GeoEngineers

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Memorandum

To:	Marty Penhallegon, P.E.
From:	Garrett Leque, LG; Terry McPhetridge, LG, LHG
Date:	April 7, 2022
File:	6694-002-05
Subject:	Go East Landfill Northeast Slope Reconnaissance and Observations

This memorandum discusses the results of a slope reconnaissance, debris removal, and results of other observations of the northeast slope at the former Go East Landfill located at 4330 108th Street Southeast in Everett, Washington.

Slope Reconnaissance

GeoEngineers performed a slope reconnaissance on December 17, 2021 that was attended by representatives from the Washington State Department of Ecology and the Snohomish Health District. The area reconnoitered generally consisted of the northeast slope of the former landfill (Figure 1).

The reconnaissance members traversed the slope observing this area for hazardous materials. We observed the ground surface, and the tree wells of fallen trees where recently-exposed soil was observed. No evidence of hazardous materials (e.g., drums, soil staining) were observed on the ground surface or in tree wells during the reconnaissance. Small pieces of inert solid debris were observed in isolated locations on the ground (e.g. cinder block, concrete, glass, metal); see attached representative photos in Attachment A. Field screening of soil in these locations using a photoionization detector to screen for volatile organic compounds did not indicate evidence of contamination. No soil sampling was deemed necessary for these inert items.

There were two locations where metal was observed including a steel pipe and steel I-beam (See Figure 1 and Attachment A). Field screening of soil in these locations using a photoionization detector to screen for volatile organic compounds did not indicate evidence of contamination. We were not able to remove the metal at the time of the slope reconnaissance. We recommend AERO Construction (AERO) cut off the pipe and I-beam as close to the ground surface as possible for physical safety reasons.

One erosional feature was observed near the top of the northeast slope (see Figure 1 and Attachment A). No evidence of hazardous materials were observed in the feature. We understand that surface water runoff into the feature has been diverted to prevent further erosion. We further understand that erosion control materials will be applied to the erosional feature, and that PACE Engineering will monitor the feature from a construction stormwater perspective.

Debris Removal

Metal debris was encountered by crews working to install the buttress and weir box at the toe of the northeast slope on March 21, 2022. The metal debris was encountered upslope from the weir box (see Figure 1 and Attachment A). The metal debris appeared to be consistent with photos and description of metal debris described in a March 31, 2019 letter by Practical Environmental Solutions to the Washington State Department of Ecology. GeoEngineers observed AERO remove the metal debris and underlying soil/mixed debris (plastic, wood debris etc.) on March 25, 2022. GeoEngineers field screened soil at the excavation limits which was approximately 10 feet by 17 feet, and 2.4 feet in depth. GeoEngineers collected four confirmation soil samples and submitted

them to OnSite Environmental, Inc. for analysis of contaminants of potential concern in consultation with the Ecology project manager for the Go East Landfill Site. Results are shown in Table 1 and summarized below:

- Diesel-range petroleum hydrocarbons, oil-range petroleum hydrocarbons, and/or the sum of diesel- and oil-range petroleum hydrocarbons exceeded the Site screening level of 260 milligrams per kilogram (mg/kg) in two samples (Slope-1-20220325 and Slope-3-20220325).
- The metals cadmium, lead, and mercury exceeded Site screening levels in sample Slope-3-20220325.
- Other analytes were either non-detect or below screening levels.

GeoEngineers returned to the Site on March 30, 2022 and observed AERO over-excavate the two exceedance areas (samples from Slope-1 and Slope-3) to depths up to approximately 6 feet below ground surface at each location. GeoEngineers field screened soil and collected additional samples underneath the previous sample locations and submitted the samples for the analytes that previously exceeded screening levels. Results indicate that the analytes of concern were non-detect or below screening levels in the samples, designated as Slope-1A-20220330 and Slope-3A-20220330. The sample locations were surveyed and AERO backfilled the excavation with clean fill soil.

The laboratory analytical reports for the samples are included as Attachment B.

No other debris was observed by crews in other areas where the buttress was installed.

Other Observations

There are several other observations in addition to the slope reconnaissance that indicate the absence of hazardous materials on the slope. A mud slide occurred on the northern portion of the northeast slope on September 17, 2021 (Figure 1). The mud slide was caused by fill placement combined with heavy rainfall. GeoEngineers visited the site on September 21, 2021 to observe the affected area. GeoEngineers provided a letter dated October 1, 2021 that included our observations and conclusions of the mud slide area. One conclusion was that the mud slide involved fill that had been placed by the contractor, and that there were no indications that any portion of the landfill slope had failed or been impacted by the mud slide.

AERO built an access path on the northern portion of the northeast slope that required excavation following the mud slide. Our geotechnical field personnel were present during excavation activities. Field reports dated September 27 through September 29, and October 6, note an absence of landfill debris in excavated areas. Representative photos are included in Attachment A.

We understand AERO has periodically worked on other areas of the northeast slope and reports not observing debris at the ground surface in the areas they have worked.

We trust this memorandum meets your needs. Please call GeoEngineers if you have any questions.

Attachments:
Table 1. Northeast Slope Soil Sample Data Summary – Detections Only
Figure 1. Northeast Slope Observations
Attachment A. Site Photographs
Attachment B. Laboratory Analytical Reports

Table 1

Northeast Slope Soil Sample Summary - Detections Only[1]

Go East Corp Landfill Site

Everett, Washington

Analyte	Sample ID	Slope-1-20220324	Slope-1A-20220330	Slope-2-20220324	Slope-3-20220324	Slope-3A-20220330	Slope-4-20220324
	Sample Date	3/24/2022	3/30/2022	3/24/2022	3/24/2022	3/30/2022	3/24/2022
	Interim Action Level						
Total Petroleum Hydrocarbons (mg/kg)							
Diesel-range hydrocarbons	NE	**65**	30 U	**63**	37 U	35 U	31 U
Lube oil-range hydrocarbons	NE	**220**	**110**	**190**	**370**	69 U	61 U
Total (Sum of) Diesel- and Lube oil-range hydrocarbons	260	**285**	**110**	**253**	**370**	69 U	61 U
Semi-Volatile Organic Compounds (mg/kg)							
Benzyl Alcohol	11	--	--	--	**0.28**	--	--
Phenanthrene	NE	--	--	--	**0.010**	--	--
Fluoranthene	NE	--	--	--	**0.010**	--	--
Pyrene	0.02	--	--	--	**0.010**	--	--
Bis(2-Ethylhexyl) Phthalate	0.17	--	--	--	**1.2**	--*	--
Polycyclic Aromatic Hydrocarbons (mg/kg)							
Benzo(a)anthracene	NE	**0.028**	--	0.0093 U	0.0099 U	--	0.0082 U
Benzo(a)pyrene	NE	**0.036**	--	0.0093 U	0.0099 U	--	0.0082 U
Benzo(b)fluoranthene	NE	**0.044**	--	**0.0096**	0.0099 U	--	0.0082 U
Benzo(j,k)fluoranthene	NE	**0.012**	--	0.0093 U	0.0099 U	--	0.0082 U
Chrysene	NE	**0.039**	--	**0.010**	0.0099 U	--	0.0082 U
Dibenzo(a,h)anthracene	NE	0.010 U	--	0.0093 U	0.0099 U	--	0.0082 U
Indeno(1,2,3-c,d)pyrene	NE	**0.029**	--	**0.0096**	0.0099 U	--	0.0082 U
cPAH TTEC	0.084	**0.048**	--	**0.008**	0.007 U	--	--
Metals (mg/kg)							
Cadmium	0.8	--	--	--	**4.4**	0.69 U	--
Chromium	48	--	--	--	**27**	--	--
Copper	36	--	--	--	**18**	--	--
Iron	NE	--	--	--	**16,000**	--	--
Lead	50	**43**	--	**26**	**70**	**11**	15 U
Manganese	NE	--	--	--	**680**	--	--
Mercury	0.07	--	--	--	**0.15**	**0.046**	--
Nickel	48	--	--	--	**33**	--	--

Notes:

[1] See laboratory deliverables for all results.

mg/kg = milligram per kilogram

U = Analyte not detected at the indicated reporting limit

-- = Analysis not performed

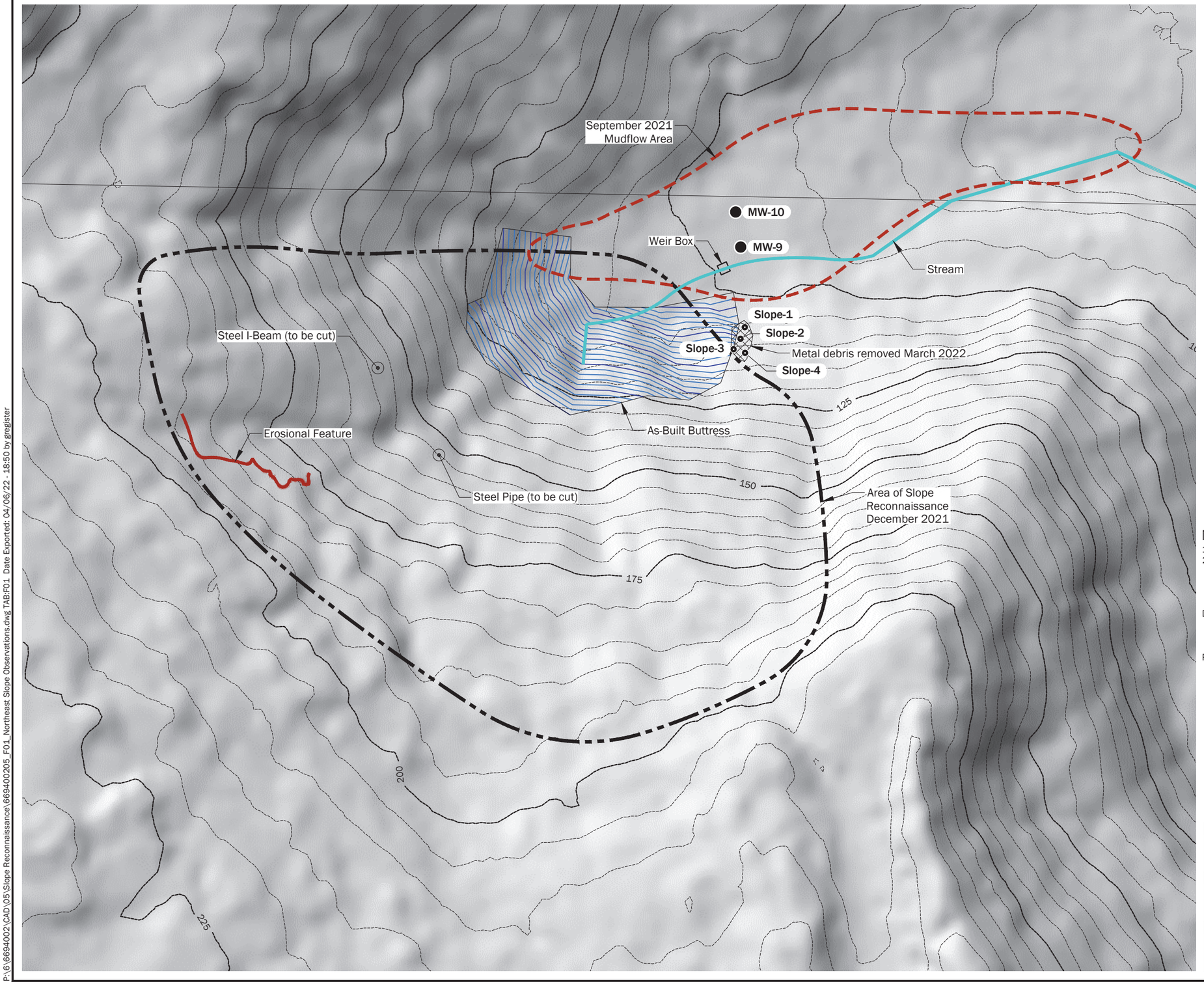
NE = Soil Interim Action Level Not Established

Bold font indicates the analyte was detected

Yellow shading indicates the analyte was detected at a concentration greater than the Soil Interim Action Level.

Gray shading indicates the analyte concentration is less than the Soil Interim Action Level and that overexcavation of the soil containing exceedances (yellow highlighted result) was removed.

* Bis(2-ethylhexyl) Phthalate is ubiquitous in the environment and has not been previously detected at the Go East site. Therefore, it was determined that no additional sampling was needed for Bis(2-ethylhexyl) Phthalate.



Legend

MW-9 ●	Monitoring Well, 2022
Slope-1 ○	Soil Sample locaiton

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: Property boundary survey from PACE Engineers, dated 1/27/2020.
Lidar image and elevation contours from Puget Sound Lidar Consortium dated 2013.
As-built Buttress from Client, no date given.

Projection: NAD83 Washington State Planes, North Zone, US Foot

N
W E
S

40 0 40
Feet

Northeast Slope Observations

Go East Corp Landfill Site
Everett, Washington

GeoEngineers

Figure 1

P:\6\6694002\CAD\05\Slope Reconnaissance\669400205_F01_Northeast Slope Observations.dwg TAB:F01 Date Exported: 04/06/22 - 18:50 by gregister

ATTACHMENT A

Site Photographs

Photograph 1. View of the northeast slope. View is to the southeast. Quarry spalls in foreground are for stabilization of an access route for equipment down to the toe of the landfill. The orange silt fence in the middle-ground of the photo (between the green arrows) approximates the top of the northeast slope.

Photograph 2. View turned slightly left of Photograph 1. View is down the access route to the toe of the landfill.

Site Photographs	
Go East Landfill Slope Reconnaissance City, State	
GeoEngineers	Attachment A

Photograph 3. One cinder block found at ground surface. The glove is shown for scale.

Photograph 4. One piece of concrete at ground surface.

Site Photographs	
Go East Landfill Slope Reconnaissance City, State	
GeoEngineers	Attachment A

Photograph 5. One I-beam protruding from concrete. We recommend the I-beam be cut off for physical safety reasons.

Photograph 6. Close-up of I-beam.

Site Photographs	
Go East Landfill Slope Reconnaissance City, State	
GeoEngineers	Attachment A

Photograph 7. One steel pipe. Field screening did not indicate presence of contamination. We recommend the pipe be cut off for physical safety reasons.

Photograph 8. Erosional feature. Surface water has been diverted to reduce further erosion. Contractor to use erosion control materials and monitor for erosion.

Site Photographs	
Go East Landfill Slope Reconnaissance City, State	
GeoEngineers	Attachment A

Photograph 9. Small pieces of glass. The green arrow points to a typical piece.

Photograph 10. Metal debris observed upslope of weir box on March 21, 2022.

Site Photographs	
Go East Landfill Slope Reconnaissance City, State	
GeoEngineers	Attachment A

Photograph 11. Additional view of metal debris discovered upslope of weir box.

Photograph 12. Excavation of metal debris

Site Photographs	
Go East Landfill Slope Reconnaissance City, State	
GeoEngineers	Attachment A

Photograph 13. Lined stockpile of excavated metal debris, soil, and other debris.

Site Photographs	
Go East Landfill Slope Reconnaissance City, State	
GeoEngineers	Attachment A

ATTACHMENT B

Laboratory Analytical Reports

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

March 25, 2022

Garrett Leque
GeoEngineers, Inc.
554 West Bakerview Road
Bellingham, WA 98226

Re: Analytical Data for Project 6694-002-05 T700
Laboratory Reference No. 2203-281

Dear Garrett:

Enclosed are the analytical results and associated quality control data for samples submitted on March 24, 2022.

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 25, 2022
Samples Submitted: March 24, 2022
Laboratory Reference: 2203-281
Project: 6694-002-05 T700

Case Narrative

Samples were collected on March 24, 2022 and received by the laboratory on March 24, 2022. 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.

Organochlorine Pesticides by EPA 8081B Analysis

The surrogate recovery for DCB for the Spike Blank (124%) was above the quality control limits of 40-117%. Due to the fact the spike recoveries were acceptable in the SB/SBD pair and all other QC in this sample batch were within quality control limits, no further action was performed.

Total Metals EPA 6010D/6020B/7471B Analysis

Due to the high concentration of Iron and Manganese in the QC sample, the amount spiked was insufficient for meaningful MS/MSD recovery data. The Spike Blank recovery was 97% for Iron and 99% for Manganese.

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: March 25, 2022
Samples Submitted: March 24, 2022
Laboratory Reference: 2203-281
Project: 6694-002-05 T700

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
Slope-1-20220324	03-281-01	Soil	3-24-22	3-24-22	
Slope-2-20220324	03-281-02	Soil	3-24-22	3-24-22	
Slope-3-20220324	03-281-03	Soil	3-24-22	3-24-22	
Slope-4-20220324	03-281-04	Soil	3-24-22	3-24-22	

Date of Report: March 25, 2022
Samples Submitted: March 24, 2022
Laboratory Reference: 2203-281
Project: 6694-002-05 T700

GASOLINE RANGE ORGANICS/BTEX
NWTPH-Gx/EPA 8021B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Slope-1-20220324**					
Laboratory ID:	03-281-01					
Benzene	**ND**	0.022	EPA 8021B	3-24-22	3-24-22	
Toluene	**ND**	0.11	EPA 8021B	3-24-22	3-24-22	
Ethyl Benzene	**ND**	0.11	EPA 8021B	3-24-22	3-24-22	
m,p-Xylene	**ND**	0.11	EPA 8021B	3-24-22	3-24-22	
o-Xylene	**ND**	0.11	EPA 8021B	3-24-22	3-24-22	
Gasoline	**ND**	11	NWTPH-Gx	3-24-22	3-24-22	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*87*	*66-129*				
Client ID:	**Slope-2-20220324**					
Laboratory ID:	03-281-02					
Benzene	**ND**	0.020	EPA 8021B	3-24-22	3-24-22	
Toluene	**ND**	0.092	EPA 8021B	3-24-22	3-24-22	
Ethyl Benzene	**ND**	0.092	EPA 8021B	3-24-22	3-24-22	
m,p-Xylene	**ND**	0.092	EPA 8021B	3-24-22	3-24-22	
o-Xylene	**ND**	0.092	EPA 8021B	3-24-22	3-24-22	
Gasoline	**ND**	9.2	NWTPH-Gx	3-24-22	3-24-22	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*93*	*66-129*				
Client ID:	**Slope-3-20220324**					
Laboratory ID:	03-281-03					
Benzene	**ND**	0.021	EPA 8021B	3-24-22	3-24-22	
Toluene	**ND**	0.10	EPA 8021B	3-24-22	3-24-22	
Ethyl Benzene	**ND**	0.10	EPA 8021B	3-24-22	3-24-22	
m,p-Xylene	**ND**	0.10	EPA 8021B	3-24-22	3-24-22	
o-Xylene	**ND**	0.10	EPA 8021B	3-24-22	3-24-22	
Gasoline	**ND**	10	NWTPH-Gx	3-24-22	3-24-22	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*88*	*66-129*				

Date of Report: March 25, 2022
Samples Submitted: March 24, 2022
Laboratory Reference: 2203-281
Project: 6694-002-05 T700

GASOLINE RANGE ORGANICS/BTEX
NWTPH-Gx/EPA 8021B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Slope-4-20220324**					
Laboratory ID:	03-281-04					
Benzene	**ND**	0.020	EPA 8021B	3-24-22	3-24-22	
Toluene	**ND**	0.072	EPA 8021B	3-24-22	3-24-22	
Ethyl Benzene	**ND**	0.072	EPA 8021B	3-24-22	3-24-22	
m,p-Xylene	**ND**	0.072	EPA 8021B	3-24-22	3-24-22	
o-Xylene	**ND**	0.072	EPA 8021B	3-24-22	3-24-22	
Gasoline	**ND**	7.2	NWTPH-Gx	3-24-22	3-24-22	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*79*	*66-129*				

Date of Report: March 25, 2022
Samples Submitted: March 24, 2022
Laboratory Reference: 2203-281
Project: 6694-002-05 T700

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:	**Slope-1-20220324**					
Laboratory ID:	03-281-01					
Diesel Range Organics	**65**	38	NWTPH-Dx	3-24-22	3-24-22	
Lube Oil Range Organics	**220**	76	NWTPH-Dx	3-24-22	3-24-22	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*76*	*50-150*				
Client ID:	**Slope-2-20220324**					
Laboratory ID:	03-281-02					
Diesel Range Organics	**63**	35	NWTPH-Dx	3-24-22	3-24-22	
Lube Oil Range Organics	**190**	70	NWTPH-Dx	3-24-22	3-24-22	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*67*	*50-150*				
Client ID:	**Slope-3-20220324**					
Laboratory ID:	03-281-03					
Diesel Range Organics	**ND**	37	NWTPH-Dx	3-24-22	3-24-22	
Lube Oil Range Organics	**370**	74	NWTPH-Dx	3-24-22	3-24-22	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*81*	*50-150*				
Client ID:	**Slope-4-20220324**					
Laboratory ID:	03-281-04					
Diesel Range Organics	**ND**	31	NWTPH-Dx	3-24-22	3-24-22	
Lube Oil Range Organics	**ND**	61	NWTPH-Dx	3-24-22	3-24-22	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*75*	*50-150*				

Date of Report: March 25, 2022
Samples Submitted: March 24, 2022
Laboratory Reference: 2203-281
Project: 6694-002-05 T700

SEMIVOLATILE ORGANICS EPA 8270E/SIM
page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Slope-3-20220324**					
Laboratory ID:	03-281-03					
n-Nitrosodimethylamine	**ND**	0.050	EPA 8270E	3-24-22	3-24-22	
Pyridine	**ND**	0.50	EPA 8270E	3-24-22	3-24-22	
Phenol	**ND**	0.050	EPA 8270E	3-24-22	3-24-22	
Aniline	**ND**	0.25	EPA 8270E	3-24-22	3-24-22	
bis(2-Chloroethyl)ether	**ND**	0.050	EPA 8270E	3-24-22	3-24-22	
2-Chlorophenol	**ND**	0.050	EPA 8270E	3-24-22	3-24-22	
1,3-Dichlorobenzene	**ND**	0.050	EPA 8270E	3-24-22	3-24-22	
1,4-Dichlorobenzene	**ND**	0.050	EPA 8270E	3-24-22	3-24-22	
Benzyl alcohol	**0.28**	0.050	EPA 8270E	3-24-22	3-24-22	
1,2-Dichlorobenzene	**ND**	0.050	EPA 8270E	3-24-22	3-24-22	
2-Methylphenol (o-Cresol)	**ND**	0.050	EPA 8270E	3-24-22	3-24-22	
bis(2-Chloroisopropyl)ether	**ND**	0.050	EPA 8270E	3-24-22	3-24-22	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.050	EPA 8270E	3-24-22	3-24-22	
n-Nitroso-di-n-propylamine	**ND**	0.050	EPA 8270E	3-24-22	3-24-22	
Hexachloroethane	**ND**	0.050	EPA 8270E	3-24-22	3-24-22	
Nitrobenzene	**ND**	0.050	EPA 8270E	3-24-22	3-24-22	
Isophorone	**ND**	0.050	EPA 8270E	3-24-22	3-24-22	
2-Nitrophenol	**ND**	0.050	EPA 8270E	3-24-22	3-24-22	
2,4-Dimethylphenol	**ND**	0.050	EPA 8270E	3-24-22	3-24-22	
bis(2-Chloroethoxy)methane	**ND**	0.050	EPA 8270E	3-24-22	3-24-22	
2,4-Dichlorophenol	**ND**	0.050	EPA 8270E	3-24-22	3-24-22	
1,2,4-Trichlorobenzene	**ND**	0.050	EPA 8270E	3-24-22	3-24-22	
Naphthalene	**ND**	0.0099	EPA 8270E/SIM	3-24-22	3-24-22	
4-Chloroaniline	**ND**	0.25	EPA 8270E	3-24-22	3-24-22	
Hexachlorobutadiene	**ND**	0.050	EPA 8270E	3-24-22	3-24-22	
4-Chloro-3-methylphenol	**ND**	0.050	EPA 8270E	3-24-22	3-24-22	
2-Methylnaphthalene	**ND**	0.0099	EPA 8270E/SIM	3-24-22	3-24-22	
1-Methylnaphthalene	**ND**	0.0099	EPA 8270E/SIM	3-24-22	3-24-22	
Hexachlorocyclopentadiene	**ND**	0.050	EPA 8270E	3-24-22	3-24-22	
2,4,6-Trichlorophenol	**ND**	0.050	EPA 8270E	3-24-22	3-24-22	
2,3-Dichloroaniline	**ND**	0.050	EPA 8270E	3-24-22	3-24-22	
2,4,5-Trichlorophenol	**ND**	0.050	EPA 8270E	3-24-22	3-24-22	
2-Chloronaphthalene	**ND**	0.050	EPA 8270E	3-24-22	3-24-22	
2-Nitroaniline	**ND**	0.050	EPA 8270E	3-24-22	3-24-22	
1,4-Dinitrobenzene	**ND**	0.050	EPA 8270E	3-24-22	3-24-22	
Dimethylphthalate	**ND**	0.050	EPA 8270E	3-24-22	3-24-22	
1,3-Dinitrobenzene	**ND**	0.050	EPA 8270E	3-24-22	3-24-22	
2,6-Dinitrotoluene	**ND**	0.050	EPA 8270E	3-24-22	3-24-22	
1,2-Dinitrobenzene	**ND**	0.050	EPA 8270E	3-24-22	3-24-22	
Acenaphthylene	**ND**	0.0099	EPA 8270E/SIM	3-24-22	3-24-22	
3-Nitroaniline	**ND**	0.050	EPA 8270E	3-24-22	3-24-22	

Date of Report: March 25, 2022
Samples Submitted: March 24, 2022
Laboratory Reference: 2203-281
Project: 6694-002-05 T700

SEMIVOLATILE ORGANICS EPA 8270E/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Slope-3-20220324**					
Laboratory ID:	03-281-03					
2,4-Dinitrophenol	**ND**	0.25	EPA 8270E	3-24-22	3-24-22	
Acenaphthene	**ND**	0.0099	EPA 8270E/SIM	3-24-22	3-24-22	
4-Nitrophenol	**ND**	0.050	EPA 8270E	3-24-22	3-24-22	
2,4-Dinitrotoluene	**ND**	0.050	EPA 8270E	3-24-22	3-24-22	
Dibenzofuran	**ND**	0.050	EPA 8270E	3-24-22	3-24-22	
2,3,5,6-Tetrachlorophenol	**ND**	0.050	EPA 8270E	3-24-22	3-24-22	
2,3,4,6-Tetrachlorophenol	**ND**	0.050	EPA 8270E	3-24-22	3-24-22	
Diethylphthalate	**ND**	0.25	EPA 8270E	3-24-22	3-24-22	
4-Chlorophenyl-phenylether	**ND**	0.050	EPA 8270E	3-24-22	3-24-22	
4-Nitroaniline	**ND**	0.050	EPA 8270E	3-24-22	3-24-22	
Fluorene	**ND**	0.0099	EPA 8270E/SIM	3-24-22	3-24-22	
4,6-Dinitro-2-methylphenol	**ND**	0.25	EPA 8270E	3-24-22	3-24-22	
n-Nitrosodiphenylamine	**ND**	0.050	EPA 8270E	3-24-22	3-24-22	
1,2-Diphenylhydrazine	**ND**	0.050	EPA 8270E	3-24-22	3-24-22	
4-Bromophenyl-phenylether	**ND**	0.050	EPA 8270E	3-24-22	3-24-22	
Hexachlorobenzene	**ND**	0.050	EPA 8270E	3-24-22	3-24-22	
Pentachlorophenol	**ND**	0.25	EPA 8270E	3-24-22	3-24-22	
Phenanthrene	**0.010**	0.0099	EPA 8270E/SIM	3-24-22	3-24-22	
Anthracene	**ND**	0.0099	EPA 8270E/SIM	3-24-22	3-24-22	
Carbazole	**ND**	0.050	EPA 8270E	3-24-22	3-24-22	
Di-n-butylphthalate	**ND**	0.25	EPA 8270E	3-24-22	3-24-22	
Fluoranthene	**0.010**	0.0099	EPA 8270E/SIM	3-24-22	3-24-22	
Pyrene	**0.010**	0.0099	EPA 8270E/SIM	3-24-22	3-24-22	
Butylbenzylphthalate	**ND**	0.25	EPA 8270E	3-24-22	3-24-22	
bis-2-Ethylhexyladipate	**ND**	0.25	EPA 8270E	3-24-22	3-24-22	
3,3'-Dichlorobenzidine	**ND**	0.25	EPA 8270E	3-24-22	3-24-22	
Benzo[a]anthracene	**ND**	0.0099	EPA 8270E/SIM	3-24-22	3-24-22	
Chrysene	**ND**	0.0099	EPA 8270E/SIM	3-24-22	3-24-22	
bis(2-Ethylhexyl)phthalate	**1.2**	0.25	EPA 8270E	3-24-22	3-24-22	
Di-n-octylphthalate	**ND**	0.25	EPA 8270E	3-24-22	3-24-22	
Benzo[b]fluoranthene	**ND**	0.0099	EPA 8270E/SIM	3-24-22	3-24-22	
Benzo(j,k)fluoranthene	**ND**	0.0099	EPA 8270E/SIM	3-24-22	3-24-22	
Benzo[a]pyrene	**ND**	0.0099	EPA 8270E/SIM	3-24-22	3-24-22	
Indeno[1,2,3-cd]pyrene	**ND**	0.0099	EPA 8270E/SIM	3-24-22	3-24-22	
Dibenz[a,h]anthracene	**ND**	0.0099	EPA 8270E/SIM	3-24-22	3-24-22	
Benzo[g,h,i]perylene	**ND**	0.0099	EPA 8270E/SIM	3-24-22	3-24-22	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*56*	*26 - 109*				
Phenol-d6	*56*	*33 - 113*				
Nitrobenzene-d5	*63*	*31 - 110*				
2-Fluorobiphenyl	*67*	*42 - 107*				
2,4,6-Tribromophenol	*72*	*42 - 123*				
Terphenyl-d14	*70*	*41 - 115*				

Date of Report: March 25, 2022
Samples Submitted: March 24, 2022
Laboratory Reference: 2203-281
Project: 6694-002-05 T700

PAHs EPA 8270E/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Slope-1-20220324**					
Laboratory ID:	03-281-01					
Benzo[a]anthracene	**0.028**	0.010	EPA 8270E/SIM	3-25-22	3-25-22	
Chrysene	**0.039**	0.010	EPA 8270E/SIM	3-25-22	3-25-22	
Benzo[b]fluoranthene	**0.044**	0.010	EPA 8270E/SIM	3-25-22	3-25-22	
Benzo(j,k)fluoranthene	**0.012**	0.010	EPA 8270E/SIM	3-25-22	3-25-22	
Benzo[a]pyrene	**0.036**	0.010	EPA 8270E/SIM	3-25-22	3-25-22	
Indeno(1,2,3-c,d)pyrene	**0.029**	0.010	EPA 8270E/SIM	3-25-22	3-25-22	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270E/SIM	3-25-22	3-25-22	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*85*	*41 - 114*				
Pyrene-d10	*79*	*39 - 115*				
Terphenyl-d14	*80*	*44 - 125*				
Client ID:	**Slope-2-20220324**					
Laboratory ID:	03-281-02					
Benzo[a]anthracene	**ND**	0.0093	EPA 8270E/SIM	3-25-22	3-25-22	
Chrysene	**0.010**	0.0093	EPA 8270E/SIM	3-25-22	3-25-22	
Benzo[b]fluoranthene	**0.0096**	0.0093	EPA 8270E/SIM	3-25-22	3-25-22	
Benzo(j,k)fluoranthene	**ND**	0.0093	EPA 8270E/SIM	3-25-22	3-25-22	
Benzo[a]pyrene	**ND**	0.0093	EPA 8270E/SIM	3-25-22	3-25-22	
Indeno(1,2,3-c,d)pyrene	**0.0096**	0.0093	EPA 8270E/SIM	3-25-22	3-25-22	
Dibenz[a,h]anthracene	**ND**	0.0093	EPA 8270E/SIM	3-25-22	3-25-22	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*88*	*41 - 114*				
Pyrene-d10	*79*	*39 - 115*				
Terphenyl-d14	*78*	*44 - 125*				

Date of Report: March 25, 2022
Samples Submitted: March 24, 2022
Laboratory Reference: 2203-281
Project: 6694-002-05 T700

PAHs EPA 8270E/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Slope-4-20220324**					
Laboratory ID:	03-281-04					
Benzo[a]anthracene	**ND**	0.0082	EPA 8270E/SIM	3-25-22	3-25-22	
Chrysene	**ND**	0.0082	EPA 8270E/SIM	3-25-22	3-25-22	
Benzo[b]fluoranthene	**ND**	0.0082	EPA 8270E/SIM	3-25-22	3-25-22	
Benzo(j,k)fluoranthene	**ND**	0.0082	EPA 8270E/SIM	3-25-22	3-25-22	
Benzo[a]pyrene	**ND**	0.0082	EPA 8270E/SIM	3-25-22	3-25-22	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0082	EPA 8270E/SIM	3-25-22	3-25-22	
Dibenz[a,h]anthracene	**ND**	0.0082	EPA 8270E/SIM	3-25-22	3-25-22	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*86*	*41 - 114*				
Pyrene-d10	*78*	*39 - 115*				
Terphenyl-d14	*78*	*44 - 125*				

Date of Report: March 25, 2022
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Project: 6694-002-05 T700

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Slope-3-20220324**					
Laboratory ID:	03-281-03					
alpha-BHC	**ND**	7.6	EPA 8081B	2-24-22	3-24-22	
gamma-BHC (Lindane)	**ND**	7.6	EPA 8081B	2-24-22	3-24-22	
beta-BHC	**ND**	7.6	EPA 8081B	2-24-22	3-24-22	
delta-BHC	**ND**	7.6	EPA 8081B	2-24-22	3-24-22	
Heptachlor	**ND**	7.6	EPA 8081B	2-24-22	3-24-22	
Aldrin	**ND**	7.6	EPA 8081B	2-24-22	3-24-22	
Heptachlor Epoxide	**ND**	7.6	EPA 8081B	2-24-22	3-24-22	
gamma-Chlordane	**ND**	7.6	EPA 8081B	2-24-22	3-24-22	
alpha-Chlordane	**ND**	15	EPA 8081B	2-24-22	3-24-22	
4,4'-DDE	**ND**	15	EPA 8081B	2-24-22	3-24-22	
Endosulfan I	**ND**	7.6	EPA 8081B	2-24-22	3-24-22	
Dieldrin	**ND**	15	EPA 8081B	2-24-22	3-24-22	
Endrin	**ND**	7.6	EPA 8081B	2-24-22	3-24-22	
4,4'-DDD	**ND**	15	EPA 8081B	2-24-22	3-24-22	
Endosulfan II	**ND**	15	EPA 8081B	2-24-22	3-24-22	
4,4'-DDT	**ND**	15	EPA 8081B	2-24-22	3-24-22	
Endrin Aldehyde	**ND**	15	EPA 8081B	2-24-22	3-24-22	
Methoxychlor	**ND**	15	EPA 8081B	2-24-22	3-24-22	
Endosulfan Sulfate	**ND**	15	EPA 8081B	2-24-22	3-24-22	
Endrin Ketone	**ND**	15	EPA 8081B	2-24-22	3-24-22	
Toxaphene	**ND**	76	EPA 8081B	2-24-22	3-24-22	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*83*	*30-110*				
DCB	*90*	*40-117*				

Date of Report: March 25, 2022
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Project: 6694-002-05 T700

TOTAL METALS
EPA 6010D/6020B/7471B

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Slope-1-20220324**					
Laboratory ID:	03-281-01					
Lead	**43**	7.6	EPA 6010D	3-24-22	3-24-22	
Client ID:	**Slope-2-20220324**					
Laboratory ID:	03-281-02					
Lead	**26**	7.0	EPA 6010D	3-24-22	3-24-22	
Client ID:	**Slope-3-20220324**					
Laboratory ID:	03-281-03					
Arsenic	**ND**	15	EPA 6010D	3-24-22	3-24-22	
Cadmium	**4.4**	0.74	EPA 6010D	3-24-22	3-24-22	
Chromium	**27**	0.74	EPA 6010D	3-24-22	3-24-22	
Copper	**18**	0.93	EPA 6020B	3-25-22	3-25-22	
Iron	**16000**	740	EPA 6010D	3-25-22	3-25-22	
Lead	**70**	7.4	EPA 6010D	3-24-22	3-24-22	
Manganese	**680**	7.4	EPA 6010D	3-25-22	3-25-22	
Mercury	**0.15**	0.022	EPA 7471B	3-24-22	3-24-22	
Nickel	**33**	3.7	EPA 6010D	3-24-22	3-24-22	
Selenium	**ND**	0.74	EPA 6020B	3-25-22	3-25-22	
Silver	**ND**	0.93	EPA 6020B	3-25-22	3-25-22	
Client ID:	**Slope-4-20220324**					
Laboratory ID:	03-281-04					
Lead	**ND**	6.1	EPA 6010D	3-24-22	3-24-22	

Date of Report: March 25, 2022
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Laboratory Reference: 2203-281
Project: 6694-002-05 T700

GASOLINE RANGE ORGANICS/BTEX
NWTPH-Gx/EPA 8021B
QUALITY CONTROL

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0324S2					
Benzene	**ND**	0.020	EPA 8021B	3-24-22	3-24-22	
Toluene	**ND**	0.050	EPA 8021B	3-24-22	3-24-22	
Ethyl Benzene	**ND**	0.050	EPA 8021B	3-24-22	3-24-22	
m,p-Xylene	**ND**	0.050	EPA 8021B	3-24-22	3-24-22	
o-Xylene	**ND**	0.050	EPA 8021B	3-24-22	3-24-22	
Gasoline	**ND**	5.0	NWTPH-Gx	3-24-22	3-24-22	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*83*	*66-129*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	03-281-01										
	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						*87*	*87*	*66-129*			
SPIKE BLANKS											
Laboratory ID:	SB0324S1										
	SB	SBD	SB	SBD		SB	SBD				
Benzene	**0.867**	**0.880**	1.00	1.00		**87**	**88**	68-112	1	10	
Toluene	**0.903**	**0.911**	1.00	1.00		**90**	**91**	70-114	1	10	
Ethyl Benzene	**0.914**	**0.928**	1.00	1.00		**91**	**93**	70-115	2	10	
m,p-Xylene	**0.939**	**0.941**	1.00	1.00		**94**	**94**	69-117	0	11	
o-Xylene	**0.932**	**0.939**	1.00	1.00		**93**	**94**	71-115	1	11	
Surrogate:											
Fluorobenzene						*88*	*90*	*66-129*			

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Project: 6694-002-05 T700

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:	MB0324S2					
Diesel Range Organics	**ND**	25	NWTPH-Dx	3-24-22	3-24-22	
Lube Oil Range Organics	**ND**	50	NWTPH-Dx	3-24-22	3-24-22	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*99*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	SB0324S2										
	ORIG	DUP									
Diesel Fuel #2	**103**	**94.7**	NA	NA		NA		NA	8	NA	
Surrogate:											
o-Terphenyl						*113*	*107*	*50-150*			

Date of Report: March 25, 2022
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Project: 6694-002-05 T700

SEMIVOLATILE ORGANICS EPA 8270E/SIM
QUALITY CONTROL
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Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0324S1					
n-Nitrosodimethylamine	**ND**	0.033	EPA 8270E	3-24-22	3-24-22	
Pyridine	**ND**	0.33	EPA 8270E	3-24-22	3-24-22	
Phenol	**ND**	0.033	EPA 8270E	3-24-22	3-24-22	
Aniline	**ND**	0.17	EPA 8270E	3-24-22	3-24-22	
bis(2-Chloroethyl)ether	**ND**	0.033	EPA 8270E	3-24-22	3-24-22	
2-Chlorophenol	**ND**	0.033	EPA 8270E	3-24-22	3-24-22	
1,3-Dichlorobenzene	**ND**	0.033	EPA 8270E	3-24-22	3-24-22	
1,4-Dichlorobenzene	**ND**	0.033	EPA 8270E	3-24-22	3-24-22	
Benzyl alcohol	**ND**	0.033	EPA 8270E	3-24-22	3-24-22	
1,2-Dichlorobenzene	**ND**	0.033	EPA 8270E	3-24-22	3-24-22	
2-Methylphenol (o-Cresol)	**ND**	0.033	EPA 8270E	3-24-22	3-24-22	
bis(2-Chloroisopropyl)ether	**ND**	0.033	EPA 8270E	3-24-22	3-24-22	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.033	EPA 8270E	3-24-22	3-24-22	
n-Nitroso-di-n-propylamine	**ND**	0.033	EPA 8270E	3-24-22	3-24-22	
Hexachloroethane	**ND**	0.033	EPA 8270E	3-24-22	3-24-22	
Nitrobenzene	**ND**	0.033	EPA 8270E	3-24-22	3-24-22	
Isophorone	**ND**	0.033	EPA 8270E	3-24-22	3-24-22	
2-Nitrophenol	**ND**	0.033	EPA 8270E	3-24-22	3-24-22	
2,4-Dimethylphenol	**ND**	0.033	EPA 8270E	3-24-22	3-24-22	
bis(2-Chloroethoxy)methane	**ND**	0.033	EPA 8270E	3-24-22	3-24-22	
2,4-Dichlorophenol	**ND**	0.033	EPA 8270E	3-24-22	3-24-22	
1,2,4-Trichlorobenzene	**ND**	0.033	EPA 8270E	3-24-22	3-24-22	
Naphthalene	**ND**	0.0067	EPA 8270E/SIM	3-24-22	3-24-22	
4-Chloroaniline	**ND**	0.17	EPA 8270E	3-24-22	3-24-22	
Hexachlorobutadiene	**ND**	0.033	EPA 8270E	3-24-22	3-24-22	
4-Chloro-3-methylphenol	**ND**	0.033	EPA 8270E	3-24-22	3-24-22	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270E/SIM	3-24-22	3-24-22	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270E/SIM	3-24-22	3-24-22	
Hexachlorocyclopentadiene	**ND**	0.033	EPA 8270E	3-24-22	3-24-22	
2,4,6-Trichlorophenol	**ND**	0.033	EPA 8270E	3-24-22	3-24-22	
2,3-Dichloroaniline	**ND**	0.033	EPA 8270E	3-24-22	3-24-22	
2,4,5-Trichlorophenol	**ND**	0.033	EPA 8270E	3-24-22	3-24-22	
2-Chloronaphthalene	**ND**	0.033	EPA 8270E	3-24-22	3-24-22	
2-Nitroaniline	**ND**	0.033	EPA 8270E	3-24-22	3-24-22	
1,4-Dinitrobenzene	**ND**	0.033	EPA 8270E	3-24-22	3-24-22	
Dimethylphthalate	**ND**	0.033	EPA 8270E	3-24-22	3-24-22	
1,3-Dinitrobenzene	**ND**	0.033	EPA 8270E	3-24-22	3-24-22	
2,6-Dinitrotoluene	**ND**	0.033	EPA 8270E	3-24-22	3-24-22	
1,2-Dinitrobenzene	**ND**	0.033	EPA 8270E	3-24-22	3-24-22	
Acenaphthylene	**ND**	0.0067	EPA 8270E/SIM	3-24-22	3-24-22	
3-Nitroaniline	**ND**	0.033	EPA 8270E	3-24-22	3-24-22	

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QUALITY CONTROL
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0324S1					
2,4-Dinitrophenol	**ND**	0.17	EPA 8270E	3-24-22	3-24-22	
Acenaphthene	**ND**	0.0067	EPA 8270E/SIM	3-24-22	3-24-22	
4-Nitrophenol	**ND**	0.033	EPA 8270E	3-24-22	3-24-22	
2,4-Dinitrotoluene	**ND**	0.033	EPA 8270E	3-24-22	3-24-22	
Dibenzofuran	**ND**	0.033	EPA 8270E	3-24-22	3-24-22	
2,3,5,6-Tetrachlorophenol	**ND**	0.033	EPA 8270E	3-24-22	3-24-22	
2,3,4,6-Tetrachlorophenol	**ND**	0.033	EPA 8270E	3-24-22	3-24-22	
Diethylphthalate	**ND**	0.17	EPA 8270E	3-24-22	3-24-22	
4-Chlorophenyl-phenylether	**ND**	0.033	EPA 8270E	3-24-22	3-24-22	
4-Nitroaniline	**ND**	0.033	EPA 8270E	3-24-22	3-24-22	
Fluorene	**ND**	0.0067	EPA 8270E/SIM	3-24-22	3-24-22	
4,6-Dinitro-2-methylphenol	**ND**	0.17	EPA 8270E	3-24-22	3-24-22	
n-Nitrosodiphenylamine	**ND**	0.033	EPA 8270E	3-24-22	3-24-22	
1,2-Diphenylhydrazine	**ND**	0.033	EPA 8270E	3-24-22	3-24-22	
4-Bromophenyl-phenylether	**ND**	0.033	EPA 8270E	3-24-22	3-24-22	
Hexachlorobenzene	**ND**	0.033	EPA 8270E	3-24-22	3-24-22	
Pentachlorophenol	**ND**	0.17	EPA 8270E	3-24-22	3-24-22	
Phenanthrene	**ND**	0.0067	EPA 8270E/SIM	3-24-22	3-24-22	
Anthracene	**ND**	0.0067	EPA 8270E/SIM	3-24-22	3-24-22	
Carbazole	**ND**	0.033	EPA 8270E	3-24-22	3-24-22	
Di-n-butylphthalate	**ND**	0.17	EPA 8270E	3-24-22	3-24-22	
Fluoranthene	**ND**	0.0067	EPA 8270E/SIM	3-24-22	3-24-22	
Pyrene	**ND**	0.0067	EPA 8270E/SIM	3-24-22	3-24-22	
Butylbenzylphthalate	**ND**	0.17	EPA 8270E	3-24-22	3-24-22	
bis-2-Ethylhexyladipate	**ND**	0.17	EPA 8270E	3-24-22	3-24-22	
3,3'-Dichlorobenzidine	**ND**	0.17	EPA 8270E	3-24-22	3-24-22	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270E/SIM	3-24-22	3-24-22	
Chrysene	**ND**	0.0067	EPA 8270E/SIM	3-24-22	3-24-22	
bis(2-Ethylhexyl)phthalate	**ND**	0.17	EPA 8270E	3-24-22	3-24-22	
Di-n-octylphthalate	**ND**	0.17	EPA 8270E	3-24-22	3-24-22	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270E/SIM	3-24-22	3-24-22	
Benzo(j,k)fluoranthene	**ND**	0.0067	EPA 8270E/SIM	3-24-22	3-24-22	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270E/SIM	3-24-22	3-24-22	
Indeno[1,2,3-cd]pyrene	**ND**	0.0067	EPA 8270E/SIM	3-24-22	3-24-22	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270E/SIM	3-24-22	3-24-22	
Benzo[g,h,i]perylene	**ND**	0.0067	EPA 8270E/SIM	3-24-22	3-24-22	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*78*	*26 - 109*				
Phenol-d6	*82*	*33 - 113*				
Nitrobenzene-d5	*78*	*31 - 110*				
2-Fluorobiphenyl	*83*	*42 - 107*				
2,4,6-Tribromophenol	*91*	*42 - 123*				
Terphenyl-d14	*84*	*41 - 115*				

Date of Report: March 25, 2022
Samples Submitted: March 24, 2022
Laboratory Reference: 2203-281
Project: 6694-002-05 T700

SEMIVOLATILE ORGANICS EPA 8270E/SIM
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0324S1									
	SB	SBD	SB	SBD	SB	SBD				
Phenol	**0.990**	**0.853**	1.33	1.33	74	64	47 - 106	15	30	
2-Chlorophenol	**1.11**	**0.924**	1.33	1.33	83	69	51 - 105	18	31	
1,4-Dichlorobenzene	**0.548**	**0.455**	0.667	0.667	82	68	49 - 101	19	33	
n-Nitroso-di-n-propylamine	**0.508**	**0.458**	0.667	0.667	76	69	50 - 105	10	26	
1,2,4-Trichlorobenzene	**0.573**	**0.486**	0.667	0.667	86	73	50 - 107	16	31	
4-Chloro-3-methylphenol	**1.17**	**1.11**	1.33	1.33	88	83	58 - 114	5	22	
Acenaphthene	**0.563**	**0.512**	0.667	0.667	84	77	52 - 102	9	22	
4-Nitrophenol	**1.26**	**1.14**	1.33	1.33	95	86	51 - 126	10	20	
2,4-Dinitrotoluene	**0.569**	**0.533**	0.667	0.667	85	80	54 - 108	7	19	
Pentachlorophenol	**1.09**	**0.959**	1.33	1.33	82	72	20 - 148	13	30	
Pyrene	**0.577**	**0.539**	0.667	0.667	87	81	55 - 112	7	19	
Surrogate:										
2-Fluorophenol					*81*	*67*	*26 - 109*			
Phenol-d6					*82*	*71*	*33 - 113*			
Nitrobenzene-d5					*83*	*71*	*31 - 110*			
2-Fluorobiphenyl					*85*	*77*	*42 - 107*			
2,4,6-Tribromophenol					*95*	*87*	*42 - 123*			
Terphenyl-d14					*85*	*79*	*41 - 115*			

Date of Report: March 25, 2022
Samples Submitted: March 24, 2022
Laboratory Reference: 2203-281
Project: 6694-002-05 T700

PAHs EPA 8270E/SIM
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0325S1					
Benzo[a]anthracene	**ND**	0.0067	EPA 8270E/SIM	3-25-22	3-25-22	
Chrysene	**ND**	0.0067	EPA 8270E/SIM	3-25-22	3-25-22	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270E/SIM	3-25-22	3-25-22	
Benzo(j,k)fluoranthene	**ND**	0.0067	EPA 8270E/SIM	3-25-22	3-25-22	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270E/SIM	3-25-22	3-25-22	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0067	EPA 8270E/SIM	3-25-22	3-25-22	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270E/SIM	3-25-22	3-25-22	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*97*	*41 - 114*				
Pyrene-d10	*84*	*39 - 115*				
Terphenyl-d14	*82*	*44 - 125*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	03-281-04										
	MS	MSD	MS	MSD		MS	MSD				
Benzo[a]anthracene	**0.173**	**0.166**	0.167	0.167	ND	104	99	49 - 139	4	27	
Chrysene	**0.159**	**0.151**	0.167	0.167	ND	95	90	47 - 127	5	28	
Benzo[b]fluoranthene	**0.151**	**0.142**	0.167	0.167	ND	90	85	46 - 129	6	31	
Benzo(j,k)fluoranthene	**0.147**	**0.142**	0.167	0.167	ND	88	85	46 - 128	3	25	
Benzo[a]pyrene	**0.154**	**0.148**	0.167	0.167	ND	92	89	47 - 134	4	27	
Indeno(1,2,3-c,d)pyrene	**0.157**	**0.144**	0.167	0.167	ND	94	86	42 - 133	9	25	
Dibenz[a,h]anthracene	**0.152**	**0.144**	0.167	0.167	ND	91	86	46 - 129	5	24	
Surrogate:											
2-Fluorobiphenyl						*90*	*84*	*41 - 114*			
Pyrene-d10						*80*	*76*	*39 - 115*			
Terphenyl-d14						*81*	*76*	*44 - 125*			

Date of Report: March 25, 2022
Samples Submitted: March 24, 2022
Laboratory Reference: 2203-281
Project: 6694-002-05 T700

ORGANOCHLORINE PESTICIDES EPA 8081B QUALITY CONTROL

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0324S1					
alpha-BHC	**ND**	5.0	EPA 8081B	3-24-22	3-24-22	
gamma-BHC (Lindane)	**ND**	5.0	EPA 8081B	3-24-22	3-24-22	
beta-BHC	**ND**	5.0	EPA 8081B	3-24-22	3-24-22	
delta-BHC	**ND**	5.0	EPA 8081B	3-24-22	3-24-22	
Heptachlor	**ND**	5.0	EPA 8081B	3-24-22	3-24-22	
Aldrin	**ND**	5.0	EPA 8081B	3-24-22	3-24-22	
Heptachlor Epoxide	**ND**	5.0	EPA 8081B	3-24-22	3-24-22	
gamma-Chlordane	**ND**	5.0	EPA 8081B	3-24-22	3-24-22	
alpha-Chlordane	**ND**	10	EPA 8081B	3-24-22	3-24-22	
4,4'-DDE	**ND**	10	EPA 8081B	3-24-22	3-24-22	
Endosulfan I	**ND**	5.0	EPA 8081B	3-24-22	3-24-22	
Dieldrin	**ND**	10	EPA 8081B	3-24-22	3-24-22	
Endrin	**ND**	5.0	EPA 8081B	3-24-22	3-24-22	
4,4'-DDD	**ND**	10	EPA 8081B	3-24-22	3-24-22	
Endosulfan II	**ND**	10	EPA 8081B	3-24-22	3-24-22	
4,4'-DDT	**ND**	10	EPA 8081B	3-24-22	3-24-22	
Endrin Aldehyde	**ND**	10	EPA 8081B	3-24-22	3-24-22	
Methoxychlor	**ND**	10	EPA 8081B	3-24-22	3-24-22	
Endosulfan Sulfate	**ND**	10	EPA 8081B	3-24-22	3-24-22	
Endrin Ketone	**ND**	10	EPA 8081B	3-24-22	3-24-22	
Toxaphene	**ND**	50	EPA 8081B	3-24-22	3-24-22	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*91*	*30-110*				
DCB	*109*	*40-117*				

Date of Report: March 25, 2022
Samples Submitted: March 24, 2022
Laboratory Reference: 2203-281
Project: 6694-002-05 T700

ORGANOCHLORINE PESTICIDES EPA 8081B QUALITY CONTROL

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB0324S2										
	SB	SBD	SB	SBD		SB	SBD				
alpha-BHC	**106**	**98.1**	100	100	N/A	**106**	**98**	65-115	8	15	
gamma-BHC (Lindane)	**101**	**94.6**	100	100	N/A	**101**	**95**	69-116	7	15	
beta-BHC	**92.2**	**86.0**	100	100	N/A	**92**	**86**	63-116	7	15	
delta-BHC	**105**	**96.2**	100	100	N/A	**105**	**96**	66-116	9	15	
Heptachlor	**89.6**	**83.2**	100	100	N/A	**90**	**83**	63-119	7	15	
Aldrin	**98.7**	**92.9**	100	100	N/A	**99**	**93**	60-116	6	15	
Heptachlor Epoxide	**89.4**	**83.3**	100	100	N/A	**89**	**83**	65-116	7	15	
gamma-Chlordane	**90.7**	**85.0**	100	100	N/A	**91**	**85**	64-116	6	15	
alpha-Chlordane	**91.4**	**85.7**	100	100	N/A	**91**	**86**	62-119	6	15	
4,4'-DDE	**100**	**93.1**	100	100	N/A	**100**	**93**	69-120	7	15	
Endosulfan I	**94.8**	**88.3**	100	100	N/A	**95**	**88**	60-121	7	15	
Dieldrin	**95.9**	**89.3**	100	100	N/A	**96**	**89**	64-115	7	15	
Endrin	**103**	**95.5**	100	100	N/A	**103**	**96**	62-118	8	15	
4,4'-DDD	**99.6**	**94.2**	100	100	N/A	**100**	**94**	64-124	6	15	
Endosulfan II	**90.2**	**83.8**	100	100	N/A	**90**	**84**	64-115	7	15	
4,4'-DDT	**96.3**	**87.5**	100	100	N/A	**96**	**88**	57-130	10	15	
Endrin Aldehyde	**87.8**	**83.5**	100	100	N/A	**88**	**84**	57-114	5	15	
Methoxychlor	**108**	**100**	100	100	N/A	**108**	**100**	49-129	8	15	
Endosulfan Sulfate	**87.8**	**82.6**	100	100	N/A	**88**	**83**	61-115	6	15	
Endrin Ketone	**85.6**	**79.9**	100	100	N/A	**86**	**80**	64-116	7	15	
Surrogate:											
TCMX						*107*	*100*	*30-110*			
DCB						*124*	*117*	*40-117*			Q

Date of Report: March 25, 2022
Samples Submitted: March 24, 2022
Laboratory Reference: 2203-281
Project: 6694-002-05 T700

TOTAL METALS
EPA 6010D/6020B/7471B
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0324SM1					
Arsenic	**ND**	10	EPA 6010D	3-24-22	3-24-22	
Cadmium	**ND**	0.50	EPA 6010D	3-24-22	3-24-22	
Chromium	**ND**	0.50	EPA 6010D	3-24-22	3-24-22	
Nickel	**ND**	2.5	EPA 6010D	3-24-22	3-24-22	
Laboratory ID:	MB0324S1					
Mercury	**ND**	0.015	EPA 7471B	3-24-22	3-24-22	
Laboratory ID:	MB0325SM1					
Selenium	**ND**	0.50	EPA 6020B	3-25-22	3-25-22	
Laboratory ID:	MB0325SM2					
Copper	**ND**	0.63	EPA 6020B	3-25-22	3-25-22	
Silver	**ND**	0.63	EPA 6020B	3-25-22	3-25-22	
Laboratory ID:	MB0325SH1					
Iron	**ND**	50	EPA 6010D	3-25-22	3-25-22	
Manganese	**ND**	0.50	EPA 6010D	3-25-22	3-25-22	

Date of Report: March 25, 2022
Samples Submitted: March 24, 2022
Laboratory Reference: 2203-281
Project: 6694-002-05 T700

TOTAL METALS
EPA 6010D/6020B/7471B
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	03-270-01									
	ORIG	DUP								
Arsenic	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Cadmium	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Chromium	**10.8**	**10.4**	NA	NA		NA	NA	4	20	
Lead	**5.65**	**9.55**	NA	NA		NA	NA	51	20	C
Nickel	**12.6**	**14.7**	NA	NA		NA	NA	15	20	
Laboratory ID:	03-270-01									
Mercury	**ND**	**0.0186**	NA	NA		NA	NA	NA	20	
Laboratory ID:	03-270-01									
	ORIG	DUP								
Iron	**10000**	**11100**	NA	NA		NA	NA	10	20	
Manganese	**145**	**164**	NA	NA		NA	NA	13	20	
Laboratory ID:	03-270-01									
	ORIG	DUP								
Copper	**9.49**	**9.58**	NA	NA		NA	NA	1	20	
Silver	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Laboratory ID:	03-281-03									
	ORIG	DUP								
Selenium	**ND**	**ND**	NA	NA		NA	NA	NA	20	

Date of Report: March 25, 2022
Samples Submitted: March 24, 2022
Laboratory Reference: 2203-281
Project: 6694-002-05 T700

TOTAL METALS
EPA 6010D/6020B/7471B
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	03-270-01										
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	**85.6**	**94.7**	100	100	ND	**86**	**95**	75-125	10	20	
Cadmium	**41.7**	**45.8**	50.0	50.0	ND	**83**	**92**	75-125	9	20	
Chromium	**95.7**	**104**	100	100	10.8	**85**	**93**	75-125	8	20	
Lead	**213**	**234**	250	250	5.65	**83**	**91**	75-125	9	20	
Nickel	**96.0**	**105**	100	100	12.6	**83**	**92**	75-125	9	20	
Laboratory ID:	03-270-01										
Mercury	**0.496**	**0.491**	0.500	0.500	0.0112	**97**	**96**	80-120	1	20	
Laboratory ID:	03-270-01										
	MS	MSD	MS	MSD		MS	MSD				
Iron	**9720**	**11700**	1000	1000	10000	**-32**	**169**	75-125	19	20	A
Manganese	**153**	**169**	25.0	25.0	145	**34**	**96**	75-125	10	20	A
Laboratory ID:	03-270-01										
	MS	MSD	MS	MSD		MS	MSD				
Copper	**55.0**	**53.3**	50.0	50.0	9.49	**91**	**88**	75-125	3	20	
Silver	**23.5**	**23.6**	25.0	25.0	ND	**94**	**94**	75-125	0	20	
Laboratory ID:	03-281-03										
	MS	MSD	MS	MSD		MS	MSD				
Selenium	**49.3**	**47.8**	50.0	50.0	ND	**99**	**96**	75-125	3	20	

Date of Report: March 25, 2022
Samples Submitted: March 24, 2022
Laboratory Reference: 2203-281
Project: 6694-002-05 T700

% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
Slope-1-20220324	03-281-01	**34**	3-24-22
Slope-2-20220324	03-281-02	**29**	3-24-22
Slope-3-20220324	03-281-03	**33**	3-24-22
Slope-4-20220324	03-281-04	**18**	3-24-22

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.

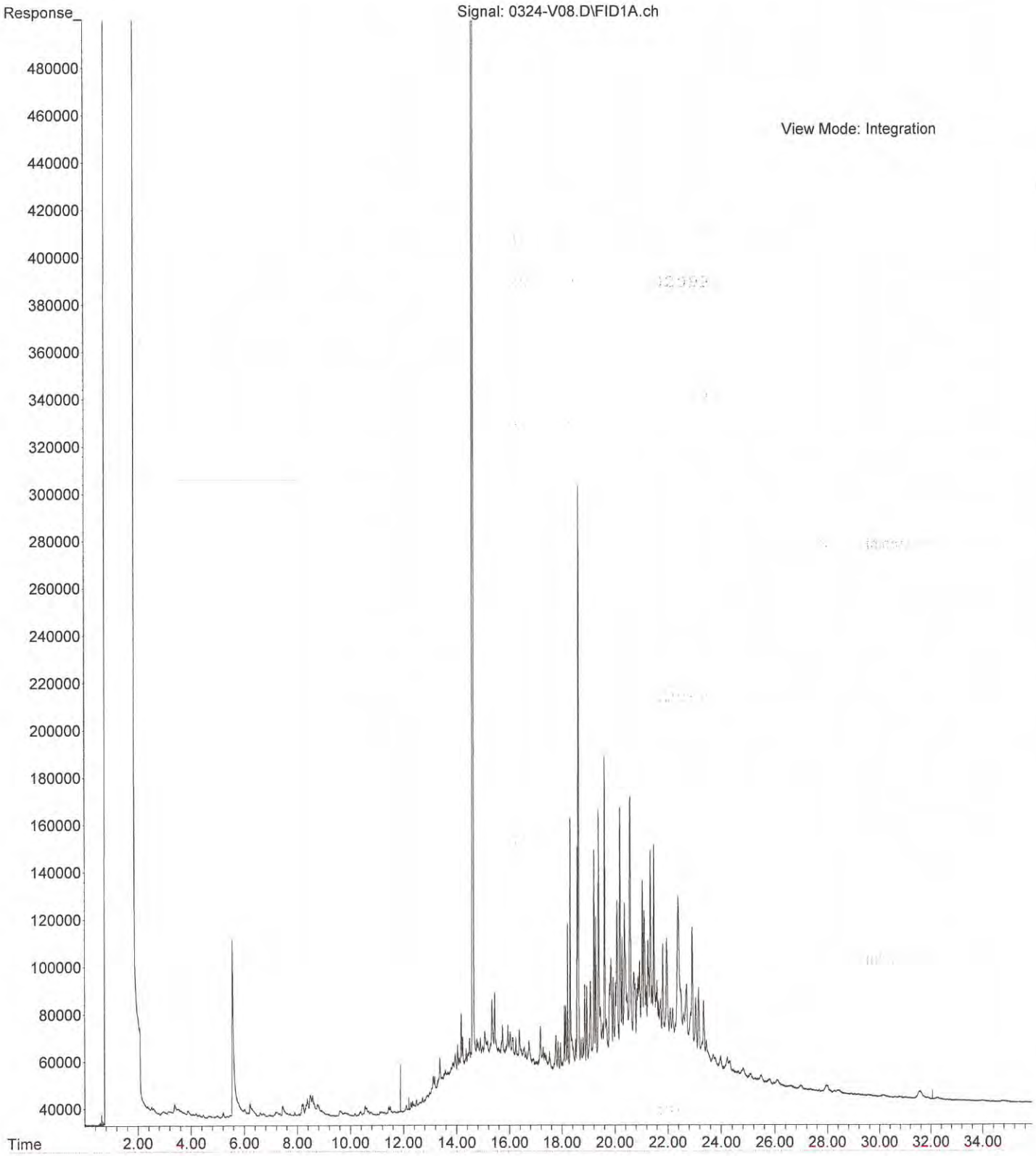
X1- Sample extract treated with a sulfuric acid/silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, 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.

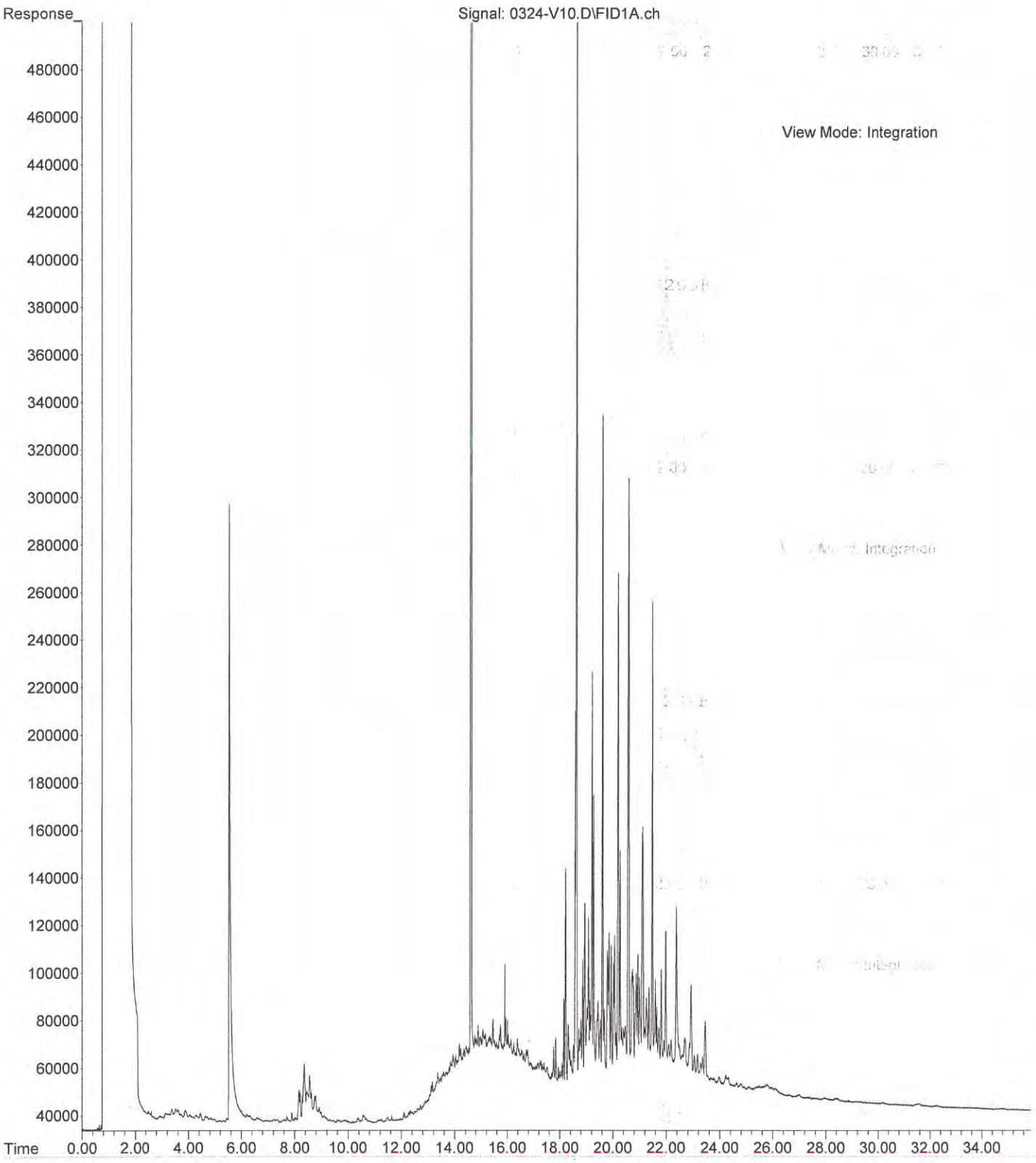
Z -

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

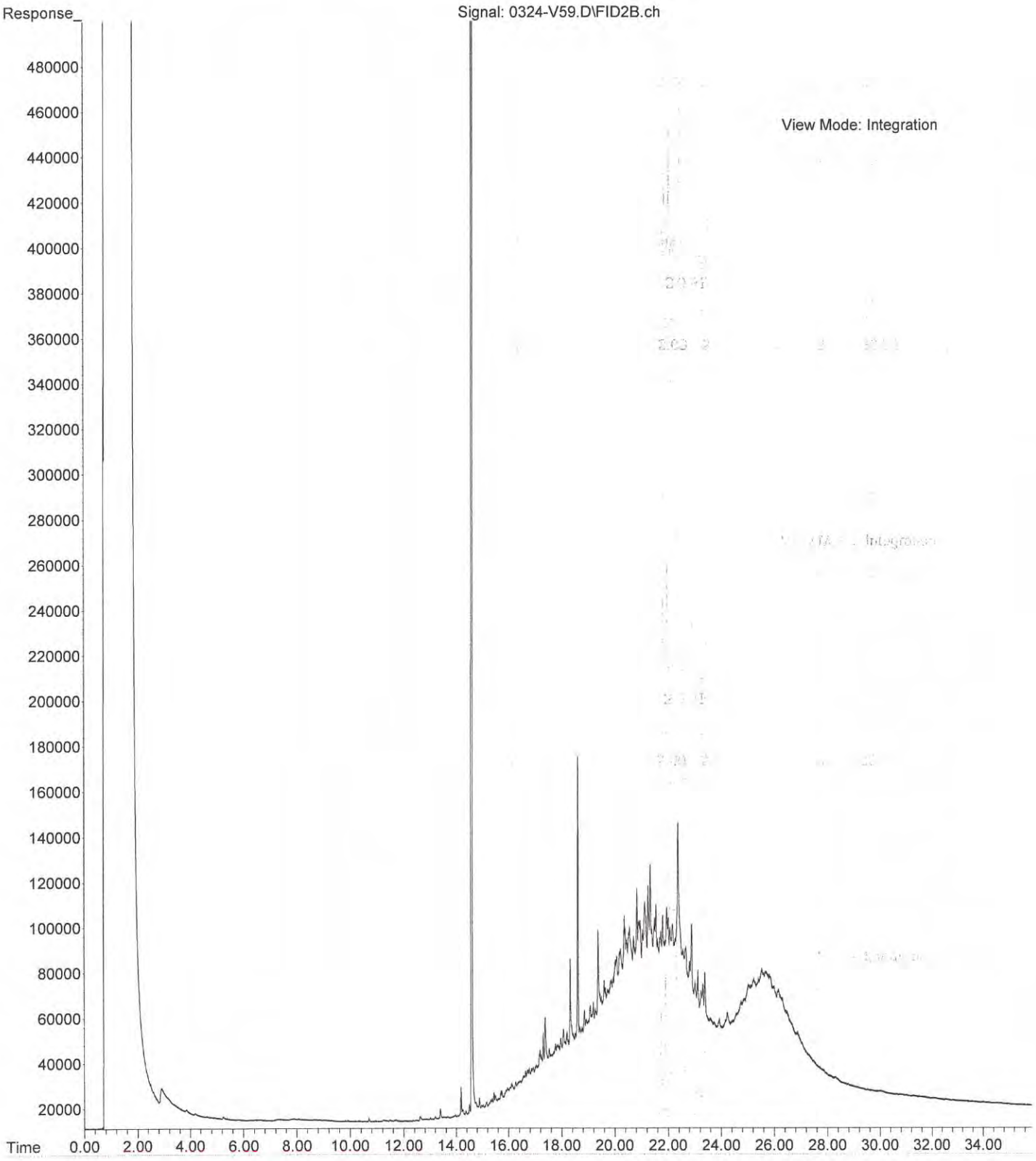
File :C:\msdchem\2\data\V220324\0324-V08.D
Operator : JP
Acquired : 24 Mar 2022 15:44 using AcqMethod V220209F.M
Instrument : Vigo
Sample Name: 03-281-01
Misc Info : Sample
Vial Number: 8



File :C:\msdchem\2\data\V220324\0324-V10.D
Operator : JP
Acquired : 24 Mar 2022 17:04 using AcqMethod V220209F.M
Instrument : Vigo
Sample Name: 03-281-02
Misc Info : Sample
Vial Number: 10



File :C:\msdchem\2\data\V220324.SEC\0324-V59.D
Operator : JP
Acquired : 24 Mar 2022 16:24 using AcqMethod V220209F.M
Instrument : Vigo
Sample Name: 03-281-03
Misc Info : RearSamp
Vial Number: 59



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

March 31, 2022

Garrett Leque
GeoEngineers, Inc.
554 West Bakerview Road
Bellingham, WA 98226

Re: Analytical Data for Project 6694-002-05
Laboratory Reference No. 2203-347

Dear Garrett:

Enclosed are the analytical results and associated quality control data for samples submitted on March 30, 2022.

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 31, 2022
Samples Submitted: March 30, 2022
Laboratory Reference: 2203-347
Project: 6694-002-05

Case Narrative

Samples were collected on March 30, 2022 and received by the laboratory on March 30, 2022. 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: March 31, 2022
Samples Submitted: March 30, 2022
Laboratory Reference: 2203-347
Project: 6694-002-05

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
Slope-1A-20220330	03-347-01	Soil	3-30-22	3-30-22	
Slope-3A-20220330	03-347-02	Soil	3-30-22	3-30-22	

Date of Report: March 31, 2022
Samples Submitted: March 30, 2022
Laboratory Reference: 2203-347
Project: 6694-002-05

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:	**Slope-1A-20220330**					
Laboratory ID:	03-347-01					
Diesel Range Organics	**ND**	30	NWTPH-Dx	3-31-22	3-31-22	
Lube Oil	**110**	60	NWTPH-Dx	3-31-22	3-31-22	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*97*	*50-150*				
Client ID:	**Slope-3A-20220330**					
Laboratory ID:	03-347-02					
Diesel Range Organics	**ND**	35	NWTPH-Dx	3-31-22	3-31-22	
Lube Oil Range Organics	**ND**	69	NWTPH-Dx	3-31-22	3-31-22	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*81*	*50-150*				

Date of Report: March 31, 2022
Samples Submitted: March 30, 2022
Laboratory Reference: 2203-347
Project: 6694-002-05

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Slope-3A-20220330**					
Laboratory ID:	03-347-02					
Cadmium	**ND**	0.69	EPA 6010D	3-30-22	3-30-22	
Lead	**11**	6.9	EPA 6010D	3-30-22	3-30-22	
Mercury	**0.046**	0.024	EPA 7471B	3-30-22	3-30-22	

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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:	MB0331S1					
Diesel Range Organics	**ND**	25	NWTPH-Dx	3-31-22	3-31-22	
Lube Oil Range Organics	**ND**	50	NWTPH-Dx	3-31-22	3-31-22	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*98*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	SB0331S1										
	ORIG	DUP									
Diesel Fuel #2	**81.8**	**82.1**	NA	NA		NA		NA	0	NA	
Surrogate:											
o-Terphenyl						*90*	*85*	*50-150*			

Date of Report: March 31, 2022
Samples Submitted: March 30, 2022
Laboratory Reference: 2203-347
Project: 6694-002-05

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:	MB0330SM2					
Cadmium	**ND**	0.50	EPA 6010D	3-30-22	3-30-22	
Lead	**ND**	5.0	EPA 6010D	3-30-22	3-30-22	
Laboratory ID:	MB0331S1					
Mercury	**ND**	0.018	EPA 7471B	3-31-22	3-31-22	

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	03-282-01									
	ORIG	DUP								
Aluminum	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Copper	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Lead	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Zinc	**ND**	**ND**	NA	NA		NA	NA	NA	20	
MATRIX SPIKES										
Laboratory ID:	03-282-01									
	MS	MSD	MS	MSD		MS	MSD			
Aluminum	**69.0**	**69.8**	80.0	80.0	ND	**86**	**87**	75-125	1	20
Copper	**76.2**	**76.2**	80.0	80.0	ND	**95**	**95**	75-125	0	20
Lead	**77.4**	**77.8**	80.0	80.0	ND	**97**	**97**	75-125	1	20
Zinc	**82.8**	**80.6**	80.0	80.0	ND	**104**	**101**	75-125	3	20

Date of Report: March 31, 2022
Samples Submitted: March 30, 2022
Laboratory Reference: 2203-347
Project: 6694-002-05

% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
Slope-1A-20220330	03-347-01	**17**	3-30-22
Slope-3A-20220330	03-347-02	**27**	3-30-22

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 methods 8260 & 8270, 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

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

Company: GEI
Project Number: 6094-002-05
Project Name: GO-East
Project Manager: Garrett League
Sampled by: Woodrow D. Stokstad

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☐ Standard (7 Days)
☒ 24 hour (other)

Laboratory Number: 03-347

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX (8021☐ 8260☐)	NWTPH-Gx	NWTPH-Dx (Acid / SG Clean-up☐)	Volatiles 8260	Halogenated Volatiles 8260	EDB EPA 8011 (Waters Only)	Semivolatiles 8270/SIM (with low-level PAHs)	PAHs 8270/SIM (low-level)	PCBs 8082	Organochlorine Pesticides 8081	Organophosphorus Pesticides 8270/SIM	Chlorinated Acid Herbicides 8151	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664	Pb, Cd, Hg				% Moisture
1	~~Sed~~ Slope-1A-20220330	3/30/2022	1130	Soil	2				X																		X
2	~~Sed~~ Slope-3A-20220330	↓	1115	↓	C				X														X				X

	Signature	Company	Date	Time
Relinquished		GEI	3/30/2022	1205
Received		STEEDY	3/30/22	3:20
Relinquished		"	3/30/22	4:00
Received		ORE	3/31/22	1600
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
Contact Garrett League w/ questions

Data Package: Standard ☐ Level III ☐ Level IV ☐

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

File : C:\msdchem\2\data\V220331.SEC\0331-V53.D
Operator : LAD
Acquired : 31 Mar 2022 9:14 using AcqMethod V220209F.M
Instrument : Vigo
Sample Name: 03-347-01
Misc Info : RearSamp
Vial Number: 53