Phase II Environmental Site Assessment

Sprague and Riverside Parcels
Spokane, Washington

for
Avista Utilities

January 4, 2022

GeoEngineers
Earth Science + Technology

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Table of Contents

1.0 INTRODUCTION 1
1.1. Site History and Background 1
1.2. Site Description 2
2.0 SCOPE OF SERVICES 2
2.1. Phase II ESA Analytical Testing 2
3.0 SOIL ASSESSMENT 4
3.1. Direct Push Exploration and Sampling 4
4.0 SITE CONDITIONS 4
4.1. Surface and Subsurface Conditions 4
4.2. Groundwater Conditions 5
5.0 CHEMICAL ANALYTICAL RESULTS 5
6.0 ASSESSMENT SUMMARY 6
7.0 CONTAMINATED SOIL VOLUME ESTIMATE 6
7.1. Construction Considerations 7
8.0 LIMITATIONS 7
9.0 REFERENCES 7

LIST OF TABLES

Table 1. Summary of Chemical Analytical Results – Petroleum Hydrocarbons, Metals, VOCs and PAHs – Soil

LIST OF FIGURES

Figure 1. Vicinity Map
Figure 2. Site Plan, Boring Locations
Figure 3. Sample Locations and Analytical Results
Figure 4. Estimated Soil Removal Areas

APPENDICES

Appendix A. Field Methods and Boring Logs
    Figure A-1– Key to Exploration Logs
    Figures A-2 through A-16 – Logs of Borings
Appendix B. Data Validation and Chemical Analysis Laboratory Reports
Appendix C. Report Limitations and Guidelines for Use

1.0 INTRODUCTION

This report presents the results of GeoEngineers, Inc.'s (GeoEngineers) Phase II environmental site assessment (ESA) of the five contiguous parcels located at 415 East Sprague Avenue, 419 East Sprague Avenue, 425 East Sprague Avenue and 420 East Riverside Avenue in Spokane, Washington as shown in the Vicinity Map, Figure 1. The site is composed of Spokane County parcel Nos. 35173.1211, 35173.1212, 35173.1213, 35173.1220 and 35173.1207. Parcel No. 35173.1207 is a vacant lot without an address located directly west of 420 East Riverside Avenue. The former building at the 415 East Sprague property was demolished and the property is currently used as a gravel parking lot. The properties at 419 East Sprague and 425 East Sprague have a paved parking lot. The property at 420 East Riverside has a cell phone tower structure at the north end of the parcel.

The properties are collectively referred to herein as the "subject property." The subject property is shown relative to surrounding physical features on Figure 1. The layout of the subject property and surrounding properties is shown on the Site Plan, Boring Locations, Figure 2.

Avista previously contracted GeoEngineers to perform a Phase I ESA for the subject property in 2018.

1.1. Site History and Background

The following is a summary of historic development at and adjacent to the subject property from the Sprague and Riverside Parcels Phase I ESA (GeoEngineers 2018). Since the early 1900's, the subject property has been partially developed for commercial retail and industrial use in all available Sanborn maps dating back to 1900 and aerial photographs dating back to 1938. According to Spokane County assessor information (SCOUT), a mixed-use brick facility was constructed in the south-central portion of the property in 1900 that was once a bottling facility and model train store. According to SCOUT, in 1927 an additional brick facility was constructed at the southwest corner of the subject property that was utilized initially as a gym and flooring store. From 1950 to 1980, the southwest brick facility was listed as a machinery facility on all available Sanborn maps. Sometime around 2017, the existing cell phone tower and cell phone tower building were constructed. Between 2017 to 2020, the brick facilities were demolished.

Mr. Rohme owned the subject properties from 1999, except parcel 35173.1220 (cell phone tower and cell phone tower building), which was purchased by Mr. Rohme in 2003, until 2018. According to Mr. Rohme, the brick building at the subject property was previously used by the City of Spokane as a detox center and was previously owned by Charles Balzer from 1940s or 1950s up until 1999.

Commercial development of adjacent properties began in the early 1900's and were generally utilized for industrial and commercial retail purposes. Multiple recognized environmental conditions (RECs) were identified for the subject property during GeoEngineers' 2018 Phase I ESA with potential shallow metals, carcinogenic polycyclic aromatic hydrocarbons (cPAHs) and petroleum-contaminated soil located at adjacent properties.

A GeoEngineers Phase I & II ESA (GeoEngineers 2011, GeoEngineers 2014) at the north-adjacent Pedestrian Bridge Site indicated shallow metals- and cPAH-impacted soil were present, and the limits of contamination were not fully defined.

A 2016 Independent Remedial Action Report and 2018 Petroleum-Impacted Soil Removal Report by AECOM Environment indicated lead-, cadmium- and petroleum-impacted soil was found at concentrations

greater than the Model Toxics Control Act (MTCA) Method A unrestricted land use cleanup levels from the site located at 601 East Riverside Avenue. The site was remediated, and contaminated soil was hauled to Waste Management's Graham Road facility in Medical Lake, Washington. Washington State Department of Ecology (Ecology) issued two No Further Action (NFA) letters for remediation of metals- and petroleum-impacted soil at that site.

Sanborn fire insurance maps identify the presence of a dry-cleaning business located one block south of the subject property from 1910 to 1955, which is likely upgradient of the subject property. However, there was no record of a release or contamination by dry cleaning solvents.

A heating oil tank was located in the basement of the model train store brick building at the subject property. The property owner reportedly had the tank pumped empty about 15 years ago and there is no record or sign of release.

1.2. Site Description

The subject property is situated between East Riverside Avenue and East Sprague Avenue and includes the five contiguous parcels described in Section 1.0. The former building at the 415 East Sprague property was demolished and the property is currently used as a gravel parking lot that is situated approximately 6 to 8 feet below the general subject property grade. A basalt cobble retaining structure divides the 415 East Sprague property from the east and south adjacent parcels. The 419 East Sprague and 425 East Sprague parcels are currently utilized as asphalt concrete cement parking areas. The parcel at 420 East Riverside has an active cell phone tower structure at the north end of the parcel. A diesel generator was observed at the cell phone tower structure at the 420 East Riverside property.

Parcel boundaries and other key site features are shown in Figure 2.

2.0 SCOPE OF SERVICES

The purpose of our services was to provide an environmental assessment of existing site soil conditions and to estimate the extent and volume of contaminated soil. We performed our services in accordance with the terms described in our Master Agreement (R-42955) with Avista, dated December 18, 2019. Our specific scope of services included:

2.1. Phase II ESA Analytical Testing

Our general scope of services for Phase II environmental assessment included:

1. Reviewed readily available, in-house and public literature for information including geologic and soils mapping, previous environmental assessments and geotechnical evaluations conducted at and near the properties.
2. Prepared a brief sampling and analysis plan (SAP) and health and safety plan (HASP) to guide field activities.
3. Notified the One-Call utility locating service before the execution of our subsurface exploration program to confirm the absence or presence of underground utilities at or near our proposed exploration locations. We also subcontracted Utilities Plus, LLC to check for possible underground utility conflicts.

4. Revised the original scope of work, including up to 12 test pits to about 12 feet below ground surface (bgs), which was substituted for 1 day of direct-push exploration methods as subsurface conditions permitted (good recovery with direct-push).
5. Explored subsurface soil conditions by advancing 15 soil borings to depths of about 2.5 to 13.2 feet bgs until rock conditions precluded the advancement of the boring.
    - Soil cuttings and decontamination water were placed into metal drums for temporary storage and disposal. Liquid and solid material were drummed separately, labeled and stored on site pending the results of analytical testing.
6. Collected up to two soil samples from each boring and submitted each sample to Eurofins TestAmerica Laboratory (Eurofins) in Spokane Valley, Washington for potential analysis. Field screened soil samples at selected depths for the potential presence of contaminants. Field screening included water sheen tests, potential volatile compound presence using a photoionization detector (PID), and visual methods. Data was recorded in field logs and the shallow (fill) sample exhibiting the highest potential for contamination was submitted for analysis. The deeper sample from each boring was held pending results of the shallow samples.
7. Submitted 16 soil samples to Eurofins on a 1-week turnaround time. Shallow fill soil samples were analyzed for the following:
    - Polycyclic aromatic hydrocarbons (PAHs) using Environmental Protection Agency (EPA) Method 8270D SIM; and
    - Resource Conservation and Recovery Act (RCRA) metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver) using EPA 6000/7000 Series Methods.
8. Submitted one soil sample to Eurofins on a 1-week turnaround for analysis of the following:
    - Gasoline-range petroleum hydrocarbons (GRPH) using Northwest Method NWTPH-Gx; and
    - Diesel- and oil-range petroleum hydrocarbons (DRPH and ORPH, respectively) using Northwest Method NWTPH-Dx.
9. In addition to the initial analytical test request and to further characterize observed sample results, four soil samples were submitted on a 1-week turnaround for the following:
    - PAHs using EPA Method 8270D SIM; and
    - RCRA metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver) using EPA 6000/7000 Series Methods.
10. Four soil samples that exhibited high metals concentrations were further analyzed on a 1-week turnaround for the following:
    - Toxicity characteristic leachate procedure (TCLP) for lead and mercury using EPA Method 1311.
11. Spokane Environmental Solutions (SES) was retained to profile and transport the investigation-derived waste (IDW) for disposal at a permitted facility.
12. Provided this Phase II ESA report containing the results of our environmental field exploration and testing activities.

3.0 SOIL ASSESSMENT

3.1. Direct Push Exploration and Sampling

GeoEngineers evaluated subsurface soil conditions at the subject property on November 11, 2021 by advancing 15 direct-push borings (DP-1 through DP-15). The subsurface explorations were excavated by Northern Lights Drilling, LLC (NLD) using a GeoProbe© 5400 to depths of about 2.5 to 13.2 feet bgs. Samples were field screened for petroleum contamination using the methods listed in Appendix A. Up to two soil samples were collected from each exploration for chemical analysis. Samples were collected from within and below the debris fill materials, where encountered.

Direct-push explorations DP-13, DP-14 and DP-15 surrounding exploration DP-3 were conducted to characterize observed petroleum-related contamination in DP-3. Direct-push exploration locations are shown in Figure 2.

The direct-push explorations were continuously monitored by technical staff from GeoEngineers who obtained representative soil samples, classified the soil and developed detailed logs of the explorations. Soil samples were field-screened to assess the presence of petroleum contamination and volatile organic compounds (VOCs). Select soil samples were submitted to Eurofins for analyses of select contaminants of concern (COCs).

A detailed description of field methods along with test pit logs are provided in Appendix A.

4.0 SITE CONDITIONS

The following sections describe surface, subsurface and groundwater conditions at the site based on our explorations.

4.1. Surface and Subsurface Conditions

Below is a summary of the surface and subsurface conditions found in the direct-push explorations.

- Approximately 2 inches of asphalt was observed in nine explorations (DP-1 to DP-6, and DP-13 to DP-15);
- Fill consisting generally of fine to coarse gravel with sand, varying amount of silt and debris (including brick, wood, glass, plastic, insulation) was observed in all explorations (DP-1 to DP-15) at depths ranging generally from 0 to 11 feet bgs;
- Native soils generally including clay and fine to coarse gravel with sand and varying amounts of silt were encountered in seven explorations (DP-3, DP-5, DP-6, DP-8, DP-10, DP-14 and DP-15) at depths ranging from about 4 to 9.5 feet bgs;
- Field screening indicated petroleum contamination was observed in exploration DP-3 at a depth of 10 to 11 feet;
- Basalt was observed in the base of the 15 soil borings.

4.2. Groundwater Conditions

Groundwater was not encountered during the November 11, 2021 direct-push subsurface soil investigation. The inferred direction of shallow groundwater flow is to the northwest as indicated in the GeoEngineers Phase I ESA (GeoEngineers 2018).

5.0 CHEMICAL ANALYTICAL RESULTS

Select soil samples collected from the borings were submitted to Eurofins for chemical analysis. Soil chemical analytical results are summarized and compared to MTCA Method A unrestricted land use cleanup levels in Summary of Chemical Analytical Results – Petroleum Hydrocarbons, Metals, VOCs and PAHs - Soil, Table 1. Laboratory reports and a data quality review are provided in Appendix B. Boring locations and analytical information are displayed in Sample Locations and Analytical Results, Figure 3.

Chemical analytical results for test pit samples are summarized by the following:

- PAHs exceeded the carcinogenic PAH (cPAH) toxic equivalency (TEQ) in eight samples [DP-2(1-2), DP-2(4-5), DP-3(1.5-2.5), DP-10(1-2), DP-10(4-5), DP-12(1-2), DP-14(4-5) and DP-14(8-9)]. Benzo(a)pyrene concentrations ranged from 110 to 1,300 micrograms per kilogram (µg/kg) in the eight samples. The collective cPAH TEQ exceeding MTCA Method A unrestricted land use cleanup levels in the eight samples and the cPAH TEQ concentrations ranged from 155.5 to 1,985 µg/kg. The MTCA Method A cleanup level for benzo(a)pyrene and cPAH TEQ is 100 µg/kg.
- GRPH, DRPH and ORPH exceeded the MTCA Method A cleanup level in one sample [DP-3(10-11)]. The MTCA Method A cleanup level for GRPH, DRPH and ORPH is 100 milligrams per kilogram (mg/kg), 2000 mg/kg and 2000 mg/kg, respectively. Step-out borings DP-13, DP-14 and DP-15 were not tested for petroleum hydrocarbons because field screening did not indicate a presence.
- Lead exceeded the MTCA Method A cleanup level for unrestricted land use in three samples [DP-2(4-5), DP-11(1.5-2.5) and DP-12(1-2)] analyzed from the borings at a range of 800 to 5,100 mg/kg. The lead MTCA Method A cleanup level for unrestricted land use is 250 mg/kg.
    - TCLP lead did not exceed the Washington Dangerous Waste allowable limit of 5.0 milligrams per liter (mg/L) in the three samples tested.
- Mercury exceeded the MTCA Method A cleanup level in one sample [DP-2(1-2)] with a concentration of 7,800 µg/kg. The MTCA Method A cleanup level for mercury is 2,000 µg/kg.
    - TCLP mercury did not exceed the Washington Dangerous Waste allowable limit of 0.2 mg/L in one sample tested.
- VOCs were detected at concentrations greater than laboratory reporting limits, or the method detection limits (MDL). Trichloroethylene exceeded the MTCA Method A cleanup level in one sample [DP-3(10-11)] with a concentration of 0.073 mg/kg. The MTCA Method A cleanup level for unrestricted land use is 0.03 mg/kg.
- Other site COCs were either not detected or detected at concentrations less than MTCA Cleanup levels for unrestricted land use.

6.0 ASSESSMENT SUMMARY

GeoEngineers conducted a Phase II ESA at the Sprague and Riverside Parcels site on November 11, 2021. Assessment activities consisted of advancing 15 direct-push borings and collecting soil samples for laboratory analysis. Five borings (DP-2, DP-3, DP-10, DP-12 and DP-14) contained cPAH concentrations exceeding the MTCA TEQ. One boring (DP-3) contained GRPH, DRPH, ORPH and VOC concentrations exceeding MTCA Method A cleanup levels.

Three borings (DP-2, DP-11 and DP-12) contained lead concentrations exceeding the MTCA Method A cleanup level. The samples were analyzed by TCLP-lead and did not exceed the state limit for lead. One boring contained mercury concentration exceeding the MTCA Method A cleanup level. The sample was analyzed by TCLP-mercury and did not exceed the state limit for mercury. One boring (DP-12) contained a cadmium concentration exceeding the MTCA Method A cleanup level.

7.0 CONTAMINATED SOIL VOLUME ESTIMATE

The following are approximate contaminated soil volume estimates for the site. The estimates for petroleum-, metals- and PAH-contaminated soil removal are based on sample results from widely spaced sample locations and therefore, actual volumes and costs could vary considerably. These estimates also are based on a limited number of sample results; localized areas with higher contaminant concentrations are possible. We recommend Avista use the volume estimates below for general planning purposes only. Estimated Soil Removal Areas, Figure 4, displays the approximate area of contaminated soil around borings DP-2, DP-3, DP-10, DP-11, DP 12 and DP-14.

The following are assumptions and data used to generate the contaminated soil volume from the vicinity of borings DP-2, DP-3, DP-10, DP-12, DP-11 and DP-14:

- DP-2 samples were contaminated from about 1 to 5 feet bgs. Refusal on assumed bedrock at 7 feet bgs. Remove soil in this area to rock at 7 feet bgs. Contaminated soil volume estimated at 2,783 cubic feet (cf) or 103 cubic yards (cy).
- DP-3 samples were contaminated from about 9 to 10 feet bgs. Refusal on assumed bedrock at 12¼ feet bgs. Step out boring DP-14 samples were contaminated from about 4 to 9 feet bgs. with refusal on assumed bedrock at 10 feet bgs. Remove soil in this area to rock or an average of 11 feet bgs. Contaminated soil volume estimated at 5,320 cf or 197 cy.
- DP-10 samples were contaminated from about 1 to 5 feet bgs. Refusal on assumed bedrock at 6.5 feet bgs. Remove soil in this area to rock at 6.5 feet bgs. Contaminated soil volume estimated at 2,587 cf or 96 cy.
- DP-11 samples were contaminated from about 1.5 to 2.5 feet bgs. Refusal on assumed bedrock in DP-11 at 4.5 feet. DP-12 samples were contaminated from about 1 to 2 feet bgs. Refusal on assumed bedrock in DP-12 at 4 feet. Remove soil in the DP-11/DP-12 area to rock with an average of 4½ feet. Contaminated soil volume estimated at 14,598 cf or 540 cy.

Total estimated contaminated soil volume removal is 936 bank cubic yards and converted to 1,123 loose cubic yards using a 20 percent swell. The 1,123 loose cubic yards are converted to tons at 1.5 tons per cubic yard totaling an approximate 1,700 tons of PAH-, metals- and petroleum-contaminated soil.

7.1. Construction Considerations

Construction workers dealing with hazardous materials should be Hazardous Waste Operations and Emergency Response (HAZWOPER) 40-hour trained. If contaminated material is stockpiled, the stockpiles should be lined with plastic and covered to prevent migration of the material. Avista should perform construction with necessary temporary erosion sediment and control (TESC) measures. Applicable permitting should be completed to perform excavations in accordance with local, state and federal regulations.

8.0 LIMITATIONS

We have prepared this report for Avista for the Sprague and Riverside Parcels Phase II ESA project in Spokane, Washington. Avista may distribute copies of this report to Avista's authorized agents and regulatory agencies as may be required for the project.

Within the limitations of scope, schedule and budget, our services have been executed in accordance with generally accepted practices in the field of environmental engineering in this area at the time this report was prepared. The conclusions, recommendations, and opinions presented in this report are based on our professional knowledge, judgment and experience. No warranty or other conditions, express or implied, should be understood.

Please refer to Appendix C, titled "Report Limitations and Guidelines for Use," for additional information pertaining to use of this report.

9.0 REFERENCES

GeoEngineers, Inc. 2018. "Phase I Environmental Site Assessment Sprague and Riverside Parcels." GEI File No. 2522-085-00.

TABLES

GeoEngineers

Table 1

Summary of Chemical Analytical Results - Petroleum Hydrocarbons, Metals, VOCs, and PAHs[1] - Soil

Sprague and Riverside Parcels Phase II ESA

Spokane, Washington

				Location ID	DP-1	DP-2	DP-2	DP-3	DP-3	DP-4	DP-5	DP-6	DP-7	DP-8	DP-9
				Sample ID	DP-1(1-2)	DP-2(1-2)	DP-2(4-5)	DP-3(1.5-2.5)	DP-3(10-11)	DP-4(2-3)	DP-5(1-2)	DP-6(1-2)	DP-7(1-2)	DP-8(0.5-1.5)	DP-9(1.5-2.5)
				Sample Date	11/11/2021	11/11/2021	11/11/2021	11/11/2021	11/11/2021	11/11/2021	11/11/2021	11/11/2021	11/11/2021	11/11/2021	11/11/2021
				Sample Depth Interval (feet)	1 - 2	1 - 2	4 - 5	1.5 - 2.5	10 - 11	2 - 3	1 - 2	1 - 2	1 - 2	0.5 - 1.5	1.5 - 2.5
Method	Analyte	Cleanup Level[2]	Units												
Petroleum Hydrocarbons	Gasoline-range hydrocarbons[3]	100	mg/kg	–	–	–	–	490	–	--	–	--	–	–	
	Diesel-range hydrocarbons[4]	2,000	mg/kg	–	–	–	–	2,700 J	–	--	–	--	–	–	
	Lube oil-range hydrocarbons[4]	2,000	mg/kg	–	–	–	–	2,100 J	–	--	–	--	–	–	
Metals[5]	Arsenic	20	mg/kg	8.2	1.7	9.8	7.8	5.7	3.9	11	4.4	6.6	5.3	2.6	
	Barium	NE	mg/kg	120 J	26	210	110	160	95	110	110	80	130	85	
	Cadmium	2	mg/kg	0.22 J	0.19 J	0.94	0.73 J	0.48 J	0.22 J	0.30 J	0.21 J	0.43 J	0.86	0.17 J	
	Chromium	2,000	mg/kg	10	1.2	14	11	14	9.5	10	6.5	11	8.6	2.5	
	Selenium	NE	mg/kg	4.3 U	3.2 U	4.2 U	4.1 U	5.8 U	4.4 U	4.4 U	8.2 U	4.0 U	4.0 U	8.2 U	
	Silver	NE	mg/kg	1.1 U	0.47 J	1.1 U	1.0 U	1.4 U	1.1 U	1.1 U	2.1 U	0.99 U	1.0 U	2.0 U	
	Lead	250	mg/kg	21 J	120	800	190	23	44	29	14	79	42	11	
	TCLP - Lead[6]	5.0	mg/L	–	–	0.18	–	–	–	–	–	–	–	–	
	Mercury	2,000	µg/kg	13 J	7,800	670	46 J	28 J	91	27 J	21 J	20 J	16 J	14 J	
	TCLP - Mercury[6]	0.2	mg/L	–	0.00027	–	–	--	–	--	–	--	–	–	
VOCs[7]	1,1,2,2-Tetrachloroethane	NE	mg/kg	–	–	–	–	5.8	–	--	–	–	–	–	
	1,2,3-Trichlorobenzene	NE	mg/kg	–	–	–	–	0.25	–	–	–	–	–	–	
	1,2,4-Trimethylbenzene	NE	mg/kg	–	–	–	–	0.083 J	–	–	–	–	–	–	
	1,2-Dibromo-3-Chloropropane	NE	mg/kg	–	–	–	–	0.40 J	–	–	–	–	–	–	
	2-Chlorotoluene	NE	mg/kg	–	–	–	–	0.065 J	–	–	–	–	–	–	
	Naphthalene	5[8]	mg/kg	–	–	–	–	0.77	–	--	–	--	–	–	
	n-Butylbenzene	NE	mg/kg	–	–	–	–	0.32	–	--	–	–	–	–	
	Sec-Butylbenzene	NE	mg/kg	–	–	–	–	0.76	–	–	–	–	–	–	
	Tert-Butylbenzene	NE	mg/kg	–	–	–	–	0.079 J	–	–	–	–	–	–	
	Tetrachloroethylene	NE	mg/kg	–	–	–	–	5.9	–	–	–	–	–	–	
	Trichloroethylene	0.03	mg/kg	–	–	–	–	0.073	–	–	–	–	–	–	
PAHs[9]	1-Methylnaphthalene	5,000[8]	µg/kg	11 U	11	10 J	6.8 J	140 U	12 U	11 U	11 U	10 U	11 U	11 U	
	2-Methylnaphthalene		µg/kg	11 U	13	4.7 J	7.0 J	140 U	12 U	11 U	11 U	10 U	11 U	11 U	
	Acenaphthene	NE	µg/kg	11 U	17	24 J	10 U	210	12 U	11 U	11 U	10 U	11 U	11 U	
	Acenaphthylene	NE	µg/kg	11 U	230	26 J	16	63 J	12 U	6.6 J	11 U	10 U	11 U	11 U	
	Anthracene	NE	µg/kg	11 U	290	58 J	19	140 U	6.3 J	3.2 J	11 U	10 U	11 U	6.8 J	
	Benzo(a)anthracene	NE	µg/kg	11 U	2000	170 J	82	140 U	33	22	11 U	7.1 J	5.4 J	18	
	Benzo(a)pyrene	100	µg/kg	11 U	1300	290 J	120	14 U	35	31	11 U	11	7.9 J	34	
	Benzo(b)fluoranthene	NE	µg/kg	11 U	2400	280 J	130	14 U	37	33	11 U	13	13	44	
	Benzo(g,h,i)perylene	NE	µg/kg	11 U	980	200 J	78	14 U	17	20	11 U	8.5 J	9.3 J	20	
	Benzo(k)fluoranthene	NE	µg/kg	11 U	920	120 J	52	14	15	10 J	11 U	4.1 J	3.9 J	19	
	Chrysene	NE	µg/kg	11 U	1900	220 J	100	140 U	28	26	11 U	8.7 J	8.1 J	40	
	Dibenzo(a,h)anthracene	NE	µg/kg	11 U	360	43 J	17	14 U	3.6 J	4.3 J	11 U	10 U	11 U	5.6 J	
	Fluoranthene	NE	µg/kg	11 U	2700	370 J	130	140 U	76	33	11 U	12	6.8 J	90	
	Fluorene	NE	µg/kg	11 U	19	18 J	4.9 J	140 U	12 U	11 U	11 U	10 U	11 U	3.6 J	
	Indeno(1,2,3-c,d)pyrene	NE	µg/kg	11 U	980	170 J	64	14 U	15	17	11 U	5.7 J	6.6 J	19	
	Naphthalene	5,000[8]	µg/kg	11 U	22	8.5 J	4.7 J	140 U	12 U	11 U	11 U	10 U	11 U	11 U	

			Location ID	DP-1		DP-2		DP-2		DP-3		DP-3		DP-4		DP-5		DP-6		DP-7		DP-8		DP-9	
			Sample ID	DP-1(1-2)		DP-2(1-2)		DP-2(4-5)		DP-3(1.5-2.5)		DP-3(10-11)		DP-4(2-3)		DP-5(1-2)		DP-6(1-2)		DP-7(1-2)		DP-8(0.5-1.5)		DP-9(1.5-2.5)	
			Sample Date	11/11/2021		11/11/2021		11/11/2021		11/11/2021		11/11/2021		11/11/2021		11/11/2021		11/11/2021		11/11/2021		11/11/2021		11/11/2021	
			Sample Depth Interval (feet)	1 - 2		1 - 2		4 - 5		1.5 - 2.5		10 - 11		2 - 3		1 - 2		1 - 2		1 - 2		0.5 - 1.5		1.5 - 2.5	
Method	Analyte	Cleanup Level[2]	Units																						
PAHs[9] (continued)	Phenanthrene	NE	µg/kg	11	U	**1100**		**330**	**J**	**74**		140	U	**35**		**13**		11	U	**4.2**	**J**	**8.6**	**J**	**83**	
	Pyrene	NE	µg/kg	11	U	**2200**		**430**	**J**	**180**		140	U	**63**		**44**		11	U	**18**		**11**		**93**	
	Total cPAH TEQ (ND=0.5RL)	100	µg/kg	8.3	U	**1985**		**370.5**	**J**	**155.5**		**18.2**		**45.6**	**J**	**39.9**	**J**	8.3	U	**14.6**	**J**	**11.4**	**J**	**45.0**	**J**

				Location ID	DP-10		DP-10		DP-11		DP-12		DP-12		DP-13		DP-14		DP-14		DP-15	
				Sample ID	DP-10(1-2)		DP-10(4-5)		DP-11(1.5-2.5)		DP-12(1-2)		DP-12(3-3.5)		DP-13(1-2)		DP-14(4-5)		DP-14(8-9)		DP-15(2-3)	
				Sample Date	11/11/2021		11/11/2021		11/11/2021		11/11/2021		11/11/2021		11/11/2021		11/11/2021		11/11/2021		11/11/2021	
				Sample Depth Interval (feet)	1 - 2		4 - 5		1.5 - 2.5		1 - 2		3 - 3.5		1 - 2		4 - 5		8 - 9		2 - 3	
Method	Analyte	Cleanup Level[2]	Units																			
Petroleum Hydrocarbons	Gasoline-range hydrocarbons[3]	100	mg/kg		–		–		–		--		–		--		–		--		–	
	Diesel-range hydrocarbons[4]	2,000	mg/kg		–		–		–		--		–		--		–		--		–	
	Lube oil-range hydrocarbons[4]	2,000	mg/kg		–		–		–		--		–		--		–		--		–	
Metals[5]	Arsenic	20	mg/kg		**7.1**		**1.0**	J	**4.0**		**4.3**	J	1.2	U	**12**		**11**		**0.59**	J	**9.8**	
	Barium	NE	mg/kg		**110**		**19**		**110**		**86**		**11**		**110**		**100**		**29**		**90**	
	Cadmium	2	mg/kg		**0.76**	J	**0.081**	J	**0.27**	J	**2.7**	J	**0.094**	J	**0.41**	J	**0.28**	J	**0.44**	J	**0.37**	J
	Chromium	2,000	mg/kg		**13**		**1.2**	J	**6.5**		**6.7**	J	**0.80**	J	**10**		**12**		**1.4**		**11**	
	Selenium	NE	mg/kg		22	U	5.1	U	5.0	U	38	U	4.9	U	4.0	U	4.3	U	4.8	U	4.0	U
	Silver	NE	mg/kg		5.5	U	1.3	U	1.2	U	9.4	U	1.2	U	1.0	U	1.1	U	1.2	U	1.0	U
	Lead	250	mg/kg		**140**		**11**		**5,100**		**2,200**		3.0	U	**53**		**41**		**200**		**60**	
	TCLP - Lead[6]	5.0	mg/L		–		–		**0.042**	J	**1.4**		–		–		–		–		–	
	Mercury	2,000	µg/kg		**310**		**310**		**84**		**190**		46	U	**54**		**47**		**110**		**38**	J
	TCLP - Mercury[6]	0.2	mg/L		–		–		–		--		–		--		–		--		–	
VOCs[7]	1,1,2,2-Tetrachloroethane	NE	mg/kg		–		–		–		--		–		--		–		–		–	
	1,2,3-Trichlorobenzene	NE	mg/kg		–		–		–		--		–		–		–		–		–	
	1,2,4-Trimethylbenzene	NE	mg/kg		–		–		–		–		–		–		–		–		–	
	1,2-Dibromo-3-Chloropropane	NE	mg/kg		–		–		–		–		–		–		–		–		–	
	2-Chlorotoluene	NE	mg/kg		–		–		–		–		–		–		–		–		–	
	Naphthalene	5[8]	mg/kg		–		–		–		--		–		--		–		--		–	
	n-Butylbenzene	NE	mg/kg		–		–		–		--		–		--		–		–		–	
	Sec-Butylbenzene	NE	mg/kg		–		–		–		--		–		–		–		–		–	
	Tert-Butylbenzene	NE	mg/kg		–		–		–		–		–		–		–		–		–	
	Tetrachloroethylene	NE	mg/kg		–		–		–		–		–		–		–		–		–	
	Trichloroethylene	0.03	mg/kg		–		–		–		–		–		–		–		–		–	
PAHs[9]	1-Methylnaphthalene	5,000[8]	µg/kg		110	U	**8.6**	J	13	U	**76**		12	U	21	U	24	U	**5.0**	J	11	U
	2-Methylnaphthalene		µg/kg		110	U	**13**		13	U	**65**		12	U	21	U	24	U	**5.8**	J	11	U
	Acenaphthene	NE	µg/kg		110	U	**9.9**	J	13	U	**320**		12	U	21	U	120	U	**5.6**	J	11	U
	Acenaphthylene	NE	µg/kg		**51**	J	**71**		13	U	**78**		12	U	21	U	120	U	**10**	J	11	U
	Anthracene	NE	µg/kg		**120**		**50**		13	U	**680**		**5.5**	J	**15**	J	**14**	J	**16**		**9.8**	J
	Benzo(a)anthracene	NE	µg/kg		**340**		**220**		63	U	**1,200**		**12**		110	U	**63**		**92**		**35**	
	Benzo(a)pyrene	100	µg/kg		**480**		**320**		63	U	**1,200**		**12**		110	U	**110**		**150**		**55**	
	Benzo(b)fluoranthene	NE	µg/kg		**470**		**310**		63	U	**1,300**		**17**		110	U	**120**		**140**		53	U
	Benzo(g,h,i)perylene	NE	µg/kg		**260**		**230**		63	U	**380**		**6.6**	J	110	U	**43**		**110**		**47**	J
	Benzo(k)fluoranthene	NE	µg/kg		**180**		**120**		63	U	**470**		**6.4**	J	110	U	**42**		**59**		53	U
	Chrysene	NE	µg/kg		**370**		**260**		63	U	**1,200**		**15**		110	U	**68**		**100**		**40**	
	Dibenzo(a,h)anthracene	NE	µg/kg		**63**	J	**48**		63	U	**120**		**4.1**	J	110	U	**13**	J	**25**		53	U
	Fluoranthene	NE	µg/kg		**660**		**360**		**41**		**2,700**		**21**		**67**		**73**		**130**		**57**	
	Fluorene	NE	µg/kg		**35**	J	**9.7**	J	13	U	**230**		12	U	21	U	120	U	**3.4**	J	11	U
	Indeno(1,2,3-c,d)pyrene	NE	µg/kg		**210**		**170**		63	U	**360**		**6.1**	J	110	U	**44**		**88**		**31**	J
	Naphthalene	5,000[8]	µg/kg		110	U	**10**	J	13	U	**62**		12	U	21	U	24	U	**4.5**	J	11	U

				Location ID	DP-10		DP-10		DP-11		DP-12		DP-12		DP-13		DP-14		DP-14		DP-15	
				Sample ID	DP-10(1-2)		DP-10(4-5)		DP-11(1.5-2.5)		DP-12(1-2)		DP-12(3-3.5)		DP-13(1-2)		DP-14(4-5)		DP-14(8-9)		DP-15(2-3)	
				Sample Date	11/11/2021		11/11/2021		11/11/2021		11/11/2021		11/11/2021		11/11/2021		11/11/2021		11/11/2021		11/11/2021	
				Sample Depth Interval (feet)	1 - 2		4 - 5		1.5 - 2.5		1 - 2		3 - 3.5		1 - 2		4 - 5		8 - 9		2 - 3	
Method	Analyte	Cleanup Level[2]	Units																			
PAHs[9] (continued)	Phenanthrene	NE	µg/kg		**450**		**140**		13	U	**2,600**		**13**		**43**		**28**		**66**		**30**	
	Pyrene	NE	µg/kg		**790**		**490**		63	U	**2,800**		**26**		**97**	J	**110**		**160**		**76**	
	Total cPAH TEQ (ND=0.5RL)	100	µg/kg		**610**	J	**410**	J	47.6	U	**1,557**		**16.7**	J	83.1	U	**138.9**	J	**191.4**		**70.0**	J

Notes:

[1]Laboratory testing provided by Eurofins TestAmerica Laboratories, Inc. in Spokane Valley, Washington.

[2]Model Toxics Control Act (MTCA) Method A cleanup levels for unrestricted land use.

[3]Gasoline-range petroleum hydrocarbons (GRPH) analyzed by Northwest Method NWTPH-Gx.

[4]Diesel- and oil-range petroleum hydrocarbons analyzed by Northwest Method NWTPH-Dx.

[5]Metals analyzed using Environmental Protection Agency (EPA) 6000/7000 Series Methods.

[6]Toxicity characteristic leaching procedure (TCLP) performed by EPA 1311 Method.

[7]Volatile organic compounds (VOCs) analyzed using EPA Method 8260C. Full list VOCs for DP-3(10-11) is available in Appenix B. Lab Reports. Only VOCs detected above the laboratory reporting limit are shown.

[8]Cleanup level is for the sum of all naphthalenes.

[9]Polycyclic aromatic hydrocarbons (PAHs) analyzed using EPA Method 8270DSIM.

µg/kg = micrograms per kilogram; mg/kg = milligrams per kilogram; "–" = not tested; NE = not established

U = analyte was not detected at concentrations greater than the laboratory reporting limit or the method detection limit (MDL).

J = estimated result

Bold = indicates the analyte was detected above the laboratory reporting limit.

Bold Red = indicates the analyte was detected above the respective cleanup level.

FIGURES

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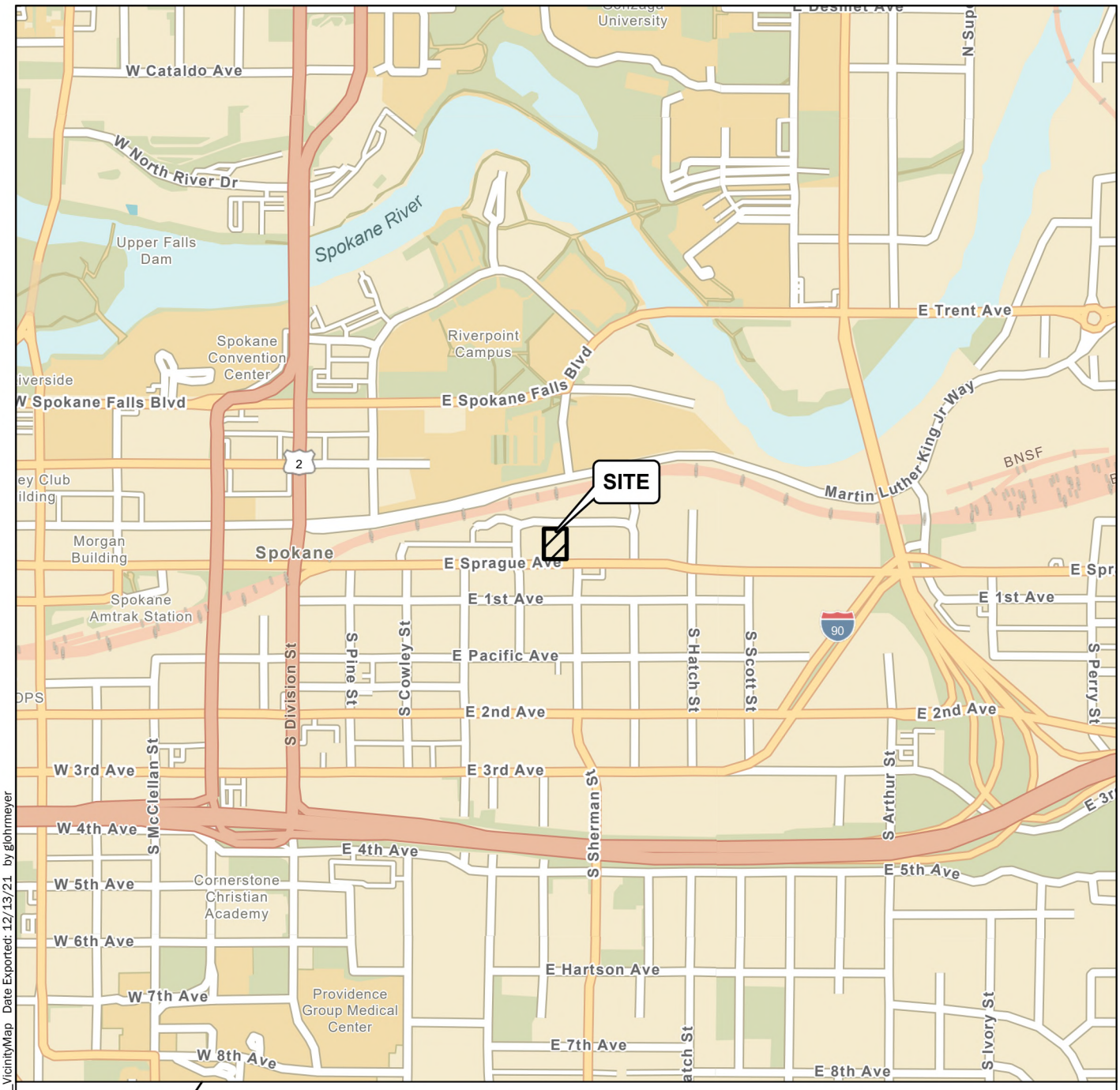

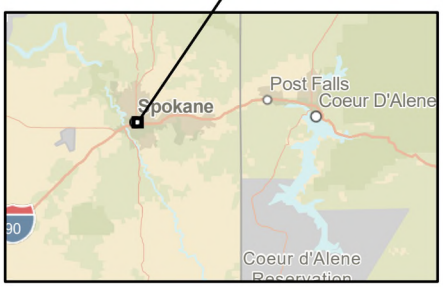

N
W E
S

1,000 0 1,000
Feet

Vicinity Map

Avista Phase II ESA – Sprague and Riverside Parcels
Spokane, Washington

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Figure 1

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 11N

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Legend

Direct Push Boring Approximate Location
(estimated Depth to Bedrock in feet below ground surface)

Subject Property

Data Source: ESRI World Imagery

N
W E
S

50 0 50
Feet

Site Plan, Boring Locations

Avista Phase II ESA - Sprague and Riverside Parcels
Spokane, Washington

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Figure 2

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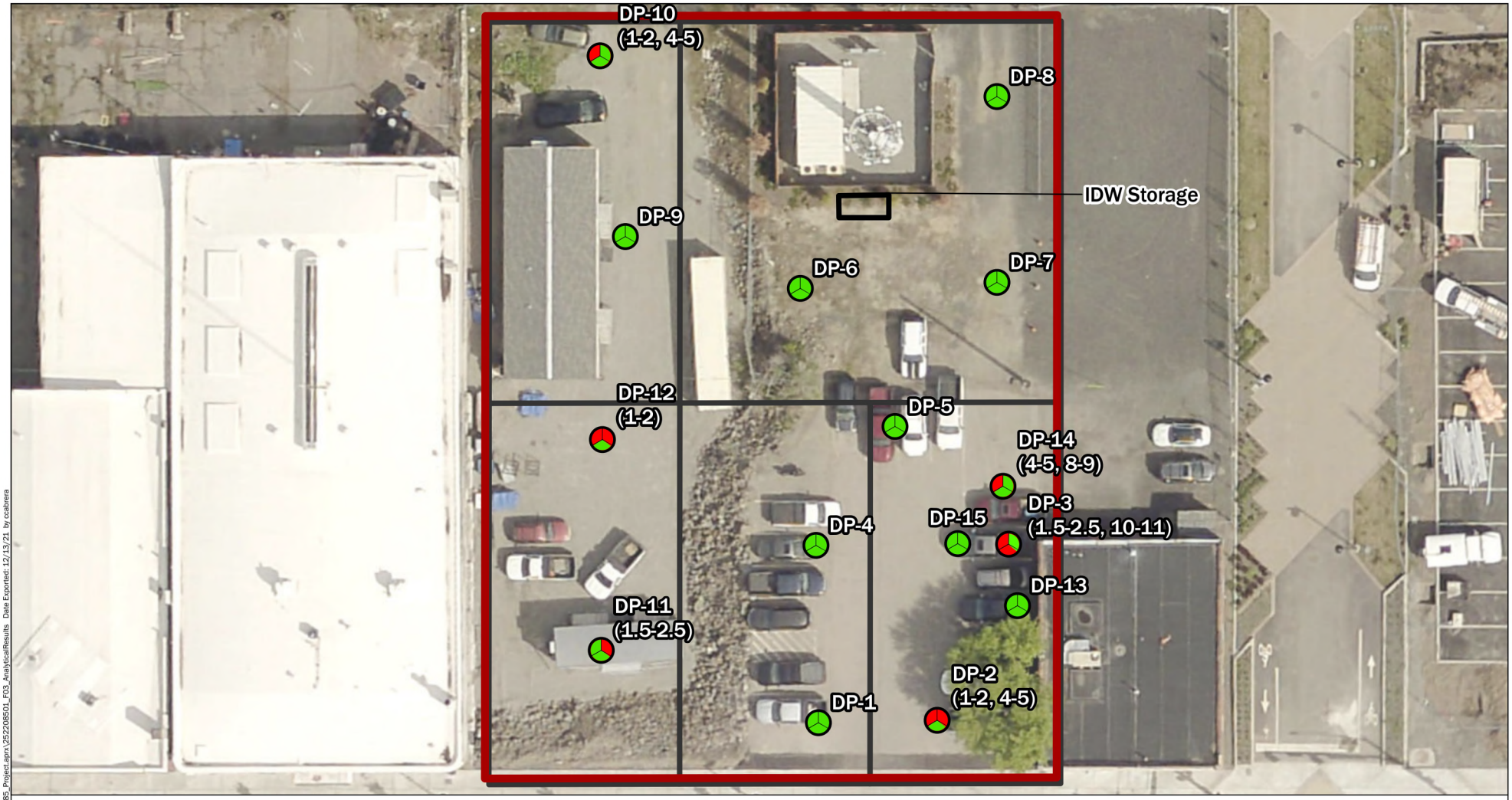
Notes:



Subject Property

Concentrations less than MTCA Method A cleanup levels

Concentrations greater than MTCA Method A cleanup levels

PAHs / Metals / Petroleum/VOCs

Boring ID
(contaminated sample depth(s) in feet)

MTCA = Model Toxics Control Act
PAHs = Polycyclic Aromatic Hydrocarbons
Petroleum = Gasoline-Range(GRPH), Diesel-Range(DRPH), Oil-Range(ORPH)
VOCs = Volatile Organic Compounds

N
W
E
S

25 0 25
Feet

Data Source: ESRI World Imagery

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Sample Locations and Analytical Results

Avista Phase II ESA - Sprague and Riverside Parcels
Spokane, Washington

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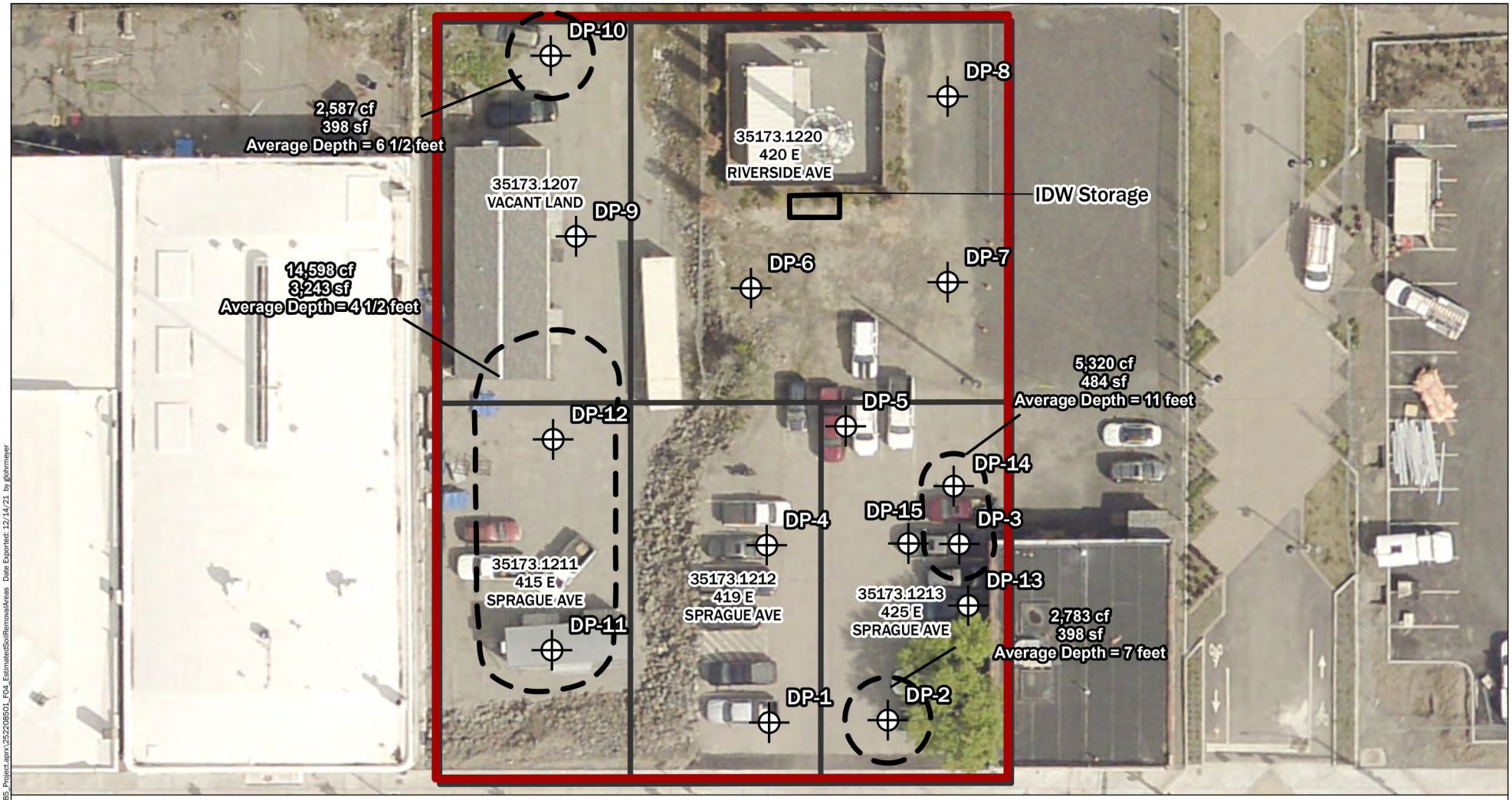
Figure 3

Legend



Legend

- Direct Push Boring Approximate Location
- Subject Property
- Estimated Soil Removal Areas

cf = cubic feet
sf = square feet

Data Source: ESRI World Imagery

N
W E
S

25 0 25
Feet

Estimated Soil Removal Areas

Avista Phase II ESA - Sprague and Riverside Parcels
Spokane, Washington

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Figure 4

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APPENDICES

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APPENDIX A
Field Methods and Boring Logs

APPENDIX A
FIELD METHODS AND BORING LOGS

General

Subsurface conditions at the Sprague and Riverside Parcels site were explored on November 11, 2021 by advancing 15 direct-push borings (DP-1 through DP-15) at the approximate locations shown on the Site Plan, Boring Locations, Figure 2. The borings were advanced to depths between 2.5 and 13.2 feet below existing site grade using a Geoprobe 5400 drilling rig. The borings were backfilled with bentonite chips and areas of asphalt were patched.

Soil Sample Collection

Environmental Protection Agency (EPA) 5035 sampling methods were used to collect soil samples for potential volatile organic compounds (VOCs). Based on the chemical analytical results, the soil samples were not analyzed for VOCs. For analysis of other parameters, soil was placed in laboratory-supplied sample jars and filled to minimize headspace. Soil samples were stored in a chilled cooler until delivery to the analytical laboratory.

The drilling operations were monitored by staff from our firm who examined and classified the soil encountered, obtained soil samples and maintained a continuous log of the explorations. Soil encountered in the borings was classified in general accordance with ASTM International (ASTM) D 2488 and the classification chart listed in Key to Exploration Logs, Figure A-1. Logs of the borings are presented in Figures A-2 through A-16. The logs are based on interpretation of the field data and indicate the depth at which subsurface materials, or their characteristics change, although these changes might actually be gradual.

Field Screening of Soil Samples

GeoEngineers' field representative performed field-screening tests on soil samples obtained from the borings. Field screening results were used as a general guideline to assess areas of possible petroleum-related contamination. The field screening methods used included (1) visual screening; (2) water-sheen screening; and (3) headspace-vapor screening using a MiniRAE photoionization detector (PID) calibrated to isobutylene on the day of testing.

Visual screening consisted of observing soil for stains indicative of metals- or petroleum-related contamination. Water-sheen screening involved placing soil in a pan of water and observing the water surface for signs of sheen. Sheen screening might detect both volatile and nonvolatile petroleum hydrocarbons. Sheens observed are classified as follows:

No Sheen (NS)	No visible sheen on the water surface.
Slight Sheen (SS)	Light, colorless, dull sheen; spread is irregular, not rapid; sheen dissipates rapidly. Natural organic matter in the soil may produce a slight sheen.
Moderate Sheen (MS)	Light to heavy sheen; may have some color/iridescence; spread is irregular to flowing, may be rapid; few remaining areas of no sheen on the water surface.
Heavy Sheen (HS)	Heavy sheen with color/iridescence; spread is rapid; entire water surface may be covered with sheen.

Headspace vapor screening involved placing a soil sample in a plastic sample bag. Air was captured in the bag, and the bag was shaken to expose the soil to the air trapped in the bag. Headspace vapor screening targeted volatile petroleum hydrocarbon compounds. In this application, the PID measured concentration of organic vapors ionizable by a 10.6 electron volt (ev) lamp in the range between 1.0 and 5,000 parts per million (ppm), with a resolution of +/- 2 ppm.

Field screening results can be site specific. The effectiveness of field screening can vary with temperature, moisture content, organic content, soil type and type and age of contaminant. The presence or absence of a sheen or headspace vapors does not necessarily indicate the presence or absence of contaminants.

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
	MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE			GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES
		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
	MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE			SP	POORLY-GRADED SANDS, GRAVELLY SAND
		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

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Figure A-1

Drilled Start 11/11/2021 End 11/11/2021	Total Depth (ft) 5	Logged By JML Checked By BDW	Driller Northern Lights Drilling	Drilling Method Direct-Push	
Surface Elevation (ft) 1940 Vertical Datum NAVD88		Hammer Data NA		Drilling Equipment Geoprobe 5400	
Easting (X) 258637 Northing (Y) 2485225		System Datum WA State Plane North WGS84 (feet)		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		22					AC	Approximately 2 inches asphalt concrete pavement			
								GP-GM	Brown fine to coarse gravel with silt and sand (medium dense, moist)	NS	<1	
						DP-1(1-2) CA		GM	Dark brown silty fine to coarse gravel with sand and debris (brick) (medium dense, moist)	NS	<1	
			12			DP-1(4-5)		GP-GM	Dark gray fine to coarse gravel with silt and sand (medium dense, moist)	NS	<1	
1935	5								Refusal at approximately 5 feet			

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

Log of Boring DP-1

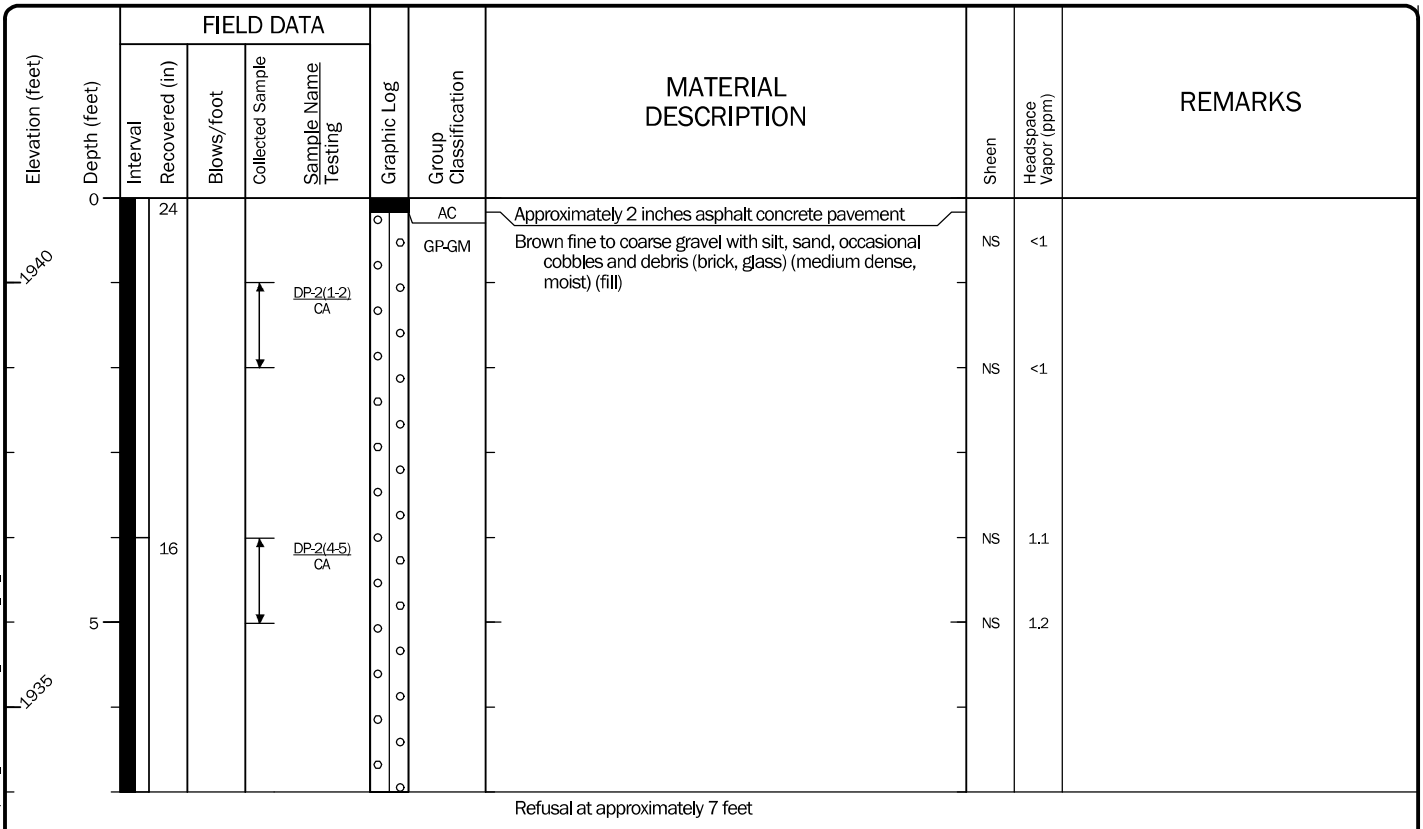
GeoEngineers

Project: Avista Sprague/Riverside
Project Location: Spokane, Washington
Project Number: 2522-085-01

Figure A-2
Sheet 1 of 1

Date:12/14/21 Path:\\GEOENGINEERS.COM\WAN\PROJECTS\2\2522085\GINT\252208501.GPJ DBLibrary/Library/GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEIB_ENVIRONMENTAL_STANDARD_NO_GW

Drilled: Start 11/11/2021 End 11/11/2021	Total Depth (ft): 7	Logged By: JML Checked By: BDW	Driller: Northern Lights Drilling	Drilling Method: Direct-Push	
Surface Elevation (ft): 1941 Vertical Datum: NAVD88		Hammer Data: NA		Drilling Equipment: Geoprobe 5400	
Easting (X): 258639 Northing (Y): 2485256		System Datum: WA State Plane North WGS84 (feet)		Groundwater not observed at time of exploration	
Notes:					



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

Log of Boring DP-2

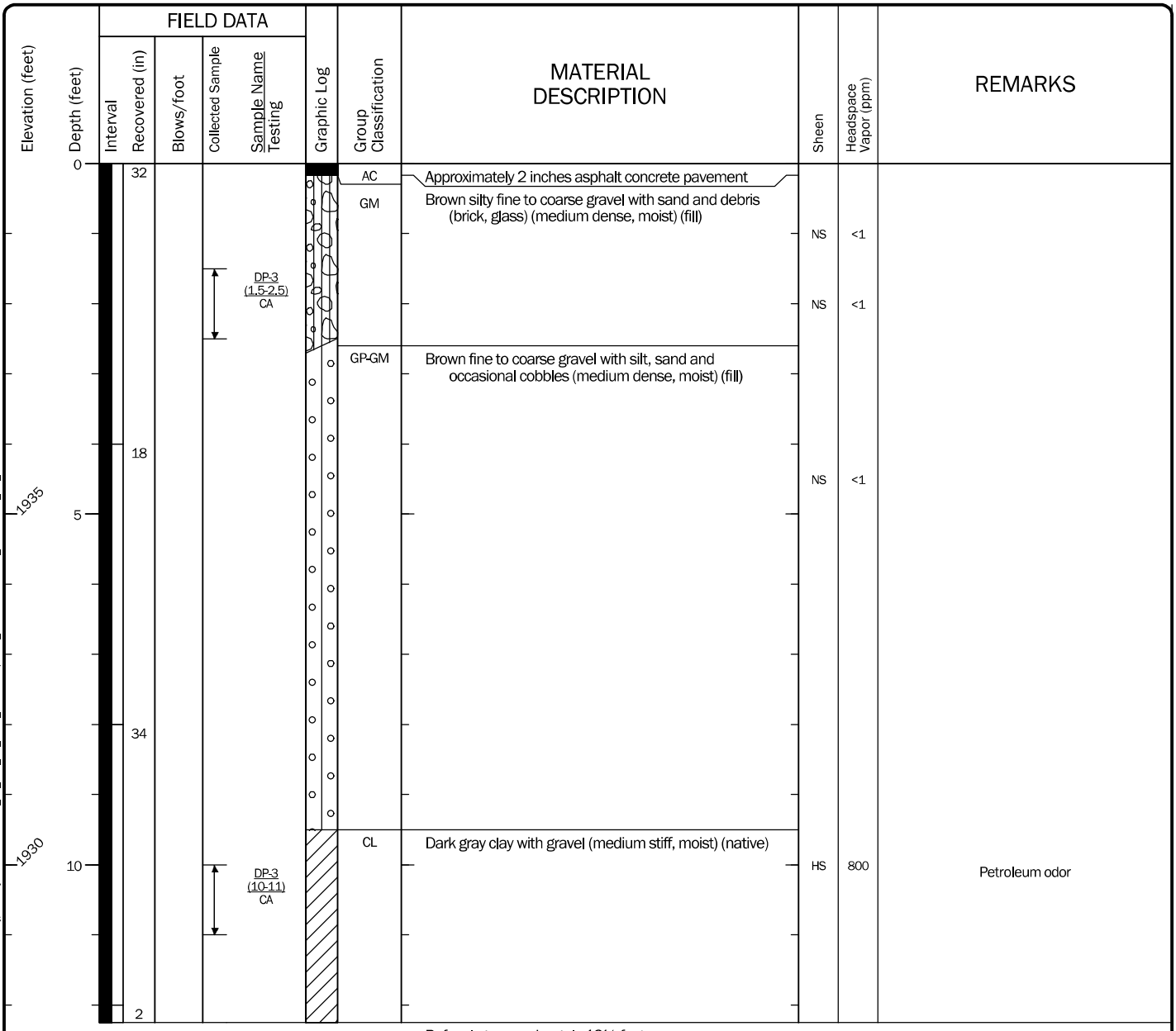
GeoEngineers

Project: Avista Sprague/Riverside
Project Location: Spokane, Washington
Project Number: 2522-085-01

Figure A-3
Sheet 1 of 1

Date:12/14/21 Path:\\GEOENGINEERS.COM\WAN\PROJECTS\2\2522085\GINT\252208501.GPJ DBLibrary/Library/GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEIB_ENVIRONMENTAL_STANDARD_NO_GW

Drilled: Start 11/11/2021 End 11/11/2021	Total Depth (ft) 12.25	Logged By JML Checked By BDW	Driller Northern Lights Drilling	Drilling Method Direct-Push	
Surface Elevation (ft) 1940 Vertical Datum NAVD88		Hammer Data NA		Drilling Equipment Geoprobe 5400	
Easting (X) 258686 Northing (Y) 2485272		System Datum WA State Plane North WGS84 (feet)		Groundwater not observed at time of exploration	
Notes:					



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

Log of Boring DP-3

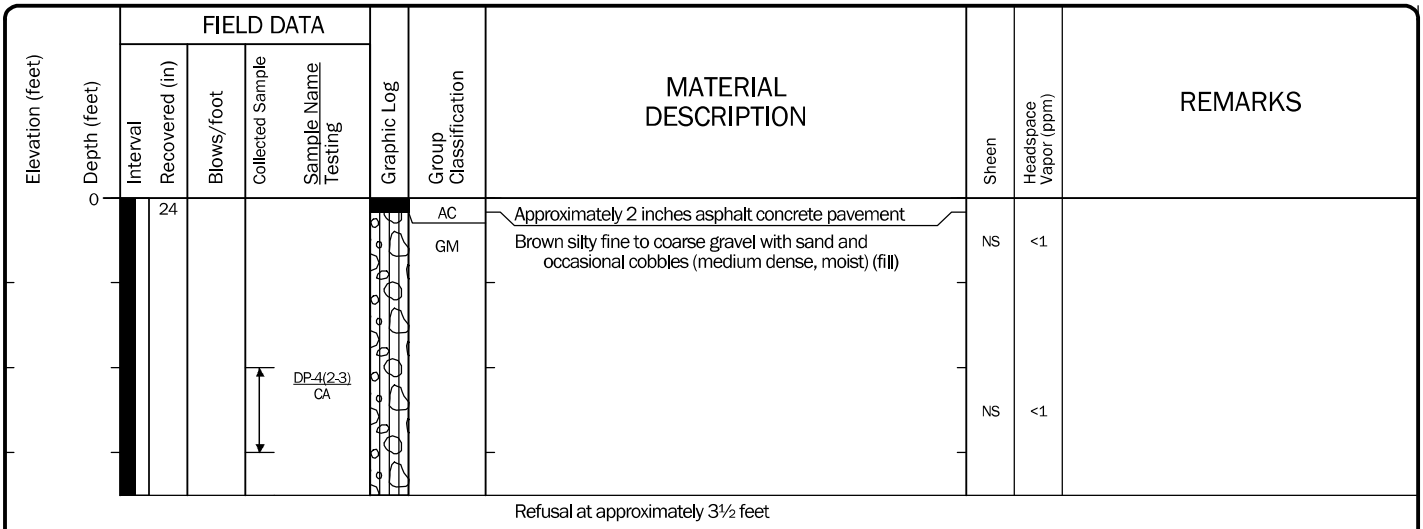
GeoEngineers

Project: Avista Sprague/Riverside
Project Location: Spokane, Washington
Project Number: 2522-085-01

Figure A-4
Sheet 1 of 1

Date:12/14/21 Path:\\GEOENGINEERS.COM\WAN\PROJECTS\2\2522085\GINT\252208501.GPJ DBLibrary/Library/GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEIB_ENVIRONMENTAL_STANDARD_NO_GW

Drilled Start 11/11/2021 End 11/11/2021	Total Depth (ft) 3.5	Logged By JML Checked By BDW	Driller Northern Lights Drilling	Drilling Method Direct-Push	
Surface Elevation (ft) 1940 Vertical Datum NAVD88		Hammer Data NA		Drilling Equipment Geoprobe 5400	
Easting (X) 258683 Northing (Y) 2485222		System Datum WA State Plane North WGS84 (feet)		Groundwater not observed at time of exploration	
Notes:					



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

Log of Boring DP-4

GeoEngineers

Project: Avista Sprague/Riverside
Project Location: Spokane, Washington
Project Number: 2522-085-01

Figure A-5
Sheet 1 of 1

Date:12/14/21 Path:\\GEOENGINEERS.COM\WAN\PROJECTS\2\2522085\GINT\252208501.GPJ DBLibrary/Library/GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEIB_ENVIRONMENTAL_STANDARD_NO_GW

Drilled Start 11/11/2021 End 11/11/2021	Total Depth (ft) 13	Logged By JML Checked By BDW	Driller Northern Lights Drilling	Drilling Method Direct-Push	
Surface Elevation (ft) 1940 Vertical Datum NAVD88		Hammer Data NA		Drilling Equipment Geoprobe 5400	
Easting (X) 258715 Northing (Y) 2485241		System Datum WA State Plane North WGS84 (feet)		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		26					AC	Approximately 2 inches asphalt concrete pavement			
								GM	Brown silty fine to coarse gravel with sand and occasional cobbles (medium dense, moist) (fill)			
						B-5(1-2) CA				NS	<1	
										NS	<1	
			12							NS	<1	
1935	5											
			24							NS	<1	
						B-5(9-10)				NS	<1	
1930	10							CL	Brown clay (medium stiff, moist) (native)			
			12						Becomes wet	NS	<1	
									Refusal at approximately 13 feet			

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

Log of Boring DP-5

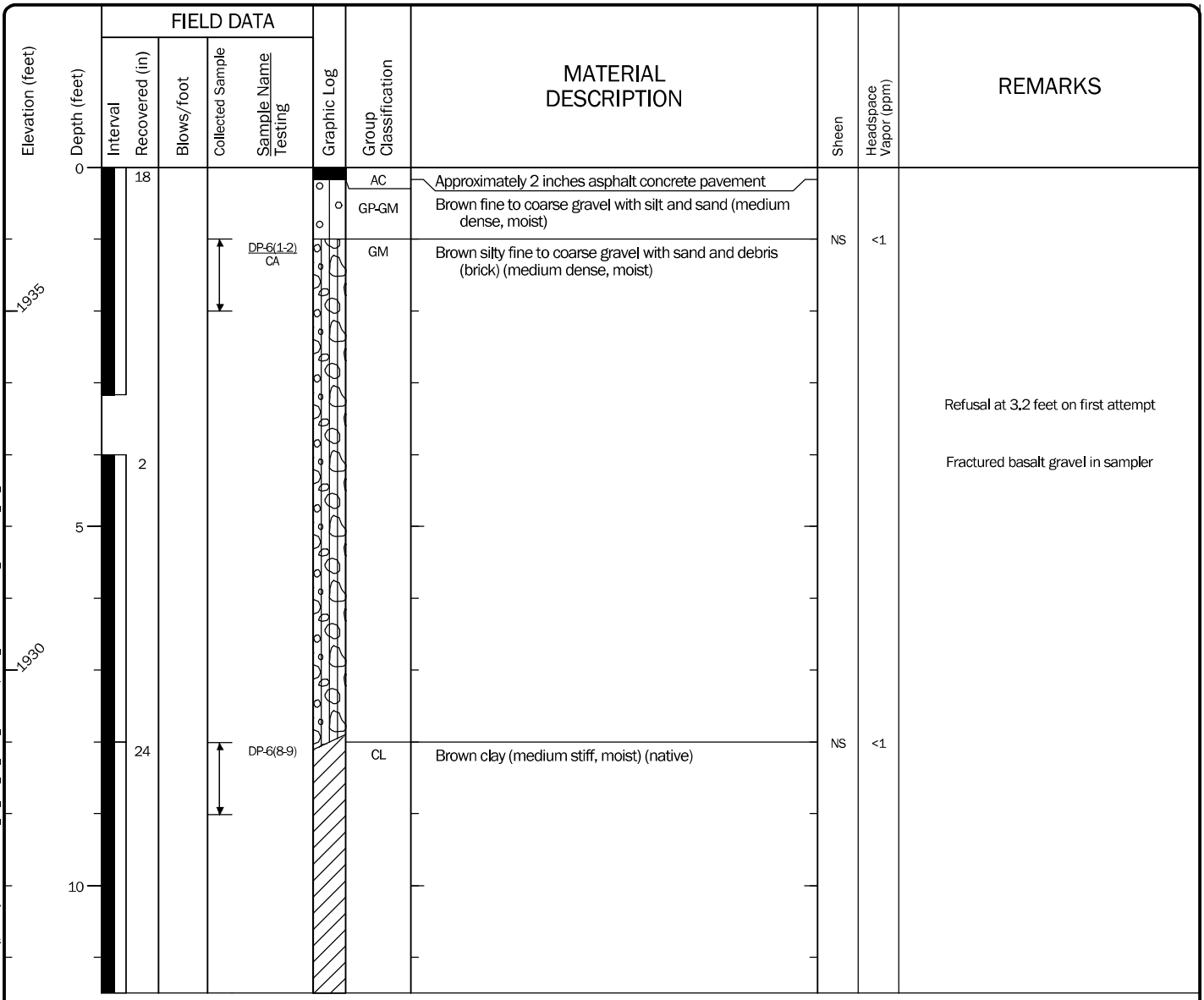
GeoEngineers

Project: Avista Sprague/Riverside
Project Location: Spokane, Washington
Project Number: 2522-085-01

Figure A-6
Sheet 1 of 1

Date:12/14/21 Path:\\GEOENGINEERS.COM\WAN\PROJECTS\2\2522085\GINT\252208501.GPJ DBLibrary/Library/GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEIB_ENVIRONMENTAL_STANDARD_NO_GW

Drilled: Start 11/11/2021 End 11/11/2021	Total Depth (ft): 11.5	Logged By: JML Checked By: BDW	Driller: Northern Lights Drilling	Drilling Method: Direct-Push	
Surface Elevation (ft) Vertical Datum: 1937 NAVD88		Hammer Data: NA		Drilling Equipment: Geoprobe 5400	
Easting (X) Northing (Y): 258750 2485214		System Datum: WA State Plane North WGS84 (feet)		Groundwater not observed at time of exploration	
Notes:					



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

Log of Boring DP-6

GeoEngineers

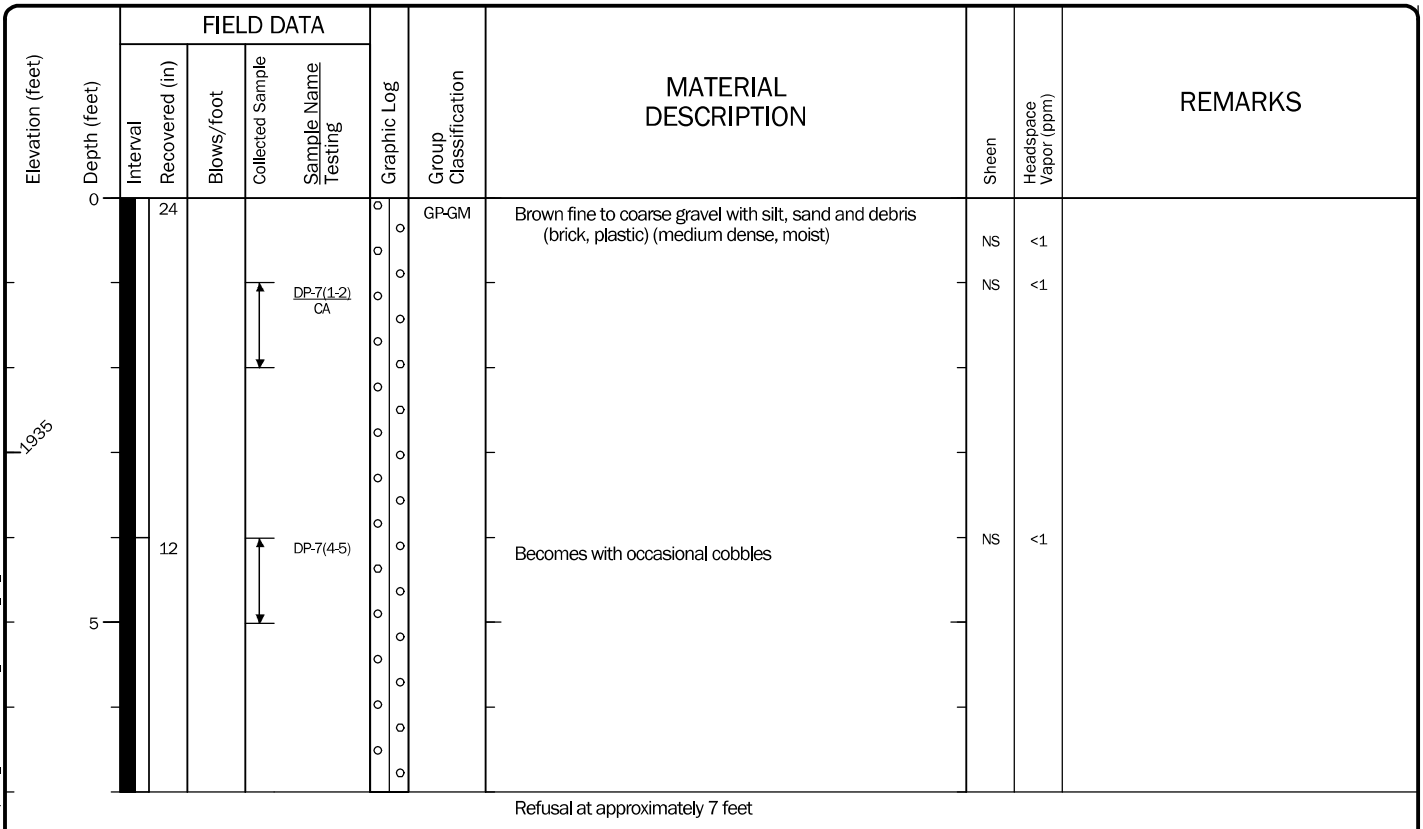
Project: Avista Sprague/Riverside
Project Location: Spokane, Washington
Project Number: 2522-085-01

Figure A-7
Sheet 1 of 1

Date:12/14/21 Path:\\GEOENGINEERS.COM\WAN\PROJECTS\2\2522085\GINT\252208501.GPJ DBLibrary/Library/GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEIB_ENVIRONMENTAL_STANDARD_NO_GW

Drilled	Start 11/11/2021	End 11/11/2021	Total Depth (ft) 7	Logged By JML / Checked By BDW	Driller Northern Lights Drilling	Drilling Method Direct-Push
Surface Elevation (ft) / Vertical Datum	1938 / NAVD88		Hammer Data	NA	Drilling Equipment	Geoprobe 5400
Easting (X) / Northing (Y)	258755 / 2485266		System Datum	WA State Plane North / WGS84 (feet)	Groundwater not observed at time of exploration	

Notes:



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

Log of Boring DP-7

GeoEngineers

Project: Avista Sprague/Riverside
Project Location: Spokane, Washington
Project Number: 2522-085-01

Figure A-8
Sheet 1 of 1

Date:12/14/21 Path:\\GEOENGINEERS.COM\WAN\PROJECTS\2\2522085\GINT\252208501.GPJ DBLibrary/Library/GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEIB_ENVIRONMENTAL_STANDARD_NO_GW

Drilled Start 11/11/2021 End 11/11/2021	Total Depth (ft) 13.25	Logged By JML Checked By BDW	Driller Northern Lights Drilling	Drilling Method Direct-Push	
Surface Elevation (ft) 1937 Vertical Datum NAVD88		Hammer Data NA		Drilling Equipment Geoprobe 5400	
Easting (X) 258803 Northing (Y) 2485263		System Datum WA State Plane North WGS84 (feet)		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							GP	Gray fine gravel with trace silt and sand (loose, moist)			
			20			DP-8 (0.5-1.5) CA		GP-GM	Brown fine to coarse gravel with silt and sand (medium dense, moist) (fill)	NS	<1	
1935										NS	<1	
			12			DP-8(4-5)		CL	Brown clay with trace sand and gravel (medium stiff, moist) (native)	NS	<1	
	5											
1930												
	10											
1925												

Refusal at approximately 13¼ feet

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

Log of Boring DP-8

GeoEngineers

Project: Avista Sprague/Riverside
Project Location: Spokane, Washington
Project Number: 2522-085-01

Figure A-9
Sheet 1 of 1

Date:12/14/21 Path:\\GEOENGINEERS.COM\WAN\PROJECTS\2\2522085\GINT\252208501.GPJ DBLibrary/Library/GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEIB_ENVIRONMENTAL_STANDARD_NO_GW

Drilled Start 11/11/2021 End 11/11/2021	Total Depth (ft) 2.5	Logged By JML Checked By BDW	Driller Northern Lights Drilling	Drilling Method Direct-Push	
Surface Elevation (ft) 1930 Vertical Datum NAVD88		Hammer Data NA		Drilling Equipment Geoprobe 5400	
Easting (X) 258762 Northing (Y) 2485168		System Datum WA State Plane North WGS84 (feet)		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		20					GP-GM	Brown fine to coarse gravel with silt and sand (medium dense, moist) (fill)	NS	<1	
								GP-GM	Dark brown fine to coarse gravel with silt, sand and debris (brick) (medium dense, moist)	NS	<1	
						DP-9 (1.5-2.5) CA						

Refusal at approximately 2½ feet

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

Log of Boring DP-9

GeoEngineers

Project: Avista Sprague/Riverside
Project Location: Spokane, Washington
Project Number: 2522-085-01

Figure A-10
Sheet 1 of 1

Date:12/14/21 Path:\\GEOENGINEERS.COM\WAN\PROJECTS\2\2522085\GINT\252208501.GPJ DBLibrary/Library/GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEIB_ENVIRONMENTAL_STANDARD_NO_GW

Drilled Start 11/11/2021 End 11/11/2021	Total Depth (ft) 6.5	Logged By JML Checked By BDW	Driller Northern Lights Drilling	Drilling Method Direct-Push	
Surface Elevation (ft) 1934 Vertical Datum NAVD88		Hammer Data NA		Drilling Equipment Geoprobe 5400	
Easting (X) 258809 Northing (Y) 2485159		System Datum WA State Plane North WGS84 (feet)		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		29			DP-10(1-2) CA		GP-GM	Brown fine to coarse gravel with silt, sand and debris (brick) (medium dense, moist) (fill)	NS	<1	
										NS	<1	
1930			18			DP-10(4-5) CA		GM	Dark gray silty fine to coarse gravel with sand (medium dense, moist) (native)	NS	<1	
	5								Refusal at approximately 6½ feet			

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

Log of Boring DP-10

GeoEngineers

Project: Avista Sprague/Riverside
Project Location: Spokane, Washington
Project Number: 2522-085-01

Figure A-11
Sheet 1 of 1

Date:12/14/21 Path:\\GEOENGINEERS.COM\WAN\PROJECTS\2\2522085\GINT\252208501.GPJ DBLibrary/Library/GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEIB_ENVIRONMENTAL_STANDARD_NO_GW

Drilled Start 11/11/2021 End 11/11/2021	Total Depth (ft) 4.5	Logged By JML Checked By BDW	Driller Northern Lights Drilling	Drilling Method Direct-Push	
Surface Elevation (ft) 1937 Vertical Datum NAVD88		Hammer Data NA		Drilling Equipment Geoprobe 5400	
Easting (X) 258653 Northing (Y) 2485167		System Datum WA State Plane North WGS84 (feet)		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		36					GP-GM	Brown fine to coarse gravel with silt and sand (medium dense, moist) (fill)	NS	<1	
1935								GM	Brown silty fine to coarse gravel with sand, occasional cobbles and debris (brick, insulation) (medium dense, moist) (fill)	NS	2.3	
						DP-11 (1.5-2.5) CA						
			6			DP-11 (4-4.5)				NS	<1	
									Boring terminated at approximately 4½ feet			

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

Log of Boring DP-11

GeoEngineers

Project: Avista Sprague/Riverside
Project Location: Spokane, Washington
Project Number: 2522-085-01

Figure A-12
Sheet 1 of 1

Date:12/14/21 Path:\\GEOENGINEERS.COM\WAN\PROJECTS\2\2522085\GINT\252208501.GPJ DBLibrary/Library/GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEIB_ENVIRONMENTAL_STANDARD_NO_GW

Drilled	Start 11/11/2021	End 11/11/2021	Total Depth (ft) 4	Logged By JML / Checked By BDW	Driller Northern Lights Drilling	Drilling Method Direct-Push
Surface Elevation (ft) / Vertical Datum	1933 / NAVD88		Hammer Data	NA	Drilling Equipment	Geoprobe 5400
Easting (X) / Northing (Y)	258708 / 2485165		System Datum	WA State Plane North / WGS84 (feet)	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		33					GP-GM	Brown/gray fine to coarse gravel with silt and sand (medium dense, moist) (fill)	NS	<1	
						DP-12 (1-2) CA			Becomes dark brown with debris (brick)	NS	1.3	
1930						DP-12 (3-3.5) CA				NS	<1	

Refusal at approximately 4 feet

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

Log of Boring DP-12

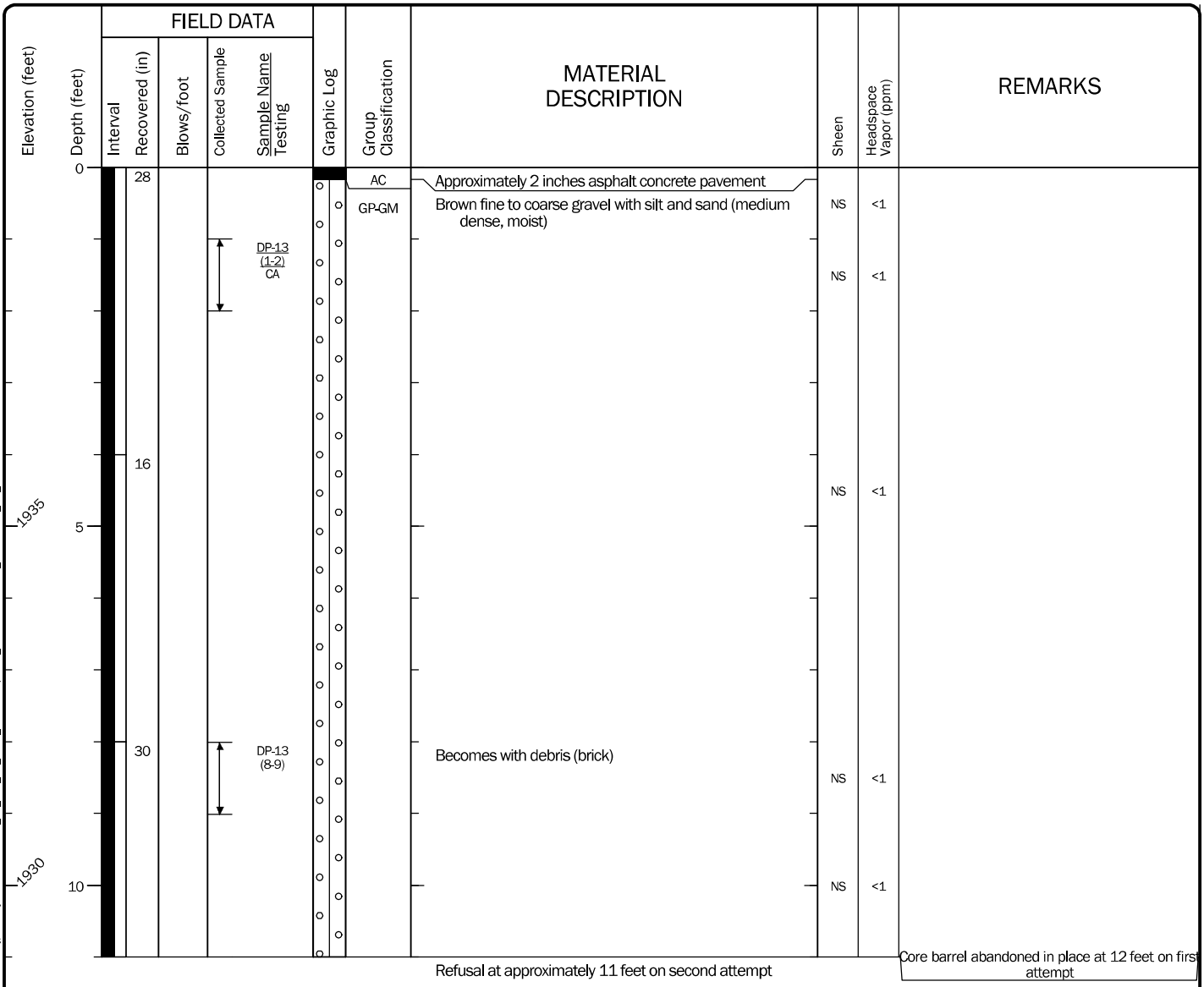
GeoEngineers

Project: Avista Sprague/Riverside
Project Location: Spokane, Washington
Project Number: 2522-085-01

Figure A-13
Sheet 1 of 1

Date:12/14/21 Path:\\GEOENGINEERS.COM\WAN\PROJECTS\2\2522085\GINT\252208501.GPJ DBLibrary/Library/GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEIB_ENVIRONMENTAL_STANDARD_NO_GW

Drilled Start 11/11/2021 End 11/11/2021	Total Depth (ft) 11	Logged By JML Checked By BDW	Driller Northern Lights Drilling	Drilling Method Direct-Push	
Surface Elevation (ft) 1940 Vertical Datum NAVD88		Hammer Data NA		Drilling Equipment Geoprobe 5400	
Easting (X) 258670 Northing (Y) 2485275		System Datum WA State Plane North WGS84 (feet)		Groundwater not observed at time of exploration	
Notes:					



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

Log of Boring DP-13

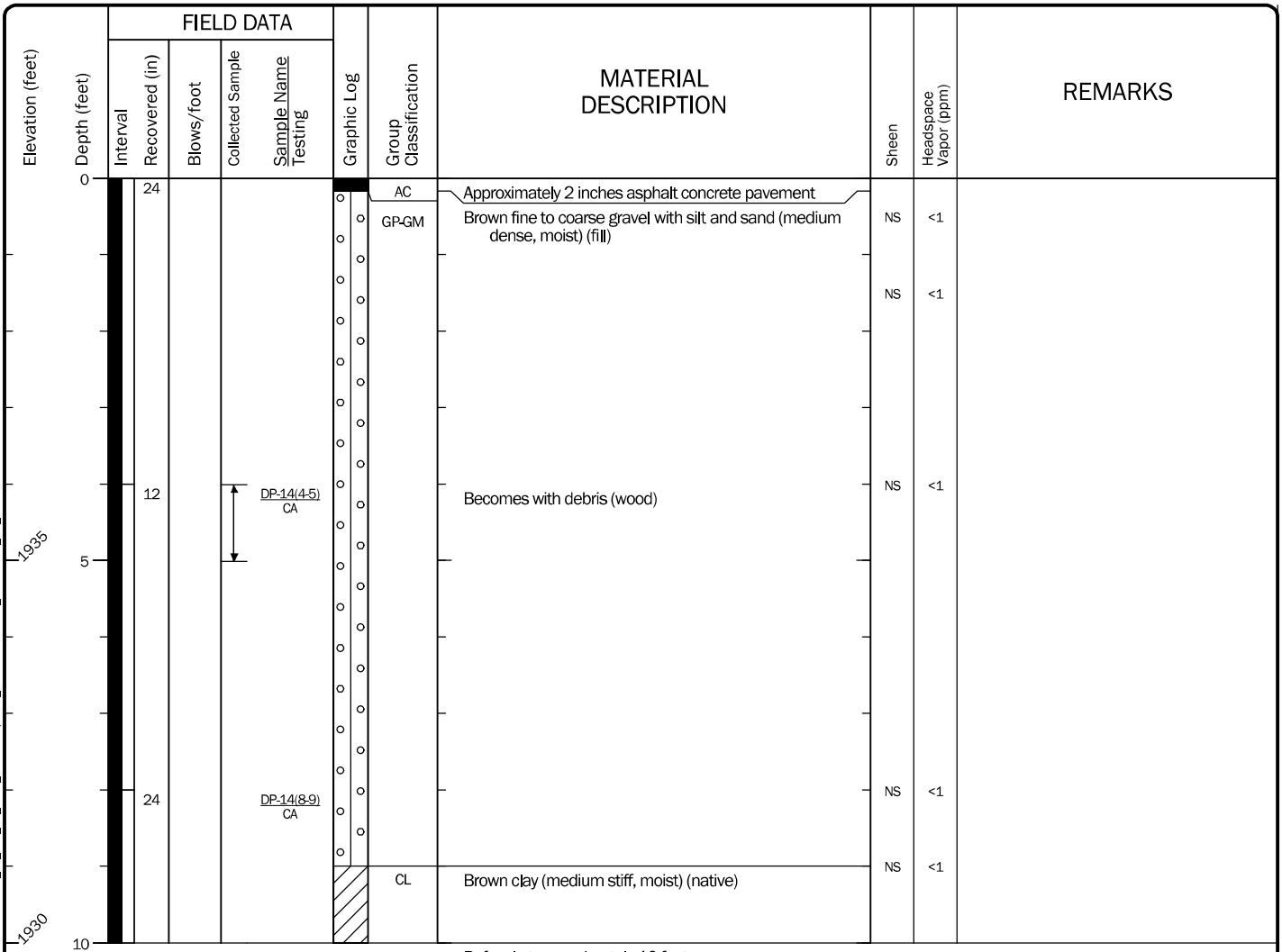
GeoEngineers

Project: Avista Sprague/Riverside
Project Location: Spokane, Washington
Project Number: 2522-085-01

Figure A-14
Sheet 1 of 1

Date:12/14/21 Path:\\GEOENGINEERS.COM\WAN\PROJECTS\2\2522085\GINT\252208501.GPJ DBLibrary/Library/GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEIB_ENVIRONMENTAL_STANDARD_NO_GW

Drilled: Start 11/11/2021 End 11/11/2021	Total Depth (ft): 10	Logged By: JML Checked By: BDW	Driller: Northern Lights Drilling	Drilling Method: Direct-Push	
Surface Elevation (ft): 1940 Vertical Datum: NAVD88		Hammer Data: NA		Drilling Equipment: Geoprobe 5400	
Easting (X): 258701 Northing (Y): 2485270		System Datum: WA State Plane North WGS84 (feet)		Groundwater not observed at time of exploration	
Notes:					



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

Log of Boring DP-14

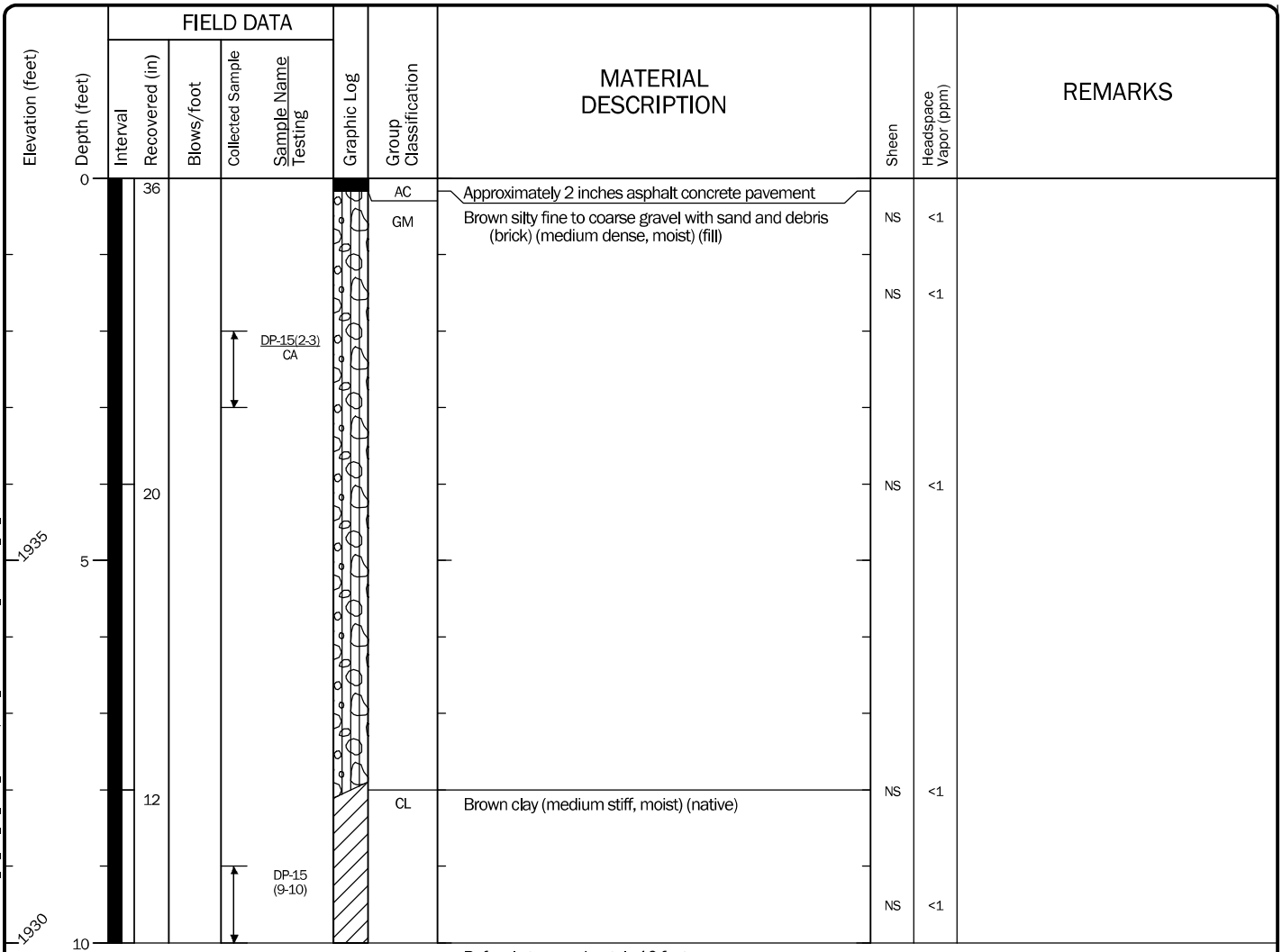
GeoEngineers

Project: Avista Sprague/Riverside
Project Location: Spokane, Washington
Project Number: 2522-085-01

Figure A-15
Sheet 1 of 1

Date:12/14/21 Path:\\GEOENGINEERS.COM\WAN\PROJECTS\2\2522085\GINT\252208501.GPJ DBLibrary/Library/GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEIB_ENVIRONMENTAL_STANDARD_NO_GW

Drilled: Start 11/11/2021 End 11/11/2021	Total Depth (ft): 10	Logged By: JML Checked By: BDW	Driller: Northern Lights Drilling	Drilling Method: Direct-Push	
Surface Elevation (ft): 1940 Vertical Datum: NAVD88		Hammer Data: NA		Drilling Equipment: Geoprobe 5400	
Easting (X): 258686 Northing (Y): 2485259		System Datum: WA State Plane North WGS84 (feet)		Groundwater not observed at time of exploration	
Notes:					



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

Log of Boring DP-15

GeoEngineers

Project: Avista Sprague/Riverside
Project Location: Spokane, Washington
Project Number: 2522-085-01

Figure A-16
Sheet 1 of 1

Date:12/14/21 Path:\\GEOENGINEERS.COM\WAN\PROJECTS\2\2522085\GINT\252208501.GPJ DBLibrary/Library/GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEIB_ENVIRONMENTAL_STANDARD_NO_GW

APPENDIX B
Data Validation and Chemical Analysis Laboratory Reports

GeoEngineers

523 East Second Avenue, Spokane, Washington 99202, Telephone: 509.363.3125 www.geoengineers.com

Data Validation Report

Project: Avista – Sprague and Riverside Parcels, Phase II ESA
November 2021 Soil Samples

GEI File No: 2522-085-01

Date: December 8, 2021

This report documents the results of a United States Environmental Protection Agency (USEPA)-defined Stage 2A data validation (USEPA Document 540-R-08-005; USEPA 2009) of analytical data from the analyses of soil samples collected as part of the November 2021 sampling event, and the associated laboratory and field quality control (QC) samples. The samples were obtained from the Avista Sprague and Riverside site parcel located at 415 East Sprague Avenue, 419 East Sprague Avenue, 425 East Sprague Avenue, and 420 East Riverside Avenue in Spokane, Washington.

Please note that this report was originally dated 11/29/2021. This report was revised on 12/8/2021 to include the addition of SDG 590-16359-2.

OBJECTIVE AND QUALITY CONTROL ELEMENTS

GeoEngineers, Inc. (GeoEngineers) completed the data validation consistent with the USEPA Contract Laboratory Program National Functional Guidelines for Organic Superfund Methods Data Review (USEPA, 2020a) and Inorganic Superfund Methods Data Review (USEPA, 2020b) (National Functional Guidelines) to determine if the laboratory analytical results meet the project objectives and are usable for their intended purpose. Data usability was assessed by determining if:

- The samples were analyzed using well-defined and acceptable methods that provide reporting limits below applicable regulatory criteria;
- The precision and accuracy of the data are well-defined and sufficient to provide defensible data; and
- The quality assurance/quality control (QA/QC) procedures utilized by the laboratory meet acceptable industry practices and standards.

The data validation included review of the following QC elements:

- Data Package Completeness
- Chain-of-Custody Documentation
- Holding Times and Sample Preservation
- Surrogate Recoveries
- Method and Trip Blanks
- Matrix Spikes/Matrix Spike Duplicates
- Laboratory Control Samples/Laboratory Control Sample Duplicates
- Laboratory Duplicates
- Miscellaneous

VALIDATED SAMPLE DELIVERY GROUPS

This data validation included review of the sample delivery group (SDG) listed below in Table A-1.

TABLE A-1. SUMMARY OF VALIDATED SAMPLE DELIVERY GROUPS

Laboratory SDG	Samples Validated
590-16359-1	DP-1(1-2), DP-2(4-5), DP-3(1.5-2.5), DP-3(10-11), DP-4(2-3), DP-5(1-2), DP-6(1-2), DP-7(1-2), DP-8(0.5-1.5), DP-9(1.5-2.5), DP-10(1-2), DP-11(1.5-2.5), DP-12(1-2), DP-13(1-2), DP-14(4-5), DP-15(2-3), Trip Blank
590-16359-2	DP-2(1-2), DP-2(4-5), DP-10(4-5), DP-11(1.5-2.5), DP-12(1-2), DP-12(3-3.5), DP-14(8-9)

CHEMICAL ANALYSIS PERFORMED

Eurofins TestAmerica Laboratories, Inc. (TestAmerica), located in Spokane, Washington, performed laboratory analyses on the samples using one or more of the following methods:

- Gasoline-range Hydrocarbons (NWTPH-Gx) by Method NWTPH-Gx;
- Petroleum Hydrocarbons (NWTPH-Dx) by Method NWTPH-Dx;
- Volatile Organic Compounds (VOCs) by Method SW8260D;
- Polycyclic Aromatic Hydrocarbons (PAHs) by Method SW8270E-SIM;
- Total Metals by Methods SW6010D and SW7471B; and
- Toxicity Characteristic Leaching Procedure (TCLP) for Lead by Method SW6010D

DATA VALIDATION SUMMARY

The results for each of the QC elements are summarized below.

Data Package Completeness

TestAmerica provided the required deliverables for the data validation according to the National Functional Guidelines. The laboratory followed adequate corrective action processes and the identified anomalies were discussed in the relevant laboratory case narrative.

Chain-of-Custody Documentation

Chain-of-custody (COC) forms were provided with the laboratory analytical reports. The COCs were accurate and complete when submitted to the laboratory.

Holding Times and Sample Preservation

The sample holding time is defined as the time that elapses between sample collection and sample analysis. Maximum holding time criteria exist for each analysis to help ensure that the analyte concentrations found at the time of analysis reflect the concentration present at the time of sample

collection. Established holding times were met for each analysis. The sample cooler arrived at the laboratory within the appropriate temperatures of between 2 and 6 degrees Celsius.

Surrogate Recoveries

A surrogate compound is a compound that is chemically similar to the organic analytes of interest, but unlikely to be found in an environmental sample. Surrogates are used for organic analyses and are added to the samples, standards, and blanks to serve as an accuracy and specificity check of each analysis. The surrogates are added to the samples at a known concentration and percent recoveries are calculated following analysis. The surrogate percent recoveries for field samples were within the laboratory control limits, with the following exceptions:

SDG 590-16359-1: (VOCs) The percent recovery for surrogate 4-Bromofluorobenzene was greater than the control limits in Sample DP-3(10-11); however, the sample was spiked with three additional surrogates and in each case the percent recovery values were within their respective control limits. No action was required for this outlier.

(PAHs) The percent recovery for surrogate p-Terphenyl-d14 was greater than the control limits in Sample DP-3(1.5-2.5); however, the sample was spiked with two additional surrogates and in each case the percent recovery values were within their respective control limits. No action was required for this outlier.

The percent recovery for surrogate p-Terphenyl-d14 was less than the control limits in Sample DP-14(4-5); however, the sample was spiked with two additional surrogates and in each case the percent recovery values were within their respective control limits. No action was required for this outlier.

Method *and Trip Blanks*

Method Blanks

Method blanks are analyzed to ensure that laboratory procedures and reagents do not introduce measurable concentrations of the analytes of interest. A method blank was analyzed with each batch of samples, at a frequency of 1 per 20 samples. For each sample batch, method blanks for the applicable methods were analyzed at the required frequency. None of the analytes of interest were detected in the method blanks, with the following exception:

SDG 590-16359-2: (Total Metals) There was a positive result for total mercury detected above the method detection limit and below the reporting limit in the method blank digested on 11/24/2021. The positive result for total mercury was qualified at non-detected (U) in Sample DP-12(3-3.5). The positive results for this target analyte in the remaining associated field samples were greater than 10X the concentration in the method blank; therefore, no qualifications were required.

Trip Blanks

Trip blanks are analyzed to provide an indication as to whether volatile compounds have cross-contaminated other like samples within the transportation process to the laboratory. None of the analytes of interest were detected in the trip blank, with the following exception:

SDG 590-16359-1: (VOCs) There was a positive result for naphthalene in the trip blank sample. The positive result for this target analyte in the associated field sample was greater than 2X the concentration in the trip blank; therefore, no qualification was required.

Matrix *Spikes/Matrix Spike Duplicates*

Since the actual analyte concentration in an environmental sample is not known, the accuracy of a particular analysis is usually inferred by performing a matrix spike (MS) analysis on one sample from the associated batch, known as the parent sample. One aliquot of the sample is analyzed in the normal manner and then a second aliquot of the sample is spiked with a known amount of analyte concentration and analyzed. From these analyses, a percent recovery is calculated. Matrix spike duplicate (MSD) analyses are generally performed for organic analyses as a precision check and analyzed in the same sequence as a matrix spike. Using the result values from the MS and MSD, the relative percent difference (RPD) is calculated.

One MS/MSD analysis should be performed for every analytical batch or every 20 field samples, whichever is more frequent. The frequency requirements were met for each analysis and the percent recovery and RPD values were within the proper control limits, with the following exceptions:

SDG 590-16359-1: (PAHs) The laboratory performed an MS/MSD sample set on Sample DP-2(4-5). The percent recoveries for benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, fluoranthene, phenanthrene, and pyrene were greater than the control limits in the MS and less than the control limits in the MSD extracted on 11/16/2021. The positive results for these target analytes were qualified as estimated (J) in this sample.

Additionally, in the same MS/MSD sample set, the RPD values for 1-Methylnaphthalene, 2-Methylnaphthalene, acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, fluoranthene, fluorene, indeno(1,2,3-c,d)pyrene, naphthalene, phenanthrene, and pyrene were greater than the control limits in the MS/MSD. The positive results for these target analytes were qualified as estimated (J) in this sample.

Also, in the same MS/MSD sample set, the percent recoveries for benzo(g,h,i)perylene, dibenzo(a,h)anthracene, and indeno(1,2,3-c,d)pyrene were less than the control limits in the MSD; however, the percent recoveries for these target analytes were within the control limits in the corresponding MS. No action was required for these outliers.

Laboratory Control Samples/Laboratory Contr*ol Sample Duplicates*

A laboratory control sample (LCS) is a blank sample that is spiked with a known amount of analyte and then analyzed. An LCS is similar to an MS, but without the possibility of matrix interference. Given that matrix interference is not an issue, the LCS/LCSD control limits for accuracy and precision are usually more rigorous than for MS/MSD analyses. Additionally, data qualification based on LCS/LCSD analyses would apply to each sample in the associated batch, instead of just the parent sample. The percent recovery control limits for LCS and LCSD analyses are specified in the laboratory documents, as are the RPD control limits for LCS/LCSD sample sets.

One LCS analysis should be performed for every analytical batch or every 20 field samples, whichever is more frequent. The frequency requirements were met for each analysis and the percent recovery values were within the proper control limits.

Laboratory Duplicates

Internal laboratory duplicate analyses are performed to monitor the precision of the specific laboratory analyses. Two separate aliquots of a sample are analyzed as distinct samples in the laboratory, and the RPD between the two results is calculated. Duplicate analyses should be performed once per analytical batch. If one or more of the samples used has a concentration less than five times the reporting limit for that sample, the absolute difference is used instead of the RPD as a measurement of precision.

Laboratory duplicates were analyzed at the proper frequency and the specified acceptance criteria were met, with the following exceptions:

SDG 590-16359-1: (Total Metals) The laboratory performed a laboratory duplicate sample set on Sample DP-1(1-2). The RPD values for total barium, total cadmium, and total lead were greater than the control limits in the laboratory duplicate digested on 11/15/2021. The positive results for these target analytes were qualified as estimated (J) in this sample.

Miscellaneous

SDG 590-16359-1: (NWTPH-Dx) The positive results for diesel- and lube oil-range hydrocarbons in Sample DP-3(10-11) appear to be due to a complex mixture of diesel- and oil-range hydrocarbons in the sample. For this reason, the positive results for diesel- and lube oil-range hydrocarbons were qualified as estimated (J) in this sample, in order to signify a potential high bias.

OVERALL ASSESSMENT

As was determined by this data validation, the laboratory followed the specified analytical methods. Accuracy was acceptable, as demonstrated by the surrogate, LCS, and MS/MSD percent recovery values, with the exceptions noted above. Precision was acceptable, as demonstrated by the MS/MSD and laboratory duplicate RPD values, with the exceptions noted above.

The data are acceptable for the intended use, with the following qualifications listed below in Table A-2.

TABLE A-2. SUMMARY OF QUALIFIED SAMPLES

Sample ID	Analyte	Qualifier	Reason
DP-1(1-2)	Total barium	J	Laboratory Duplicate RPD
	Total cadmium	J	Laboratory Duplicate RPD
	Total lead	J	Laboratory Duplicate RPD
DP-2(4-5)	1-Methylnaphthalene	J	MS/MSD RPD
	2-Methylnaphthalene	J	MS/MSD RPD
	Acenaphthene	J	MS/MSD RPD
	Acenaphthylene	J	MS/MSD RPD
	Anthracene	J	MS/MSD RPD
	Benzo(a)anthracene	J	MS/MSD Recovery and RPD
	Benzo(a)pyrene	J	MS/MSD Recovery and RPD
	Benzo(b)fluoranthene	J	MS/MSD Recovery and RPD
	Benzo(g,h,i)perylene	J	MS/MSD RPD
	Benzo(k)fluoranthene	J	MS/MSD Recovery and RPD
	Chrysene	J	MS/MSD Recovery and RPD
	Dibenzo(a,h)anthracene	J	MS/MSD RPD
	Fluoranthene	J	MS/MSD Recovery and RPD
	Fluorene	J	MS/MSD RPD
	Indeno(1,2,3-c,d)pyrene	J	MS/MSD RPD
	Naphthalene	J	MS/MSD RPD
	Phenanthrene	J	MS/MSD Recovery and RPD
	Pyrene	J	MS/MSD Recovery and RPD
DP-3(10-11)	Diesel-range hydrocarbons	J	See Miscellaneous
	Lube oil-range hydrocarbon	J	See Miscellaneous
DP-12(3-3.5)	Total mercury	U	Method Blank Contamination

REFERENCES

U.S. Environmental Protection Agency (USEPA). "Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use," EPA-540-R-08-005. January 2009.

U.S. Environmental Protection Agency (USEPA) 2020a. Contract Laboratory Program National Functional Guidelines for Organic Superfund Methods Data Review, EPA-540-R-20-005. November 2020.

U.S. Environmental Protection Agency (USEPA) 2020b. Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Methods Data Review, EPA-542-R-20-006. November 2020.

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ANALYTICAL REPORT

Eurofins TestAmerica, Spokane
11922 East 1st Ave
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Tel: (509)924-9200

Laboratory Job ID: 590-16359-1
Client Project/Site: Avista 415 E Sprague Phase II

For:
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Attn: Josh Lee

Randee Arrington

Authorized for release by:
11/19/2021 1:40:04 PM

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

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

Table of Contents

Cover Page 1
Table of Contents 2
Case Narrative 3
Sample Summary 4
Definitions 5
Client Sample Results 6
QC Sample Results 24
Chronicle 35
Certification Summary 42
Method Summary 43
Chain of Custody 44
Receipt Checklists 47

Case Narrative

Client: GeoEngineers Inc
Project/Site: Avista 415 E Sprague Phase II

Job ID: 590-16359-1

Job ID: 590-16359-1

Laboratory: Eurofins TestAmerica, Spokane

Narrative

Receipt
The samples were received on 11/12/2021 10:45 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.0º C.

GC/MS VOA
Method 8260D: The continuing calibration verification (CCV) associated with batch 590-34000 recovered above the upper control limit for 2,2-Dichloropropane, Carbon tetrachloride, and 1,1-Dichloroethene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8260D: Surrogate recovery for the following sample was outside control limits: DP-3(10-11) (590-16359-6). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC/MS Semi VOA
Method 8270E SIM: Due to the high concentration of multiple analytes, the matrix spike / matrix spike duplicate (MS/MSD) for preparation batch 590-34047 and analytical batch 590-34048 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

Method 8270E SIM: Surrogate recovery for the following samples were outside control limits: DP-3(1.5-2.5) (590-16359-5) and DP-14(4-5) (590-16359-25). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA
Method NWTPH-Dx: Detected hydrocarbons appear to be due to a complex mixture of diesel and oil range organics in the following sample: DP-3(10-11) (590-16359-6).

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

Metals
Method 6010D: The sample duplicate (DUP) precision for preparation batch 590-34009 and analytical batch 590-34050 was outside control limits. Sample matrix interference is suspected.

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

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

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

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

Sample Summary

Client: GeoEngineers Inc
Project/Site: Avista 415 E Sprague Phase II

Job ID: 590-16359-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-16359-1	DP-1(1-2)	Solid	11/11/21 09:15	11/12/21 10:45
590-16359-4	DP-2(4-5)	Solid	11/11/21 09:40	11/12/21 10:45
590-16359-5	DP-3(1.5-2.5)	Solid	11/11/21 09:45	11/12/21 10:45
590-16359-6	DP-3(10-11)	Solid	11/11/21 09:50	11/12/21 10:45
590-16359-7	DP-4(2-3)	Solid	11/11/21 10:20	11/12/21 10:45
590-16359-8	DP-5(1-2)	Solid	11/11/21 10:40	11/12/21 10:45
590-16359-10	DP-6(1-2)	Solid	11/11/21 11:20	11/12/21 10:45
590-16359-12	DP-7(1-2)	Solid	11/11/21 12:00	11/12/21 10:45
590-16359-14	DP-8(0.5-1.5)	Solid	11/11/21 12:20	11/12/21 10:45
590-16359-16	DP-9(1.5-2.5)	Solid	11/11/21 13:00	11/12/21 10:45
590-16359-17	DP-10(1-2)	Solid	11/11/21 13:10	11/12/21 10:45
590-16359-19	DP-11(1.5-2.5)	Solid	11/11/21 13:30	11/12/21 10:45
590-16359-21	DP-12(1-2)	Solid	11/11/21 13:50	11/12/21 10:45
590-16359-23	DP-13(1-2)	Solid	11/11/21 14:05	11/12/21 10:45
590-16359-25	DP-14(4-5)	Solid	11/11/21 15:00	11/12/21 10:45
590-16359-27	DP-15(2-3)	Solid	11/11/21 15:30	11/12/21 10:45
590-16359-29	Trip Blank	Solid	11/11/21 08:40	11/12/21 10:45

Definitions/Glossary

Client: GeoEngineers Inc
Job ID: 590-16359-1
Project/Site: Avista 415 E Sprague Phase II

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1+	Surrogate recovery exceeds control limits, high biased.

GC/MS Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.

Metals

Qualifier	Qualifier Description
F3	Duplicate RPD exceeds the control limit
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL, and the absolute difference between results is < the upper reporting limits for both.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Client Sample ID: DP-1(1-2)

Lab Sample ID: 590-16359-1
Date Collected: 11/11/21 09:15
Matrix: Solid
Date Received: 11/12/21 10:45
Percent Solids: 85.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		11	2.5	ug/Kg	☼	11/16/21 12:10	11/16/21 17:03	1
2-Methylnaphthalene	ND		11	3.6	ug/Kg	☼	11/16/21 12:10	11/16/21 17:03	1
1-Methylnaphthalene	ND		11	2.5	ug/Kg	☼	11/16/21 12:10	11/16/21 17:03	1
Acenaphthylene	ND		11	3.8	ug/Kg	☼	11/16/21 12:10	11/16/21 17:03	1
Acenaphthene	ND		11	2.9	ug/Kg	☼	11/16/21 12:10	11/16/21 17:03	1
Fluorene	ND		11	2.5	ug/Kg	☼	11/16/21 12:10	11/16/21 17:03	1
Phenanthrene	ND		11	4.1	ug/Kg	☼	11/16/21 12:10	11/16/21 17:03	1
Anthracene	ND		11	2.3	ug/Kg	☼	11/16/21 12:10	11/16/21 17:03	1
Fluoranthene	ND		11	2.8	ug/Kg	☼	11/16/21 12:10	11/16/21 17:03	1
Pyrene	ND		11	4.3	ug/Kg	☼	11/16/21 12:10	11/16/21 17:03	1
Benzo[a]anthracene	ND		11	2.4	ug/Kg	☼	11/16/21 12:10	11/16/21 17:03	1
Chrysene	ND		11	1.7	ug/Kg	☼	11/16/21 12:10	11/16/21 17:03	1
Benzo[b]fluoranthene	ND		11	4.0	ug/Kg	☼	11/16/21 12:10	11/16/21 17:03	1
Benzo[k]fluoranthene	ND		11	2.9	ug/Kg	☼	11/16/21 12:10	11/16/21 17:03	1
Benzo[a]pyrene	ND		11	4.8	ug/Kg	☼	11/16/21 12:10	11/16/21 17:03	1
Indeno[1,2,3-cd]pyrene	ND		11	3.4	ug/Kg	☼	11/16/21 12:10	11/16/21 17:03	1
Dibenz(a,h)anthracene	ND		11	3.2	ug/Kg	☼	11/16/21 12:10	11/16/21 17:03	1
Benzo[g,h,i]perylene	ND		11	2.7	ug/Kg	☼	11/16/21 12:10	11/16/21 17:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*84*		*33 - 120*	*11/16/21 12:10*	*11/16/21 17:03*	*1*
2-Fluorobiphenyl (Surr)	*78*		*47 - 120*	*11/16/21 12:10*	*11/16/21 17:03*	*1*
p-Terphenyl-d14	*96*		*74 - 120*	*11/16/21 12:10*	*11/16/21 17:03*	*1*

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**8.2**		1.1	0.42	mg/Kg	☼	11/15/21 09:02	11/16/21 10:13	1
Barium	**120**		1.1	0.29	mg/Kg	☼	11/15/21 09:02	11/16/21 10:13	1
Cadmium	**0.22**	**J**	0.85	0.050	mg/Kg	☼	11/15/21 09:02	11/16/21 10:13	1
Chromium	**10**		1.1	0.15	mg/Kg	☼	11/15/21 09:02	11/16/21 10:13	1
Lead	**21**		2.6	1.3	mg/Kg	☼	11/15/21 09:02	11/16/21 10:13	1
Selenium	ND		4.3	2.6	mg/Kg	☼	11/15/21 09:02	11/16/21 10:13	1
Silver	ND		1.1	0.11	mg/Kg	☼	11/15/21 09:02	11/16/21 10:13	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**13**	**J**	42	3.0	ug/Kg		11/15/21 08:47	11/16/21 10:14	1

Client Sample ID: DP-2(4-5)

Lab Sample ID: 590-16359-4
Date Collected: 11/11/21 09:40
Matrix: Solid
Date Received: 11/12/21 10:45
Percent Solids: 89.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	**8.5**	**J F2**	11	2.4	ug/Kg	☼	11/16/21 12:10	11/16/21 17:27	1
2-Methylnaphthalene	**4.7**	**J F2**	11	3.4	ug/Kg	☼	11/16/21 12:10	11/16/21 17:27	1
1-Methylnaphthalene	**10**	**J F2**	11	2.4	ug/Kg	☼	11/16/21 12:10	11/16/21 17:27	1
Acenaphthylene	**26**	**F2**	11	3.6	ug/Kg	☼	11/16/21 12:10	11/16/21 17:27	1
Acenaphthene	**24**	**F2**	11	2.8	ug/Kg	☼	11/16/21 12:10	11/16/21 17:27	1
Fluorene	**18**	**F2**	11	2.4	ug/Kg	☼	11/16/21 12:10	11/16/21 17:27	1
Phenanthrene	**330**	**F2 F1**	11	4.0	ug/Kg	☼	11/16/21 12:10	11/16/21 17:27	1

Client Sample ID: DP-2(4-5)

Lab Sample ID: 590-16359-4
Date Collected: 11/11/21 09:40
Matrix: Solid
Date Received: 11/12/21 10:45
Percent Solids: 89.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Anthracene	58	F2	11	2.2	ug/Kg	☼	11/16/21 12:10	11/16/21 17:27	1
Fluoranthene	370	F2 F1	11	2.7	ug/Kg	☼	11/16/21 12:10	11/16/21 17:27	1
Pyrene	430	F2 F1	11	4.2	ug/Kg	☼	11/16/21 12:10	11/16/21 17:27	1
Benzo[a]anthracene	170	F2 F1	11	2.3	ug/Kg	☼	11/16/21 12:10	11/16/21 17:27	1
Chrysene	220	F2 F1	11	1.7	ug/Kg	☼	11/16/21 12:10	11/16/21 17:27	1
Benzo[b]fluoranthene	280	F2 F1	11	3.8	ug/Kg	☼	11/16/21 12:10	11/16/21 17:27	1
Benzo[k]fluoranthene	120	F2 F1	11	2.7	ug/Kg	☼	11/16/21 12:10	11/16/21 17:27	1
Benzo[a]pyrene	290	F2 F1	11	4.6	ug/Kg	☼	11/16/21 12:10	11/16/21 17:27	1
Indeno[1,2,3-cd]pyrene	170	F2 F1	11	3.2	ug/Kg	☼	11/16/21 12:10	11/16/21 17:27	1
Dibenz(a,h)anthracene	43	F2 F1	11	3.1	ug/Kg	☼	11/16/21 12:10	11/16/21 17:27	1
Benzo[g,h,i]perylene	200	F2 F1	11	2.6	ug/Kg	☼	11/16/21 12:10	11/16/21 17:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*88*		*33 - 120*	*11/16/21 12:10*	*11/16/21 17:27*	*1*
2-Fluorobiphenyl (Surr)	*76*		*47 - 120*	*11/16/21 12:10*	*11/16/21 17:27*	*1*
p-Terphenyl-d14	*101*		*74 - 120*	*11/16/21 12:10*	*11/16/21 17:27*	*1*

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	9.8		1.1	0.42	mg/Kg	☼	11/15/21 09:02	11/16/21 10:36	1
Barium	210		1.1	0.28	mg/Kg	☼	11/15/21 09:02	11/16/21 10:36	1
Cadmium	0.94		0.84	0.050	mg/Kg	☼	11/15/21 09:02	11/16/21 10:36	1
Chromium	14		1.1	0.15	mg/Kg	☼	11/15/21 09:02	11/16/21 10:36	1
Lead	800		13	6.2	mg/Kg	☼	11/15/21 09:02	11/16/21 15:30	5
Selenium	ND		4.2	2.5	mg/Kg	☼	11/15/21 09:02	11/16/21 10:36	1
Silver	ND		1.1	0.11	mg/Kg	☼	11/15/21 09:02	11/16/21 10:36	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	670		49	3.5	ug/Kg		11/15/21 08:47	11/16/21 10:16	1

Client Sample ID: DP-3(1.5-2.5)

Lab Sample ID: 590-16359-5
Date Collected: 11/11/21 09:45
Matrix: Solid
Date Received: 11/12/21 10:45
Percent Solids: 93.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	4.7	J	10	2.2	ug/Kg	☼	11/16/21 12:10	11/16/21 18:40	1
2-Methylnaphthalene	7.0	J	10	3.2	ug/Kg	☼	11/16/21 12:10	11/16/21 18:40	1
1-Methylnaphthalene	6.8	J	10	2.3	ug/Kg	☼	11/16/21 12:10	11/16/21 18:40	1
Acenaphthylene	16		10	3.4	ug/Kg	☼	11/16/21 12:10	11/16/21 18:40	1
Acenaphthene	ND		10	2.6	ug/Kg	☼	11/16/21 12:10	11/16/21 18:40	1
Fluorene	4.9	J	10	2.3	ug/Kg	☼	11/16/21 12:10	11/16/21 18:40	1
Phenanthrene	74		10	3.7	ug/Kg	☼	11/16/21 12:10	11/16/21 18:40	1
Anthracene	19		10	2.0	ug/Kg	☼	11/16/21 12:10	11/16/21 18:40	1
Fluoranthene	130		10	2.5	ug/Kg	☼	11/16/21 12:10	11/16/21 18:40	1
Pyrene	180		10	3.9	ug/Kg	☼	11/16/21 12:10	11/16/21 18:40	1
Benzo[a]anthracene	82		10	2.2	ug/Kg	☼	11/16/21 12:10	11/16/21 18:40	1
Chrysene	100		10	1.5	ug/Kg	☼	11/16/21 12:10	11/16/21 18:40	1
Benzo[b]fluoranthene	130		10	3.6	ug/Kg	☼	11/16/21 12:10	11/16/21 18:40	1
Benzo[k]fluoranthene	52		10	2.5	ug/Kg	☼	11/16/21 12:10	11/16/21 18:40	1

Client Sample ID: DP-3(1.5-2.5)
Lab Sample ID: 590-16359-5
Date Collected: 11/11/21 09:45
Matrix: Solid
Date Received: 11/12/21 10:45
Percent Solids: 93.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	120		10	4.3	ug/Kg	☼	11/16/21 12:10	11/16/21 18:40	1
Indeno[1,2,3-cd]pyrene	64		10	3.0	ug/Kg	☼	11/16/21 12:10	11/16/21 18:40	1
Dibenz(a,h)anthracene	17		10	2.9	ug/Kg	☼	11/16/21 12:10	11/16/21 18:40	1
Benzo[g,h,i]perylene	78		10	2.4	ug/Kg	☼	11/16/21 12:10	11/16/21 18:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*89*		*33 - 120*	*11/16/21 12:10*	*11/16/21 18:40*	*1*
2-Fluorobiphenyl (Surr)	*95*		*47 - 120*	*11/16/21 12:10*	*11/16/21 18:40*	*1*
p-Terphenyl-d14	*125*	*S1+*	*74 - 120*	*11/16/21 12:10*	*11/16/21 18:40*	*1*

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	7.8		1.0	0.40	mg/Kg	☼	11/15/21 09:02	11/16/21 10:40	1
Barium	110		1.0	0.27	mg/Kg	☼	11/15/21 09:02	11/16/21 10:40	1
Cadmium	0.73	J	0.81	0.048	mg/Kg	☼	11/15/21 09:02	11/16/21 10:40	1
Chromium	11		1.0	0.14	mg/Kg	☼	11/15/21 09:02	11/16/21 10:40	1
Lead	190		2.4	1.2	mg/Kg	☼	11/15/21 09:02	11/16/21 10:40	1
Selenium	ND		4.1	2.4	mg/Kg	☼	11/15/21 09:02	11/16/21 10:40	1
Silver	ND		1.0	0.11	mg/Kg	☼	11/15/21 09:02	11/16/21 10:40	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	46	J	47	3.4	ug/Kg		11/15/21 08:47	11/16/21 10:19	1

Client Sample ID: DP-3(10-11)
Lab Sample ID: 590-16359-6
Date Collected: 11/11/21 09:50
Matrix: Solid
Date Received: 11/12/21 10:45
Percent Solids: 68.9

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.18	0.035	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
1,1,1-Trichloroethane	ND		0.18	0.032	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
1,1,2,2-Tetrachloroethane	5.8		0.18	0.053	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
1,1,2-Trichloroethane	ND		0.18	0.065	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
1,1-Dichloroethane	ND		0.18	0.048	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
1,1-Dichloroethene	ND		0.18	0.062	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
1,1-Dichloropropene	ND		0.18	0.032	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
1,2,3-Trichlorobenzene	0.25		0.18	0.061	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
1,2,3-Trichloropropane	ND		0.37	0.067	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
1,2,4-Trichlorobenzene	ND		0.18	0.034	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
1,2,4-Trimethylbenzene	0.083	J	0.18	0.043	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
1,2-Dibromo-3-Chloropropane	0.40	J	0.91	0.11	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
1,2-Dibromoethane (EDB)	ND		0.18	0.061	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
1,2-Dichlorobenzene	ND		0.18	0.043	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
1,2-Dichloroethane	ND		0.18	0.013	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
1,2-Dichloropropane	ND		0.22	0.055	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
1,3,5-Trimethylbenzene	ND		0.18	0.059	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
1,3-Dichlorobenzene	ND		0.18	0.023	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
1,3-Dichloropropane	ND		0.18	0.054	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
1,4-Dichlorobenzene	ND		0.18	0.038	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
2,2-Dichloropropane	ND		0.18	0.044	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1

Client Sample ID: DP-3(10-11)
Lab Sample ID: 590-16359-6
Date Collected: 11/11/21 09:50
Matrix: Solid
Date Received: 11/12/21 10:45
Percent Solids: 68.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chlorotoluene	**0.065**	**J**	0.18	0.030	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
4-Chlorotoluene	ND		0.18	0.016	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
Benzene	ND		0.037	0.018	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
Bromobenzene	ND		0.18	0.041	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
Bromochloromethane	ND		0.18	0.073	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
Bromodichloromethane	ND		0.18	0.11	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
Bromoform	ND		0.37	0.035	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
Bromomethane	ND		0.91	0.061	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
Carbon tetrachloride	ND		0.18	0.020	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
Chlorobenzene	ND		0.18	0.038	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
Chloroethane	ND		0.37	0.10	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
Chloroform	ND		0.18	0.043	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
Chloromethane	ND		0.91	0.076	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
cis-1,2-Dichloroethene	ND		0.18	0.038	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
cis-1,3-Dichloropropene	ND		0.18	0.037	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
Dibromochloromethane	ND		0.37	0.030	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
Dibromomethane	ND		0.18	0.041	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
Dichlorodifluoromethane	ND		0.18	0.051	mg/Kg	☼	11/12/21 13:34	11/17/21 14:14	1
Ethylbenzene	ND		0.18	0.030	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
Hexachlorobutadiene	ND		0.18	0.030	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
Isopropylbenzene	ND		0.18	0.057	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
m,p-Xylene	ND		0.73	0.052	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
Methyl tert-butyl ether	ND		0.091	0.055	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
Methylene Chloride	ND		0.64	0.37	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
Naphthalene	**0.77**		0.37	0.051	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
n-Butylbenzene	**0.32**		0.18	0.050	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
N-Propylbenzene	ND		0.18	0.048	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
o-Xylene	ND		0.37	0.042	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
p-Isopropyltoluene	ND		0.18	0.037	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
sec-Butylbenzene	**0.76**		0.18	0.034	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
Styrene	ND		0.18	0.043	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
tert-Butylbenzene	**0.079**	**J**	0.18	0.036	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
Tetrachloroethene	**5.9**		0.073	0.032	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
Toluene	ND		0.18	0.024	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
trans-1,2-Dichloroethene	ND		0.18	0.042	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
trans-1,3-Dichloropropene	ND		0.18	0.048	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
Trichloroethene	**0.073**		0.046	0.014	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
Trichlorofluoromethane	ND		0.37	0.060	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1
Vinyl chloride	ND		0.11	0.037	mg/Kg	☼	11/12/21 13:34	11/12/21 19:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*117*		*75 - 129*	*11/12/21 13:34*	*11/12/21 19:51*	*1*
1,2-Dichloroethane-d4 (Surr)	*118*		*75 - 129*	*11/12/21 13:34*	*11/17/21 14:14*	*1*
4-Bromofluorobenzene (Surr)	*282*	*S1+*	*76 - 122*	*11/12/21 13:34*	*11/12/21 19:51*	*1*
4-Bromofluorobenzene (Surr)	*249*	*S1+*	*76 - 122*	*11/12/21 13:34*	*11/17/21 14:14*	*1*
Dibromofluoromethane (Surr)	*107*		*80 - 120*	*11/12/21 13:34*	*11/12/21 19:51*	*1*
Dibromofluoromethane (Surr)	*112*		*80 - 120*	*11/12/21 13:34*	*11/17/21 14:14*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*	*11/12/21 13:34*	*11/12/21 19:51*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*	*11/12/21 13:34*	*11/17/21 14:14*	*1*

Client Sample ID: DP-3(10-11)
Lab Sample ID: 590-16359-6
Date Collected: 11/11/21 09:50
Matrix: Solid
Date Received: 11/12/21 10:45
Percent Solids: 68.9

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**490**		91	33	mg/Kg	☼	11/12/21 13:34	11/15/21 18:50	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*122*		*41.5 - 162*	*11/12/21 13:34*	*11/15/21 18:50*	*10*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		140	31	ug/Kg	☼	11/16/21 12:10	11/17/21 11:56	10
2-Methylnaphthalene	ND		140	45	ug/Kg	☼	11/16/21 12:10	11/17/21 11:56	10
1-Methylnaphthalene	ND		140	32	ug/Kg	☼	11/16/21 12:10	11/17/21 11:56	10
Acenaphthylene	**63**	**J**	140	48	ug/Kg	☼	11/16/21 12:10	11/17/21 11:56	10
Acenaphthene	**210**		140	37	ug/Kg	☼	11/16/21 12:10	11/17/21 11:56	10
Fluorene	ND		140	32	ug/Kg	☼	11/16/21 12:10	11/17/21 11:56	10
Phenanthrene	ND		140	52	ug/Kg	☼	11/16/21 12:10	11/17/21 11:56	10
Anthracene	ND		140	29	ug/Kg	☼	11/16/21 12:10	11/17/21 11:56	10
Fluoranthene	ND		140	36	ug/Kg	☼	11/16/21 12:10	11/17/21 11:56	10
Pyrene	ND		140	55	ug/Kg	☼	11/16/21 12:10	11/17/21 11:56	10
Benzo[a]anthracene	ND		140	31	ug/Kg	☼	11/16/21 12:10	11/17/21 11:56	10
Chrysene	ND		140	22	ug/Kg	☼	11/16/21 12:10	11/17/21 11:56	10
Benzo[b]fluoranthene	ND		14	5.1	ug/Kg	☼	11/16/21 12:10	11/16/21 19:04	1
Benzo[k]fluoranthene	**14**		14	3.6	ug/Kg	☼	11/16/21 12:10	11/16/21 19:04	1
Benzo[a]pyrene	ND		14	6.1	ug/Kg	☼	11/16/21 12:10	11/16/21 19:04	1
Indeno[1,2,3-cd]pyrene	ND		14	4.3	ug/Kg	☼	11/16/21 12:10	11/16/21 19:04	1
Dibenz(a,h)anthracene	ND		14	4.1	ug/Kg	☼	11/16/21 12:10	11/16/21 19:04	1
Benzo[g,h,i]perylene	ND		14	3.4	ug/Kg	☼	11/16/21 12:10	11/16/21 19:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*95*		*33 - 120*	*11/16/21 12:10*	*11/17/21 11:56*	*10*
2-Fluorobiphenyl (Surr)	*76*		*47 - 120*	*11/16/21 12:10*	*11/17/21 11:56*	*10*
p-Terphenyl-d14	*81*		*74 - 120*	*11/16/21 12:10*	*11/17/21 11:56*	*10*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	**2700**		14	6.0	mg/Kg	☼	11/17/21 08:32	11/17/21 21:49	1
Residual Range Organics (RRO) (C25-C36)	**2100**		36	7.1	mg/Kg	☼	11/17/21 08:32	11/17/21 21:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*143*		*50 - 150*	*11/17/21 08:32*	*11/17/21 21:49*	*1*
n-Triacontane-d62	*115*		*50 - 150*	*11/17/21 08:32*	*11/17/21 21:49*	*1*

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**5.7**		1.4	0.57	mg/Kg	☼	11/15/21 09:02	11/16/21 10:56	1
Barium	**160**		1.4	0.39	mg/Kg	☼	11/15/21 09:02	11/16/21 10:56	1
Cadmium	**0.48**	**J**	1.2	0.068	mg/Kg	☼	11/15/21 09:02	11/16/21 10:56	1
Chromium	**14**		1.4	0.20	mg/Kg	☼	11/15/21 09:02	11/16/21 10:56	1
Lead	**23**		3.5	1.7	mg/Kg	☼	11/15/21 09:02	11/16/21 10:56	1
Selenium	ND		5.8	3.5	mg/Kg	☼	11/15/21 09:02	11/16/21 10:56	1
Silver	ND		1.4	0.15	mg/Kg	☼	11/15/21 09:02	11/16/21 10:56	1

Client Sample ID: DP-3(10-11)
Lab Sample ID: 590-16359-6
Date Collected: 11/11/21 09:50
Matrix: Solid
Date Received: 11/12/21 10:45
Percent Solids: 68.9

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	28	J	49	3.5	ug/Kg	☼	11/15/21 08:47	11/16/21 10:22	1

Client Sample ID: DP-4(2-3)
Lab Sample ID: 590-16359-7
Date Collected: 11/11/21 10:20
Matrix: Solid
Date Received: 11/12/21 10:45
Percent Solids: 80.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		12	2.6	ug/Kg	☼	11/16/21 12:10	11/16/21 19:28	1
2-Methylnaphthalene	ND		12	3.8	ug/Kg	☼	11/16/21 12:10	11/16/21 19:28	1
1-Methylnaphthalene	ND		12	2.7	ug/Kg	☼	11/16/21 12:10	11/16/21 19:28	1
Acenaphthylene	ND		12	4.1	ug/Kg	☼	11/16/21 12:10	11/16/21 19:28	1
Acenaphthene	ND		12	3.1	ug/Kg	☼	11/16/21 12:10	11/16/21 19:28	1
Fluorene	ND		12	2.7	ug/Kg	☼	11/16/21 12:10	11/16/21 19:28	1
Phenanthrene	35		12	4.4	ug/Kg	☼	11/16/21 12:10	11/16/21 19:28	1
Anthracene	6.3	J	12	2.4	ug/Kg	☼	11/16/21 12:10	11/16/21 19:28	1
Fluoranthene	76		12	3.0	ug/Kg	☼	11/16/21 12:10	11/16/21 19:28	1
Pyrene	63		12	4.7	ug/Kg	☼	11/16/21 12:10	11/16/21 19:28	1
Benzo[a]anthracene	33		12	2.6	ug/Kg	☼	11/16/21 12:10	11/16/21 19:28	1
Chrysene	28		12	1.9	ug/Kg	☼	11/16/21 12:10	11/16/21 19:28	1
Benzo[b]fluoranthene	37		12	4.3	ug/Kg	☼	11/16/21 12:10	11/16/21 19:28	1
Benzo[k]fluoranthene	15		12	3.1	ug/Kg	☼	11/16/21 12:10	11/16/21 19:28	1
Benzo[a]pyrene	35		12	5.2	ug/Kg	☼	11/16/21 12:10	11/16/21 19:28	1
Indeno[1,2,3-cd]pyrene	15		12	3.6	ug/Kg	☼	11/16/21 12:10	11/16/21 19:28	1
Dibenz(a,h)anthracene	3.6	J	12	3.5	ug/Kg	☼	11/16/21 12:10	11/16/21 19:28	1
Benzo[g,h,i]perylene	17		12	2.9	ug/Kg	☼	11/16/21 12:10	11/16/21 19:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*88*		*33 - 120*	*11/16/21 12:10*	*11/16/21 19:28*	*1*
2-Fluorobiphenyl (Surr)	*63*		*47 - 120*	*11/16/21 12:10*	*11/16/21 19:28*	*1*
p-Terphenyl-d14	*96*		*74 - 120*	*11/16/21 12:10*	*11/16/21 19:28*	*1*

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.9		1.1	0.43	mg/Kg	☼	11/15/21 09:02	11/16/21 11:00	1
Barium	95		1.1	0.29	mg/Kg	☼	11/15/21 09:02	11/16/21 11:00	1
Cadmium	0.22	J	0.87	0.052	mg/Kg	☼	11/15/21 09:02	11/16/21 11:00	1
Chromium	9.5		1.1	0.15	mg/Kg	☼	11/15/21 09:02	11/16/21 11:00	1
Lead	44		2.6	1.3	mg/Kg	☼	11/15/21 09:02	11/16/21 11:00	1
Selenium	ND		4.4	2.6	mg/Kg	☼	11/15/21 09:02	11/16/21 11:00	1
Silver	ND		1.1	0.12	mg/Kg	☼	11/15/21 09:02	11/16/21 11:00	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	91		45	3.2	ug/Kg	☼	11/15/21 08:47	11/16/21 10:24	1

Client Sample ID: DP-5(1-2)

Lab Sample ID: 590-16359-8
Date Collected: 11/11/21 10:40
Matrix: Solid
Date Received: 11/12/21 10:45
Percent Solids: 85.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		11	2.4	ug/Kg	☼	11/16/21 12:10	11/16/21 19:52	1
2-Methylnaphthalene	ND		11	3.5	ug/Kg	☼	11/16/21 12:10	11/16/21 19:52	1
1-Methylnaphthalene	ND		11	2.5	ug/Kg	☼	11/16/21 12:10	11/16/21 19:52	1
Acenaphthylene	**6.6**	**J**	11	3.7	ug/Kg	☼	11/16/21 12:10	11/16/21 19:52	1
Acenaphthene	ND		11	2.8	ug/Kg	☼	11/16/21 12:10	11/16/21 19:52	1
Fluorene	ND		11	2.5	ug/Kg	☼	11/16/21 12:10	11/16/21 19:52	1
Phenanthrene	**13**		11	4.0	ug/Kg	☼	11/16/21 12:10	11/16/21 19:52	1
Anthracene	**3.2**	**J**	11	2.2	ug/Kg	☼	11/16/21 12:10	11/16/21 19:52	1
Fluoranthene	**33**		11	2.8	ug/Kg	☼	11/16/21 12:10	11/16/21 19:52	1
Pyrene	**44**		11	4.2	ug/Kg	☼	11/16/21 12:10	11/16/21 19:52	1
Benzo[a]anthracene	**22**		11	2.4	ug/Kg	☼	11/16/21 12:10	11/16/21 19:52	1
Chrysene	**26**		11	1.7	ug/Kg	☼	11/16/21 12:10	11/16/21 19:52	1
Benzo[b]fluoranthene	**33**		11	3.9	ug/Kg	☼	11/16/21 12:10	11/16/21 19:52	1
Benzo[k]fluoranthene	**10**	**J**	11	2.8	ug/Kg	☼	11/16/21 12:10	11/16/21 19:52	1
Benzo[a]pyrene	**31**		11	4.7	ug/Kg	☼	11/16/21 12:10	11/16/21 19:52	1
Indeno[1,2,3-cd]pyrene	**17**		11	3.3	ug/Kg	☼	11/16/21 12:10	11/16/21 19:52	1
Dibenz(a,h)anthracene	**4.3**	**J**	11	3.2	ug/Kg	☼	11/16/21 12:10	11/16/21 19:52	1
Benzo[g,h,i]perylene	**20**		11	2.6	ug/Kg	☼	11/16/21 12:10	11/16/21 19:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*88*		*33 - 120*	*11/16/21 12:10*	*11/16/21 19:52*	*1*
2-Fluorobiphenyl (Surr)	*78*		*47 - 120*	*11/16/21 12:10*	*11/16/21 19:52*	*1*
p-Terphenyl-d14	*107*		*74 - 120*	*11/16/21 12:10*	*11/16/21 19:52*	*1*

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**11**		1.1	0.44	mg/Kg	☼	11/15/21 09:02	11/16/21 11:04	1
Barium	**110**		1.1	0.30	mg/Kg	☼	11/15/21 09:02	11/16/21 11:04	1
Cadmium	**0.30**	**J**	0.88	0.052	mg/Kg	☼	11/15/21 09:02	11/16/21 11:04	1
Chromium	**10**		1.1	0.16	mg/Kg	☼	11/15/21 09:02	11/16/21 11:04	1
Lead	**29**		2.6	1.3	mg/Kg	☼	11/15/21 09:02	11/16/21 11:04	1
Selenium	ND		4.4	2.7	mg/Kg	☼	11/15/21 09:02	11/16/21 11:04	1
Silver	ND		1.1	0.12	mg/Kg	☼	11/15/21 09:02	11/16/21 11:04	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**27**	**J**	42	3.0	ug/Kg		11/15/21 08:47	11/16/21 10:27	1

Client Sample ID: DP-6(1-2)

Lab Sample ID: 590-16359-10
Date Collected: 11/11/21 11:20
Matrix: Solid
Date Received: 11/12/21 10:45
Percent Solids: 92.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		11	2.3	ug/Kg	☼	11/16/21 12:10	11/16/21 20:16	1
2-Methylnaphthalene	ND		11	3.3	ug/Kg	☼	11/16/21 12:10	11/16/21 20:16	1
1-Methylnaphthalene	ND		11	2.4	ug/Kg	☼	11/16/21 12:10	11/16/21 20:16	1
Acenaphthylene	ND		11	3.6	ug/Kg	☼	11/16/21 12:10	11/16/21 20:16	1
Acenaphthene	ND		11	2.7	ug/Kg	☼	11/16/21 12:10	11/16/21 20:16	1
Fluorene	ND		11	2.4	ug/Kg	☼	11/16/21 12:10	11/16/21 20:16	1
Phenanthrene	ND		11	3.9	ug/Kg	☼	11/16/21 12:10	11/16/21 20:16	1

Client Sample ID: DP-6(1-2)
Lab Sample ID: 590-16359-10
Date Collected: 11/11/21 11:20
Matrix: Solid
Date Received: 11/12/21 10:45
Percent Solids: 92.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Anthracene	ND		11	2.1	ug/Kg	☼	11/16/21 12:10	11/16/21 20:16	1
Fluoranthene	ND		11	2.7	ug/Kg	☼	11/16/21 12:10	11/16/21 20:16	1
Pyrene	ND		11	4.1	ug/Kg	☼	11/16/21 12:10	11/16/21 20:16	1
Benzo[a]anthracene	ND		11	2.3	ug/Kg	☼	11/16/21 12:10	11/16/21 20:16	1
Chrysene	ND		11	1.6	ug/Kg	☼	11/16/21 12:10	11/16/21 20:16	1
Benzo[b]fluoranthene	ND		11	3.8	ug/Kg	☼	11/16/21 12:10	11/16/21 20:16	1
Benzo[k]fluoranthene	ND		11	2.7	ug/Kg	☼	11/16/21 12:10	11/16/21 20:16	1
Benzo[a]pyrene	ND		11	4.5	ug/Kg	☼	11/16/21 12:10	11/16/21 20:16	1
Indeno[1,2,3-cd]pyrene	ND		11	3.2	ug/Kg	☼	11/16/21 12:10	11/16/21 20:16	1
Dibenz(a,h)anthracene	ND		11	3.0	ug/Kg	☼	11/16/21 12:10	11/16/21 20:16	1
Benzo[g,h,i]perylene	ND		11	2.5	ug/Kg	☼	11/16/21 12:10	11/16/21 20:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*82*		*33 - 120*	*11/16/21 12:10*	*11/16/21 20:16*	*1*
2-Fluorobiphenyl (Surr)	*76*		*47 - 120*	*11/16/21 12:10*	*11/16/21 20:16*	*1*
p-Terphenyl-d14	*108*		*74 - 120*	*11/16/21 12:10*	*11/16/21 20:16*	*1*

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**4.4**		2.1	0.82	mg/Kg	☼	11/15/21 09:02	11/16/21 15:34	2
Barium	**110**		2.1	0.55	mg/Kg	☼	11/15/21 09:02	11/16/21 15:34	2
Cadmium	**0.21**	**J**	1.6	0.097	mg/Kg	☼	11/15/21 09:02	11/16/21 15:34	2
Chromium	**6.5**		2.1	0.29	mg/Kg	☼	11/15/21 09:02	11/16/21 15:34	2
Lead	**14**		4.9	2.4	mg/Kg	☼	11/15/21 09:02	11/16/21 15:34	2
Selenium	ND		8.2	4.9	mg/Kg	☼	11/15/21 09:02	11/16/21 15:34	2
Silver	ND		2.1	0.22	mg/Kg	☼	11/15/21 09:02	11/16/21 15:34	2

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**21**	**J**	45	3.2	ug/Kg		11/15/21 08:47	11/16/21 10:29	1

Client Sample ID: DP-7(1-2)
Lab Sample ID: 590-16359-12
Date Collected: 11/11/21 12:00
Matrix: Solid
Date Received: 11/12/21 10:45
Percent Solids: 94.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		10	2.2	ug/Kg	☼	11/16/21 12:10	11/16/21 20:40	1
2-Methylnaphthalene	ND		10	3.3	ug/Kg	☼	11/16/21 12:10	11/16/21 20:40	1
1-Methylnaphthalene	ND		10	2.3	ug/Kg	☼	11/16/21 12:10	11/16/21 20:40	1
Acenaphthylene	ND		10	3.5	ug/Kg	☼	11/16/21 12:10	11/16/21 20:40	1
Acenaphthene	ND		10	2.6	ug/Kg	☼	11/16/21 12:10	11/16/21 20:40	1
Fluorene	ND		10	2.3	ug/Kg	☼	11/16/21 12:10	11/16/21 20:40	1
Phenanthrene	**4.2**	**J**	10	3.8	ug/Kg	☼	11/16/21 12:10	11/16/21 20:40	1
Anthracene	ND		10	2.1	ug/Kg	☼	11/16/21 12:10	11/16/21 20:40	1
Fluoranthene	**12**		10	2.6	ug/Kg	☼	11/16/21 12:10	11/16/21 20:40	1
Pyrene	**18**		10	4.0	ug/Kg	☼	11/16/21 12:10	11/16/21 20:40	1
Benzo[a]anthracene	**7.1**	**J**	10	2.2	ug/Kg	☼	11/16/21 12:10	11/16/21 20:40	1
Chrysene	**8.7**	**J**	10	1.6	ug/Kg	☼	11/16/21 12:10	11/16/21 20:40	1
Benzo[b]fluoranthene	**13**		10	3.7	ug/Kg	☼	11/16/21 12:10	11/16/21 20:40	1
Benzo[k]fluoranthene	**4.1**	**J**	10	2.6	ug/Kg	☼	11/16/21 12:10	11/16/21 20:40	1

Client Sample ID: DP-7(1-2)
Lab Sample ID: 590-16359-12
Date Collected: 11/11/21 12:00
Matrix: Solid
Date Received: 11/12/21 10:45
Percent Solids: 94.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	11		10	4.4	ug/Kg	☼	11/16/21 12:10	11/16/21 20:40	1
Indeno[1,2,3-cd]pyrene	5.7	J	10	3.1	ug/Kg	☼	11/16/21 12:10	11/16/21 20:40	1
Dibenz(a,h)anthracene	ND		10	3.0	ug/Kg	☼	11/16/21 12:10	11/16/21 20:40	1
Benzo[g,h,i]perylene	8.5	J	10	2.5	ug/Kg	☼	11/16/21 12:10	11/16/21 20:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*84*		*33 - 120*	*11/16/21 12:10*	*11/16/21 20:40*	*1*
2-Fluorobiphenyl (Surr)	*77*		*47 - 120*	*11/16/21 12:10*	*11/16/21 20:40*	*1*
p-Terphenyl-d14	*103*		*74 - 120*	*11/16/21 12:10*	*11/16/21 20:40*	*1*

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	6.6		0.99	0.39	mg/Kg	☼	11/15/21 09:02	11/16/21 11:12	1
Barium	80		0.99	0.27	mg/Kg	☼	11/15/21 09:02	11/16/21 11:12	1
Cadmium	0.43	J	0.79	0.047	mg/Kg	☼	11/15/21 09:02	11/16/21 11:12	1
Chromium	11		0.99	0.14	mg/Kg	☼	11/15/21 09:02	11/16/21 11:12	1
Lead	79		2.4	1.2	mg/Kg	☼	11/15/21 09:02	11/16/21 11:12	1
Selenium	ND		4.0	2.4	mg/Kg	☼	11/15/21 09:02	11/16/21 11:12	1
Silver	ND		0.99	0.11	mg/Kg	☼	11/15/21 09:02	11/16/21 11:12	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	20	J	47	3.4	ug/Kg		11/15/21 08:47	11/16/21 10:32	1

Client Sample ID: DP-8(0.5-1.5)
Lab Sample ID: 590-16359-14
Date Collected: 11/11/21 12:20
Matrix: Solid
Date Received: 11/12/21 10:45
Percent Solids: 93.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		11	2.3	ug/Kg	☼	11/16/21 12:10	11/16/21 21:04	1
2-Methylnaphthalene	ND		11	3.3	ug/Kg	☼	11/16/21 12:10	11/16/21 21:04	1
1-Methylnaphthalene	ND		11	2.4	ug/Kg	☼	11/16/21 12:10	11/16/21 21:04	1
Acenaphthylene	ND		11	3.6	ug/Kg	☼	11/16/21 12:10	11/16/21 21:04	1
Acenaphthene	ND		11	2.7	ug/Kg	☼	11/16/21 12:10	11/16/21 21:04	1
Fluorene	ND		11	2.4	ug/Kg	☼	11/16/21 12:10	11/16/21 21:04	1
Phenanthrene	8.6	J	11	3.9	ug/Kg	☼	11/16/21 12:10	11/16/21 21:04	1
Anthracene	ND		11	2.1	ug/Kg	☼	11/16/21 12:10	11/16/21 21:04	1
Fluoranthene	6.8	J	11	2.7	ug/Kg	☼	11/16/21 12:10	11/16/21 21:04	1
Pyrene	11		11	4.1	ug/Kg	☼	11/16/21 12:10	11/16/21 21:04	1
Benzo[a]anthracene	5.4	J	11	2.3	ug/Kg	☼	11/16/21 12:10	11/16/21 21:04	1
Chrysene	8.1	J	11	1.6	ug/Kg	☼	11/16/21 12:10	11/16/21 21:04	1
Benzo[b]fluoranthene	13		11	3.8	ug/Kg	☼	11/16/21 12:10	11/16/21 21:04	1
Benzo[k]fluoranthene	3.9	J	11	2.7	ug/Kg	☼	11/16/21 12:10	11/16/21 21:04	1
Benzo[a]pyrene	7.9	J	11	4.5	ug/Kg	☼	11/16/21 12:10	11/16/21 21:04	1
Indeno[1,2,3-cd]pyrene	6.6	J	11	3.2	ug/Kg	☼	11/16/21 12:10	11/16/21 21:04	1
Dibenz(a,h)anthracene	ND		11	3.0	ug/Kg	☼	11/16/21 12:10	11/16/21 21:04	1
Benzo[g,h,i]perylene	9.3	J	11	2.5	ug/Kg	☼	11/16/21 12:10	11/16/21 21:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*73*		*33 - 120*	*11/16/21 12:10*	*11/16/21 21:04*	*1*

Client Sample ID: DP-8(0.5-1.5)
Lab Sample ID: 590-16359-14
Date Collected: 11/11/21 12:20
Matrix: Solid
Date Received: 11/12/21 10:45
Percent Solids: 93.0

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*76*		*47 - 120*	*11/16/21 12:10*	*11/16/21 21:04*	*1*
p-Terphenyl-d14	*105*		*74 - 120*	*11/16/21 12:10*	*11/16/21 21:04*	*1*

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**5.3**		1.0	0.40	mg/Kg	☼	11/15/21 09:02	11/16/21 11:16	1
Barium	**130**		1.0	0.27	mg/Kg	☼	11/15/21 09:02	11/16/21 11:16	1
Cadmium	**0.86**		0.81	0.048	mg/Kg	☼	11/15/21 09:02	11/16/21 11:16	1
Chromium	**8.6**		1.0	0.14	mg/Kg	☼	11/15/21 09:02	11/16/21 11:16	1
Lead	**42**		2.4	1.2	mg/Kg	☼	11/15/21 09:02	11/16/21 11:16	1
Selenium	ND		4.0	2.4	mg/Kg	☼	11/15/21 09:02	11/16/21 11:16	1
Silver	ND		1.0	0.11	mg/Kg	☼	11/15/21 09:02	11/16/21 11:16	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**16**	**J**	47	3.4	ug/Kg		11/15/21 08:47	11/16/21 10:34	1

Client Sample ID: DP-9(1.5-2.5)
Lab Sample ID: 590-16359-16
Date Collected: 11/11/21 13:00
Matrix: Solid
Date Received: 11/12/21 10:45
Percent Solids: 91.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		11	2.3	ug/Kg	☼	11/16/21 12:10	11/16/21 21:28	1
2-Methylnaphthalene	ND		11	3.3	ug/Kg	☼	11/16/21 12:10	11/16/21 21:28	1
1-Methylnaphthalene	ND		11	2.4	ug/Kg	☼	11/16/21 12:10	11/16/21 21:28	1
Acenaphthylene	ND		11	3.5	ug/Kg	☼	11/16/21 12:10	11/16/21 21:28	1
Acenaphthene	ND		11	2.7	ug/Kg	☼	11/16/21 12:10	11/16/21 21:28	1
Fluorene	**3.6**	**J**	11	2.3	ug/Kg	☼	11/16/21 12:10	11/16/21 21:28	1
Phenanthrene	**83**		11	3.8	ug/Kg	☼	11/16/21 12:10	11/16/21 21:28	1
Anthracene	**6.8**	**J**	11	2.1	ug/Kg	☼	11/16/21 12:10	11/16/21 21:28	1
Fluoranthene	**90**		11	2.6	ug/Kg	☼	11/16/21 12:10	11/16/21 21:28	1
Pyrene	**93**		11	4.0	ug/Kg	☼	11/16/21 12:10	11/16/21 21:28	1
Benzo[a]anthracene	**18**		11	2.3	ug/Kg	☼	11/16/21 12:10	11/16/21 21:28	1
Chrysene	**40**		11	1.6	ug/Kg	☼	11/16/21 12:10	11/16/21 21:28	1
Benzo[b]fluoranthene	**44**		11	3.7	ug/Kg	☼	11/16/21 12:10	11/16/21 21:28	1
Benzo[k]fluoranthene	**19**		11	2.6	ug/Kg	☼	11/16/21 12:10	11/16/21 21:28	1
Benzo[a]pyrene	**34**		11	4.5	ug/Kg	☼	11/16/21 12:10	11/16/21 21:28	1
Indeno[1,2,3-cd]pyrene	**19**		11	3.1	ug/Kg	☼	11/16/21 12:10	11/16/21 21:28	1
Dibenz(a,h)anthracene	**5.6**	**J**	11	3.0	ug/Kg	☼	11/16/21 12:10	11/16/21 21:28	1
Benzo[g,h,i]perylene	**20**		11	2.5	ug/Kg	☼	11/16/21 12:10	11/16/21 21:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*63*		*33 - 120*	*11/16/21 12:10*	*11/16/21 21:28*	*1*
2-Fluorobiphenyl (Surr)	*60*		*47 - 120*	*11/16/21 12:10*	*11/16/21 21:28*	*1*
p-Terphenyl-d14	*110*		*74 - 120*	*11/16/21 12:10*	*11/16/21 21:28*	*1*

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**2.6**		2.0	0.81	mg/Kg	☼	11/15/21 09:02	11/16/21 15:38	2

Client Sample ID: DP-9(1.5-2.5)
Lab Sample ID: 590-16359-16
Date Collected: 11/11/21 13:00
Matrix: Solid
Date Received: 11/12/21 10:45
Percent Solids: 91.4

Method: 6010D - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	85		2.0	0.55	mg/Kg	☼	11/15/21 09:02	11/16/21 15:38	2
Cadmium	0.17	J	1.6	0.096	mg/Kg	☼	11/15/21 09:02	11/16/21 15:38	2
Chromium	2.5		2.0	0.29	mg/Kg	☼	11/15/21 09:02	11/16/21 15:38	2
Lead	11		4.9	2.4	mg/Kg	☼	11/15/21 09:02	11/16/21 15:38	2
Selenium	ND		8.2	4.9	mg/Kg	☼	11/15/21 09:02	11/16/21 15:38	2
Silver	ND		2.0	0.22	mg/Kg	☼	11/15/21 09:02	11/16/21 15:38	2

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	14	J	40	2.9	ug/Kg		11/15/21 08:47	11/16/21 10:37	1

Client Sample ID: DP-10(1-2)
Lab Sample ID: 590-16359-17
Date Collected: 11/11/21 13:10
Matrix: Solid
Date Received: 11/12/21 10:45
Percent Solids: 86.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		110	24	ug/Kg	☼	11/16/21 12:10	11/16/21 21:52	10
2-Methylnaphthalene	ND		110	35	ug/Kg	☼	11/16/21 12:10	11/16/21 21:52	10
1-Methylnaphthalene	ND		110	25	ug/Kg	☼	11/16/21 12:10	11/16/21 21:52	10
Acenaphthylene	51	J	110	37	ug/Kg	☼	11/16/21 12:10	11/16/21 21:52	10
Acenaphthene	ND		110	28	ug/Kg	☼	11/16/21 12:10	11/16/21 21:52	10
Fluorene	35	J	110	25	ug/Kg	☼	11/16/21 12:10	11/16/21 21:52	10
Phenanthrene	450		110	40	ug/Kg	☼	11/16/21 12:10	11/16/21 21:52	10
Anthracene	120		110	22	ug/Kg	☼	11/16/21 12:10	11/16/21 21:52	10
Fluoranthene	660		110	28	ug/Kg	☼	11/16/21 12:10	11/16/21 21:52	10
Pyrene	790		110	43	ug/Kg	☼	11/16/21 12:10	11/16/21 21:52	10
Benzo[a]anthracene	340		110	24	ug/Kg	☼	11/16/21 12:10	11/16/21 21:52	10
Chrysene	370		110	17	ug/Kg	☼	11/16/21 12:10	11/16/21 21:52	10
Benzo[b]fluoranthene	470		110	39	ug/Kg	☼	11/16/21 12:10	11/16/21 21:52	10
Benzo[k]fluoranthene	180		110	28	ug/Kg	☼	11/16/21 12:10	11/16/21 21:52	10
Benzo[a]pyrene	480		110	47	ug/Kg	☼	11/16/21 12:10	11/16/21 21:52	10
Indeno[1,2,3-cd]pyrene	210		110	33	ug/Kg	☼	11/16/21 12:10	11/16/21 21:52	10
Dibenz(a,h)anthracene	63	J	110	32	ug/Kg	☼	11/16/21 12:10	11/16/21 21:52	10
Benzo[g,h,i]perylene	260		110	26	ug/Kg	☼	11/16/21 12:10	11/16/21 21:52	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*87*		*33 - 120*	*11/16/21 12:10*	*11/16/21 21:52*	*10*
2-Fluorobiphenyl (Surr)	*84*		*47 - 120*	*11/16/21 12:10*	*11/16/21 21:52*	*10*
p-Terphenyl-d14	*104*		*74 - 120*	*11/16/21 12:10*	*11/16/21 21:52*	*10*

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	7.1		5.5	2.2	mg/Kg	☼	11/15/21 09:02	11/16/21 15:42	5
Barium	110		5.5	1.5	mg/Kg	☼	11/15/21 09:02	11/16/21 15:42	5
Cadmium	0.76	J	4.4	0.26	mg/Kg	☼	11/15/21 09:02	11/16/21 15:42	5
Chromium	13		5.5	0.77	mg/Kg	☼	11/15/21 09:02	11/16/21 15:42	5
Lead	140		13	6.4	mg/Kg	☼	11/15/21 09:02	11/16/21 15:42	5
Selenium	ND		22	13	mg/Kg	☼	11/15/21 09:02	11/16/21 15:42	5
Silver	ND		5.5	0.59	mg/Kg	☼	11/15/21 09:02	11/16/21 15:42	5

Client Sample ID: DP-10(1-2)
Lab Sample ID: 590-16359-17
Date Collected: 11/11/21 13:10
Matrix: Solid
Date Received: 11/12/21 10:45
Percent Solids: 86.7

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**310**		49	3.5	ug/Kg		11/15/21 08:47	11/16/21 10:44	1

Client Sample ID: DP-11(1.5-2.5)
Lab Sample ID: 590-16359-19
Date Collected: 11/11/21 13:30
Matrix: Solid
Date Received: 11/12/21 10:45
Percent Solids: 75.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		13	2.7	ug/Kg	☼	11/16/21 12:10	11/16/21 22:16	1
2-Methylnaphthalene	ND		13	3.9	ug/Kg	☼	11/16/21 12:10	11/16/21 22:16	1
1-Methylnaphthalene	ND		13	2.8	ug/Kg	☼	11/16/21 12:10	11/16/21 22:16	1
Acenaphthylene	ND		13	4.2	ug/Kg	☼	11/16/21 12:10	11/16/21 22:16	1
Acenaphthene	ND		13	3.2	ug/Kg	☼	11/16/21 12:10	11/16/21 22:16	1
Fluorene	ND		13	2.8	ug/Kg	☼	11/16/21 12:10	11/16/21 22:16	1
Phenanthrene	ND		13	4.6	ug/Kg	☼	11/16/21 12:10	11/16/21 22:16	1
Anthracene	ND		13	2.5	ug/Kg	☼	11/16/21 12:10	11/16/21 22:16	1
Fluoranthene	**41**		13	3.1	ug/Kg	☼	11/16/21 12:10	11/16/21 22:16	1
Pyrene	ND		63	24	ug/Kg	☼	11/16/21 12:10	11/17/21 12:20	5
Benzo[a]anthracene	ND		63	13	ug/Kg	☼	11/16/21 12:10	11/17/21 12:20	5
Chrysene	ND		63	9.5	ug/Kg	☼	11/16/21 12:10	11/17/21 12:20	5
Benzo[b]fluoranthene	ND		63	22	ug/Kg	☼	11/16/21 12:10	11/17/21 12:20	5
Benzo[k]fluoranthene	ND		63	16	ug/Kg	☼	11/16/21 12:10	11/17/21 12:20	5
Benzo[a]pyrene	ND		63	27	ug/Kg	☼	11/16/21 12:10	11/17/21 12:20	5
Indeno[1,2,3-cd]pyrene	ND		63	19	ug/Kg	☼	11/16/21 12:10	11/17/21 12:20	5
Dibenz(a,h)anthracene	ND		63	18	ug/Kg	☼	11/16/21 12:10	11/17/21 12:20	5
Benzo[g,h,i]perylene	ND		63	15	ug/Kg	☼	11/16/21 12:10	11/17/21 12:20	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*84*		*33 - 120*	*11/16/21 12:10*	*11/16/21 22:16*	*1*
Nitrobenzene-d5	*78*		*33 - 120*	*11/16/21 12:10*	*11/17/21 12:20*	*5*
2-Fluorobiphenyl (Surr)	*78*		*47 - 120*	*11/16/21 12:10*	*11/16/21 22:16*	*1*
2-Fluorobiphenyl (Surr)	*70*		*47 - 120*	*11/16/21 12:10*	*11/17/21 12:20*	*5*
p-Terphenyl-d14	*98*		*74 - 120*	*11/16/21 12:10*	*11/17/21 12:20*	*5*

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**4.0**		1.2	0.49	mg/Kg	☼	11/15/21 09:02	11/16/21 11:27	1
Barium	**110**		1.2	0.33	mg/Kg	☼	11/15/21 09:02	11/16/21 11:27	1
Cadmium	**0.27**	**J**	0.99	0.059	mg/Kg	☼	11/15/21 09:02	11/16/21 11:27	1
Chromium	**6.5**		1.2	0.18	mg/Kg	☼	11/15/21 09:02	11/16/21 11:27	1
Lead	**5100**		60	29	mg/Kg	☼	11/15/21 09:02	11/16/21 15:46	20
Selenium	ND		5.0	3.0	mg/Kg	☼	11/15/21 09:02	11/16/21 11:27	1
Silver	ND		1.2	0.13	mg/Kg	☼	11/15/21 09:02	11/16/21 11:27	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**84**		48	3.4	ug/Kg		11/15/21 08:47	11/16/21 10:47	1

Client Sample ID: DP-12(1-2)
Lab Sample ID: 590-16359-21

Date Collected: 11/11/21 13:50
Matrix: Solid
Date Received: 11/12/21 10:45
Percent Solids: 93.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	62		10	2.2	ug/Kg	☼	11/16/21 12:10	11/16/21 22:40	1
2-Methylnaphthalene	65		10	3.2	ug/Kg	☼	11/16/21 12:10	11/16/21 22:40	1
1-Methylnaphthalene	76		10	2.3	ug/Kg	☼	11/16/21 12:10	11/16/21 22:40	1
Acenaphthylene	78		10	3.5	ug/Kg	☼	11/16/21 12:10	11/16/21 22:40	1
Acenaphthene	320		10	2.6	ug/Kg	☼	11/16/21 12:10	11/16/21 22:40	1
Fluorene	230		10	2.3	ug/Kg	☼	11/16/21 12:10	11/16/21 22:40	1
Phenanthrene	2600		10	3.8	ug/Kg	☼	11/16/21 12:10	11/16/21 22:40	1
Anthracene	680		10	2.1	ug/Kg	☼	11/16/21 12:10	11/16/21 22:40	1
Fluoranthene	2700		10	2.6	ug/Kg	☼	11/16/21 12:10	11/16/21 22:40	1
Pyrene	2800		100	40	ug/Kg	☼	11/16/21 12:10	11/17/21 12:44	10
Benzo[a]anthracene	1200		10	2.2	ug/Kg	☼	11/16/21 12:10	11/16/21 22:40	1
Chrysene	1200		10	1.6	ug/Kg	☼	11/16/21 12:10	11/16/21 22:40	1
Benzo[b]fluoranthene	1300		10	3.7	ug/Kg	☼	11/16/21 12:10	11/16/21 22:40	1
Benzo[k]fluoranthene	470		10	2.6	ug/Kg	☼	11/16/21 12:10	11/16/21 22:40	1
Benzo[a]pyrene	1200		10	4.4	ug/Kg	☼	11/16/21 12:10	11/16/21 22:40	1
Indeno[1,2,3-cd]pyrene	360		10	3.1	ug/Kg	☼	11/16/21 12:10	11/16/21 22:40	1
Dibenz(a,h)anthracene	120		10	3.0	ug/Kg	☼	11/16/21 12:10	11/16/21 22:40	1
Benzo[g,h,i]perylene	380		10	2.5	ug/Kg	☼	11/16/21 12:10	11/16/21 22:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*83*		*33 - 120*	*11/16/21 12:10*	*11/16/21 22:40*	*1*
Nitrobenzene-d5	*74*		*33 - 120*	*11/16/21 12:10*	*11/17/21 12:44*	*10*
2-Fluorobiphenyl (Surr)	*85*		*47 - 120*	*11/16/21 12:10*	*11/16/21 22:40*	*1*
2-Fluorobiphenyl (Surr)	*77*		*47 - 120*	*11/16/21 12:10*	*11/17/21 12:44*	*10*
p-Terphenyl-d14	*85*		*74 - 120*	*11/16/21 12:10*	*11/16/21 22:40*	*1*
p-Terphenyl-d14	*96*		*74 - 120*	*11/16/21 12:10*	*11/17/21 12:44*	*10*

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.3	J	9.4	3.7	mg/Kg	☼	11/15/21 09:02	11/16/21 15:50	10
Barium	86		9.4	2.5	mg/Kg	☼	11/15/21 09:02	11/16/21 15:50	10
Cadmium	2.7	J	7.5	0.44	mg/Kg	☼	11/15/21 09:02	11/16/21 15:50	10
Chromium	6.7	J	9.4	1.3	mg/Kg	☼	11/15/21 09:02	11/16/21 15:50	10
Lead	2200		23	11	mg/Kg	☼	11/15/21 09:02	11/16/21 15:50	10
Selenium	ND		38	23	mg/Kg	☼	11/15/21 09:02	11/16/21 15:50	10
Silver	ND		9.4	1.0	mg/Kg	☼	11/15/21 09:02	11/16/21 15:50	10

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	190		46	3.3	ug/Kg		11/15/21 08:47	11/16/21 10:49	1

Client Sample ID: DP-13(1-2)
Lab Sample ID: 590-16359-23

Date Collected: 11/11/21 14:05
Matrix: Solid
Date Received: 11/12/21 10:45
Percent Solids: 92.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		21	4.6	ug/Kg	☼	11/16/21 12:10	11/16/21 23:04	2
2-Methylnaphthalene	ND		21	6.6	ug/Kg	☼	11/16/21 12:10	11/16/21 23:04	2
1-Methylnaphthalene	ND		21	4.7	ug/Kg	☼	11/16/21 12:10	11/16/21 23:04	2
Acenaphthylene	ND		21	7.0	ug/Kg	☼	11/16/21 12:10	11/16/21 23:04	2

Client Sample ID: DP-13(1-2)
Lab Sample ID: 590-16359-23
Date Collected: 11/11/21 14:05
Matrix: Solid
Date Received: 11/12/21 10:45
Percent Solids: 92.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		21	5.4	ug/Kg	☼	11/16/21 12:10	11/16/21 23:04	2
Fluorene	ND		21	4.7	ug/Kg	☼	11/16/21 12:10	11/16/21 23:04	2
Phenanthrene	**43**		21	7.7	ug/Kg	☼	11/16/21 12:10	11/16/21 23:04	2
Anthracene	**15**	**J**	21	4.2	ug/Kg	☼	11/16/21 12:10	11/16/21 23:04	2
Fluoranthene	**67**		21	5.3	ug/Kg	☼	11/16/21 12:10	11/16/21 23:04	2
Pyrene	**97**	**J**	110	40	ug/Kg	☼	11/16/21 12:10	11/17/21 13:08	10
Benzo[a]anthracene	ND		110	23	ug/Kg	☼	11/16/21 12:10	11/17/21 13:08	10
Chrysene	ND		110	16	ug/Kg	☼	11/16/21 12:10	11/17/21 13:08	10
Benzo[b]fluoranthene	ND		110	37	ug/Kg	☼	11/16/21 12:10	11/17/21 13:08	10
Benzo[k]fluoranthene	ND		110	26	ug/Kg	☼	11/16/21 12:10	11/17/21 13:08	10
Benzo[a]pyrene	ND		110	45	ug/Kg	☼	11/16/21 12:10	11/17/21 13:08	10
Indeno[1,2,3-cd]pyrene	ND		110	31	ug/Kg	☼	11/16/21 12:10	11/17/21 13:08	10
Dibenz(a,h)anthracene	ND		110	30	ug/Kg	☼	11/16/21 12:10	11/17/21 13:08	10
Benzo[g,h,i]perylene	ND		110	25	ug/Kg	☼	11/16/21 12:10	11/17/21 13:08	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*88*		*33 - 120*	*11/16/21 12:10*	*11/16/21 23:04*	*2*
Nitrobenzene-d5	*83*		*33 - 120*	*11/16/21 12:10*	*11/17/21 13:08*	*10*
2-Fluorobiphenyl (Surr)	*80*		*47 - 120*	*11/16/21 12:10*	*11/16/21 23:04*	*2*
2-Fluorobiphenyl (Surr)	*75*		*47 - 120*	*11/16/21 12:10*	*11/17/21 13:08*	*10*
p-Terphenyl-d14	*100*		*74 - 120*	*11/16/21 12:10*	*11/17/21 13:08*	*10*

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**12**		1.0	0.40	mg/Kg	☼	11/15/21 09:02	11/16/21 11:47	1
Barium	**110**		1.0	0.27	mg/Kg	☼	11/15/21 09:02	11/16/21 11:47	1
Cadmium	**0.41**	**J**	0.80	0.047	mg/Kg	☼	11/15/21 09:02	11/16/21 11:47	1
Chromium	**10**		1.0	0.14	mg/Kg	☼	11/15/21 09:02	11/16/21 11:47	1
Lead	**53**		2.4	1.2	mg/Kg	☼	11/15/21 09:02	11/16/21 11:47	1
Selenium	ND		4.0	2.4	mg/Kg	☼	11/15/21 09:02	11/16/21 11:47	1
Silver	ND		1.0	0.11	mg/Kg	☼	11/15/21 09:02	11/16/21 11:47	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**54**		44	3.1	ug/Kg		11/15/21 08:47	11/16/21 10:52	1

Client Sample ID: DP-14(4-5)
Lab Sample ID: 590-16359-25
Date Collected: 11/11/21 15:00
Matrix: Solid
Date Received: 11/12/21 10:45
Percent Solids: 79.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		24	5.3	ug/Kg	☼	11/16/21 12:10	11/16/21 23:28	2
2-Methylnaphthalene	ND		24	7.6	ug/Kg	☼	11/16/21 12:10	11/16/21 23:28	2
1-Methylnaphthalene	ND		24	5.4	ug/Kg	☼	11/16/21 12:10	11/16/21 23:28	2
Acenaphthylene	ND		120	41	ug/Kg	☼	11/16/21 12:10	11/17/21 13:32	10
Acenaphthene	ND		120	31	ug/Kg	☼	11/16/21 12:10	11/17/21 13:32	10
Fluorene	ND		120	27	ug/Kg	☼	11/16/21 12:10	11/17/21 13:32	10
Phenanthrene	**28**		24	8.9	ug/Kg	☼	11/16/21 12:10	11/16/21 23:28	2
Anthracene	**14**	**J**	24	4.9	ug/Kg	☼	11/16/21 12:10	11/16/21 23:28	2
Fluoranthene	**73**		24	6.1	ug/Kg	☼	11/16/21 12:10	11/16/21 23:28	2

Client Sample ID: DP-14(4-5)

Lab Sample ID: 590-16359-25
Date Collected: 11/11/21 15:00
Matrix: Solid
Date Received: 11/12/21 10:45
Percent Solids: 79.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pyrene	110		24	9.3	ug/Kg	☼	11/16/21 12:10	11/16/21 23:28	2
Benzo[a]anthracene	63		24	5.2	ug/Kg	☼	11/16/21 12:10	11/16/21 23:28	2
Chrysene	68		24	3.7	ug/Kg	☼	11/16/21 12:10	11/16/21 23:28	2
Benzo[b]fluoranthene	120		24	8.6	ug/Kg	☼	11/16/21 12:10	11/16/21 23:28	2
Benzo[k]fluoranthene	42		24	6.1	ug/Kg	☼	11/16/21 12:10	11/16/21 23:28	2
Benzo[a]pyrene	110		24	10	ug/Kg	☼	11/16/21 12:10	11/16/21 23:28	2
Indeno[1,2,3-cd]pyrene	44		24	7.3	ug/Kg	☼	11/16/21 12:10	11/16/21 23:28	2
Dibenz(a,h)anthracene	13	J	24	7.0	ug/Kg	☼	11/16/21 12:10	11/16/21 23:28	2
Benzo[g,h,i]perylene	43		24	5.8	ug/Kg	☼	11/16/21 12:10	11/16/21 23:28	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*47*		*33 - 120*	*11/16/21 12:10*	*11/16/21 23:28*	*2*
Nitrobenzene-d5	*88*		*33 - 120*	*11/16/21 12:10*	*11/17/21 13:32*	*10*
2-Fluorobiphenyl (Surr)	*91*		*47 - 120*	*11/16/21 12:10*	*11/17/21 13:32*	*10*
p-Terphenyl-d14	*45*	*S1-*	*74 - 120*	*11/16/21 12:10*	*11/16/21 23:28*	*2*
p-Terphenyl-d14	*100*		*74 - 120*	*11/16/21 12:10*	*11/17/21 13:32*	*10*

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	11		1.1	0.43	mg/Kg	☼	11/15/21 09:02	11/16/21 11:51	1
Barium	100		1.1	0.29	mg/Kg	☼	11/15/21 09:02	11/16/21 11:51	1
Cadmium	0.28	J	0.86	0.051	mg/Kg	☼	11/15/21 09:02	11/16/21 11:51	1
Chromium	12		1.1	0.15	mg/Kg	☼	11/15/21 09:02	11/16/21 11:51	1
Lead	41		2.6	1.3	mg/Kg	☼	11/15/21 09:02	11/16/21 11:51	1
Selenium	ND		4.3	2.6	mg/Kg	☼	11/15/21 09:02	11/16/21 11:51	1
Silver	ND		1.1	0.12	mg/Kg	☼	11/15/21 09:02	11/16/21 11:51	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	47		41	2.9	ug/Kg		11/15/21 08:47	11/16/21 10:55	1

Client Sample ID: DP-15(2-3)

Lab Sample ID: 590-16359-27
Date Collected: 11/11/21 15:30
Matrix: Solid
Date Received: 11/12/21 10:45
Percent Solids: 90.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		11	2.3	ug/Kg	☼	11/16/21 12:10	11/16/21 23:52	1
2-Methylnaphthalene	ND		11	3.3	ug/Kg	☼	11/16/21 12:10	11/16/21 23:52	1
1-Methylnaphthalene	ND		11	2.3	ug/Kg	☼	11/16/21 12:10	11/16/21 23:52	1
Acenaphthylene	ND		11	3.5	ug/Kg	☼	11/16/21 12:10	11/16/21 23:52	1
Acenaphthene	ND		11	2.7	ug/Kg	☼	11/16/21 12:10	11/16/21 23:52	1
Fluorene	ND		11	2.3	ug/Kg	☼	11/16/21 12:10	11/16/21 23:52	1
Phenanthrene	30		11	3.8	ug/Kg	☼	11/16/21 12:10	11/16/21 23:52	1
Anthracene	9.8	J	11	2.1	ug/Kg	☼	11/16/21 12:10	11/16/21 23:52	1
Fluoranthene	57		11	2.6	ug/Kg	☼	11/16/21 12:10	11/16/21 23:52	1
Pyrene	76		11	4.0	ug/Kg	☼	11/16/21 12:10	11/16/21 23:52	1
Benzo[a]anthracene	35		11	2.2	ug/Kg	☼	11/16/21 12:10	11/16/21 23:52	1
Chrysene	40		11	1.6	ug/Kg	☼	11/16/21 12:10	11/16/21 23:52	1
Benzo[b]fluoranthene	ND		53	18	ug/Kg	☼	11/16/21 12:10	11/17/21 13:57	5
Benzo[k]fluoranthene	ND		53	13	ug/Kg	☼	11/16/21 12:10	11/17/21 13:57	5

Client Sample ID: DP-15(2-3)

Lab Sample ID: 590-16359-27
Date Collected: 11/11/21 15:30
Matrix: Solid
Date Received: 11/12/21 10:45
Percent Solids: 90.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	55		53	22	ug/Kg	☼	11/16/21 12:10	11/17/21 13:57	5
Indeno[1,2,3-cd]pyrene	31	J	53	16	ug/Kg	☼	11/16/21 12:10	11/17/21 13:57	5
Dibenz(a,h)anthracene	ND		53	15	ug/Kg	☼	11/16/21 12:10	11/17/21 13:57	5
Benzo[g,h,i]perylene	47	J	53	12	ug/Kg	☼	11/16/21 12:10	11/17/21 13:57	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*86*		*33 - 120*	*11/16/21 12:10*	*11/16/21 23:52*	*1*
Nitrobenzene-d5	*81*		*33 - 120*	*11/16/21 12:10*	*11/17/21 13:57*	*5*
2-Fluorobiphenyl (Surr)	*92*		*47 - 120*	*11/16/21 12:10*	*11/16/21 23:52*	*1*
2-Fluorobiphenyl (Surr)	*73*		*47 - 120*	*11/16/21 12:10*	*11/17/21 13:57*	*5*
p-Terphenyl-d14	*108*		*74 - 120*	*11/16/21 12:10*	*11/16/21 23:52*	*1*
p-Terphenyl-d14	*107*		*74 - 120*	*11/16/21 12:10*	*11/17/21 13:57*	*5*

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	9.8		1.0	0.40	mg/Kg	☼	11/15/21 09:02	11/16/21 11:55	1
Barium	90		1.0	0.27	mg/Kg	☼	11/15/21 09:02	11/16/21 11:55	1
Cadmium	0.37	J	0.80	0.047	mg/Kg	☼	11/15/21 09:02	11/16/21 11:55	1
Chromium	11		1.0	0.14	mg/Kg	☼	11/15/21 09:02	11/16/21 11:55	1
Lead	60		2.4	1.2	mg/Kg	☼	11/15/21 09:02	11/16/21 11:55	1
Selenium	ND		4.0	2.4	mg/Kg	☼	11/15/21 09:02	11/16/21 11:55	1
Silver	ND		1.0	0.11	mg/Kg	☼	11/15/21 09:02	11/16/21 11:55	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	38	J	45	3.2	ug/Kg		11/15/21 08:47	11/16/21 10:57	1

Client Sample ID: Trip Blank

Lab Sample ID: 590-16359-29
Date Collected: 11/11/21 08:40
Matrix: Solid
Date Received: 11/12/21 10:45

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.10	0.019	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
1,1,1-Trichloroethane	ND		0.10	0.017	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
1,1,2,2-Tetrachloroethane	ND		0.10	0.029	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
1,1,2-Trichloroethane	ND		0.10	0.035	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
1,1-Dichloroethane	ND		0.10	0.026	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
1,1-Dichloroethene	ND		0.10	0.034	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
1,1-Dichloropropene	ND		0.10	0.017	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
1,2,3-Trichlorobenzene	ND		0.10	0.033	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
1,2,3-Trichloropropane	ND		0.20	0.037	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
1,2,4-Trichlorobenzene	ND		0.10	0.019	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
1,2,4-Trimethylbenzene	ND		0.10	0.023	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
1,2-Dibromo-3-Chloropropane	ND		0.50	0.060	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
1,2-Dibromoethane (EDB)	ND		0.10	0.034	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
1,2-Dichlorobenzene	ND		0.10	0.023	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
1,2-Dichloroethane	ND		0.10	0.0070	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
1,2-Dichloropropane	ND		0.12	0.030	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
1,3,5-Trimethylbenzene	ND		0.10	0.032	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
1,3-Dichlorobenzene	ND		0.10	0.013	mg/Kg		11/12/21 13:34	11/12/21 20:12	1

Client Sample ID: Trip Blank
Lab Sample ID: 590-16359-29
Date Collected: 11/11/21 08:40
Matrix: Solid
Date Received: 11/12/21 10:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichloropropane	ND		0.10	0.030	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
1,4-Dichlorobenzene	ND		0.10	0.021	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
2,2-Dichloropropane	ND		0.10	0.024	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
2-Chlorotoluene	ND		0.10	0.016	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
4-Chlorotoluene	ND		0.10	0.0087	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
Benzene	ND		0.020	0.010	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
Bromobenzene	ND		0.10	0.022	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
Bromochloromethane	ND		0.10	0.040	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
Bromodichloromethane	ND		0.10	0.062	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
Bromoform	ND		0.20	0.019	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
Bromomethane	ND		0.50	0.033	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
Carbon tetrachloride	ND		0.10	0.011	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
Chlorobenzene	ND		0.10	0.021	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
Chloroethane	ND		0.20	0.056	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
Chloroform	ND		0.10	0.024	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
Chloromethane	ND		0.50	0.042	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
cis-1,2-Dichloroethene	ND		0.10	0.021	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
cis-1,3-Dichloropropene	ND		0.10	0.020	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
Dibromochloromethane	ND		0.20	0.016	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
Dibromomethane	ND		0.10	0.022	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
Dichlorodifluoromethane	ND		0.10	0.028	mg/Kg		11/12/21 13:34	11/17/21 14:34	1
Ethylbenzene	ND		0.10	0.016	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
Hexachlorobutadiene	ND		0.10	0.016	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
Isopropylbenzene	ND		0.10	0.031	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
m,p-Xylene	ND		0.40	0.029	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
Methyl tert-butyl ether	ND		0.050	0.030	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
Methylene Chloride	ND		0.35	0.20	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
Naphthalene	**0.042**	**J**	0.20	0.028	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
n-Butylbenzene	ND		0.10	0.028	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
N-Propylbenzene	ND		0.10	0.026	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
o-Xylene	ND		0.20	0.023	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
p-Isopropyltoluene	ND		0.10	0.020	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
sec-Butylbenzene	ND		0.10	0.019	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
Styrene	ND		0.10	0.024	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
tert-Butylbenzene	ND		0.10	0.020	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
Tetrachloroethene	ND		0.040	0.018	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
Toluene	ND		0.10	0.013	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
trans-1,2-Dichloroethene	ND		0.10	0.023	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
trans-1,3-Dichloropropene	ND		0.10	0.026	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
Trichloroethene	ND		0.025	0.0076	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
Trichlorofluoromethane	ND		0.20	0.033	mg/Kg		11/12/21 13:34	11/12/21 20:12	1
Vinyl chloride	ND		0.060	0.020	mg/Kg		11/12/21 13:34	11/12/21 20:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*75 - 129*	*11/12/21 13:34*	*11/12/21 20:12*	*1*
1,2-Dichloroethane-d4 (Surr)	*106*		*75 - 129*	*11/12/21 13:34*	*11/17/21 14:34*	*1*
4-Bromofluorobenzene (Surr)	*106*		*76 - 122*	*11/12/21 13:34*	*11/12/21 20:12*	*1*
4-Bromofluorobenzene (Surr)	*110*		*76 - 122*	*11/12/21 13:34*	*11/17/21 14:34*	*1*
Dibromofluoromethane (Surr)	*107*		*80 - 120*	*11/12/21 13:34*	*11/12/21 20:12*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 120*	*11/12/21 13:34*	*11/17/21 14:34*	*1*

Client: GeoEngineers Inc
Job ID: 590-16359-1
Project/Site: Avista 415 E Sprague Phase II

Client Sample ID: Trip Blank
Lab Sample ID: 590-16359-29
Date Collected: 11/11/21 08:40
Matrix: Solid
Date Received: 11/12/21 10:45

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*95*		*80 - 120*	*11/12/21 13:34*	*11/12/21 20:12*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*	*11/12/21 13:34*	*11/17/21 14:34*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		5.0	1.8	mg/Kg		11/12/21 13:34	11/15/21 19:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*41.5 - 162*	*11/12/21 13:34*	*11/15/21 19:11*	*1*

Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 590-34002/1-A
Matrix: Solid
Analysis Batch: 34000

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34002

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.10	0.019	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
1,1,1-Trichloroethane	ND		0.10	0.017	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
1,1,2,2-Tetrachloroethane	ND		0.10	0.029	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
1,1,2-Trichloroethane	ND		0.10	0.035	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
1,1-Dichloroethane	ND		0.10	0.026	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
1,1-Dichloroethene	ND		0.10	0.034	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
1,1-Dichloropropene	ND		0.10	0.017	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
1,2,3-Trichlorobenzene	ND		0.10	0.033	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
1,2,3-Trichloropropane	ND		0.20	0.037	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
1,2,4-Trichlorobenzene	ND		0.10	0.019	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
1,2,4-Trimethylbenzene	ND		0.10	0.023	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
1,2-Dibromo-3-Chloropropane	ND		0.50	0.060	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
1,2-Dibromoethane (EDB)	ND		0.10	0.034	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
1,2-Dichlorobenzene	ND		0.10	0.023	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
1,2-Dichloroethane	ND		0.10	0.0070	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
1,2-Dichloropropane	ND		0.12	0.030	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
1,3,5-Trimethylbenzene	ND		0.10	0.032	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
1,3-Dichlorobenzene	ND		0.10	0.013	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
1,3-Dichloropropane	ND		0.10	0.030	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
1,4-Dichlorobenzene	ND		0.10	0.021	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
2,2-Dichloropropane	ND		0.10	0.024	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
2-Chlorotoluene	ND		0.10	0.016	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
4-Chlorotoluene	ND		0.10	0.0087	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
Benzene	ND		0.020	0.010	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
Bromobenzene	ND		0.10	0.022	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
Bromochloromethane	ND		0.10	0.040	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
Bromodichloromethane	ND		0.10	0.062	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
Bromoform	ND		0.20	0.019	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
Bromomethane	ND		0.50	0.033	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
Carbon tetrachloride	ND		0.10	0.011	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
Chlorobenzene	ND		0.10	0.021	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
Chloroethane	ND		0.20	0.056	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
Chloroform	ND		0.10	0.024	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
Chloromethane	ND		0.50	0.042	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
cis-1,2-Dichloroethene	ND		0.10	0.021	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
cis-1,3-Dichloropropene	ND		0.10	0.020	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
Dibromochloromethane	ND		0.20	0.016	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
Dibromomethane	ND		0.10	0.022	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
Dichlorodifluoromethane	ND		0.10	0.028	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
Ethylbenzene	ND		0.10	0.016	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
Hexachlorobutadiene	ND		0.10	0.016	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
Isopropylbenzene	ND		0.10	0.031	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
m,p-Xylene	ND		0.40	0.029	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
Methyl tert-butyl ether	ND		0.050	0.030	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
Methylene Chloride	ND		0.35	0.20	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
Naphthalene	ND		0.20	0.028	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
n-Butylbenzene	ND		0.10	0.028	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
N-Propylbenzene	ND		0.10	0.026	mg/Kg		11/12/21 13:30	11/12/21 14:43	1

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

Lab Sample ID: MB 590-34002/1-A
Matrix: Solid
Analysis Batch: 34000

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34002

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.20	0.023	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
p-Isopropyltoluene	ND		0.10	0.020	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
sec-Butylbenzene	ND		0.10	0.019	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
Styrene	ND		0.10	0.024	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
tert-Butylbenzene	ND		0.10	0.020	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
Tetrachloroethene	ND		0.040	0.018	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
Toluene	ND		0.10	0.013	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
trans-1,2-Dichloroethene	ND		0.10	0.023	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
trans-1,3-Dichloropropene	ND		0.10	0.026	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
Trichloroethene	ND		0.025	0.0076	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
Trichlorofluoromethane	ND		0.20	0.033	mg/Kg		11/12/21 13:30	11/12/21 14:43	1
Vinyl chloride	ND		0.060	0.020	mg/Kg		11/12/21 13:30	11/12/21 14:43	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*75 - 129*	*11/12/21 13:30*	*11/12/21 14:43*	*1*
4-Bromofluorobenzene (Surr)	*106*		*76 - 122*	*11/12/21 13:30*	*11/12/21 14:43*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*	*11/12/21 13:30*	*11/12/21 14:43*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*	*11/12/21 13:30*	*11/12/21 14:43*	*1*

Lab Sample ID: LCS 590-34002/2-A
Matrix: Solid
Analysis Batch: 34000

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34002

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	0.500	0.552		mg/Kg		110	80 - 128
1,1,1-Trichloroethane	0.500	0.624		mg/Kg		125	80 - 130
1,1,2,2-Tetrachloroethane	0.500	0.537		mg/Kg		107	75 - 128
1,1,2-Trichloroethane	0.500	0.534		mg/Kg		107	80 - 125
1,1-Dichloroethane	0.500	0.553		mg/Kg		111	80 - 129
1,1-Dichloroethene	0.500	0.610		mg/Kg		122	73 - 135
1,1-Dichloropropene	0.500	0.602		mg/Kg		120	78 - 132
1,2,3-Trichlorobenzene	0.500	0.508		mg/Kg		102	66 - 130
1,2,3-Trichloropropane	0.500	0.552		mg/Kg		110	67 - 131
1,2,4-Trichlorobenzene	0.500	0.531		mg/Kg		106	79 - 126
1,2,4-Trimethylbenzene	0.500	0.605		mg/Kg		121	76 - 132
1,2-Dibromo-3-Chloropropane	0.500	0.472	J	mg/Kg		94	49 - 139
1,2-Dibromoethane (EDB)	0.500	0.496		mg/Kg		99	80 - 121
1,2-Dichlorobenzene	0.500	0.553		mg/Kg		111	80 - 124
1,2-Dichloroethane	0.500	0.605		mg/Kg		121	80 - 129
1,2-Dichloropropane	0.500	0.530		mg/Kg		106	75 - 121
1,3,5-Trimethylbenzene	0.500	0.594		mg/Kg		119	76 - 133
1,3-Dichlorobenzene	0.500	0.571		mg/Kg		114	80 - 123
1,3-Dichloropropane	0.500	0.499		mg/Kg		100	76 - 125
1,4-Dichlorobenzene	0.500	0.567		mg/Kg		113	80 - 125
2,2-Dichloropropane	0.500	0.677		mg/Kg		135	80 - 138
2-Chlorotoluene	0.500	0.600		mg/Kg		120	77 - 135
4-Chlorotoluene	0.500	0.570		mg/Kg		114	77 - 133
Benzene	0.500	0.573		mg/Kg		115	76 - 129

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

Lab Sample ID: LCS 590-34002/2-A
Matrix: Solid
Analysis Batch: 34000

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34002

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromobenzene	0.500	0.582		mg/Kg		116	75 - 129
Bromochloromethane	0.500	0.562		mg/Kg		112	75 - 135
Bromodichloromethane	0.500	0.587		mg/Kg		117	80 - 128
Bromoform	0.500	0.525		mg/Kg		105	72 - 133
Bromomethane	0.500	0.441	J	mg/Kg		88	56 - 138
Carbon tetrachloride	0.500	0.633		mg/Kg		127	72 - 138
Chlorobenzene	0.500	0.553		mg/Kg		111	80 - 129
Chloroethane	0.500	0.466		mg/Kg		93	50 - 142
Chloroform	0.500	0.600		mg/Kg		120	80 - 130
Chloromethane	0.500	0.398	J	mg/Kg		80	63 - 120
cis-1,2-Dichloroethene	0.500	0.612		mg/Kg		122	80 - 124
cis-1,3-Dichloropropene	0.500	0.556		mg/Kg		111	80 - 126
Dibromochloromethane	0.500	0.531		mg/Kg		106	78 - 127
Dibromomethane	0.500	0.567		mg/Kg		113	80 - 123
Dichlorodifluoromethane	0.500	0.354		mg/Kg		71	34 - 120
Ethylbenzene	0.500	0.557		mg/Kg		111	77 - 126
Hexachlorobutadiene	0.500	0.585		mg/Kg		117	80 - 136
Isopropylbenzene	0.500	0.558		mg/Kg		112	78 - 139
m,p-Xylene	0.500	0.533		mg/Kg		107	78 - 130
Methyl tert-butyl ether	0.500	0.551		mg/Kg		110	80 - 123
Methylene Chloride	0.500	0.583		mg/Kg		117	30 - 150
Naphthalene	0.500	0.472		mg/Kg		94	53 - 144
n-Butylbenzene	0.500	0.573		mg/Kg		115	80 - 131
N-Propylbenzene	0.500	0.584		mg/Kg		117	77 - 131
o-Xylene	0.500	0.551		mg/Kg		110	77 - 129
p-Isopropyltoluene	0.500	0.592		mg/Kg		118	80 - 130
sec-Butylbenzene	0.500	0.573		mg/Kg		115	76 - 130
Styrene	0.500	0.541		mg/Kg		108	80 - 128
tert-Butylbenzene	0.500	0.596		mg/Kg		119	76 - 130
Tetrachloroethene	0.500	0.588		mg/Kg		118	77 - 134
Toluene	0.500	0.544		mg/Kg		109	77 - 131
trans-1,2-Dichloroethene	0.500	0.577		mg/Kg		115	80 - 126
trans-1,3-Dichloropropene	0.500	0.495		mg/Kg		99	80 - 124
Trichloroethene	0.500	0.587		mg/Kg		117	79 - 133
Trichlorofluoromethane	0.500	0.537		mg/Kg		107	64 - 143
Vinyl chloride	0.500	0.497		mg/Kg		99	66 - 129

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*101*		*75 - 129*
4-Bromofluorobenzene (Surr)	*103*		*76 - 122*
Dibromofluoromethane (Surr)	*102*		*80 - 120*
Toluene-d8 (Surr)	*96*		*80 - 120*

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

Lab Sample ID: MB 590-34060/1-A
Matrix: Solid
Analysis Batch: 34063

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34060

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.10	0.019	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
1,1,1-Trichloroethane	ND		0.10	0.017	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
1,1,2,2-Tetrachloroethane	ND		0.10	0.029	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
1,1,2-Trichloroethane	ND		0.10	0.035	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
1,1-Dichloroethane	ND		0.10	0.026	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
1,1-Dichloroethene	ND		0.10	0.034	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
1,1-Dichloropropene	ND		0.10	0.017	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
1,2,3-Trichlorobenzene	ND		0.10	0.033	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
1,2,3-Trichloropropane	ND		0.20	0.037	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
1,2,4-Trichlorobenzene	ND		0.10	0.019	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
1,2,4-Trimethylbenzene	ND		0.10	0.023	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
1,2-Dibromo-3-Chloropropane	ND		0.50	0.060	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
1,2-Dibromoethane (EDB)	ND		0.10	0.034	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
1,2-Dichlorobenzene	ND		0.10	0.023	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
1,2-Dichloroethane	ND		0.10	0.0070	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
1,2-Dichloropropane	ND		0.12	0.030	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
1,3,5-Trimethylbenzene	ND		0.10	0.032	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
1,3-Dichlorobenzene	ND		0.10	0.013	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
1,3-Dichloropropane	ND		0.10	0.030	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
1,4-Dichlorobenzene	ND		0.10	0.021	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
2,2-Dichloropropane	ND		0.10	0.024	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
2-Chlorotoluene	ND		0.10	0.016	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
4-Chlorotoluene	ND		0.10	0.0087	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
Benzene	ND		0.020	0.010	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
Bromobenzene	ND		0.10	0.022	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
Bromochloromethane	ND		0.10	0.040	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
Bromodichloromethane	ND		0.10	0.062	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
Bromoform	ND		0.20	0.019	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
Bromomethane	ND		0.50	0.033	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
Carbon tetrachloride	ND		0.10	0.011	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
Chlorobenzene	ND		0.10	0.021	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
Chloroethane	ND		0.20	0.056	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
Chloroform	ND		0.10	0.024	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
Chloromethane	ND		0.50	0.042	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
cis-1,2-Dichloroethene	ND		0.10	0.021	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
cis-1,3-Dichloropropene	ND		0.10	0.020	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
Dibromochloromethane	ND		0.20	0.016	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
Dibromomethane	ND		0.10	0.022	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
Dichlorodifluoromethane	ND		0.10	0.028	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
Ethylbenzene	ND		0.10	0.016	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
Hexachlorobutadiene	ND		0.10	0.016	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
Isopropylbenzene	ND		0.10	0.031	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
m,p-Xylene	ND		0.40	0.029	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
Methyl tert-butyl ether	ND		0.050	0.030	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
Methylene Chloride	ND		0.35	0.20	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
Naphthalene	ND		0.20	0.028	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
n-Butylbenzene	ND		0.10	0.028	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
N-Propylbenzene	ND		0.10	0.026	mg/Kg		11/17/21 11:26	11/17/21 14:55	1

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

Lab Sample ID: MB 590-34060/1-A
Matrix: Solid
Analysis Batch: 34063

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34060

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.20	0.023	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
p-Isopropyltoluene	ND		0.10	0.020	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
sec-Butylbenzene	ND		0.10	0.019	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
Styrene	ND		0.10	0.024	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
tert-Butylbenzene	ND		0.10	0.020	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
Tetrachloroethene	ND		0.040	0.018	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
Toluene	ND		0.10	0.013	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
trans-1,2-Dichloroethene	ND		0.10	0.023	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
trans-1,3-Dichloropropene	ND		0.10	0.026	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
Trichloroethene	ND		0.025	0.0076	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
Trichlorofluoromethane	ND		0.20	0.033	mg/Kg		11/17/21 11:26	11/17/21 14:55	1
Vinyl chloride	ND		0.060	0.020	mg/Kg		11/17/21 11:26	11/17/21 14:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*111*		*75 - 129*	*11/17/21 11:26*	*11/17/21 14:55*	*1*
4-Bromofluorobenzene (Surr)	*103*		*76 - 122*	*11/17/21 11:26*	*11/17/21 14:55*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 120*	*11/17/21 11:26*	*11/17/21 14:55*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*	*11/17/21 11:26*	*11/17/21 14:55*	*1*

Lab Sample ID: LCS 590-34060/2-A
Matrix: Solid
Analysis Batch: 34063

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34060

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	0.500	0.555		mg/Kg		111	80 - 128
1,1,1-Trichloroethane	0.500	0.629		mg/Kg		126	80 - 130
1,1,2,2-Tetrachloroethane	0.500	0.502		mg/Kg		100	75 - 128
1,1,2-Trichloroethane	0.500	0.509		mg/Kg		102	80 - 125
1,1-Dichloroethane	0.500	0.574		mg/Kg		115	80 - 129
1,1-Dichloroethene	0.500	0.591		mg/Kg		118	73 - 135
1,1-Dichloropropene	0.500	0.620		mg/Kg		124	78 - 132
1,2,3-Trichlorobenzene	0.500	0.505		mg/Kg		101	66 - 130
1,2,3-Trichloropropane	0.500	0.527		mg/Kg		105	67 - 131
1,2,4-Trichlorobenzene	0.500	0.525		mg/Kg		105	79 - 126
1,2,4-Trimethylbenzene	0.500	0.581		mg/Kg		116	76 - 132
1,2-Dibromo-3-Chloropropane	0.500	0.555		mg/Kg		111	49 - 139
1,2-Dibromoethane (EDB)	0.500	0.508		mg/Kg		102	80 - 121
1,2-Dichlorobenzene	0.500	0.560		mg/Kg		112	80 - 124
1,2-Dichloroethane	0.500	0.619		mg/Kg		124	80 - 129
1,2-Dichloropropane	0.500	0.544		mg/Kg		109	75 - 121
1,3,5-Trimethylbenzene	0.500	0.561		mg/Kg		112	76 - 133
1,3-Dichlorobenzene	0.500	0.558		mg/Kg		112	80 - 123
1,3-Dichloropropane	0.500	0.527		mg/Kg		105	76 - 125
1,4-Dichlorobenzene	0.500	0.554		mg/Kg		111	80 - 125
2,2-Dichloropropane	0.500	0.690		mg/Kg		138	80 - 138
2-Chlorotoluene	0.500	0.563		mg/Kg		113	77 - 135
4-Chlorotoluene	0.500	0.552		mg/Kg		110	77 - 133
Benzene	0.500	0.577		mg/Kg		115	76 - 129

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

Lab Sample ID: LCS 590-34060/2-A
Matrix: Solid
Analysis Batch: 34063

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34060

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromobenzene	0.500	0.546		mg/Kg		109	75 - 129
Bromochloromethane	0.500	0.617		mg/Kg		123	75 - 135
Bromodichloromethane	0.500	0.602		mg/Kg		120	80 - 128
Bromoform	0.500	0.549		mg/Kg		110	72 - 133
Bromomethane	0.500	0.475	J	mg/Kg		95	56 - 138
Carbon tetrachloride	0.500	0.641		mg/Kg		128	72 - 138
Chlorobenzene	0.500	0.553		mg/Kg		111	80 - 129
Chloroethane	0.500	0.463		mg/Kg		93	50 - 142
Chloroform	0.500	0.607		mg/Kg		121	80 - 130
Chloromethane	0.500	0.404	J	mg/Kg		81	63 - 120
cis-1,2-Dichloroethene	0.500	0.598		mg/Kg		120	80 - 124
cis-1,3-Dichloropropene	0.500	0.587		mg/Kg		117	80 - 126
Dibromochloromethane	0.500	0.569		mg/Kg		114	78 - 127
Dibromomethane	0.500	0.597		mg/Kg		119	80 - 123
Dichlorodifluoromethane	0.500	0.322		mg/Kg		64	34 - 120
Ethylbenzene	0.500	0.554		mg/Kg		111	77 - 126
Hexachlorobutadiene	0.500	0.561		mg/Kg		112	80 - 136
Isopropylbenzene	0.500	0.559		mg/Kg		112	78 - 139
m,p-Xylene	0.500	0.544		mg/Kg		109	78 - 130
Methyl tert-butyl ether	0.500	0.624	*+	mg/Kg		125	80 - 123
Methylene Chloride	0.500	0.609		mg/Kg		122	30 - 150
Naphthalene	0.500	0.511		mg/Kg		102	53 - 144
n-Butylbenzene	0.500	0.562		mg/Kg		112	80 - 131
N-Propylbenzene	0.500	0.549		mg/Kg		110	77 - 131
o-Xylene	0.500	0.559		mg/Kg		112	77 - 129
p-Isopropyltoluene	0.500	0.566		mg/Kg		113	80 - 130
sec-Butylbenzene	0.500	0.557		mg/Kg		111	76 - 130
Styrene	0.500	0.538		mg/Kg		108	80 - 128
tert-Butylbenzene	0.500	0.572		mg/Kg		114	76 - 130
Tetrachloroethene	0.500	0.554		mg/Kg		111	77 - 134
Toluene	0.500	0.538		mg/Kg		108	77 - 131
trans-1,2-Dichloroethene	0.500	0.575		mg/Kg		115	80 - 126
trans-1,3-Dichloropropene	0.500	0.504		mg/Kg		101	80 - 124
Trichloroethene	0.500	0.608		mg/Kg		122	79 - 133
Trichlorofluoromethane	0.500	0.518		mg/Kg		104	64 - 143
Vinyl chloride	0.500	0.514		mg/Kg		103	66 - 129

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*108*		*75 - 129*
4-Bromofluorobenzene (Surr)	*97*		*76 - 122*
Dibromofluoromethane (Surr)	*101*		*80 - 120*
Toluene-d8 (Surr)	*91*		*80 - 120*

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

Lab Sample ID: MB 590-34047/1-A
Matrix: Solid
Analysis Batch: 34048

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34047

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		10	2.2	ug/Kg		11/16/21 12:10	11/16/21 16:15	1
2-Methylnaphthalene	ND		10	3.1	ug/Kg		11/16/21 12:10	11/16/21 16:15	1
1-Methylnaphthalene	ND		10	2.2	ug/Kg		11/16/21 12:10	11/16/21 16:15	1
Acenaphthylene	ND		10	3.3	ug/Kg		11/16/21 12:10	11/16/21 16:15	1
Acenaphthene	ND		10	2.5	ug/Kg		11/16/21 12:10	11/16/21 16:15	1
Fluorene	ND		10	2.2	ug/Kg		11/16/21 12:10	11/16/21 16:15	1
Phenanthrene	ND		10	3.6	ug/Kg		11/16/21 12:10	11/16/21 16:15	1
Anthracene	ND		10	2.0	ug/Kg		11/16/21 12:10	11/16/21 16:15	1
Fluoranthene	ND		10	2.5	ug/Kg		11/16/21 12:10	11/16/21 16:15	1
Pyrene	ND		10	3.8	ug/Kg		11/16/21 12:10	11/16/21 16:15	1
Benzo[a]anthracene	ND		10	2.1	ug/Kg		11/16/21 12:10	11/16/21 16:15	1
Chrysene	ND		10	1.5	ug/Kg		11/16/21 12:10	11/16/21 16:15	1
Benzo[b]fluoranthene	ND		10	3.5	ug/Kg		11/16/21 12:10	11/16/21 16:15	1
Benzo[k]fluoranthene	ND		10	2.5	ug/Kg		11/16/21 12:10	11/16/21 16:15	1
Benzo[a]pyrene	ND		10	4.2	ug/Kg		11/16/21 12:10	11/16/21 16:15	1
Indeno[1,2,3-cd]pyrene	ND		10	3.0	ug/Kg		11/16/21 12:10	11/16/21 16:15	1
Dibenz(a,h)anthracene	ND		10	2.8	ug/Kg		11/16/21 12:10	11/16/21 16:15	1
Benzo[g,h,i]perylene	ND		10	2.4	ug/Kg		11/16/21 12:10	11/16/21 16:15	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*68*		*33 - 120*	*11/16/21 12:10*	*11/16/21 16:15*	*1*
2-Fluorobiphenyl (Surr)	*81*		*47 - 120*	*11/16/21 12:10*	*11/16/21 16:15*	*1*
p-Terphenyl-d14	*106*		*74 - 120*	*11/16/21 12:10*	*11/16/21 16:15*	*1*

Lab Sample ID: LCS 590-34047/2-A
Matrix: Solid
Analysis Batch: 34048

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34047

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Naphthalene	267	189		ug/Kg		71	45 - 120
2-Methylnaphthalene	267	191		ug/Kg		71	48 - 120
1-Methylnaphthalene	267	196		ug/Kg		73	44 - 120
Acenaphthylene	267	199		ug/Kg		75	52 - 120
Acenaphthene	267	191		ug/Kg		72	53 - 120
Fluorene	267	207		ug/Kg		78	55 - 120
Phenanthrene	267	215		ug/Kg		81	57 - 121
Anthracene	267	212		ug/Kg		79	60 - 120
Fluoranthene	267	217		ug/Kg		82	63 - 127
Pyrene	267	186		ug/Kg		70	61 - 125
Benzo[a]anthracene	267	195		ug/Kg		73	61 - 131
Chrysene	267	211		ug/Kg		79	67 - 127
Benzo[b]fluoranthene	267	230		ug/Kg		86	61 - 127
Benzo[k]fluoranthene	267	212		ug/Kg		79	63 - 127
Benzo[a]pyrene	267	238		ug/Kg		89	60 - 126
Indeno[1,2,3-cd]pyrene	267	187		ug/Kg		70	63 - 128
Dibenz(a,h)anthracene	267	195		ug/Kg		73	60 - 121
Benzo[g,h,i]perylene	267	185		ug/Kg		69	58 - 129

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

Lab Sample ID: LCS 590-34047/2-A
Matrix: Solid
Analysis Batch: 34048

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34047

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Nitrobenzene-d5	83		33 - 120
2-Fluorobiphenyl (Surr)	80		47 - 120
p-Terphenyl-d14	96		74 - 120

Lab Sample ID: 590-16359-4 MS
Matrix: Solid
Analysis Batch: 34048

Client Sample ID: DP-2(4-5)
Prep Type: Total/NA
Prep Batch: 34047

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Naphthalene	8.5	J F2	297	238		ug/Kg	☼	78	45 - 120
2-Methylnaphthalene	4.7	J F2	297	236		ug/Kg	☼	78	48 - 120
1-Methylnaphthalene	10	J F2	297	258		ug/Kg	☼	83	44 - 120
Acenaphthylene	26	F2	297	290		ug/Kg	☼	89	52 - 120
Acenaphthene	24	F2	297	286		ug/Kg	☼	88	53 - 120
Fluorene	18	F2	297	313		ug/Kg	☼	100	55 - 120
Phenanthrene	330	F2 F1	297	1670	F1	ug/Kg	☼	452	57 - 121
Anthracene	58	F2	297	391		ug/Kg	☼	112	60 - 120
Fluoranthene	370	F2 F1	297	1600	F1	ug/Kg	☼	413	63 - 127
Pyrene	430	F2 F1	297	1850	F1	ug/Kg	☼	480	61 - 125
Benzo[a]anthracene	170	F2 F1	297	717	F1	ug/Kg	☼	185	61 - 131
Chrysene	220	F2 F1	297	826	F1	ug/Kg	☼	203	67 - 127
Benzo[b]fluoranthene	280	F2 F1	297	868	F1	ug/Kg	☼	199	61 - 127
Benzo[k]fluoranthene	120	F2 F1	297	532	F1	ug/Kg	☼	139	63 - 127
Benzo[a]pyrene	290	F2 F1	297	853	F1	ug/Kg	☼	191	60 - 126
Indeno[1,2,3-cd]pyrene	170	F2 F1	297	479		ug/Kg	☼	105	63 - 128
Dibenz(a,h)anthracene	43	F2 F1	297	289		ug/Kg	☼	83	60 - 121
Benzo[g,h,i]perylene	200	F2 F1	297	527		ug/Kg	☼	110	58 - 129

Surrogate	MS %Recovery	MS Qualifier	Limits
Nitrobenzene-d5	73		33 - 120
2-Fluorobiphenyl (Surr)	79		47 - 120
p-Terphenyl-d14	100		74 - 120

Lab Sample ID: 590-16359-4 MSD
Matrix: Solid
Analysis Batch: 34048

Client Sample ID: DP-2(4-5)
Prep Type: Total/NA
Prep Batch: 34047

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Naphthalene	8.5	J F2	287	164	F2	ug/Kg	☼	54	45 - 120	37	20
2-Methylnaphthalene	4.7	J F2	287	170	F2	ug/Kg	☼	58	48 - 120	32	20
1-Methylnaphthalene	10	J F2	287	186	F2	ug/Kg	☼	61	44 - 120	32	14
Acenaphthylene	26	F2	287	202	F2	ug/Kg	☼	61	52 - 120	36	20
Acenaphthene	24	F2	287	190	F2	ug/Kg	☼	58	53 - 120	40	11
Fluorene	18	F2	287	200	F2	ug/Kg	☼	64	55 - 120	44	21
Phenanthrene	330	F2 F1	287	458	F2 F1	ug/Kg	☼	44	57 - 121	114	18
Anthracene	58	F2	287	241	F2	ug/Kg	☼	64	60 - 120	48	18
Fluoranthene	370	F2 F1	287	460	F2 F1	ug/Kg	☼	31	63 - 127	111	18
Pyrene	430	F2 F1	287	599	F2 F1	ug/Kg	☼	59	61 - 125	102	26

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

Lab Sample ID: 590-16359-4 MSD
Matrix: Solid
Analysis Batch: 34048

Client Sample ID: DP-2(4-5)
Prep Type: Total/NA
Prep Batch: 34047

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzo[a]anthracene	170	F2 F1	287	317	F2 F1	ug/Kg	☼	52	61 - 131	77	16
Chrysene	220	F2 F1	287	359	F2 F1	ug/Kg	☼	47	67 - 127	79	15
Benzo[b]fluoranthene	280	F2 F1	287	384	F2 F1	ug/Kg	☼	37	61 - 127	77	16
Benzo[k]fluoranthene	120	F2 F1	287	279	F2 F1	ug/Kg	☼	55	63 - 127	62	16
Benzo[a]pyrene	290	F2 F1	287	404	F2 F1	ug/Kg	☼	41	60 - 126	71	20
Indeno[1,2,3-cd]pyrene	170	F2 F1	287	282	F2 F1	ug/Kg	☼	40	63 - 128	52	18
Dibenz(a,h)anthracene	43	F2 F1	287	207	F2 F1	ug/Kg	☼	57	60 - 121	33	18
Benzo[g,h,i]perylene	200	F2 F1	287	306	F2 F1	ug/Kg	☼	37	58 - 129	53	17

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Nitrobenzene-d5	*71*		*33 - 120*
2-Fluorobiphenyl (Surr)	*73*		*47 - 120*
p-Terphenyl-d14	*101*		*74 - 120*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 590-34053/1-A
Matrix: Solid
Analysis Batch: 34068

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34053

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		10	4.2	mg/Kg		11/17/21 08:32	11/17/21 21:09	1
Residual Range Organics (RRO) (C25-C36)	ND		25	5.0	mg/Kg		11/17/21 08:32	11/17/21 21:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*79*		*50 - 150*	*11/17/21 08:32*	*11/17/21 21:09*	*1*
n-Triacontane-d62	*81*		*50 - 150*	*11/17/21 08:32*	*11/17/21 21:09*	*1*

Lab Sample ID: LCS 590-34053/2-A
Matrix: Solid
Analysis Batch: 34068

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34053

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics (DRO) (C10-C25)	66.7	64.2		mg/Kg		96	50 - 150
Residual Range Organics (RRO) (C25-C36)	66.7	67.0		mg/Kg		100	50 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*91*		*50 - 150*
n-Triacontane-d62	*91*		*50 - 150*

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 590-34009/2-A
Matrix: Solid
Analysis Batch: 34050

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34009

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		1.3	0.50	mg/Kg		11/15/21 09:01	11/16/21 10:09	1
Barium	ND		1.3	0.34	mg/Kg		11/15/21 09:01	11/16/21 10:09	1
Cadmium	ND		1.0	0.059	mg/Kg		11/15/21 09:01	11/16/21 10:09	1
Chromium	ND		1.3	0.18	mg/Kg		11/15/21 09:01	11/16/21 10:09	1
Lead	ND		3.0	1.5	mg/Kg		11/15/21 09:01	11/16/21 10:09	1
Selenium	ND		5.0	3.0	mg/Kg		11/15/21 09:01	11/16/21 10:09	1
Silver	ND		1.3	0.13	mg/Kg		11/15/21 09:01	11/16/21 10:09	1

Lab Sample ID: LCS 590-34009/1-A
Matrix: Solid
Analysis Batch: 34050

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34009

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	100	92.5		mg/Kg		92	80 - 120
Barium	100	90.6		mg/Kg		91	80 - 120
Cadmium	50.0	46.4		mg/Kg		93	80 - 120
Chromium	50.0	47.6		mg/Kg		95	80 - 120
Lead	50.0	49.9		mg/Kg		100	80 - 120
Selenium	100	92.8		mg/Kg		93	80 - 120
Silver	5.00	4.21		mg/Kg		84	80 - 120

Lab Sample ID: 590-16359-1 MS
Matrix: Solid
Analysis Batch: 34050

Client Sample ID: DP-1(1-2)
Prep Type: Total/NA
Prep Batch: 34009

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	8.2		116	116		mg/Kg	☼	93	75 - 125
Barium	120		116	225		mg/Kg	☼	93	75 - 125
Cadmium	0.22	J	57.8	54.9		mg/Kg	☼	95	75 - 125
Chromium	10		57.8	65.7		mg/Kg	☼	96	75 - 125
Lead	21		57.8	72.9		mg/Kg	☼	90	75 - 125
Selenium	ND		116	107		mg/Kg	☼	93	75 - 125
Silver	ND		5.78	5.05		mg/Kg	☼	87	75 - 125

Lab Sample ID: 590-16359-1 MSD
Matrix: Solid
Analysis Batch: 34050

Client Sample ID: DP-1(1-2)
Prep Type: Total/NA
Prep Batch: 34009

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	8.2		116	115		mg/Kg	☼	92	75 - 125	1	20
Barium	120		116	229		mg/Kg	☼	96	75 - 125	2	20
Cadmium	0.22	J	57.8	54.2		mg/Kg	☼	93	75 - 125	1	20
Chromium	10		57.8	65.0		mg/Kg	☼	95	75 - 125	1	20
Lead	21		57.8	70.0		mg/Kg	☼	85	75 - 125	4	20
Selenium	ND		116	106		mg/Kg	☼	91	75 - 125	1	20
Silver	ND		5.78	4.74		mg/Kg	☼	82	75 - 125	6	20

Method: 6010D - Metals (ICP) (Continued)

Lab Sample ID: 590-16359-1 DU
Matrix: Solid
Analysis Batch: 34050

Client Sample ID: DP-1(1-2)
Prep Type: Total/NA
Prep Batch: 34009

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Arsenic	8.2			7.56		mg/Kg	☼			9	20
Barium	120			95.6	F3	mg/Kg	☼			21	20
Cadmium	0.22	J		0.159	J F5	mg/Kg	☼			33	20
Chromium	10			8.86		mg/Kg	☼			13	20
Lead	21			15.7	F3	mg/Kg	☼			29	20
Selenium	ND			ND		mg/Kg	☼			NC	20
Silver	ND			ND		mg/Kg	☼			NC	20

Lab Chronicle

Client: GeoEngineers Inc
Job ID: 590-16359-1
Project/Site: Avista 415 E Sprague Phase II

Client Sample ID: DP-1(1-2)
Lab Sample ID: 590-16359-1
Date Collected: 11/11/21 09:15
Matrix: Solid
Date Received: 11/12/21 10:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7471B			0.60 g	50 mL	34008	11/15/21 08:47	AMB	TAL SPK
Total/NA	Analysis	7471B		1			34045	11/16/21 10:14	AMB	TAL SPK
Total/NA	Analysis	Moisture		1			34010	11/15/21 09:49	KBZ	TAL SPK

Client Sample ID: DP-1(1-2)
Lab Sample ID: 590-16359-1
Date Collected: 11/11/21 09:15
Matrix: Solid
Date Received: 11/12/21 10:45
Percent Solids: 85.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.34 g	2 mL	34047	11/16/21 12:10	KBZ	TAL SPK
Total/NA	Analysis	8270E SIM		1			34048	11/16/21 17:03	NMI	TAL SPK
Total/NA	Prep	3050B			1.37 g	50 mL	34009	11/15/21 09:02	AMB	TAL SPK
Total/NA	Analysis	6010D		1			34050	11/16/21 10:13	AMB	TAL SPK

Client Sample ID: DP-2(4-5)
Lab Sample ID: 590-16359-4
Date Collected: 11/11/21 09:40
Matrix: Solid
Date Received: 11/12/21 10:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7471B			0.51 g	50 mL	34008	11/15/21 08:47	AMB	TAL SPK
Total/NA	Analysis	7471B		1			34045	11/16/21 10:16	AMB	TAL SPK
Total/NA	Analysis	Moisture		1			34010	11/15/21 09:49	KBZ	TAL SPK

Client Sample ID: DP-2(4-5)
Lab Sample ID: 590-16359-4
Date Collected: 11/11/21 09:40
Matrix: Solid
Date Received: 11/12/21 10:45
Percent Solids: 89.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.28 g	2 mL	34047	11/16/21 12:10	KBZ	TAL SPK
Total/NA	Analysis	8270E SIM		1			34048	11/16/21 17:27	NMI	TAL SPK
Total/NA	Prep	3050B			1.32 g	50 mL	34009	11/15/21 09:02	AMB	TAL SPK
Total/NA	Analysis	6010D		1			34050	11/16/21 10:36	AMB	TAL SPK
Total/NA	Prep	3050B			1.32 g	50 mL	34009	11/15/21 09:02	AMB	TAL SPK
Total/NA	Analysis	6010D		5			34050	11/16/21 15:30	AMB	TAL SPK

Client Sample ID: DP-3(1.5-2.5)
Lab Sample ID: 590-16359-5
Date Collected: 11/11/21 09:45
Matrix: Solid
Date Received: 11/12/21 10:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7471B			0.53 g	50 mL	34008	11/15/21 08:47	AMB	TAL SPK
Total/NA	Analysis	7471B		1			34045	11/16/21 10:19	AMB	TAL SPK
Total/NA	Analysis	Moisture		1			34010	11/15/21 09:49	KBZ	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
Job ID: 590-16359-1
Project/Site: Avista 415 E Sprague Phase II

Client Sample ID: DP-3(1.5-2.5)
Lab Sample ID: 590-16359-5
Date Collected: 11/11/21 09:45
Matrix: Solid
Date Received: 11/12/21 10:45
Percent Solids: 93.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.78 g	2 mL	34047	11/16/21 12:10	KBZ	TAL SPK
Total/NA	Analysis	8270E SIM		1			34048	11/16/21 18:40	NMI	TAL SPK
Total/NA	Prep	3050B			1.32 g	50 mL	34009	11/15/21 09:02	AMB	TAL SPK
Total/NA	Analysis	6010D		1			34050	11/16/21 10:40	AMB	TAL SPK

Client Sample ID: DP-3(10-11)
Lab Sample ID: 590-16359-6
Date Collected: 11/11/21 09:50
Matrix: Solid
Date Received: 11/12/21 10:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7471B			0.51 g	50 mL	34008	11/15/21 08:47	AMB	TAL SPK
Total/NA	Analysis	7471B		1			34045	11/16/21 10:22	AMB	TAL SPK
Total/NA	Analysis	Moisture		1			34010	11/15/21 09:49	KBZ	TAL SPK

Client Sample ID: DP-3(10-11)
Lab Sample ID: 590-16359-6
Date Collected: 11/11/21 09:50
Matrix: Solid
Date Received: 11/12/21 10:45
Percent Solids: 68.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			10.539 g	10 mL	34002	11/12/21 13:34	JSP	TAL SPK
Total/NA	Analysis	8260D		1	0.86 mL	43 mL	34000	11/12/21 19:51	JSP	TAL SPK
Total/NA	Prep	5035			10.539 g	10 mL	34002	11/12/21 13:34	JSP	TAL SPK
Total/NA	Analysis	8260D		1	0.86 mL	43 mL	34063	11/17/21 14:14	JSP	TAL SPK
Total/NA	Prep	5035			10.539 g	10 mL	34002	11/12/21 13:34	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		10	0.86 mL	43 mL	34014	11/15/21 18:50	JSP	TAL SPK
Total/NA	Prep	3550C			15.09 g	2 mL	34047	11/16/21 12:10	KBZ	TAL SPK
Total/NA	Analysis	8270E SIM		1			34048	11/16/21 19:04	NMI	TAL SPK
Total/NA	Prep	3550C			15.09 g	2 mL	34047	11/16/21 12:10	KBZ	TAL SPK
Total/NA	Analysis	8270E SIM		10			34059	11/17/21 11:56	NMI	TAL SPK
Total/NA	Prep	3550C			15.33 g	5 mL	34053	11/17/21 08:32	KBZ	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			34068	11/17/21 21:49	NMI	TAL SPK
Total/NA	Prep	3050B			1.26 g	50 mL	34009	11/15/21 09:02	AMB	TAL SPK
Total/NA	Analysis	6010D		1			34050	11/16/21 10:56	AMB	TAL SPK

Client Sample ID: DP-4(2-3)
Lab Sample ID: 590-16359-7
Date Collected: 11/11/21 10:20
Matrix: Solid
Date Received: 11/12/21 10:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7471B			0.56 g	50 mL	34008	11/15/21 08:47	AMB	TAL SPK
Total/NA	Analysis	7471B		1			34045	11/16/21 10:24	AMB	TAL SPK
Total/NA	Analysis	Moisture		1			34010	11/15/21 09:49	KBZ	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
Job ID: 590-16359-1
Project/Site: Avista 415 E Sprague Phase II

Client Sample ID: DP-4(2-3)
Lab Sample ID: 590-16359-7
Date Collected: 11/11/21 10:20
Matrix: Solid
Date Received: 11/12/21 10:45
Percent Solids: 80.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.33 g	2 mL	34047	11/16/21 12:10	KBZ	TAL SPK
Total/NA	Analysis	8270E SIM		1			34048	11/16/21 19:28	NMI	TAL SPK
Total/NA	Prep	3050B			1.43 g	50 mL	34009	11/15/21 09:02	AMB	TAL SPK
Total/NA	Analysis	6010D		1			34050	11/16/21 11:00	AMB	TAL SPK

Client Sample ID: DP-5(1-2)
Lab Sample ID: 590-16359-8
Date Collected: 11/11/21 10:40
Matrix: Solid
Date Received: 11/12/21 10:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7471B			0.59 g	50 mL	34008	11/15/21 08:47	AMB	TAL SPK
Total/NA	Analysis	7471B		1			34045	11/16/21 10:27	AMB	TAL SPK
Total/NA	Analysis	Moisture		1			34010	11/15/21 09:49	KBZ	TAL SPK

Client Sample ID: DP-5(1-2)
Lab Sample ID: 590-16359-8
Date Collected: 11/11/21 10:40
Matrix: Solid
Date Received: 11/12/21 10:45
Percent Solids: 85.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.76 g	2 mL	34047	11/16/21 12:10	KBZ	TAL SPK
Total/NA	Analysis	8270E SIM		1			34048	11/16/21 19:52	NMI	TAL SPK
Total/NA	Prep	3050B			1.32 g	50 mL	34009	11/15/21 09:02	AMB	TAL SPK
Total/NA	Analysis	6010D		1			34050	11/16/21 11:04	AMB	TAL SPK

Client Sample ID: DP-6(1-2)
Lab Sample ID: 590-16359-10
Date Collected: 11/11/21 11:20
Matrix: Solid
Date Received: 11/12/21 10:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7471B			0.55 g	50 mL	34008	11/15/21 08:47	AMB	TAL SPK
Total/NA	Analysis	7471B		1			34045	11/16/21 10:29	AMB	TAL SPK
Total/NA	Analysis	Moisture		1			34010	11/15/21 09:49	KBZ	TAL SPK

Client Sample ID: DP-6(1-2)
Lab Sample ID: 590-16359-10
Date Collected: 11/11/21 11:20
Matrix: Solid
Date Received: 11/12/21 10:45
Percent Solids: 92.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.16 g	2 mL	34047	11/16/21 12:10	KBZ	TAL SPK
Total/NA	Analysis	8270E SIM		1			34048	11/16/21 20:16	NMI	TAL SPK
Total/NA	Prep	3050B			1.32 g	50 mL	34009	11/15/21 09:02	AMB	TAL SPK
Total/NA	Analysis	6010D		2			34050	11/16/21 15:34	AMB	TAL SPK

Client Sample ID: DP-7(1-2)
Lab Sample ID: 590-16359-12
Date Collected: 11/11/21 12:00
Matrix: Solid
Date Received: 11/12/21 10:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7471B			0.53 g	50 mL	34008	11/15/21 08:47	AMB	TAL SPK
Total/NA	Analysis	7471B		1			34045	11/16/21 10:32	AMB	TAL SPK
Total/NA	Analysis	Moisture		1			34010	11/15/21 09:49	KBZ	TAL SPK

Client Sample ID: DP-7(1-2)
Lab Sample ID: 590-16359-12
Date Collected: 11/11/21 12:00
Matrix: Solid
Date Received: 11/12/21 10:45
Percent Solids: 94.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.21 g	2 mL	34047	11/16/21 12:10	KBZ	TAL SPK
Total/NA	Analysis	8270E SIM		1			34048	11/16/21 20:40	NMI	TAL SPK
Total/NA	Prep	3050B			1.34 g	50 mL	34009	11/15/21 09:02	AMB	TAL SPK
Total/NA	Analysis	6010D		1			34050	11/16/21 11:12	AMB	TAL SPK

Client Sample ID: DP-8(0.5-1.5)
Lab Sample ID: 590-16359-14
Date Collected: 11/11/21 12:20
Matrix: Solid
Date Received: 11/12/21 10:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7471B			0.53 g	50 mL	34008	11/15/21 08:47	AMB	TAL SPK
Total/NA	Analysis	7471B		1			34045	11/16/21 10:34	AMB	TAL SPK
Total/NA	Analysis	Moisture		1			34010	11/15/21 09:49	KBZ	TAL SPK

Client Sample ID: DP-8(0.5-1.5)
Lab Sample ID: 590-16359-14
Date Collected: 11/11/21 12:20
Matrix: Solid
Date Received: 11/12/21 10:45
Percent Solids: 93.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.05 g	2 mL	34047	11/16/21 12:10	KBZ	TAL SPK
Total/NA	Analysis	8270E SIM		1			34048	11/16/21 21:04	NMI	TAL SPK
Total/NA	Prep	3050B			1.33 g	50 mL	34009	11/15/21 09:02	AMB	TAL SPK
Total/NA	Analysis	6010D		1			34050	11/16/21 11:16	AMB	TAL SPK

Client Sample ID: DP-9(1.5-2.5)
Lab Sample ID: 590-16359-16
Date Collected: 11/11/21 13:00
Matrix: Solid
Date Received: 11/12/21 10:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7471B			0.62 g	50 mL	34008	11/15/21 08:47	AMB	TAL SPK
Total/NA	Analysis	7471B		1			34045	11/16/21 10:37	AMB	TAL SPK
Total/NA	Analysis	Moisture		1			34010	11/15/21 09:49	KBZ	TAL SPK

Client Sample ID: DP-9(1.5-2.5)
Lab Sample ID: 590-16359-16
Date Collected: 11/11/21 13:00
Matrix: Solid
Date Received: 11/12/21 10:45
Percent Solids: 91.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.49 g	2 mL	34047	11/16/21 12:10	KBZ	TAL SPK
Total/NA	Analysis	8270E SIM		1			34048	11/16/21 21:28	NMI	TAL SPK
Total/NA	Prep	3050B			1.34 g	50 mL	34009	11/15/21 09:02	AMB	TAL SPK
Total/NA	Analysis	6010D		2			34050	11/16/21 15:38	AMB	TAL SPK

Client Sample ID: DP-10(1-2)
Lab Sample ID: 590-16359-17
Date Collected: 11/11/21 13:10
Matrix: Solid
Date Received: 11/12/21 10:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7471B			0.51 g	50 mL	34008	11/15/21 08:47	AMB	TAL SPK
Total/NA	Analysis	7471B		1			34045	11/16/21 10:44	AMB	TAL SPK
Total/NA	Analysis	Moisture		1			34010	11/15/21 09:49	KBZ	TAL SPK

Client Sample ID: DP-10(1-2)
Lab Sample ID: 590-16359-17
Date Collected: 11/11/21 13:10
Matrix: Solid
Date Received: 11/12/21 10:45
Percent Solids: 86.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.51 g	2 mL	34047	11/16/21 12:10	KBZ	TAL SPK
Total/NA	Analysis	8270E SIM		10			34048	11/16/21 21:52	NMI	TAL SPK
Total/NA	Prep	3050B			1.32 g	50 mL	34009	11/15/21 09:02	AMB	TAL SPK
Total/NA	Analysis	6010D		5			34050	11/16/21 15:42	AMB	TAL SPK

Client Sample ID: DP-11(1.5-2.5)
Lab Sample ID: 590-16359-19
Date Collected: 11/11/21 13:30
Matrix: Solid
Date Received: 11/12/21 10:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7471B			0.52 g	50 mL	34008	11/15/21 08:47	AMB	TAL SPK
Total/NA	Analysis	7471B		1			34045	11/16/21 10:47	AMB	TAL SPK
Total/NA	Analysis	Moisture		1			34010	11/15/21 09:49	KBZ	TAL SPK

Client Sample ID: DP-11(1.5-2.5)
Lab Sample ID: 590-16359-19
Date Collected: 11/11/21 13:30
Matrix: Solid
Date Received: 11/12/21 10:45
Percent Solids: 75.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.89 g	2 mL	34047	11/16/21 12:10	KBZ	TAL SPK
Total/NA	Analysis	8270E SIM		1			34048	11/16/21 22:16	NMI	TAL SPK
Total/NA	Prep	3550C			15.89 g	2 mL	34047	11/16/21 12:10	KBZ	TAL SPK
Total/NA	Analysis	8270E SIM		5			34059	11/17/21 12:20	NMI	TAL SPK
Total/NA	Prep	3050B			1.34 g	50 mL	34009	11/15/21 09:02	AMB	TAL SPK
Total/NA	Analysis	6010D		1			34050	11/16/21 11:27	AMB	TAL SPK
Total/NA	Prep	3050B			1.34 g	50 mL	34009	11/15/21 09:02	AMB	TAL SPK
Total/NA	Analysis	6010D		20			34050	11/16/21 15:46	AMB	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
Job ID: 590-16359-1
Project/Site: Avista 415 E Sprague Phase II

Client Sample ID: DP-12(1-2)
Lab Sample ID: 590-16359-21
Date Collected: 11/11/21 13:50
Matrix: Solid
Date Received: 11/12/21 10:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7471B			0.54 g	50 mL	34008	11/15/21 08:47	AMB	TAL SPK
Total/NA	Analysis	7471B		1			34045	11/16/21 10:49	AMB	TAL SPK
Total/NA	Analysis	Moisture		1			34010	11/15/21 09:49	KBZ	TAL SPK

Client Sample ID: DP-12(1-2)
Lab Sample ID: 590-16359-21
Date Collected: 11/11/21 13:50
Matrix: Solid
Date Received: 11/12/21 10:45
Percent Solids: 93.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.43 g	2 mL	34047	11/16/21 12:10	KBZ	TAL SPK
Total/NA	Analysis	8270E SIM		1			34048	11/16/21 22:40	NMI	TAL SPK
Total/NA	Prep	3550C			15.43 g	2 mL	34047	11/16/21 12:10	KBZ	TAL SPK
Total/NA	Analysis	8270E SIM		10			34059	11/17/21 12:44	NMI	TAL SPK
Total/NA	Prep	3050B			1.43 g	50 mL	34009	11/15/21 09:02	AMB	TAL SPK
Total/NA	Analysis	6010D		10			34050	11/16/21 15:50	AMB	TAL SPK

Client Sample ID: DP-13(1-2)
Lab Sample ID: 590-16359-23
Date Collected: 11/11/21 14:05
Matrix: Solid
Date Received: 11/12/21 10:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7471B			0.57 g	50 mL	34008	11/15/21 08:47	AMB	TAL SPK
Total/NA	Analysis	7471B		1			34045	11/16/21 10:52	AMB	TAL SPK
Total/NA	Analysis	Moisture		1			34010	11/15/21 09:49	KBZ	TAL SPK

Client Sample ID: DP-13(1-2)
Lab Sample ID: 590-16359-23
Date Collected: 11/11/21 14:05
Matrix: Solid
Date Received: 11/12/21 10:45
Percent Solids: 92.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.25 g	2 mL	34047	11/16/21 12:10	KBZ	TAL SPK
Total/NA	Analysis	8270E SIM		2			34048	11/16/21 23:04	NMI	TAL SPK
Total/NA	Prep	3550C			15.25 g	2 mL	34047	11/16/21 12:10	KBZ	TAL SPK
Total/NA	Analysis	8270E SIM		10			34059	11/17/21 13:08	NMI	TAL SPK
Total/NA	Prep	3050B			1.34 g	50 mL	34009	11/15/21 09:02	AMB	TAL SPK
Total/NA	Analysis	6010D		1			34050	11/16/21 11:47	AMB	TAL SPK

Client Sample ID: DP-14(4-5)
Lab Sample ID: 590-16359-25
Date Collected: 11/11/21 15:00
Matrix: Solid
Date Received: 11/12/21 10:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7471B			0.61 g	50 mL	34008	11/15/21 08:47	AMB	TAL SPK
Total/NA	Analysis	7471B		1			34045	11/16/21 10:55	AMB	TAL SPK
Total/NA	Analysis	Moisture		1			34010	11/15/21 09:49	KBZ	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
Job ID: 590-16359-1
Project/Site: Avista 415 E Sprague Phase II

Client Sample ID: DP-14(4-5)
Lab Sample ID: 590-16359-25
Date Collected: 11/11/21 15:00
Matrix: Solid
Date Received: 11/12/21 10:45
Percent Solids: 79.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.42 g	2 mL	34047	11/16/21 12:10	KBZ	TAL SPK
Total/NA	Analysis	8270E SIM		2			34048	11/16/21 23:28	NMI	TAL SPK
Total/NA	Prep	3550C			15.42 g	2 mL	34047	11/16/21 12:10	KBZ	TAL SPK
Total/NA	Analysis	8270E SIM		10			34059	11/17/21 13:32	NMI	TAL SPK
Total/NA	Prep	3050B			1.46 g	50 mL	34009	11/15/21 09:02	AMB	TAL SPK
Total/NA	Analysis	6010D		1			34050	11/16/21 11:51	AMB	TAL SPK

Client Sample ID: DP-15(2-3)
Lab Sample ID: 590-16359-27
Date Collected: 11/11/21 15:30
Matrix: Solid
Date Received: 11/12/21 10:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7471B			0.56 g	50 mL	34008	11/15/21 08:47	AMB	TAL SPK
Total/NA	Analysis	7471B		1			34045	11/16/21 10:57	AMB	TAL SPK
Total/NA	Analysis	Moisture		1			34010	11/15/21 09:49	KBZ	TAL SPK

Client Sample ID: DP-15(2-3)
Lab Sample ID: 590-16359-27
Date Collected: 11/11/21 15:30
Matrix: Solid
Date Received: 11/12/21 10:45
Percent Solids: 90.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.69 g	2 mL	34047	11/16/21 12:10	KBZ	TAL SPK
Total/NA	Analysis	8270E SIM		1			34048	11/16/21 23:52	NMI	TAL SPK
Total/NA	Prep	3550C			15.69 g	2 mL	34047	11/16/21 12:10	KBZ	TAL SPK
Total/NA	Analysis	8270E SIM		5			34059	11/17/21 13:57	NMI	TAL SPK
Total/NA	Prep	3050B			1.38 g	50 mL	34009	11/15/21 09:02	AMB	TAL SPK
Total/NA	Analysis	6010D		1			34050	11/16/21 11:55	AMB	TAL SPK

Client Sample ID: Trip Blank
Lab Sample ID: 590-16359-29
Date Collected: 11/11/21 08:40
Matrix: Solid
Date Received: 11/12/21 10:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			10 g	10 mL	34002	11/12/21 13:34	JSP	TAL SPK
Total/NA	Analysis	8260D		1	0.86 mL	43 mL	34000	11/12/21 20:12	JSP	TAL SPK
Total/NA	Prep	5035			10 g	10 mL	34002	11/12/21 13:34	JSP	TAL SPK
Total/NA	Analysis	8260D		1	0.86 mL	43 mL	34063	11/17/21 14:34	JSP	TAL SPK
Total/NA	Prep	5035			10 g	10 mL	34002	11/12/21 13:34	JSP	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	0.86 mL	43 mL	34014	11/15/21 19:11	JSP	TAL SPK

Laboratory References:
TAL SPK = Eurofins TestAmerica, Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Accreditation/Certification Summary

Client: GeoEngineers Inc
Job ID: 590-16359-1
Project/Site: Avista 415 E Sprague Phase II

Laboratory: Eurofins TestAmerica, Spokane

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Washington	State	C569	01-06-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids
NWTPH-Dx	3550C	Solid	Residual Range Organics (RRO) (C25-C36)

Method Summary

Client: GeoEngineers Inc
Project/Site: Avista 415 E Sprague Phase II

Job ID: 590-16359-1

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	TAL SPK
NWTPH-Gx	Northwest - Volatile Petroleum Products (GC/MS)	NWTPH	TAL SPK
8270E SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL SPK
NWTPH-Dx	Northwest - Semi-Volatile Petroleum Products (GC)	NWTPH	TAL SPK
6010D	Metals (ICP)	SW846	TAL SPK
7471B	Mercury (CVAA)	SW846	TAL SPK
Moisture	Percent Moisture	EPA	TAL SPK
3050B	Preparation, Metals	SW846	TAL SPK
3550C	Ultrasonic Extraction	SW846	TAL SPK
5035	Closed System Purge and Trap	SW846	TAL SPK
7471B	Preparation, Mercury	SW846	TAL SPK

Protocol References:

EPA = US Environmental Protection Agency
NWTPH = Northwest Total Petroleum Hydrocarbon
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SPK = Eurofins TestAmerica, Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Eurofins TestAmerica, Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone: 509-924-9200 Fax: 509-924-9290

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: JML	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-6906-2026.1
Client Contact: Josh Lee	Phone: 406-239-7810	E-Mail: Randee.Arrington@Eurofinset.com	State of Origin:	Page: Page 1 of 3
Company: GeoEngineers Inc	PWSID:			Job #:
Address: 523 East Second Ave	Due Date Requested: 1-Week **			
City: Spokane	TAT Requested (days): 1-Week **			
State, Zip: WA, 99202	Compliance Project: Δ Yes Δ No			
Phone: 406-239-7810(Tel)	PO #: Purchase Order not required			
Email: jmlee@geoengineers.com	WO #:			
Project Name: Avista 415 E Sprague Phase II	Project #: 59002266			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

All jars use B- Changed to DP-

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010C, 7471B, 8270E_SIM	NWTPH_Dx - DRO and RRO	8260D, NWTPH_Gx_MS	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	F		
DP-1(1-2)	11/11/2021	0915	G	Solid			X			2	Hold samples not marked pending.
DP-1(4-5)		0920		Solid						2	
DP-2(1-2)		0935		Solid						2	
DP-2(4-5)		0940		Solid			X			2	
DP-3(1.5-2.5)		0945		Solid			X			2	
DP-3(10-11)		0950		Solid			X	X	X	4	
DP-4(2-3)		1020		Solid			X			1	
DP-5(1-2)		1040		Solid			X			1	
DP-5(9-10)		1050		Solid						1	
DP-6(1-2)		1120		Solid			X			1	
DP-6(8-9)		1130		Solid						1	

590-16359 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	11/12/21 10:45	GEI		11/12/2021 10:45	ESA-SPO
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 2.0C corr'd IR006

Ver: 06/08/2021

Eurofins TestAmerica, Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone: 509-924-9200 Fax: 509-924-9290

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: JML	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-6906-2026.2
Client Contact: Josh Lee	Phone: 406-239-7810	E-Mail: Randee.Arrington@Eurofinset.com	State of Origin:	Page: Page 2 of 3
Company: GeoEngineers Inc	PWSID:			Job #:
Address: 523 East Second Ave	Due Date Requested: 1-Week **			
City: Spokane	TAT Requested (days): 1-Week **			
State, Zip: WA, 99202	Compliance Project: Δ Yes Δ No			
Phone: 406-239-7810(Tel)	PO #: Purchase Order not required			
Email: jmlee@geoengineers.com	WO #:			
Project Name: Avista 415 E Sprague Phase II	Project #: 59002266			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010C, 7471B, 8270E_SIM	NWTPH_Dx - DRO and RRO	8260D, NWTPH_Gx_MS	Total Number of containers	Special Instructions/Note:
		Preservation Code:					N	N	F		
DP-7 (1-2)	11/11/2021	1200	G	Solid			X			1	
DP-7 (4-5)		1205		Solid						1	
DP-8 (0.5-1.5)		1220		Solid			X			1	
DP-8 (4-5)		1230		Solid						1	
DP-9 (1.5-2.5)		1300		Solid			X			1	
DP-10 (1-2)		1310		Solid			X			1	
DP-10 (4-5)		1315		Solid						1	
DP-11 (1.5-2.5)		1330		Solid			X			1	
DP-11 (4-4.5)		1335		Solid						1	
DP-12 (1-2)		1350		Solid			X			1	
DP-12 (3-3.5)		1355		Solid						1	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	11/12/21 10:45	GEI	[signature]	11/12/21 1045	EPSP
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]			[signature]		
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Eurofins TestAmerica, Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone: 509-924-9200 Fax: 509-924-9290

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: JML	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-6906-2026.3
Client Contact: Josh Lee	Phone: 406-239-7810	E-Mail: Randee.Arrington@Eurofinset.com	State of Origin:	Page: Page 3 of 3
Company: GeoEngineers Inc	PWSID:			Job #:
Address: 523 East Second Ave	Due Date Requested: 1-Week **			
City: Spokane	TAT Requested (days): 1-Week **			
State, Zip: WA, 99202	Compliance Project: Δ Yes Δ No			
Phone: 406-239-7810(Tel)	PO #: Purchase Order not required			
Email: jmlee@geoengineers.com	WO #:			
Project Name: Avista 415 E Sprague Phase II	Project #: 59002266			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010C, 7471B, 8270E_SIM	NWTPH_Dx - DRO and RRO	8260D, NWTPH_Gx_MS	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	F		
DP-13 (1-2)	11/11/2021	1405	G	Solid			X			1	
DP-13 (8-9)		1440		Solid						1	
DP-14 (4-5)		1500		Solid			X			1	
DP-14 (8-9)		1510		Solid						1	
DP-15 (2-3)		1530		Solid			X			1	
DP-15 (9-10)		1540		Solid						1	
Trip Blank				Solid					X	3	
				Solid							
				Solid							
				Solid							
				Solid							

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	11/12/21 10:45	GET	McVay	11/12/2021 10:45	EAS
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-16359-1

Login Number: 16359
List Number: 1
Creator: Vaughan, Madison 1

List Source: Eurofins TestAmerica, Spokane

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins TestAmerica, Spokane
11922 East 1st Ave
Spokane, WA 99206
Tel: (509)924-9200

Laboratory Job ID: 590-16359-2
Client Project/Site: Avista 415 E Sprague Phase II

For:
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Attn: Josh Lee

Randee Arrington

Authorized for release by:
12/6/2021 3:24:30 PM

Randee Arrington, Lab Director
(509)924-9200
Randee.Arrington@Eurofinset.com

LINKS

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www.eurofinsus.com/Env

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

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

Table of Contents

Cover Page 1
Table of Contents 2
Case Narrative 3
Sample Summary 4
Definitions 5
Client Sample Results 6
QC Sample Results 10
Chronicle 13
Certification Summary 16
Method Summary 17
Receipt Checklists 18

Case Narrative

Client: GeoEngineers Inc
Job ID: 590-16359-2
Project/Site: Avista 415 E Sprague Phase II

Job ID: 590-16359-2

Laboratory: Eurofins TestAmerica, Spokane

Narrative

Receipt
The samples were received on 11/12/2021 10:45 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.0º C.

Receipt Exceptions
The following samples were activated by the client on 11/24/21: DP-2(1-2) (590-16359-3), DP-2(4-5) (590-16359-4), DP-10(4-5) (590-16359-18), DP-11(1.5-2.5) (590-16359-19), DP-12(1-2) (590-16359-21), DP-12(3-3.5) (590-16359-22) and DP-14(8-9) (590-16359-26).

GC/MS Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals
Method 7471B: The method blank for preparation batch 590-34174 and analytical batch 590-34228 contained Hg above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method 7471B: The method blank for preparation batch 590-34174 and analytical batch 590-34275 contained Hg above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

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

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

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

Sample Summary

Client: GeoEngineers Inc
Project/Site: Avista 415 E Sprague Phase II

Job ID: 590-16359-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-16359-3	DP-2(1-2)	Solid	11/11/21 09:35	11/12/21 10:45
590-16359-4	DP-2(4-5)	Solid	11/11/21 09:40	11/12/21 10:45
590-16359-18	DP-10(4-5)	Solid	11/11/21 13:15	11/12/21 10:45
590-16359-19	DP-11(1.5-2.5)	Solid	11/11/21 13:30	11/12/21 10:45
590-16359-21	DP-12(1-2)	Solid	11/11/21 13:50	11/12/21 10:45
590-16359-22	DP-12(3-3.5)	Solid	11/11/21 13:55	11/12/21 10:45
590-16359-26	DP-14(8-9)	Solid	11/11/21 15:10	11/12/21 10:45

Definitions/Glossary

Client: GeoEngineers Inc
Job ID: 590-16359-2
Project/Site: Avista 415 E Sprague Phase II

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Client Sample ID: DP-2(1-2)

Lab Sample ID: 590-16359-3

Date Collected: 11/11/21 09:35
Date Received: 11/12/21 10:45

Matrix: Solid
Percent Solids: 92.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	22		10	2.3	ug/Kg	☼	11/24/21 09:55	11/24/21 19:15	1
2-Methylnaphthalene	13		10	3.3	ug/Kg	☼	11/24/21 09:55	11/24/21 19:15	1
1-Methylnaphthalene	11		10	2.3	ug/Kg	☼	11/24/21 09:55	11/24/21 19:15	1
Acenaphthylene	230		10	3.5	ug/Kg	☼	11/24/21 09:55	11/24/21 19:15	1
Acenaphthene	17		10	2.7	ug/Kg	☼	11/24/21 09:55	11/24/21 19:15	1
Fluorene	19		10	2.3	ug/Kg	☼	11/24/21 09:55	11/24/21 19:15	1
Phenanthrene	1100		10	3.8	ug/Kg	☼	11/24/21 09:55	11/24/21 19:15	1
Anthracene	290		10	2.1	ug/Kg	☼	11/24/21 09:55	11/24/21 19:15	1
Fluoranthene	2700		10	2.6	ug/Kg	☼	11/24/21 09:55	11/24/21 19:15	1
Pyrene	2200		10	4.0	ug/Kg	☼	11/24/21 09:55	11/24/21 19:15	1
Benzo[a]anthracene	2000		10	2.2	ug/Kg	☼	11/24/21 09:55	11/24/21 19:15	1
Chrysene	1900		10	1.6	ug/Kg	☼	11/24/21 09:55	11/24/21 19:15	1
Benzo[b]fluoranthene	2400		10	3.7	ug/Kg	☼	11/24/21 09:55	11/24/21 19:15	1
Benzo[k]fluoranthene	920		10	2.6	ug/Kg	☼	11/24/21 09:55	11/24/21 19:15	1
Benzo[a]pyrene	1300		10	4.4	ug/Kg	☼	11/24/21 09:55	11/24/21 19:15	1
Indeno[1,2,3-cd]pyrene	980		10	3.1	ug/Kg	☼	11/24/21 09:55	11/24/21 19:15	1
Dibenz(a,h)anthracene	360		10	3.0	ug/Kg	☼	11/24/21 09:55	11/24/21 19:15	1
Benzo[g,h,i]perylene	980		10	2.5	ug/Kg	☼	11/24/21 09:55	11/24/21 19:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*74*		*33 - 120*	*11/24/21 09:55*	*11/24/21 19:15*	*1*
2-Fluorobiphenyl (Surr)	*80*		*47 - 120*	*11/24/21 09:55*	*11/24/21 19:15*	*1*
p-Terphenyl-d14	*98*		*74 - 120*	*11/24/21 09:55*	*11/24/21 19:15*	*1*

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.7		0.80	0.32	mg/Kg	☼	11/24/21 14:53	11/26/21 20:13	1
Barium	26		0.80	0.21	mg/Kg	☼	11/24/21 14:53	11/26/21 20:13	1
Cadmium	0.19	J	0.64	0.038	mg/Kg	☼	11/24/21 14:53	11/26/21 20:13	1
Chromium	1.2		0.80	0.11	mg/Kg	☼	11/24/21 14:53	11/26/21 20:13	1
Lead	120		1.9	0.94	mg/Kg	☼	11/24/21 14:53	11/26/21 20:13	1
Selenium	ND		3.2	1.9	mg/Kg	☼	11/24/21 14:53	11/26/21 20:13	1
Silver	0.47	J	0.80	0.086	mg/Kg	☼	11/24/21 14:53	11/26/21 20:13	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	7800	B	740	53	ug/Kg		11/24/21 12:56	12/03/21 15:50	20

Client Sample ID: DP-2(4-5)

Lab Sample ID: 590-16359-4

Date Collected: 11/11/21 09:40
Date Received: 11/12/21 10:45

Matrix: Solid

Method: 6010D - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.18		0.060	0.0051	mg/L		12/03/21 10:58	12/03/21 15:03	1

Client Sample ID: DP-10(4-5)
Lab Sample ID: 590-16359-18

Date Collected: 11/11/21 13:15
Matrix: Solid
Date Received: 11/12/21 10:45
Percent Solids: 74.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	10	J	13	2.8	ug/Kg	☼	11/24/21 09:55	11/24/21 19:39	1
2-Methylnaphthalene	13		13	4.1	ug/Kg	☼	11/24/21 09:55	11/24/21 19:39	1
1-Methylnaphthalene	8.6	J	13	2.9	ug/Kg	☼	11/24/21 09:55	11/24/21 19:39	1
Acenaphthylene	71		13	4.3	ug/Kg	☼	11/24/21 09:55	11/24/21 19:39	1
Acenaphthene	9.9	J	13	3.3	ug/Kg	☼	11/24/21 09:55	11/24/21 19:39	1
Fluorene	9.7	J	13	2.9	ug/Kg	☼	11/24/21 09:55	11/24/21 19:39	1
Phenanthrene	140		13	4.7	ug/Kg	☼	11/24/21 09:55	11/24/21 19:39	1
Anthracene	50		13	2.6	ug/Kg	☼	11/24/21 09:55	11/24/21 19:39	1
Fluoranthene	360		13	3.3	ug/Kg	☼	11/24/21 09:55	11/24/21 19:39	1
Pyrene	490		13	5.0	ug/Kg	☼	11/24/21 09:55	11/24/21 19:39	1
Benzo[a]anthracene	220		13	2.8	ug/Kg	☼	11/24/21 09:55	11/24/21 19:39	1
Chrysene	260		13	2.0	ug/Kg	☼	11/24/21 09:55	11/24/21 19:39	1
Benzo[b]fluoranthene	310		13	4.6	ug/Kg	☼	11/24/21 09:55	11/24/21 19:39	1
Benzo[k]fluoranthene	120		13	3.3	ug/Kg	☼	11/24/21 09:55	11/24/21 19:39	1
Benzo[a]pyrene	320		13	5.5	ug/Kg	☼	11/24/21 09:55	11/24/21 19:39	1
Indeno[1,2,3-cd]pyrene	170		13	3.9	ug/Kg	☼	11/24/21 09:55	11/24/21 19:39	1
Dibenz(a,h)anthracene	48		13	3.7	ug/Kg	☼	11/24/21 09:55	11/24/21 19:39	1
Benzo[g,h,i]perylene	230		13	3.1	ug/Kg	☼	11/24/21 09:55	11/24/21 19:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*60*		*33 - 120*	*11/24/21 09:55*	*11/24/21 19:39*	*1*
2-Fluorobiphenyl (Surr)	*67*		*47 - 120*	*11/24/21 09:55*	*11/24/21 19:39*	*1*
p-Terphenyl-d14	*78*		*74 - 120*	*11/24/21 09:55*	*11/24/21 19:39*	*1*

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.0	J	1.3	0.50	mg/Kg	☼	11/24/21 14:53	11/26/21 20:29	1
Barium	19		1.3	0.34	mg/Kg	☼	11/24/21 14:53	11/26/21 20:29	1
Cadmium	0.081	J	1.0	0.060	mg/Kg	☼	11/24/21 14:53	11/26/21 20:29	1
Chromium	1.2	J	1.3	0.18	mg/Kg	☼	11/24/21 14:53	11/26/21 20:29	1
Lead	11		3.1	1.5	mg/Kg	☼	11/24/21 14:53	11/26/21 20:29	1
Selenium	ND		5.1	3.1	mg/Kg	☼	11/24/21 14:53	11/26/21 20:29	1
Silver	ND		1.3	0.14	mg/Kg	☼	11/24/21 14:53	11/26/21 20:29	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	310	B	49	3.5	ug/Kg		11/24/21 12:56	11/30/21 15:45	1

Client Sample ID: DP-11(1.5-2.5)
Lab Sample ID: 590-16359-19

Date Collected: 11/11/21 13:30
Matrix: Solid
Date Received: 11/12/21 10:45

Method: 6010D - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.042	J	0.060	0.0051	mg/L		12/03/21 10:58	12/03/21 15:08	1

Client Sample ID: DP-12(1-2)
Lab Sample ID: 590-16359-21
Date Collected: 11/11/21 13:50
Matrix: Solid
Date Received: 11/12/21 10:45

Method: 6010D - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**1.4**		0.060	0.0051	mg/L		12/03/21 10:58	12/03/21 15:12	1

Client Sample ID: DP-12(3-3.5)
Lab Sample ID: 590-16359-22
Date Collected: 11/11/21 13:55
Matrix: Solid
Date Received: 11/12/21 10:45
Percent Solids: 76.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		12	2.7	ug/Kg	☼	11/24/21 09:55	11/24/21 20:04	1
2-Methylnaphthalene	ND		12	3.9	ug/Kg	☼	11/24/21 09:55	11/24/21 20:04	1
1-Methylnaphthalene	ND		12	2.8	ug/Kg	☼	11/24/21 09:55	11/24/21 20:04	1
Acenaphthylene	ND		12	4.1	ug/Kg	☼	11/24/21 09:55	11/24/21 20:04	1
Acenaphthene	ND		12	3.2	ug/Kg	☼	11/24/21 09:55	11/24/21 20:04	1
Fluorene	ND		12	2.8	ug/Kg	☼	11/24/21 09:55	11/24/21 20:04	1
Phenanthrene	**13**		12	4.5	ug/Kg	☼	11/24/21 09:55	11/24/21 20:04	1
Anthracene	**5.5**	**J**	12	2.5	ug/Kg	☼	11/24/21 09:55	11/24/21 20:04	1
Fluoranthene	**21**		12	3.1	ug/Kg	☼	11/24/21 09:55	11/24/21 20:04	1
Pyrene	**26**		12	4.7	ug/Kg	☼	11/24/21 09:55	11/24/21 20:04	1
Benzo[a]anthracene	**12**		12	2.7	ug/Kg	☼	11/24/21 09:55	11/24/21 20:04	1
Chrysene	**15**		12	1.9	ug/Kg	☼	11/24/21 09:55	11/24/21 20:04	1
Benzo[b]fluoranthene	**17**		12	4.4	ug/Kg	☼	11/24/21 09:55	11/24/21 20:04	1
Benzo[k]fluoranthene	**6.4**	**J**	12	3.1	ug/Kg	☼	11/24/21 09:55	11/24/21 20:04	1
Benzo[a]pyrene	**12**		12	5.3	ug/Kg	☼	11/24/21 09:55	11/24/21 20:04	1
Indeno[1,2,3-cd]pyrene	**6.1**	**J**	12	3.7	ug/Kg	☼	11/24/21 09:55	11/24/21 20:04	1
Dibenz(a,h)anthracene	**4.1**	**J**	12	3.5	ug/Kg	☼	11/24/21 09:55	11/24/21 20:04	1
Benzo[g,h,i]perylene	**6.6**	**J**	12	2.9	ug/Kg	☼	11/24/21 09:55	11/24/21 20:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*67*		*33 - 120*	*11/24/21 09:55*	*11/24/21 20:04*	*1*
2-Fluorobiphenyl (Surr)	*74*		*47 - 120*	*11/24/21 09:55*	*11/24/21 20:04*	*1*
p-Terphenyl-d14	*88*		*74 - 120*	*11/24/21 09:55*	*11/24/21 20:04*	*1*

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		1.2	0.49	mg/Kg	☼	11/24/21 14:53	11/26/21 20:33	1
Barium	**11**		1.2	0.33	mg/Kg	☼	11/24/21 14:53	11/26/21 20:33	1
Cadmium	**0.094**	**J**	0.99	0.058	mg/Kg	☼	11/24/21 14:53	11/26/21 20:33	1
Chromium	**0.80**	**J**	1.2	0.18	mg/Kg	☼	11/24/21 14:53	11/26/21 20:33	1
Lead	ND		3.0	1.5	mg/Kg	☼	11/24/21 14:53	11/26/21 20:33	1
Selenium	ND		4.9	3.0	mg/Kg	☼	11/24/21 14:53	11/26/21 20:33	1
Silver	ND		1.2	0.13	mg/Kg	☼	11/24/21 14:53	11/26/21 20:33	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	**18**	**J B**	46	3.3	ug/Kg		11/24/21 12:56	11/30/21 15:47	1

Client Sample ID: DP-14(8-9)
Lab Sample ID: 590-16359-26

Date Collected: 11/11/21 15:10
Matrix: Solid

Date Received: 11/12/21 10:45
Percent Solids: 74.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	4.5	J	13	2.8	ug/Kg	☼	11/24/21 09:55	11/24/21 20:28	1
2-Methylnaphthalene	5.8	J	13	4.0	ug/Kg	☼	11/24/21 09:55	11/24/21 20:28	1
1-Methylnaphthalene	5.0	J	13	2.9	ug/Kg	☼	11/24/21 09:55	11/24/21 20:28	1
Acenaphthylene	10	J	13	4.3	ug/Kg	☼	11/24/21 09:55	11/24/21 20:28	1
Acenaphthene	5.6	J	13	3.3	ug/Kg	☼	11/24/21 09:55	11/24/21 20:28	1
Fluorene	3.4	J	13	2.9	ug/Kg	☼	11/24/21 09:55	11/24/21 20:28	1
Phenanthrene	66		13	4.7	ug/Kg	☼	11/24/21 09:55	11/24/21 20:28	1
Anthracene	16		13	2.6	ug/Kg	☼	11/24/21 09:55	11/24/21 20:28	1
Fluoranthene	130		13	3.2	ug/Kg	☼	11/24/21 09:55	11/24/21 20:28	1
Pyrene	160		13	4.9	ug/Kg	☼	11/24/21 09:55	11/24/21 20:28	1
Benzo[a]anthracene	92		13	2.8	ug/Kg	☼	11/24/21 09:55	11/24/21 20:28	1
Chrysene	100		13	2.0	ug/Kg	☼	11/24/21 09:55	11/24/21 20:28	1
Benzo[b]fluoranthene	140		13	4.6	ug/Kg	☼	11/24/21 09:55	11/24/21 20:28	1
Benzo[k]fluoranthene	59		13	3.2	ug/Kg	☼	11/24/21 09:55	11/24/21 20:28	1
Benzo[a]pyrene	150		13	5.5	ug/Kg	☼	11/24/21 09:55	11/24/21 20:28	1
Indeno[1,2,3-cd]pyrene	88		13	3.9	ug/Kg	☼	11/24/21 09:55	11/24/21 20:28	1
Dibenz(a,h)anthracene	25		13	3.7	ug/Kg	☼	11/24/21 09:55	11/24/21 20:28	1
Benzo[g,h,i]perylene	110		13	3.0	ug/Kg	☼	11/24/21 09:55	11/24/21 20:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*63*		*33 - 120*	*11/24/21 09:55*	*11/24/21 20:28*	*1*
2-Fluorobiphenyl (Surr)	*81*		*47 - 120*	*11/24/21 09:55*	*11/24/21 20:28*	*1*
p-Terphenyl-d14	*86*		*74 - 120*	*11/24/21 09:55*	*11/24/21 20:28*	*1*

Method: 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.59	J	1.2	0.48	mg/Kg	☼	11/24/21 14:53	11/26/21 20:37	1
Barium	29		1.2	0.32	mg/Kg	☼	11/24/21 14:53	11/26/21 20:37	1
Cadmium	0.44	J	0.96	0.057	mg/Kg	☼	11/24/21 14:53	11/26/21 20:37	1
Chromium	1.4		1.2	0.17	mg/Kg	☼	11/24/21 14:53	11/26/21 20:37	1
Lead	200		2.9	1.4	mg/Kg	☼	11/24/21 14:53	11/26/21 20:37	1
Selenium	ND		4.8	2.9	mg/Kg	☼	11/24/21 14:53	11/26/21 20:37	1
Silver	ND		1.2	0.13	mg/Kg	☼	11/24/21 14:53	11/26/21 20:37	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	110	B	42	3.0	ug/Kg		11/24/21 12:56	11/30/21 15:50	1

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

Lab Sample ID: MB 590-34160/1-A
Matrix: Solid
Analysis Batch: 34158

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34160

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		10	2.2	ug/Kg		11/24/21 09:55	11/24/21 11:12	1
2-Methylnaphthalene	ND		10	3.1	ug/Kg		11/24/21 09:55	11/24/21 11:12	1
1-Methylnaphthalene	ND		10	2.2	ug/Kg		11/24/21 09:55	11/24/21 11:12	1
Acenaphthylene	ND		10	3.3	ug/Kg		11/24/21 09:55	11/24/21 11:12	1
Acenaphthene	ND		10	2.5	ug/Kg		11/24/21 09:55	11/24/21 11:12	1
Fluorene	ND		10	2.2	ug/Kg		11/24/21 09:55	11/24/21 11:12	1
Phenanthrene	ND		10	3.6	ug/Kg		11/24/21 09:55	11/24/21 11:12	1
Anthracene	ND		10	2.0	ug/Kg		11/24/21 09:55	11/24/21 11:12	1
Fluoranthene	ND		10	2.5	ug/Kg		11/24/21 09:55	11/24/21 11:12	1
Pyrene	ND		10	3.8	ug/Kg		11/24/21 09:55	11/24/21 11:12	1
Benzo[a]anthracene	ND		10	2.1	ug/Kg		11/24/21 09:55	11/24/21 11:12	1
Chrysene	ND		10	1.5	ug/Kg		11/24/21 09:55	11/24/21 11:12	1
Benzo[b]fluoranthene	ND		10	3.5	ug/Kg		11/24/21 09:55	11/24/21 11:12	1
Benzo[k]fluoranthene	ND		10	2.5	ug/Kg		11/24/21 09:55	11/24/21 11:12	1
Benzo[a]pyrene	ND		10	4.2	ug/Kg		11/24/21 09:55	11/24/21 11:12	1
Indeno[1,2,3-cd]pyrene	ND		10	3.0	ug/Kg		11/24/21 09:55	11/24/21 11:12	1
Dibenz(a,h)anthracene	ND		10	2.8	ug/Kg		11/24/21 09:55	11/24/21 11:12	1
Benzo[g,h,i]perylene	ND		10	2.4	ug/Kg		11/24/21 09:55	11/24/21 11:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*71*		*33 - 120*	*11/24/21 09:55*	*11/24/21 11:12*	*1*
2-Fluorobiphenyl (Surr)	*78*		*47 - 120*	*11/24/21 09:55*	*11/24/21 11:12*	*1*
p-Terphenyl-d14	*88*		*74 - 120*	*11/24/21 09:55*	*11/24/21 11:12*	*1*

Lab Sample ID: LCS 590-34160/2-A
Matrix: Solid
Analysis Batch: 34158

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34160

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Naphthalene	267	173		ug/Kg		65	45 - 120
2-Methylnaphthalene	267	170		ug/Kg		64	48 - 120
1-Methylnaphthalene	267	171		ug/Kg		64	44 - 120
Acenaphthylene	267	210		ug/Kg		79	52 - 120
Acenaphthene	267	206		ug/Kg		77	53 - 120
Fluorene	267	182		ug/Kg		68	55 - 120
Phenanthrene	267	182		ug/Kg		68	57 - 121
Anthracene	267	180		ug/Kg		67	60 - 120
Fluoranthene	267	181		ug/Kg		68	63 - 127
Pyrene	267	205		ug/Kg		77	61 - 125
Benzo[a]anthracene	267	204		ug/Kg		76	61 - 131
Chrysene	267	203		ug/Kg		76	67 - 127
Benzo[b]fluoranthene	267	193		ug/Kg		72	61 - 127
Benzo[k]fluoranthene	267	201		ug/Kg		75	63 - 127
Benzo[a]pyrene	267	216		ug/Kg		81	60 - 126
Indeno[1,2,3-cd]pyrene	267	176		ug/Kg		66	63 - 128
Dibenz(a,h)anthracene	267	185		ug/Kg		69	60 - 121
Benzo[g,h,i]perylene	267	198		ug/Kg		74	58 - 129

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

Lab Sample ID: LCS 590-34160/2-A
Matrix: Solid
Analysis Batch: 34158

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34160

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Nitrobenzene-d5	*68*		*33 - 120*
2-Fluorobiphenyl (Surr)	*78*		*47 - 120*
p-Terphenyl-d14	*87*		*74 - 120*

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 590-34178/2-A
Matrix: Solid
Analysis Batch: 34181

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34178

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		1.3	0.50	mg/Kg		11/24/21 14:53	11/26/21 20:09	1
Barium	ND		1.3	0.34	mg/Kg		11/24/21 14:53	11/26/21 20:09	1
Cadmium	ND		1.0	0.059	mg/Kg		11/24/21 14:53	11/26/21 20:09	1
Chromium	ND		1.3	0.18	mg/Kg		11/24/21 14:53	11/26/21 20:09	1
Lead	ND		3.0	1.5	mg/Kg		11/24/21 14:53	11/26/21 20:09	1
Selenium	ND		5.0	3.0	mg/Kg		11/24/21 14:53	11/26/21 20:09	1
Silver	ND		1.3	0.13	mg/Kg		11/24/21 14:53	11/26/21 20:09	1

Lab Sample ID: LCS 590-34178/1-A
Matrix: Solid
Analysis Batch: 34181

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34178

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	100	102		mg/Kg		102	80 - 120
Barium	100	101		mg/Kg		101	80 - 120
Cadmium	50.0	49.9		mg/Kg		100	80 - 120
Chromium	50.0	51.6		mg/Kg		103	80 - 120
Lead	50.0	53.8		mg/Kg		108	80 - 120
Selenium	100	105		mg/Kg		105	80 - 120
Silver	5.00	4.31		mg/Kg		86	80 - 120

Lab Sample ID: LCS 590-34253/1-A
Matrix: Solid
Analysis Batch: 34272

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34253

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	1.00	1.04		mg/L		104	80 - 120

Lab Sample ID: LB 590-34245/1-B
Matrix: Solid
Analysis Batch: 34272

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 34253

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.060	0.0051	mg/L		12/03/21 10:58	12/03/21 14:55	1

Client: GeoEngineers Inc
Job ID: 590-16359-2
Project/Site: Avista 415 E Sprague Phase II

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 590-34174/9-A
Matrix: Solid
Analysis Batch: 34228

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 34174

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hg	7.00	J	50	3.6	ug/Kg		11/24/21 12:55	11/30/21 15:36	1

Lab Sample ID: LCS 590-34174/8-A
Matrix: Solid
Analysis Batch: 34228

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34174

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Hg			200	231		ug/Kg		116	80 - 120		

Lab Chronicle

Client: GeoEngineers Inc
Job ID: 590-16359-2
Project/Site: Avista 415 E Sprague Phase II

Client Sample ID: DP-2(1-2)
Lab Sample ID: 590-16359-3
Date Collected: 11/11/21 09:35
Matrix: Solid
Date Received: 11/12/21 10:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7471B			0.68 g	50 mL	34174	11/24/21 12:56	AMB	TAL SPK
Total/NA	Analysis	7471B		20			34275	12/03/21 15:50	AMB	TAL SPK
Total/NA	Analysis	Moisture		1			34180	11/24/21 16:40	KBZ	TAL SPK

Client Sample ID: DP-2(1-2)
Lab Sample ID: 590-16359-3
Date Collected: 11/11/21 09:35
Matrix: Solid
Date Received: 11/12/21 10:45
Percent Solids: 92.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.49 g	2 mL	34160	11/24/21 09:55	NMI	TAL SPK
Total/NA	Analysis	8270E SIM		1			34158	11/24/21 19:15	NMI	TAL SPK
Total/NA	Prep	3050B			1.69 g	50 mL	34178	11/24/21 14:53	AMB	TAL SPK
Total/NA	Analysis	6010D		1			34181	11/26/21 20:13	AMB	TAL SPK

Client Sample ID: DP-2(4-5)
Lab Sample ID: 590-16359-4
Date Collected: 11/11/21 09:40
Matrix: Solid
Date Received: 11/12/21 10:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			100.10 g	2000.88 mL	34245	12/02/21 12:37	JSP	TAL SPK
TCLP	Prep	3010A			50 mL	50 mL	34253	12/03/21 10:58	AMB	TAL SPK
TCLP	Analysis	6010D		1			34272	12/03/21 15:03	JSP	TAL SPK

Client Sample ID: DP-10(4-5)
Lab Sample ID: 590-16359-18
Date Collected: 11/11/21 13:15
Matrix: Solid
Date Received: 11/12/21 10:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7471B			0.51 g	50 mL	34174	11/24/21 12:56	AMB	TAL SPK
Total/NA	Analysis	7471B		1			34228	11/30/21 15:45	AMB	TAL SPK
Total/NA	Analysis	Moisture		1			34180	11/24/21 16:40	KBZ	TAL SPK

Client Sample ID: DP-10(4-5)
Lab Sample ID: 590-16359-18
Date Collected: 11/11/21 13:15
Matrix: Solid
Date Received: 11/12/21 10:45
Percent Solids: 74.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.41 g	2 mL	34160	11/24/21 09:55	NMI	TAL SPK
Total/NA	Analysis	8270E SIM		1			34158	11/24/21 19:39	NMI	TAL SPK
Total/NA	Prep	3050B			1.32 g	50 mL	34178	11/24/21 14:53	AMB	TAL SPK
Total/NA	Analysis	6010D		1			34181	11/26/21 20:29	AMB	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
Job ID: 590-16359-2
Project/Site: Avista 415 E Sprague Phase II

Client Sample ID: DP-11(1.5-2.5)
Lab Sample ID: 590-16359-19
Date Collected: 11/11/21 13:30
Matrix: Solid
Date Received: 11/12/21 10:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			100.07 g	2001.10 mL	34245	12/02/21 12:37	JSP	TAL SPK
TCLP	Prep	3010A			50 mL	50 mL	34253	12/03/21 10:58	AMB	TAL SPK
TCLP	Analysis	6010D		1			34272	12/03/21 15:08	JSP	TAL SPK

Client Sample ID: DP-12(1-2)
Lab Sample ID: 590-16359-21
Date Collected: 11/11/21 13:50
Matrix: Solid
Date Received: 11/12/21 10:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			100.18 g	2001.87 mL	34245	12/02/21 12:37	JSP	TAL SPK
TCLP	Prep	3010A			50 mL	50 mL	34253	12/03/21 10:58	AMB	TAL SPK
TCLP	Analysis	6010D		1			34272	12/03/21 15:12	JSP	TAL SPK

Client Sample ID: DP-12(3-3.5)
Lab Sample ID: 590-16359-22
Date Collected: 11/11/21 13:55
Matrix: Solid
Date Received: 11/12/21 10:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7471B			0.54 g	50 mL	34174	11/24/21 12:56	AMB	TAL SPK
Total/NA	Analysis	7471B		1			34228	11/30/21 15:47	AMB	TAL SPK
Total/NA	Analysis	Moisture		1			34180	11/24/21 16:40	KBZ	TAL SPK

Client Sample ID: DP-12(3-3.5)
Lab Sample ID: 590-16359-22
Date Collected: 11/11/21 13:55
Matrix: Solid
Date Received: 11/12/21 10:45
Percent Solids: 76.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.72 g	2 mL	34160	11/24/21 09:55	NMI	TAL SPK
Total/NA	Analysis	8270E SIM		1			34158	11/24/21 20:04	NMI	TAL SPK
Total/NA	Prep	3050B			1.32 g	50 mL	34178	11/24/21 14:53	AMB	TAL SPK
Total/NA	Analysis	6010D		1			34181	11/26/21 20:33	AMB	TAL SPK

Client Sample ID: DP-14(8-9)
Lab Sample ID: 590-16359-26
Date Collected: 11/11/21 15:10
Matrix: Solid
Date Received: 11/12/21 10:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7471B			0.59 g	50 mL	34174	11/24/21 12:56	AMB	TAL SPK
Total/NA	Analysis	7471B		1			34228	11/30/21 15:50	AMB	TAL SPK
Total/NA	Analysis	Moisture		1			34180	11/24/21 16:40	KBZ	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
Job ID: 590-16359-2
Project/Site: Avista 415 E Sprague Phase II

Client Sample ID: DP-14(8-9)
Lab Sample ID: 590-16359-26

Date Collected: 11/11/21 15:10
Matrix: Solid
Date Received: 11/12/21 10:45
Percent Solids: 74.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			15.47 g	2 mL	34160	11/24/21 09:55	NMI	TAL SPK
Total/NA	Analysis	8270E SIM		1			34158	11/24/21 20:28	NMI	TAL SPK
Total/NA	Prep	3050B			1.39 g	50 mL	34178	11/24/21 14:53	AMB	TAL SPK
Total/NA	Analysis	6010D		1			34181	11/26/21 20:37	AMB	TAL SPK

Laboratory References:

TAL SPK = Eurofins TestAmerica, Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Accreditation/Certification Summary

Client: GeoEngineers Inc
Job ID: 590-16359-2
Project/Site: Avista 415 E Sprague Phase II

Laboratory: Eurofins TestAmerica, Spokane

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Washington	State	C569	01-06-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

Method Summary

Client: GeoEngineers Inc
Project/Site: Avista 415 E Sprague Phase II

Job ID: 590-16359-2

Method	Method Description	Protocol	Laboratory
8270E SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL SPK
6010D	Metals (ICP)	SW846	TAL SPK
7471B	Mercury (CVAA)	SW846	TAL SPK
Moisture	Percent Moisture	EPA	TAL SPK
1311	TCLP Extraction	SW846	TAL SPK
3010A	Preparation, Total Metals	SW846	TAL SPK
3050B	Preparation, Metals	SW846	TAL SPK
3550C	Ultrasonic Extraction	SW846	TAL SPK
7471B	Preparation, Mercury	SW846	TAL SPK

Protocol References:

EPA = US Environmental Protection Agency

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

Laboratory References:

TAL SPK = Eurofins TestAmerica, Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-16359-2

Login Number: 16359
List Number: 1
Creator: Vaughan, Madison 1

List Source: Eurofins TestAmerica, Spokane

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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ANALYTICAL REPORT

Eurofins TestAmerica, Spokane
11922 East 1st Ave
Spokane, WA 99206
Tel: (509)924-9200

Laboratory Job ID: 590-16359-4
Client Project/Site: Avista 415 E Sprague Phase II

For:
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Attn: Josh Lee

Randee Arrington

Authorized for release by:
12/13/2021 4:00:25 PM

Randee Arrington, Lab Director
(509)924-9200
Randee.Arrington@Eurofinset.com

LINKS

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www.eurofinsus.com/Env

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

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

Table of Contents

Cover Page 1
Table of Contents 2
Case Narrative 3
Sample Summary 4
Definitions 5
Client Sample Results 6
QC Sample Results 7
Chronicle 8
Certification Summary 9
Method Summary 10
Chain of Custody 11
Receipt Checklists 14

Case Narrative

Client: GeoEngineers Inc
Project/Site: Avista 415 E Sprague Phase II

Job ID: 590-16359-4

Job ID: 590-16359-4

Laboratory: Eurofins TestAmerica, Spokane

Narrative

Receipt
The samples were received on 11/12/2021 10:45 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.0º C.

Receipt Exceptions
The following sample was activated for TCLP Mercury analysis by the client on 12/08/21: DP-2(1-2) (590-16359-3). This analysis was not originally requested on the chain-of-custody (COC).

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

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

Sample Summary

Client: GeoEngineers Inc
Project/Site: Avista 415 E Sprague Phase II

Job ID: 590-16359-4

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-16359-3	DP-2(1-2)	Solid	11/11/21 09:35	11/12/21 10:45

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Client Sample Results

Client: GeoEngineers Inc
Job ID: 590-16359-4
Project/Site: Avista 415 E Sprague Phase II

Client Sample ID: DP-2(1-2)
Lab Sample ID: 590-16359-3
Date Collected: 11/11/21 09:35
Matrix: Solid
Date Received: 11/12/21 10:45

Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.27		0.20	0.090	ug/L		12/10/21 10:47	12/10/21 15:54	1

Method: 7470A - Mercury (CVAA)

Lab Sample ID: LCS 590-34360/8-A
Matrix: Solid
Analysis Batch: 34376

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 34360

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	2.00	1.84		ug/L		92	80 - 120

Lab Sample ID: LB 590-34328/1-C
Matrix: Solid
Analysis Batch: 34376

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 34360

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.090	ug/L		12/10/21 10:47	12/10/21 15:38	1

Lab Chronicle

Client: GeoEngineers Inc
Job ID: 590-16359-4
Project/Site: Avista 415 E Sprague Phase II

Client Sample ID: DP-2(1-2)
Lab Sample ID: 590-16359-3
Date Collected: 11/11/21 09:35
Matrix: Solid
Date Received: 11/12/21 10:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			1.0 g	1.0 mL	34328	12/08/21 14:30	AMB	TAL SPK
TCLP	Prep	7470A			50 mL	50 mL	34360	12/10/21 10:47	AMB	TAL SPK
TCLP	Analysis	7470A		1			34376	12/10/21 15:54	AMB	TAL SPK

Laboratory References:

TAL SPK = Eurofins TestAmerica, Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Accreditation/Certification Summary

Client: GeoEngineers Inc
Job ID: 590-16359-4
Project/Site: Avista 415 E Sprague Phase II

Laboratory: Eurofins TestAmerica, Spokane

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Washington	State	C569	01-06-22

Method Summary

Client: GeoEngineers Inc
Project/Site: Avista 415 E Sprague Phase II

Job ID: 590-16359-4

Method	Method Description	Protocol	Laboratory
7470A	Mercury (CVAA)	SW846	TAL SPK
1311	TCLP Extraction	SW846	TAL SPK
7470A	Preparation, Mercury	SW846	TAL SPK

Protocol References:

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

Laboratory References:

TAL SPK = Eurofins TestAmerica, Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Eurofins TestAmerica, Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone: 509-924-9200 Fax: 509-924-9290

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: JML	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-6906-2026.1
Client Contact: Josh Lee	Phone: 406-239-7810	E-Mail: Randee.Arrington@Eurofinset.com	State of Origin:	Page: Page 1 of 3
Company: GeoEngineers Inc	PWSID:			Job #:
Address: 523 East Second Ave	Due Date Requested: 1-Week **			
City: Spokane	TAT Requested (days): 1-Week **			
State, Zip: WA, 99202	Compliance Project: Δ Yes Δ No			
Phone: 406-239-7810(Tel)	PO #: Purchase Order not required			
Email: jmlee@geoengineers.com	WO #:			
Project Name: Avista 415 E Sprague Phase II	Project #: 59002266			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

All jars use B- Changed to DP-

Special Instructions/Note:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010C, 7471B, 8270E_SIM	NWTPH_Dx - DRO and RRO	8260D, NWTPH_Gx_MS	Total Number of containers	
			Preservation Code:				N	N	F		
DP-1(1-2)	11/11/2021	0915	G	Solid			X			2	Hold samples not method pending.
DP-1(4-5)		0920		Solid						2	
DP-2(1-2)		0935		Solid						2	
DP-2(4-5)		0940		Solid			X			2	
DP-3(1.5-2.5)		0945		Solid			X			2	
DP-3(10-11)		0950		Solid			X	X	X	4	
DP-4(2-3)		1020		Solid			X			1	
DP-5(1-2)		1040		Solid			X			1	
DP-5(9-10)		1050		Solid						1	
DP-6(1-2)		1120		Solid			X			1	
DP-6(8-9)		1130		Solid						1	

590-16359 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	11/12/21 10:45	GEI		11/12/2021 10:45	ESASR
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 2.0C corr'd IR006

Eurofins TestAmerica, Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone: 509-924-9200 Fax: 509-924-9290

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: JML	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-6906-2026.2
Client Contact: Josh Lee	Phone: 406-239-7810	E-Mail: Randee.Arrington@Eurofinset.com	State of Origin:	Page: Page 2 of 3
Company: GeoEngineers Inc	PWSID:			Job #:
Address: 523 East Second Ave	Due Date Requested: 1-Week **			
City: Spokane	TAT Requested (days): 1-Week **			
State, Zip: WA, 99202	Compliance Project: Δ Yes Δ No			
Phone: 406-239-7810(Tel)	PO #: Purchase Order not required			
Email: jmlee@geoengineers.com	WO #:			
Project Name: Avista 415 E Sprague Phase II	Project #: 59002266			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010C, 7471B, 8270E_SIM	NWTPH_Dx - DRO and RRO	8260D, NWTPH_Gx_MS	Total Number of containers	Special Instructions/Note:
		Preservation Code:					N	N	F		
DP-7 (1-2)	11/11/2021	1200	G	Solid			X			1	
DP-7 (4-5)		1205		Solid						1	
DP-8 (0.5-1.5)		1220		Solid			X			1	
DP-8 (4-5)		1230		Solid						1	
DP-9 (1.5-2.5)		1300		Solid			X			1	
DP-10 (1-2)		1310		Solid			X			1	
DP-10 (4-5)		1315		Solid						1	
DP-11 (1.5-2.5)		1330		Solid			X			1	
DP-11 (4-4.5)		1335		Solid						1	
DP-12 (1-2)		1350		Solid			X			1	
DP-12 (3-3.5)		1355		Solid						1	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	[signature]	11/12/21 10:45	GEI	[signature]	11/12/21 1045	EPSP
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Eurofins TestAmerica, Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone: 509-924-9200 Fax: 509-924-9290

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: JML	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-6906-2026.3
Client Contact: Josh Lee	Phone: 406-239-7810	E-Mail: Randee.Arrington@Eurofinset.com	State of Origin:	Page: Page 3 of 3
Company: GeoEngineers Inc	PWSID:			Job #:
Address: 523 East Second Ave	Due Date Requested: 1-Week **			
City: Spokane	TAT Requested (days): 1-Week **			
State, Zip: WA, 99202	Compliance Project: Δ Yes Δ No			
Phone: 406-239-7810(Tel)	PO #: Purchase Order not required			
Email: jmlee@geoengineers.com	WO #:			
Project Name: Avista 415 E Sprague Phase II	Project #: 59002266			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010C, 7471B, 8270E_SIM	NWTPH_Dx - DRO and RRO	8260D, NWTPH_Gx_MS	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	F		
DP-13 (1-2)	11/11/2021	1405	G	Solid			X			1	
DP-13 (8-9)		1440		Solid						1	
DP-14 (4-5)		1500		Solid			X			1	
DP-14 (8-9)		1510		Solid						1	
DP-15 (2-3)		1530		Solid			X			1	
DP-15 (9-10)		1540		Solid						1	
Trip Blank				Solid					X	3	
				Solid							
				Solid							
				Solid							
				Solid							

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	11/12/21 10:45	GET	[signature]	11/12/2021 10:45	EJA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-16359-4

Login Number: 16359
List Number: 1
Creator: Vaughan, Madison 1

List Source: Eurofins TestAmerica, Spokane

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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

It is important to recognize that the geoscience practices (geotechnical engineering, geology and environmental science) rely on professional judgment and opinion to a greater extent than other engineering and natural science disciplines, where more precise and/or readily observable data may exist. To help clients better understand how this difference pertains to our services, GeoEngineers includes the following explanatory "limitations" provisions in its reports. Please confer with GeoEngineers if you need to know more how these "Report Limitations and Guidelines for Use" apply to your project or site.

Environmental Assessment Services are Performed for Specific Purposes, Persons and Projects

This report has been prepared for Avista for the project specifically identified in the report. The information contained herein is not applicable to other sites or projects.

GeoEngineers structures its services to meet the specific needs of its clients. No party other than the party to whom this report is addressed may rely on the product of our services unless we agree to such reliance in advance and in writing. Within the limitations of the agreed scope of services for the project, and its schedule and budget, GeoEngineers' services have been executed in accordance with Avista Contract No. R-39593, Work Authorization No. 13 dated January 10, 2019, and generally accepted environmental engineering practices in this area at the time this report was prepared. GeoEngineers does not authorize, and will not be responsible for, the use of this report for any purposes or projects other than those identified in the report.

Environmental Assessment Report is based on a Unique Set of Project-Specific Factors

This report has been prepared for the Avista Sprague and Riverside Parcels site in Spokane, 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, it is important not to 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.

For example, changes that can affect the applicability of this report include those that affect:

- the function of the proposed structure;
- elevation, configuration, location, orientation or weight of the proposed structure;

[1] Developed based on material provided by ASFE, Professional Firms Practicing in the Geosciences; www.asfe.org.

- composition of the design team; or
- project ownership.

If changes occur after the date of this report, GeoEngineers cannot be responsible for any consequences of such changes in relation to this report unless we have been given the opportunity to review our interpretations and recommendations. Based on that review, GeoEngineers can provide written modifications or confirmation, as appropriate.

Environmental Concerns are Not Covered

Unless environmental services were specifically included in GeoEngineers' scope of services, this report does not provide any environmental findings, conclusions, or recommendations, including but not limited to, the likelihood of encountering underground storage tanks or regulated contaminants.

Subsurface Conditions Can Change

This geotechnical or geologic report is based on conditions that existed at the time the study was performed. The findings and conclusions of this report may be affected by the passage of time, by man-made events such as construction on or adjacent to the site, new information or technology that becomes available subsequent to the report date, or by natural events such as floods, earthquakes, slope instability or groundwater fluctuations. If more than a few months have passed since issuance of our report or work product, or if any of the described events may have occurred, please contact GeoEngineers before applying this report for its intended purpose so that we may evaluate whether changed conditions affect the continued reliability or applicability of our conclusions and recommendations.

Do Not Redraw the Exploration Logs

Geotechnical engineers and geologists prepare final boring and testing logs based upon their interpretation of field logs and laboratory data. The logs included in a geotechnical engineering or geologic report should never be redrawn for inclusion in architectural or other design drawings. Photographic or electronic reproduction is acceptable but separating logs from the report can create a risk of misinterpretation.

Give Contractors a Complete Report and Guidance

To help reduce the risk of problems associated with unanticipated subsurface conditions, GeoEngineers recommends giving contractors the complete geotechnical engineering or geologic report, including these "Report Limitations and Guidelines for Use." When providing the report, you should preface it with a clearly written letter of transmittal that:

- advises contractors that the report was not prepared for purposes of bid development and that its accuracy is limited; and
- encourages contractors to confer with GeoEngineers and/or to conduct additional study to obtain the specific types of information they need or prefer.

Contractors are Responsible for Site Safety on Their Own Construction Projects

GeoEngineers' geotechnical recommendations are not intended to direct the contractor's procedures, methods, schedule or management of the work site. The contractor is solely responsible for job site safety and for managing construction operations to minimize risks to on-site personnel and adjacent properties.

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.

A Client that desires these specialized services is advised to obtain them from a consultant who offers services in this specialty.

GeoEngineers