2,4-Dinitrotoluene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Dibenzofuran	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2,3,5,6-Tetrachlorophenol	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
2,3,4,6-Tetrachlorophenol	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Diethylphthalate	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
4-Chlorophenyl-phenylether	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
4-Nitroaniline	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Fluorene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
4,6-Dinitro-2-methylphenol	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
n-Nitrosodiphenylamine	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
1,2-Diphenylhydrazine	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
4-Bromophenyl-phenylether	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Hexachlorobenzene	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Pentachlorophenol	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
Phenanthrene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Anthracene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Carbazole	**ND**	0.38	EPA 8270D	9-21-18	9-21-18	
Di-n-butylphthalate	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
Fluoranthene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Benzidine	**ND**	3.8	EPA 8270D	9-21-18	9-21-18	
Pyrene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Butylbenzylphthalate	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
bis-2-Ethylhexyladipate	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
3,3'-Dichlorobenzidine	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
Benzo[a]anthracene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Chrysene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
bis(2-Ethylhexyl)phthalate	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
Di-n-octylphthalate	**ND**	1.9	EPA 8270D	9-21-18	9-21-18	
Benzo[b]fluoranthene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Benzo(j,k)fluoranthene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Benzo[a]pyrene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Indeno[1,2,3-cd]pyrene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Dibenz[a,h]anthracene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Benzo[g,h,i]perylene	**ND**	0.015	EPA 8270D/SIM	9-21-18	9-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*38*	*19 - 103*				
Phenol-d6	*48*	*30 - 103*				
Nitrobenzene-d5	*44*	*27 - 105*				
2-Fluorobiphenyl	*56*	*36 - 102*				
2,4,6-Tribromophenol	*55*	*33 - 110*				
Terphenyl-d14	*64*	*38 - 108*				

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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FC1-2**					
Laboratory ID:	09-229-02					
n-Nitrosodimethylamine	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Pyridine	**ND**	0.36	EPA 8270D	9-21-18	9-21-18	
Phenol	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Aniline	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
bis(2-Chloroethyl)ether	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2-Chlorophenol	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
1,3-Dichlorobenzene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
1,4-Dichlorobenzene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Benzyl alcohol	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
1,2-Dichlorobenzene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2-Methylphenol (o-Cresol)	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
bis(2-Chloroisopropyl)ether	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
n-Nitroso-di-n-propylamine	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Hexachloroethane	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Nitrobenzene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Isophorone	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2-Nitrophenol	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2,4-Dimethylphenol	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
bis(2-Chloroethoxy)methane	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2,4-Dichlorophenol	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
1,2,4-Trichlorobenzene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Naphthalene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
4-Chloroaniline	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
Hexachlorobutadiene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
4-Chloro-3-methylphenol	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2-Methylnaphthalene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
1-Methylnaphthalene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Hexachlorocyclopentadiene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2,4,6-Trichlorophenol	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2,3-Dichloroaniline	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2,4,5-Trichlorophenol	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2-Chloronaphthalene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2-Nitroaniline	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
1,4-Dinitrobenzene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Dimethylphthalate	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
1,3-Dinitrobenzene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2,6-Dinitrotoluene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
1,2-Dinitrobenzene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Acenaphthylene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
3-Nitroaniline	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FC1-2**					
Laboratory ID:	09-229-02					
2,4-Dinitrophenol	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
Acenaphthene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
4-Nitrophenol	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2,4-Dinitrotoluene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Dibenzofuran	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2,3,5,6-Tetrachlorophenol	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
2,3,4,6-Tetrachlorophenol	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Diethylphthalate	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
4-Chlorophenyl-phenylether	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
4-Nitroaniline	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Fluorene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
4,6-Dinitro-2-methylphenol	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
n-Nitrosodiphenylamine	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
1,2-Diphenylhydrazine	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
4-Bromophenyl-phenylether	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Hexachlorobenzene	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Pentachlorophenol	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
Phenanthrene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Anthracene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Carbazole	**ND**	0.036	EPA 8270D	9-21-18	9-21-18	
Di-n-butylphthalate	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
Fluoranthene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Benzidine	**ND**	0.36	EPA 8270D	9-21-18	9-21-18	
Pyrene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Butylbenzylphthalate	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
bis-2-Ethylhexyladipate	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
3,3'-Dichlorobenzidine	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
Benzo[a]anthracene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Chrysene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
bis(2-Ethylhexyl)phthalate	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
Di-n-octylphthalate	**ND**	0.18	EPA 8270D	9-21-18	9-21-18	
Benzo[b]fluoranthene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Benzo(j,k)fluoranthene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Benzo[a]pyrene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Indeno[1,2,3-cd]pyrene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Dibenz[a,h]anthracene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Benzo[g,h,i]perylene	**ND**	0.0072	EPA 8270D/SIM	9-21-18	9-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*41*	*19 - 103*				
Phenol-d6	*47*	*30 - 103*				
Nitrobenzene-d5	*43*	*27 - 105*				
2-Fluorobiphenyl	*52*	*36 - 102*				
2,4,6-Tribromophenol	*78*	*33 - 110*				
Terphenyl-d14	*79*	*38 - 108*				

Date of Report: September 24, 2018
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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0921S1					
n-Nitrosodimethylamine	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Pyridine	**ND**	0.33	EPA 8270D	9-21-18	9-21-18	
Phenol	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Aniline	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
bis(2-Chloroethyl)ether	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2-Chlorophenol	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
1,3-Dichlorobenzene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
1,4-Dichlorobenzene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Benzyl alcohol	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
1,2-Dichlorobenzene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2-Methylphenol (o-Cresol)	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
bis(2-Chloroisopropyl)ether	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
n-Nitroso-di-n-propylamine	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Hexachloroethane	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Nitrobenzene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Isophorone	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2-Nitrophenol	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2,4-Dimethylphenol	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
bis(2-Chloroethoxy)methane	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2,4-Dichlorophenol	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
1,2,4-Trichlorobenzene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Naphthalene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
4-Chloroaniline	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
Hexachlorobutadiene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
4-Chloro-3-methylphenol	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Hexachlorocyclopentadiene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2,4,6-Trichlorophenol	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2,3-Dichloroaniline	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2,4,5-Trichlorophenol	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2-Chloronaphthalene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2-Nitroaniline	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
1,4-Dinitrobenzene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Dimethylphthalate	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
1,3-Dinitrobenzene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2,6-Dinitrotoluene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
1,2-Dinitrobenzene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Acenaphthylene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
3-Nitroaniline	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0921S1					
2,4-Dinitrophenol	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
Acenaphthene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
4-Nitrophenol	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2,4-Dinitrotoluene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Dibenzofuran	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2,3,5,6-Tetrachlorophenol	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
2,3,4,6-Tetrachlorophenol	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Diethylphthalate	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
4-Chlorophenyl-phenylether	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
4-Nitroaniline	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Fluorene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
4,6-Dinitro-2-methylphenol	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
n-Nitrosodiphenylamine	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
1,2-Diphenylhydrazine	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
4-Bromophenyl-phenylether	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Hexachlorobenzene	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Pentachlorophenol	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
Phenanthrene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Anthracene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Carbazole	**ND**	0.033	EPA 8270D	9-21-18	9-21-18	
Di-n-butylphthalate	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
Fluoranthene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Benzidine	**ND**	0.33	EPA 8270D	9-21-18	9-21-18	
Pyrene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Butylbenzylphthalate	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
bis-2-Ethylhexyladipate	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
3,3'-Dichlorobenzidine	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Chrysene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
bis(2-Ethylhexyl)phthalate	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
Di-n-octylphthalate	**ND**	0.17	EPA 8270D	9-21-18	9-21-18	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Benzo(j,k)fluoranthene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Indeno[1,2,3-cd]pyrene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Benzo[g,h,i]perylene	**ND**	0.0067	EPA 8270D/SIM	9-21-18	9-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*42*	*19 - 103*				
Phenol-d6	*47*	*30 - 103*				
Nitrobenzene-d5	*43*	*27 - 105*				
2-Fluorobiphenyl	*50*	*36 - 102*				
2,4,6-Tribromophenol	*70*	*33 - 110*				
Terphenyl-d14	*69*	*38 - 108*				

Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

SEMIVOLATILE ORGANICS EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0921S1									
	SB	SBD	SB	SBD	SB	SBD				
Phenol	**0.782**	**0.896**	1.33	1.33	59	67	45 - 94	14	29	
2-Chlorophenol	**0.770**	**0.879**	1.33	1.33	58	66	46 - 94	13	33	
1,4-Dichlorobenzene	**0.360**	**0.429**	0.667	0.667	54	64	42 - 91	17	37	
n-Nitroso-di-n-propylamine	**0.382**	**0.479**	0.667	0.667	57	72	45 - 100	23	26	
1,2,4-Trichlorobenzene	**0.396**	**0.454**	0.667	0.667	59	68	45 - 100	14	32	
4-Chloro-3-methylphenol	**0.950**	**1.01**	1.33	1.33	71	76	55 - 97	6	21	
Acenaphthene	**0.444**	**0.497**	0.667	0.667	67	75	48 - 91	11	21	
4-Nitrophenol	**1.04**	**1.11**	1.33	1.33	78	83	53 - 102	7	20	
2,4-Dinitrotoluene	**0.496**	**0.524**	0.667	0.667	74	79	47 - 96	5	19	
Pentachlorophenol	**1.32**	**1.35**	1.33	1.33	99	102	35 - 125	2	26	
Pyrene	**0.540**	**0.545**	0.667	0.667	81	82	55 - 110	1	17	
Surrogate:										
2-Fluorophenol					*48*	*55*	*19 - 103*			
Phenol-d6					*55*	*61*	*30 - 103*			
Nitrobenzene-d5					*51*	*57*	*27 - 105*			
2-Fluorobiphenyl					*56*	*64*	*36 - 102*			
2,4,6-Tribromophenol					*76*	*74*	*33 - 110*			
Terphenyl-d14					*71*	*71*	*38 - 108*			

Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**FC1-1**					
Laboratory ID:	09-229-01					
Arsenic	**ND**	11	EPA 6010D	9-21-18	9-21-18	
Cadmium	**ND**	0.57	EPA 6010D	9-21-18	9-21-18	
Chromium	**64**	0.57	EPA 6010D	9-21-18	9-21-18	
Lead	**27**	5.7	EPA 6010D	9-21-18	9-21-18	
Mercury	**ND**	0.28	EPA 7471B	9-21-18	9-21-18	
Client ID:	**FC1-2**					
Laboratory ID:	09-229-02					
Arsenic	**ND**	11	EPA 6010D	9-21-18	9-21-18	
Cadmium	**ND**	0.54	EPA 6010D	9-21-18	9-21-18	
Chromium	**11**	0.54	EPA 6010D	9-21-18	9-21-18	
Lead	**ND**	5.4	EPA 6010D	9-21-18	9-21-18	
Mercury	**ND**	0.27	EPA 7471B	9-21-18	9-21-18	

Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

TOTAL METALS
EPA 6010D/7471B
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0921SM2					
Arsenic	**ND**	10	EPA 6010D	9-21-18	9-21-18	
Cadmium	**ND**	0.50	EPA 6010D	9-21-18	9-21-18	
Chromium	**ND**	0.50	EPA 6010D	9-21-18	9-21-18	
Lead	**ND**	5.0	EPA 6010D	9-21-18	9-21-18	
Laboratory ID:	MB0921S1					
Mercury	**ND**	0.25	EPA 7471B	9-21-18	9-21-18	

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	09-138-01										
	ORIG	DUP									
Arsenic	**14.6**	**14.8**	NA	NA		NA		NA	2	20	
Cadmium	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Chromium	**43.8**	**50.1**	NA	NA		NA		NA	13	20	
Lead	**52.9**	**55.3**	NA	NA		NA		NA	5	20	
Laboratory ID:	09-213-01										
Mercury	**ND**	**ND**	NA	NA		NA		NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	09-138-01										
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	**106**	**105**	100	100	14.6	**92**	**91**	75-125	1	20	
Cadmium	**48.0**	**47.1**	50.0	50.0	ND	**96**	**94**	75-125	2	20	
Chromium	**145**	**147**	100	100	43.8	**101**	**103**	75-125	1	20	
Lead	**296**	**287**	250	250	52.9	**97**	**94**	75-125	3	20	
Laboratory ID:	09-213-01										
Mercury	**0.566**	**0.586**	0.500	0.500	0.0548	**102**	**106**	80-120	3	20	

Date of Report: September 24, 2018
Samples Submitted: September 21, 2018
Laboratory Reference: 1809-229
Project: Foreman

% MOISTURE

Date Analyzed: 9-21-18

Client ID	Lab ID	% Moisture
FC1-1	09-229-01	12
FC1-2	09-229-02	8

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a sulfuric acid/silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

Chain of Custody

Page 1 of 1

OnSite Environmental Inc.
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: WSDOT
Project Number:
Project Name: Foreman
Project Manager: PAT SVOBODA
Sampled by: WSDOT

Turnaround Request (in working days)

(Check One) 24 hour

- ☐ Same Day
- ☑ 1 Day
- ☐ 2 Days
- ☐ 3 Days
- ☐ Standard (7 Days) (TPH analysis 5 Days)
- ☐ _____ (other)

Laboratory Number: 09-229

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260B	Halogenated Volatiles 8260B	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082	Organochlorine Pesticides 8081A	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA / MTCA Metals (circle one)	TCLP Metals	HEM (oil and grease) 1664	% Moisture
1	FC1-1	9/20	14:15	S	6				✓			✓						✓			X
2	FC1-2	9/21	11:00	S	6				✓			✓						✓			X

	Signature	Company	Date	Time
Relinquished	[signature]	WSDOT	9/21/18	11:10
Received	[signature]	ALPHA	9-21-18	11:10
Relinquished	[signature]	ALPHA	9-21-18	12:39
Received	[signature]	OE	9/21/18	1239
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Call when you receive these.

Chromatograms with final report ☐

Data Package: Level III ☐ Level IV ☐ Electronic Data Deliverables (EDDs) ☐ _____

APPENDIX 4 DISPOSAL TICKETS

PetroCard™ MORE THAN JUST FUEL.

1st Load

401187

Phone (206) 621.9777

Certified Weight Ticket

Company ____________ Charge ____ Cash ✗

Truck # ____________ Account # ____________

Trailer # ____________ Card # ____________

Weighmaster ____________ Signature ____________

16:53:47 20 Sep 2018

Weigh fee: 10.00
3215 4TH AVE S

Axle 1:	3240 lb
Axle 2:	5620 lb
Axle 3:	5660 lb
Total:	14520 lb

PetroCard™
MORE THAN JUST FUEL.

2nd. Load

401252

Phone (206) 621.9777 **Certified Weight Ticket**

Company X MARINE VACUME SERVICE **Charge** X **Cash** ____

Truck # X

Account # ____

Trailer # ____

Card # ____

Weighmaster ____

Signature X R.B. ALLEN

08:44:47 22 Sep 2018

Weigh fee: 10.00
3215 4TH AVE S

Axle 1: 10680 lb
Axle 2: 7540 lb
Total: 18220 lb

V152

PetroCard™
MORE THAN JUST FUEL.

Light Weight

52

401254

Phone (206) 621.9777 **Certified Weight Ticket**

Company X MARINE VACUUM SERVICE **Charge** ____ **Cash** Y

Truck # X _____ **Account #** _____

Trailer # _____ **Card #** _____

Weighmaster _____ **Signature** X R B ALLEN

10:13:36 22 Sep 2018

Weigh fee: ~~10.00~~ $10.00

3215 4TH AVE S

Axle 1: 3620 lb
Axle 2: 7640 lb
Total: 11260 lb

W

PetroCard™
MORE THAN JUST FUEL.

Light Weight

401254

Phone (206) 621.9777 **Certified Weight Ticket**

Company X MARINE VACUUM SERVICE **Charge** ____ **Cash** X

Truck # X **Account #** ____

Trailer # ____ **Card #** ____

Weighmaster ____ **Signature** X R B ALLEN

10:13:36 22 Sep 2018

Weigh fee: 10.00 $11.02

3215 4TH AVE S

Axle 1:	3620 lb
Axle 2:	7640 lb
Total:	11260 lb

11

WELCOME TO
KITIMAT SEATTLE GULL
TP53888936-001 KITIMAT SEATTLE GULL
3215 4TH AVE S
SEATTLE WA 98134

Descr.	qty	amount
SCALES	1	1.00
Sub Total		1.00
Tax		0.00
TOTAL		1.00
CASH $		1.00

THANKS, COME AGAIN
PLEASE COME AGAIN
206-621-9777
REG# 003 CSH# 009 DR# 01 TRAN# 38855
09/22/18 10:04:24 ST# 20

SEATTLE RECYCLE AND
DISPOSAL STATION

R E C E I P T

Bill Acct:CASH**
CASH CUSTOMERS

SITE:STS South Transfer Static
DATE:09/25/16 TICKET#:41071208
TIME IN:14:19 ID IN:MCA
TIME OUT:14:34 ID OUT:RJO
TURNAROUND TIME: 15
TRUCK:
ROUTE:Z-Not Specified

	LBS	TONS
GROSS:	16160	8.13
TARE:	15340	7.67
NET:	920	0.46

MATERIAL:	QTY	AMT
Garbage	920	$66.70

TIP FEE:	66.70
SPEC FEE:	0.00
TOTAL FEE:	**$66.70**
TENDERED:	66.70
CHANGE:	0.00

Payment Info:
5 - Credit Car $66.70

SIGNATURE: _____
NOTE:

WELCOME TO
KITIMAT SEATTLE GULL
TP53888936-001 KITIMAT SEATTLE GULL
3215 4TH AVE S
SEATTLE WA 98134

Descr.	qty	amount
< DUPLICATE RECEIPT >		
<CUSTOMER COPY>		
SCALES	1	10.00
Sub Total		10.00
Tax		0.00
TOTAL		10.00
CREDIT $		10.00

CARD TYPE: VISA
ACCT NUMBER: XXXX XXXX XXXX 1811
TRANS TYPE: SALE
APPROVAL: 012223 INVOICE: 036301
AMOUNT: $ 10.00

APPROVED 012223
****

THANKS, COME AGAIN
PLEASE COME AGAIN
206-621-9777
REG# 0003 CSH# 009 DR# 01 TRAN# 38807
09/22/18 08:30:26 ST# 20

APPENDIX 5 PHOTOS

SS-1 during investigation

SS-2 during investigation

SS-3 during investigation

SS-4 during investigation

SS-4 During investigation

General trash and debris scattered around the property

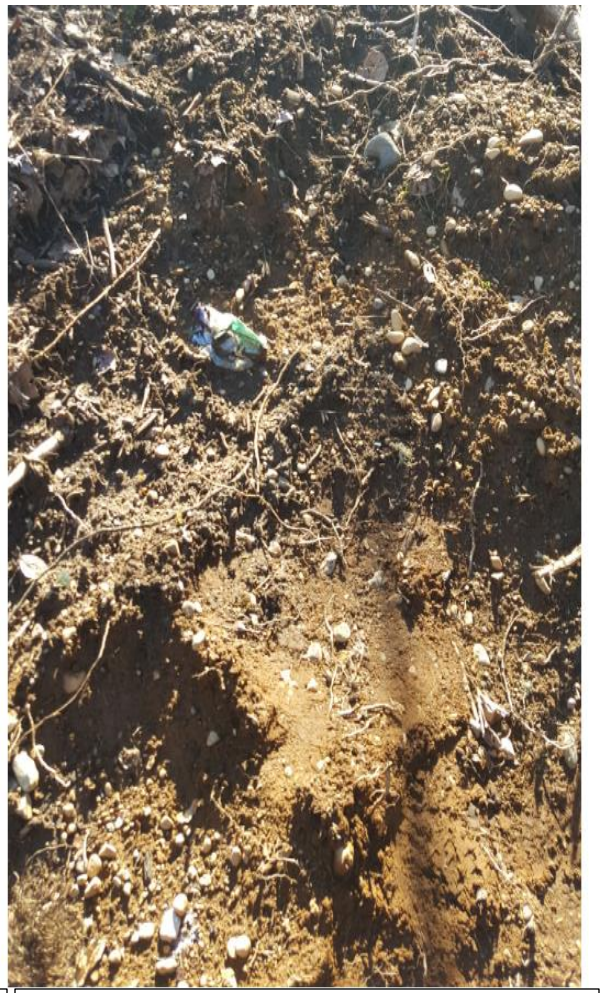
Grading and soil displacement on property

Soil displacement near SS-1

Soil displacement near SS-2

SS-2 Sample near soil displacement

SS3 of stockpile



SS4 of stockpile

Cleanup of SS-3 Area and confirmation sample area

Part of Cleanup of SS-4 area and confirmation sample taken from this area

Backfill of front area

Backfill of side area