Data Gaps Site Assessment

Airport Kwik Stop
Ione, Washington

for
Washington State Department of Ecology

March 8, 2024

GeoEngineers
Earth Science + Technology

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523 East Second Avenue
Spokane, Washington 99202
509.363.3125

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File No. 0504-058-07

March 8, 2024

Prepared for:

Washington State Department of Ecology
Eastern Regional Office
4601 North Monroe Street
Spokane, Washington 99205-1295

Attention: Elizabeth Kercher, LUST Site Manager

Prepared by:

GeoEngineers, Inc.
523 East Second Avenue
Spokane, Washington 99202
509.363.3125

Lola T. Otoki
Staff Environmental Scientist

Justin D. Orr, LG
Geologist

Scott H. Lathen, PE
Associate Environmental Engineer

JDO:SHL:ch:dt

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1.0 INTRODUCTION

This report presents the results of the Data Gaps Assessment completed at the Airport Kwik Stop site (Site) located at 238 Greenhouse Road (Property) in Ione, Washington. The Site is shown on the Vicinity Map, Figure 1.

The Washington State Department of Ecology (Ecology) plans to complete an interim action at the Site (Ecology Cleanup Site Identification Number 4203) where petroleum hydrocarbons from former underground storage tank (UST) dispenser release(s) at the former Airport Kwik Stop contaminated soil and groundwater. The planned interim action included removal of former fuel station infrastructure and excavation of shallow contaminated soil. The purpose of the Data Gaps Assessment was to evaluate the current nature and extent of soil and groundwater contamination at the Site to assist with the design of the interim action.

This report was prepared in accordance with our Ecology-approved Work Plan (GeoEngineers 2023b), executed under Amendment No. 1 to TD&H Engineering, Inc.'s (TD&H) Contract No. 2200083 with Ecology (GeoEngineers 2023a).

2.0 SITE DESCRIPTION AND BACKGROUND

The Airport Kwik Stop site is located in Ione, Washington, to the north and east of the Ione Municipal Airport. The site generally slopes to the east toward the Pend Oreille River and includes the former Airport Kwik Stop property, the Former Cabin Grill property and undeveloped properties to the east (downgradient) of the former Airport Kwik Stop. Current property use at each of these properties is as follows:

- Former Airport Kwik Stop: The former Kwik Stop building located at the northwest corner of the intersection of State Route 31 (SR 31) and Greenhouse Road previously operated as a general store and gasoline service station. The general store has not dispensed gasoline for many years; however, the former store building, fuel pumps and associated lines are still on site.
- Former Cabin Grill: The Former Cabin Grill property is currently a private residence.
- Undeveloped Properties Downgradient (East) of the Airport Kwik Stop: The properties east of the Airport Kwik Stop across SR 31 consist of undeveloped timber and pasture land and are referred to as 'Vacant Property.'

2.1. Previous Site Investigations

Between 2010 and 2022, GeoEngineers and Ecology completed numerous site assessments and groundwater sampling events to characterize contamination at the site. Site characterization and groundwater monitoring results indicated gasoline-range petroleum hydrocarbon (GRPH)-contaminated groundwater was present beneath the site, extending from the former Airport Kwik Stop property, downgradient to the Cabin Grill property and undeveloped property to the north, east and south of the Cabin Grill property (GeoEngineers 2017).

GeoEngineers and Ecology also conducted multiple interim remedial actions including soil vapor extraction and air sparge treatment systems. GeoEngineers also developed an in-situ remediation plan to address the contamination present in soil and groundwater at the site via a combination of bioremediation amendment

and in-situ chemical oxidation (ISCO) injections (GeoEngineers 2017). One round of this in-situ treatment was performed in 2017.

2.2. Current Status

In 2021, TD&H was contracted by Ecology to oversee the design and implementation of a remediation plan that included demolition of the fuel canopy over the former fuel pump islands, excavation of contaminated soil, addition of remedial products at the bottom of the excavation to provide passive treatment to remaining contaminated soil and groundwater and site restoration. During the design process, the cost to shore the excavation and the limited space for excavation led to questions about the effectiveness of excavating contaminated soil, particularly since the subsurface conditions were not investigated following previous remediation efforts. In March 2023, TD&H and GeoEngineers recommended additional investigation to assess current contaminant concentrations in soil and groundwater to determine if the planned remedial approach was appropriate.

Specifically, the goals of the additional soil and groundwater sampling described in this assessment report were as follows:

- **Soil data gaps:** Collect current soil data within the former release area to estimate the remaining vadose-zone contamination, particularly within the upper 10 feet of the soil column, which is accessible for remedial excavation using a driven shoring system. Soil data was also collected to evaluate potential in-situ remedial alternatives for the site.
- **Groundwater data gaps:** Collect current groundwater data over two groundwater monitoring events to evaluate remaining dissolved-phase contaminant concentrations. Groundwater data was also collected to evaluate potential in-situ remedial alternatives for the site.

3.0 FIELD INVESTIGATION ACTIVITIES

To assess current soil and groundwater contamination at the site, GeoEngineers performed a limited soil and groundwater assessment. The following sections describe field activities completed, including drilling and soil sampling and groundwater sampling, and a discussion of observed subsurface conditions. Based on site conditions, some modifications to the Work Plan were implemented described below.

3.1. Soil Assessment

Cascade Environmental Drilling, LLC (Cascade) advanced five borings (B-8 through B-12) to approximately 41.5 feet below ground surface (bgs) beneath and surrounding the fuel station canopy between September 13 and September 14, 2023, using a limited access Hollow Stem Auger drill rig. Boring locations are shown in Figure 2, and boring logs are included in Appendix A. Boring locations were cleared for underground utilities prior to drilling.

Soil samples were obtained from the borings using a Dames and Moore (DM) sampler at 2.5-foot intervals. Soil samples were field screened for petroleum hydrocarbons using photoionization detector (PID) measurements and water sheen and odor observations. Field screening results are included in the boring logs (Appendix A), and PID results are summarized in Table I below.

TABLE I. SUMMARY OF PID FIELD SCREENING RESULTS

Screening Depth	PID Results (ppm)				
	B-8	B-9	B-10	B-11	B-12
2.5 – 4	2.7	1.8	--	23	<1
5 – 6.5	3.8	1.0	<1	3,109	114
7.5 – 9	1.7	1.1	--	85.9	9.6
10 – 11.5	2.7	1.4	<1	14.6	1.3
12.5 – 14	1.8	2.4	--	10.1	3.1
15 – 16.5	1.8	2.0	<1	14.7	5.2
17.5 – 19	2.3	1.2	--	26.4	10
20 – 21.5	3.3	<1	<1	36.7	<1
22.5 – 24	8.5	1.3	<1	32	6.2
25 – 26.5	3.9	<1	<1	41.3	1.5
27.5 – 29	4.5	1.2	<1	78.2	1.3
30 – 31.5	2.9	1.4	<1	15	1.1
32.5 – 34	1.6	<1	<1	596.3	1.3
35 – 36.5	1,017	1.0	<1	218	4.1
37.5 – 39	1,585	440	<1	265	1,136
40 – 41.5	<1	180	<1	28.2	42

Notes: PID = photoionization detector; ppm = parts per million; <1 = less than 1 ppm; '—' = depth interval not screened

Soil from each sample interval was placed in laboratory-prepared sample containers and four samples from each boring were submitted for chemical analysis as summarized in Table II below. Borings were backfilled with bentonite chips and were completed with concrete or surface soil to match the existing ground surface.

TABLE II. SUMMARY OF SOIL SAMPLES SUBMITTED FOR ANALYSIS

Soil Boring	Sample Interval Submitted for Analysis (feet bgs)	Sample Name
B-8	12.5 – 14	B-8 (12.5 – 14)
	25 – 26.5	B-8 (25 – 26.5)
	37.5 – 39	B-8 (37.5 – 39)
	40 – 41.5	B-8 (40 – 41.5)
B-9	12.5 – 14	B-9 (12.5 – 14)
	27.5 – 29	B-9 (27.5 – 29)
	37.5 – 39	B-9 (37.5 – 39)
	40 – 41.5	B-9 (40 – 41.5)
B-10	10 – 11.5	B-10 (10 – 11.5)
	25 – 26.5	B-10 (25 – 26.5)
	32.5 – 34	B-10 (32.5 – 34)

Soil Boring	Sample Interval Submitted for Analysis (feet bgs)	Sample Name
	40 – 41.5	B-11 (40 – 41.5)
B-11	5 – 6.5	B-11 (5 – 6.5)
	20 – 21.5	B-11 (20 – 21.5)
	32.5 – 34	B-11 (32.5 – 34)
	40 – 41.5	B-11 (40 – 41.5)
B-12	5 – 6.5	B-12 (5 – 6.5)
	17.5 – 19	B-12 (17.5 – 19)
	37.5 – 39	B-12 (37.5 – 39)
	40 – 41.5	B-12 (40 – 41.5)

3.2. Subsurface Conditions

Subsurface soil observed from borings B-8 through B-12 generally consisted of fine to coarse sand with occasional gravel between 2.5 feet to 39 feet overlying sand with trace clay from 40 to 41.5 feet. Wet soil representative of groundwater was observed in the samples collected from 37.5 and 40 feet bgs.

3.3. Groundwater Assessment

Depth to water and well headspace volatile organic vapor concentrations were measured, wells were checked for the presence of product and groundwater samples were collected in monitoring wells MW-3, MW-8, MW-9, MW-10, MW-11, MW-14, MW-15, MW-16, MW-17 and MW-18 in September and November 2023 in accordance with the Work Plan (GeoEngineers 2023b).

Measured groundwater elevations ranged from approximately 2072.5 feet near the former Airport Kwik Stop property, to approximately 2069 to the east-southeast toward the Pend Oreille River. The calculated groundwater gradient was approximately 0.003 feet per foot to the southeast, consistent with previous groundwater data from the site. Groundwater elevation contours are shown for each monitoring event (September and November) in Figures 3 and 4. Groundwater elevations and well headspace measurements are included in Table 1. Petroleum non-aqueous phase liquid (product) was not observed in any of the monitoring wells.

A groundwater sample and duplicate sample were collected from MW-8 on September 12, 2023. Groundwater samples were collected from monitoring wells MW-3, MW-9, MW-10, MW-11, MW-15 and MW-18 on September 15, 2023. On November 29 and 30, 2023, a second round of groundwater samples were collected from monitoring wells MW-3, MW-8, MW-9, MW-10, MW-11, MW-15, and MW-18, with one duplicate at MW-8. Groundwater quality parameters at the time of sample collection are summarized in Table III below.

TABLE III. GROUNDWATER FIELD PARAMETERS

Well ID	Sample Date	Field Measured Water Quality Parameters						
		Depth to Groundwater (feet bgs)	pH (pH units)	Specific Conductivity (µS/cm)	ORP (mV)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	Temperature (°C)
MW-3	09/15/23	37.61	6.97	872	15.6	0.59	6.34	10.4
	11/30/23	37.86	7.34	804	-70.6	0.43	27.51	8.8
MW-8	09/12/23	36.84	6.98	1,052	44.9	0.42	7.10	10.6
	11/30/23	37.08	7.19	1,476	-39.1	0.10	5.63	8.6
MW-9	09/15/23	37.40	7.30	554	100.9	5.42	15.00	9.3
	11/30/23	37.68	7.68	515	175.0	4.68	6.00	8.2
MW-10	09/15/23	15.90	7.31	518	124.5	4.89	2.54	12.0
	11/29/23	16.06	7.70	510	100.8	5.11	3.00	9.2
MW-11	09/15/23	22.30	7.28	508	129.7	2.10	3.42	10.8
	11/29/23	22.53	7.67	580	183.1	2.11	4.68	7.6
MW-14	09/15/23	31.96	Not Sampled					
	11/29/23	32.19						
MW-15	09/15/23	42.00	7.32	527	135.9	3.42	10.78	15.1
	11/29/23	42.21	6.00	488.8	167.1	3.28	12.77	8.1
MW-16	09/15/23	16.10	Not Sampled					
	11/29/23	16.25						
MW-17	09/15/23	37.35	Not Sampled					
	11/29/23	37.59						
MW-18	09/15/23	21.73	7.44	395.5	112.3	9.68	2.94	10.30
	11/29/23	22.09	7.80	367.2	139.1	8.85	3.51	8.7

Notes:
ORP = oxygen reduction potential; µS/cm = micro-Siemens per centimeter; mV = millivolts; mg/L = milligrams per liter; NTU = nephelometric turbidity unit; C = Celsius

3.4. Investigation-Derived Waste

Investigation-derived waste (IDW), including soil cuttings, purge water, and decontamination fluids from assessment activities were placed in thirteen 55-gallon drums and stored in the garage building west of the former service station (Figure 2) pending waste profiling and off-site disposal.

4.0 CHEMICAL ANALYTICAL RESULTS

The following sections describe soil and groundwater chemical analytical results. Laboratory reports and data validation reports are included in Appendix B.

4.1. Soil Chemical Analytical Results

Twenty soil samples (four per boring) and one duplicate sample were submitted to Eurofins Environment Testing (Eurofins) in Spokane Valley, Washington for analysis of the following contaminants of concern (COCs):

- GRPH using Northwest Method NWTPH-Gx; and
- Benzene, toluene, ethylbenzene, xylenes and naphthalene (BTEXN) using United States Environmental Protection Agency (EPA) Method 8260D.

Four samples including B-8 (40 – 41.5), B-9 (40 – 41.5), B-11 (5 – 6.5) and B-12 (5 – 6.5) were also analyzed for the following natural background parameters to assist with the development of potential treatment alternatives for the site:

- Calcium, iron, magnesium, manganese, potassium and sodium using EPA Method 6010D; and
- Total organic carbon (TOC) using EPA Method 9060.

Soil chemical analytical results are presented and compared to the Washington State Model Toxics Control Act (MTCA) Method A cleanup levels for unrestricted land use in Table 2, and are summarized below:

- GRPH was detected at concentrations greater than the MTCA Method A cleanup level (100 milligrams per kilogram [mg/kg] when benzene is not present in soil) in samples B-8 (37.5 – 39 & 40 – 41.5), B-11 (5 – 6.5 & 32.5 - 34) and B-12 (5 – 6.5 & 37.5 – 39).
- GRPH was either not detected or was detected at concentrations less than the MTCA Method A cleanup level in the other soil samples analyzed.
- Benzene was not detected in the soil samples analyzed.
- Toluene and ethylbenzene were either not detected or were detected at concentrations less than their respective MTCA Method A cleanup levels in the samples analyzed.
- Total xylenes were detected at a concentration (110 mg/kg) greater than the MTCA Method A cleanup level (9 mg/kg) in one sample, B-11 (5 – 6.5). Total xylenes were either not detected or were detected at concentrations less than the MTCA Method A cleanup level in the other soil samples analyzed.
- Naphthalene was detected at a concentration (12 mg/kg) greater than the MTCA Method A cleanup level (5 mg/kg) in one sample, B-11 (5 – 6.5). Naphthalene was either not detected or was detected at concentrations less than the MTCA Method A cleanup level in the other soil samples analyzed.

4.2. Groundwater Chemical Analytical Results

Seven groundwater samples and one duplicate were submitted on September 18, 2023, and again on November 30, 2023, to Eurofins for analysis of GRPH and BTEXN using the methods described above. The samples from MW-3, MW-8, MW-9 and MW-18 were also analyzed for the following background parameters to assist with the development of potential treatment alternatives for the site:

- Total and dissolved iron and manganese using EPA Method 200.8;
- TOC using Standard Method (SM) 5310C;
- Alkalinity using SM 2320B;

- Methane using RSK-175; and
- Nitrate and sulfate using EPA Method 300.0.

Groundwater chemical analytical results are presented and compared to MTCA Method A cleanup levels in Table 3, and are summarized below:

- GRPH was detected at a concentration equal to or exceeding the MTCA Method A CUL (800 micrograms per liter [µg/L]) in monitoring wells MW-3 and MW-8 during the September monitoring event. Note that the laboratory method blank for the September event had detectable GRPH. GRPH was either not detected or was detected at concentrations less than the MTCA Method A cleanup level in the remaining groundwater samples analyzed.
- Benzene, toluene, ethylbenzene, xylenes and naphthalene were either not detected or detected at concentrations less than their respective MTCA Method A cleanup levels in the samples analyzed.

5.0 SUMMARY AND RECOMMENDATIONS

Five soil borings (B-8 through B-12) were advanced surrounding and beneath the former fuel island at the former Airport Kwik Stop property where gasoline UST dispenser release(s) contaminated soil and groundwater. Soil samples were collected from each boring and submitted for chemical analysis of site COCs and additional soil quality parameters. Seven existing monitoring wells (MW-3, MW-8, MW-9, MW-10, MW-11, MW-15 and MW-18) were sampled in September and November. Groundwater samples were submitted for chemical of site COCs and additional groundwater quality parameters. Depth to water measurements were collected from the monitoring wells sampled and three additional wells (MW-14, MW-16 and MW-17). This soil and groundwater data was collected to evaluate the current nature and extent of contamination at the site and to assist with design of the planned remedial action.

5.1. Shallow Soil Contamination

Gasoline-related contamination in soil is present near the ground surface and within the smear zone surrounding the soil/groundwater interface based on the chemical analytical results. The most contaminated soil was observed close to the northernmost fuel island near the ground surface in boring B-11 where GRPH and the volatiles total xylenes and naphthalene exceeded MTCA Method A CULs in the sample collected from 5 to 6.5 feet bgs (2,200 mg/kg GRPH). Smear zone contamination is associated with contaminated groundwater and is discussed below. Between the near surface contamination and the smear zone, GRPH concentrations were detected at concentrations less than the MTCA Method A CUL in borings B-11 and B-12 between 17.5 and 21 feet bgs and were not detectable in the remaining soil samples collected from this zone.

5.2. Groundwater and Smear Zone Contamination

Gasoline-related groundwater contamination was identified just east of the former fuel islands on the Airport Kwik Stop property in monitoring well MW-8, and at the east-adjacent Vacant Property across Highway 31 in monitoring well MW-3 which is approximately 200 feet downgradient. GRPH in these wells slightly exceeded the MTCA Method A CUL in September (1,000 µg/L in MW-3 and 1,700 µg/L in MW-8) but were below the CUL in November. GRPH was detected at concentrations below the MTCA Method A CUL at wells further downgradient including MW-9, MW-10 and MW-11, and was not detected in cross-gradient

wells MW-15 and MW-18. These results are consistent with groundwater data collected at the site by Ecology (Ecology 2022).

Note that groundwater was not sampled on the downgradient former Cabin Grill property where GRPH-contamination has historically been present in multiple wells including MW-5. During the last monitoring event conducted in MW-5 in August 2021, the GRPH concentration was 4,160 µg/L GRPH, compared to 8,600 µg/L in MW-8 on the former Airport Kwik Stop property. We understand that the Cabin Grill property owner has not granted access for sampling since August 2021. GRPH-contaminated groundwater is likely still present beneath the former Cabin Grill property based on the 2021 data from wells MW-5 and MW-8 and the 2023 data from MW-8.

Gasoline-related contamination in soil within the smear zone is an order of magnitude lower (approximately 110 to 150 mg/kg) than the observed shallow soil contamination. Smear zone contamination was observed in borings B-8, B-11 and B-12, closest to the fuel islands at depths between approximately 32.5 and 39 feet bgs.

5.3. Recommendations

Shallow soil contamination is present under the canopy and former fuel dispenser islands near B-11 and B-12 above 10 feet bgs. Some of this soil is accessible for a limited remedial excavation without shoring. Assuming a 3-to-5-foot setback from the east face of the former store building and a 1.5 to 1 excavation slope, excavation could reach most contaminated soil above 5 feet bgs and some limited soil below that depth by potholing at the base of the excavation. Alternatively, most of the shallow contamination could be removed using a driven shoring system along the east face of the building which would allow for excavation to approximately 10 feet bgs and more soil access near the building. This scenario would likely only leave contamination directly adjacent to and underneath the building in place.

A proposed excavation area is shown in Figure 5 (approximately 23 by 36 feet), which equates to approximately 307 cubic yards (CY), assuming the contamination extends to 10 feet bgs. Cross-sectional views showing the vertical extent of contamination are shown in Figures 6 and 7.

Contaminated soil below approximately 10 feet bgs and below the footprint of the building which is inaccessible for excavation without additional shoring and/or building removal may be addressed in-situ using injections of remedial agents including but not limited to chemical oxidants and/or biological amendments. In-situ treatment of vadose zone soil would likely require multiple rounds of injection to saturate the soil and allow for adequate contact time. Smear zone contamination should be considered a part of groundwater treatment, as described below.

5.3.1. Groundwater and Smear Zone Remediation

The groundwater contamination at the site will continue to naturally attenuate, particularly after the source of the contamination in overlying soil is removed. However, in-situ injections of remedial agents including but not limited to activated carbon, chemical oxidants and/or biological amendments on the Airport Kwik Stop property will help speed up the natural attenuation process near the source, particularly where a significant smear zone was observed which will not be accessible via excavation. Directly treating contaminated soil in the smear zone and groundwater is likely necessary to achieve cleanup goals within a reasonable timeframe.

6.0 LIMITATIONS

We have prepared this report for the exclusive use of Washington State Department of Ecology and their authorized agents.

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

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

7.0 REFERENCES

GeoEngineers, Inc. (GeoEngineers) 2017. "In-Situ Remediation Plan, Airport Kwik Stop and Cabin Grill Site, Ione, Washington." May 10, 2017. File No. 0504-058-06.

GeoEngineers. 2023a. "Amendment No. 1, Environmental and Geotechnical Engineering Services, Airport Kwik Stop Soil and Groundwater Cleanup, Ione, Washington." May 12, 2023. File No. 0504-058-07.

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Washington State Department of Ecology (Ecology) 2022. "Environmental Assessment Program, Quarterly Report, Airport Kwik Stop." October 26, 2022.

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TABLES

GeoEngineers

Table 1

Summary of Groundwater Level Measurements[1]

Airport Kwik Stop
Ione, Washington

Monitoring Well ID	Date Measured	Top of Casing Elevation (feet)[2]	Depth to Water (feet bTOC)	Groundwater Elevation (feet)[2]
MW-3	9/12/23	2,110.17	37.61	2,072.56
	11/29/23		37.86	2,072.31
MW-8	9/12/23	2,109.65	36.84	2,072.81
	11/29/23		37.08	2,072.57
MW-9	9/12/23	2,109.43	37.40	2,072.03
	11/29/23		37.68	2,071.75
MW-10	9/12/23	2,086.42	15.90	2,070.52
	11/29/23		16.06	2,070.36
MW-11	9/12/23	2,093.44	22.30	2,071.14
	11/29/23		22.53	2,070.91
MW-14	9/12/23	2,103.16	31.96	2,071.20
	11/29/23		32.19	2,070.97
MW-15	9/12/23	2,112.90	42.00	2,070.90
	11/29/23		42.21	2,070.69
MW-16	9/12/23	2,085.20	16.10	2,069.10
	11/29/23		16.25	2,068.95
MW-17	9/12/23	2,109.74	37.35	2,072.39
	11/29/23		37.59	2,072.15
MW-18	9/12/23	2,093.57	21.73	2,071.84
	11/29/23		22.09	2,071.48

Notes:

[1] Monitoring well locations are shown on Figures 3 and 4.

[2] Elevations are referenced to NAVD88. Top of casing elevation survey performed by Thomas, Dean & Hoskins, Inc. (TD&H).

NAVD88 = North American Vertical Datum of 1988

Table 2

Chemical Analytical Results - Soil[1]

Airport Kwik Stop
Ione, Washington

Boring ID	Sample Depth (feet bgs)	Sample Date	Volatile Organic Compounds[2] (mg/kg)					Petroleum Hydrocarbons[3] (mg/kg)	Metals[4] (mg/kg)						Organic Carbon[5] (mg/kg)
			Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	Gasoline-range (GRPH)	Calcium	Iron	Magnesium	Manganese	Potassium	Sodium	Total Organic Carbon
B-8	12.5 to 14	9/13/2023	0.026 U	0.034 U	0.041 U	0.07 U	0.072 U	4.6 U	--	--	--	--	--	--	--
	25 to 26.5	9/13/2023	0.024 U	0.032 U	0.039 U	0.12 U	0.068 U	4.4 U	--	--	--	--	--	--	--
	37.5 to 39	9/13/2023	0.021 U	0.028 U	0.035 U	0.11 U	**0.11 J**	**650**	--	--	--	--	--	--	--
	40 to 41.5	9/13/2023	0.017 U	**0.057 J**	0.027 U	0.086 U	0.047 U	**110**	**15,000**	**7,900**	**7,800**	**170**	**520**	**92 J**	**5,200**
B-9	12.5 to 14	9/13/2023	0.024 U	0.032 U	0.040 U	0.13 U	0.068 U	4.4 U	--	--	--	--	--	--	--
	27.5 to 29	9/13/2023	0.022 U	0.030 U	0.036 U	0.12 U	0.063 U	4.0 U	--	--	--	--	--	--	--
	37.5 to 39	9/13/2023	0.021 UJ	0.029 UJ	0.035 UJ	0.11 UJ	0.060 UJ	**34 J**	--	--	--	--	--	--	--
	40 to 41.5	9/13/2023	0.023 UJ	**0.28 J**	0.038 UJ	0.12 UJ	0.065 UJ	**11 J**	**13,000**	**9,700**	**7,600**	**140**	**540**	**91 J**	**3,100**
B-10	10 to 11.5	9/14/2023	0.028 U	0.037 U	0.045 U	0.15 U	0.079 U	5.1 U	--	--	--	--	--	--	--
	25 to 26.5	9/14/2023	0.025 U	0.034 U	0.041 U	0.13 U	0.071 U	4.6 U	--	--	--	--	--	--	--
	32.5 to 34	9/14/2023	0.0095 U	0.013 U	0.015 U	0.049 U	0.027 U	1.7 U	--	--	--	--	--	--	--
	40 to 41.5	9/14/2023	0.017 U	0.023 U	0.028 U	0.089 U	0.048 U	3.1 U	--	--	--	--	--	--	--
B-11	5 to 6.5	9/14/2023	0.020 U	**0.31**	**0.31**	**109**	**12**	**2,200**	**3,200**	**21,000**	**4,500**	**410**	**2,000**	**150**	**1,300 J**
	20 to 21.5	9/14/2023	0.025 U	0.033 U	0.040 U	0.13 U	**0.36 J**	**51**	--	--	--	--	--	--	--
	32.5 to 34	9/14/2023	0.021 U	0.027 U	0.033 U	**3.8**	**0.62**	**120**	--	--	--	--	--	--	--
	40 to 41.5	9/14/2023	0.023 U	**0.039 J**	0.037 U	0.12 U	0.064 U	**5.1 J**	--	--	--	--	--	--	--
B-12	5 to 6.5	9/14/2023	0.021 U	**0.073 J**	0.034 U	0.11 U	**0.19 J**	**400**	**3,400**	**21,000**	**4,500**	**390**	**2,000**	**160**	**1,500**
	17.5 to 19	9/14/2023	0.026 U	0.034 U	0.042 U	0.13 U	0.072 U	**13**	--	--	--	--	--	--	--
	37.5 to 39	9/14/2023	0.021 U	**0.055 J**	0.034 U	0.11 U	**0.11 J**	**150**	--	--	--	--	--	--	--
	40 to 41.5	9/14/2023	0.026 U	**0.29**	0.042 U	0.13 U	0.072 U	**7.8 J**	--	--	--	--	--	--	--
MTCA Method A CUL[6]			0.03	7	6	9	5	30/100[7]	NE	NE	NE	NE	NE	NE	NE

Notes:

[1] Samples analyzed by Eurofins Environment Testing Northwest located in Spokane Valley, Washington. Sample Locations are shown on Figure 2.

[2] Volatile organic compounds analyzed using United States Environmental Protection Agency (EPA) Method 8260D.

[3] Gasoline-range petroleum hydrocarbons analyzed using Northwest Method NWTPH-Gx.

[4] Metals analyzed using EPA Method 6010D.

[5] Total organic carbon analyzed using EPA Method 9060A.

[6] Washington State Model Toxics Control Act (MTCA) Method A cleanup level (CUL) for unrestricted land use.

[7] When benzene is present, the gasoline range cleanup level is 30 mg/kg. When benzene is not present the gasoline range cleanup level is 100 mg/kg.

bgs = below ground surface

mg/kg = milligrams per kilogram

NE = not established

-- = not analyzed

U = analyte was not detected above the laboratory method detection limit (MDL)

J = estimated concentration

Bold indicates analyte was detected.

Bold with gray shading indicates the analyte was detected at a concentration greater than the MTCA Method A cleanup level.

Table 3

Chemical Analytical Results - Groundwater[1]

Airport Kwik Stop
Ione, Washington

Monitoring Well ID	Sample ID	Sample Date	Volatile Organic Compounds[2] (µg/L)					Petroleum Hydrocarbons[3] (µg/L)	Dissolved Gases[4] (µg/L)	Anions[5] (µg/L)		Total Metals[6] (µg/L)		Dissolved Metals[6,7] (µg/L)		Alkalinity[8] (µg/L)	Organic Carbon[9] (µg/L)
			Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	GRPH	Methane	Nitrate	Sulfate	Iron	Manganese	Iron	Manganese	Alkalinity	Total Organic Carbon
MW-3	MW-3:091523	9/15/2023	0.093 U	0.31 U	**1.90**	**4.0**	**3.6**	**1,000**	0.63 U	57 UJ	**13,000**	**7,100**	**1,200**	**91 J**	**890**	**160,000**	**5,000**
	MW-3:113023	11/30/2023	0.093 U	0.31 U	**1.90**	**5.1**	**3.6**	**540**	0.63	**320**	**14,000**	**7,700**	**690**	**85**	**700**	**290,000**	**2,700**
MW-8	MW-8:091223	9/12/2023	0.093 U	**0.32 J**	0.20 U	0.44 U	0.94 U	**1,700**	0.63 U	**2,300 J**	**150,000**	**880**	**620**	**77 J**	**460**	**340,000**	**4,500**
	MW-8:113023	11/30/2023	**0.670**	0.31 U	**0.48**	**1.8**	**0.8 J**	**380 J**	**3.1 J**	**1,700 J**	**430,000 J**	**1,800 J**	**1,200 J**	**85**	**1,600 J**	**420,000**	**3,400**
MW-9	MW-9:091523	9/15/2023	0.093 U	0.31 U	0.20 U	0.44 U	0.63 U	48 U	0.63 U	**4,700 J**	**18,000**	**300**	**350**	**65 J**	**0.70 J**	**170,000**	**2,100**
	MW-9:113023	11/30/2023	0.093 U	0.31 U	0.20 U	0.28 U	0.63 U	54 U	0.63 U	**4,100**	**14,000**	**110**	**80**	67 U	2.30	**210,000**	**350**
MW-10	MW-10:091523	9/15/2023	0.093 U	0.31 U	0.20 U	0.44 U	0.63 U	47 U	--	--	--	--	--	--	--	--	--
	MW-10:112923	11/29/2023	0.093 U	0.31 U	0.20 U	0.28 U	0.63 U	54 U	--	--	--	--	--	--	--	--	--
MW-11	MW-11:091523	9/15/2023	0.093 U	0.31 U	0.20 U	0.44 U	0.63 U	46 U	--	--	--	--	--	--	--	--	--
	MW-11:112923	11/29/2023	0.093 U	0.31 U	0.20 U	0.28 U	0.63 U	54 U	--	--	--	--	--	--	--	--	--
MW-15	MW-15:091523	9/15/2023	0.093 U	0.31 U	0.20 U	0.44 U	0.63 U	31 U	--	--	--	--	--	--	--	--	--
	MW-15:112923	11/29/2023	0.093 U	0.31 U	0.20 U	0.28 U	0.63 U	54 U	--	--	--	--	--	--	--	--	--
MW-18	MW-18:091523	9/15/2023	0.093 U	0.31 U	0.20 U	0.44 U	0.63 U	31 U	0.63 U	**560 J**	**3800**	**58 J**	**1.3 J**	**49 J**	0.46 U	**160,000**	**1600**
	MW-18:112923	11/29/2023	0.093 U	0.31	0.20 U	0.28 U	0.63 U	54 U	--	--	--	--	--	--	--	--	--
MTCA Method A CUL[10]			5	1,000	700	1,000	160	800/1,000[11]	NE	NE	NE	NE	NE	NE	NE	NE	NE

Notes:

[1] Samples analyzed by Eurofins Environment Testing Northwest (Eurofins) located in Spokane Valley, Washington. Sample Locations are Shown on Figures 3 and 4.

[2] Volatile organic compounds analyzed using United States Environmental Protection Agency (EPA) Method 8260D.

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

[4] Dissolved Gases including methane analyzed using RSK-175.

[5] Anions including nitrate and sulfate analyzed using EPA Method 300.0.

[6] Total and Dissolved Metals analyzed using EPA Method 200.8.

[7] Dissolved metals were lab-filtered.

[8] Alkalinity analyzed using Standard Method (SM) 2320B.

[9] Total organic carbon (TOC) analyzed using SM 5310C.

[10] Washington State Model Toxics Control Act (MTCA) cleanup level (CUL).

[11] When benzene is present, the gasoline range cleanup level is 800 µg/L. When benzene is not present the gasoline range cleanup level is 1,000 µg/L.

NE = not established

-- = not analyzed

µg/L = microgram per liter

U = analyte was not detected above the laboratory method detection limit (MDL)

J = estimated concentration

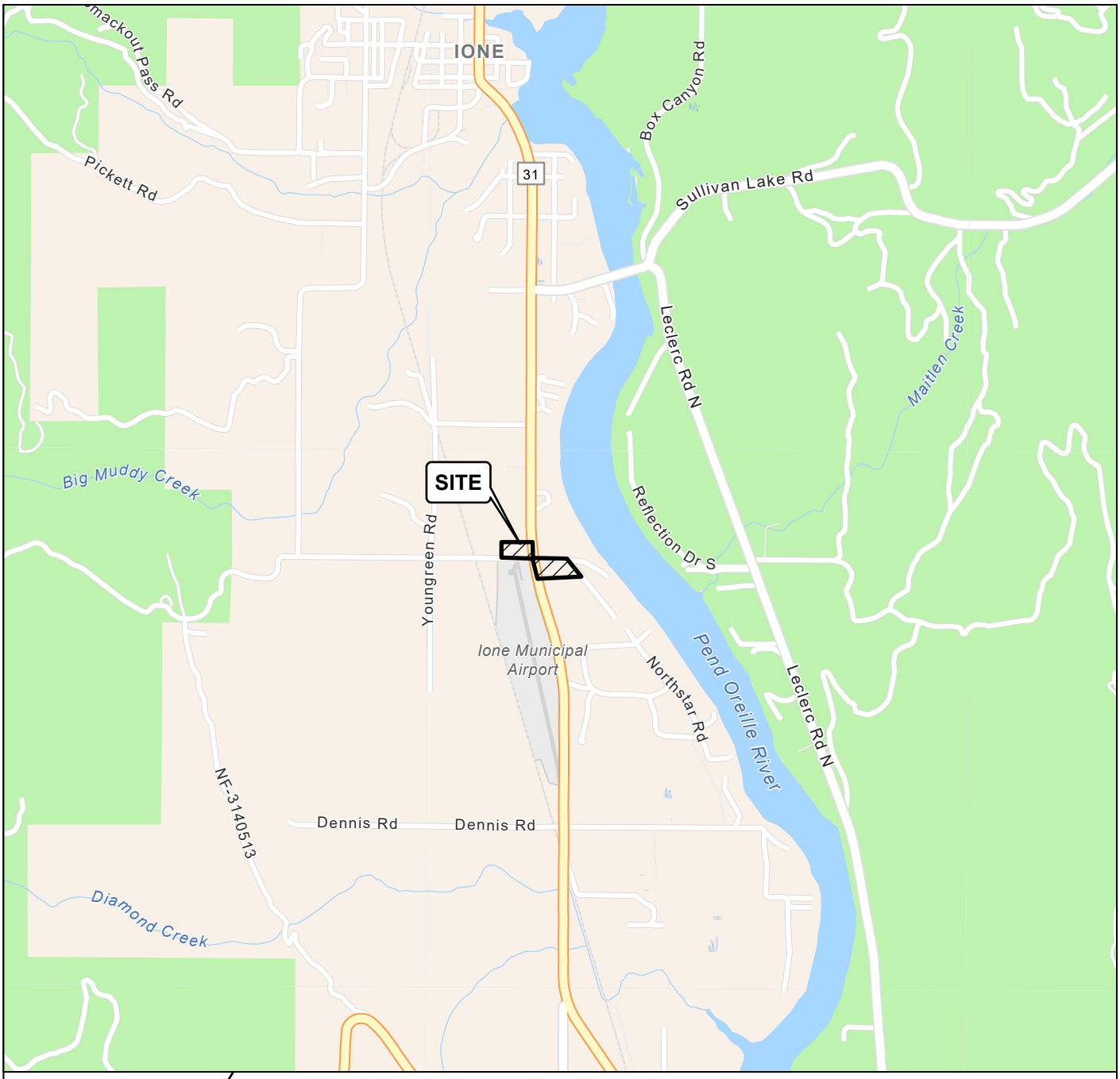
B = analyte detected in laboratory method blank and the sample

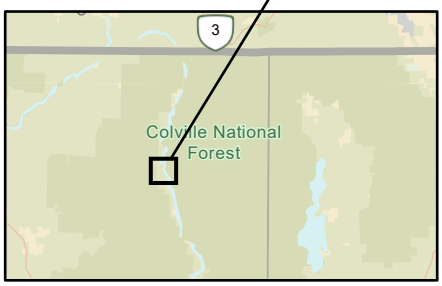
Bold indicates analyte was detected.

Bold with gray shading indicates the analyte was detected at concentrations greater than the MTCA Method A cleanup level.

FIGURES

GeoEngineers





N
W E
S

3,000 0 3,000

Feet

Vicinity Map

Airport Kwik Stop
Ione, Washington

GeoEngineers

Figure 1

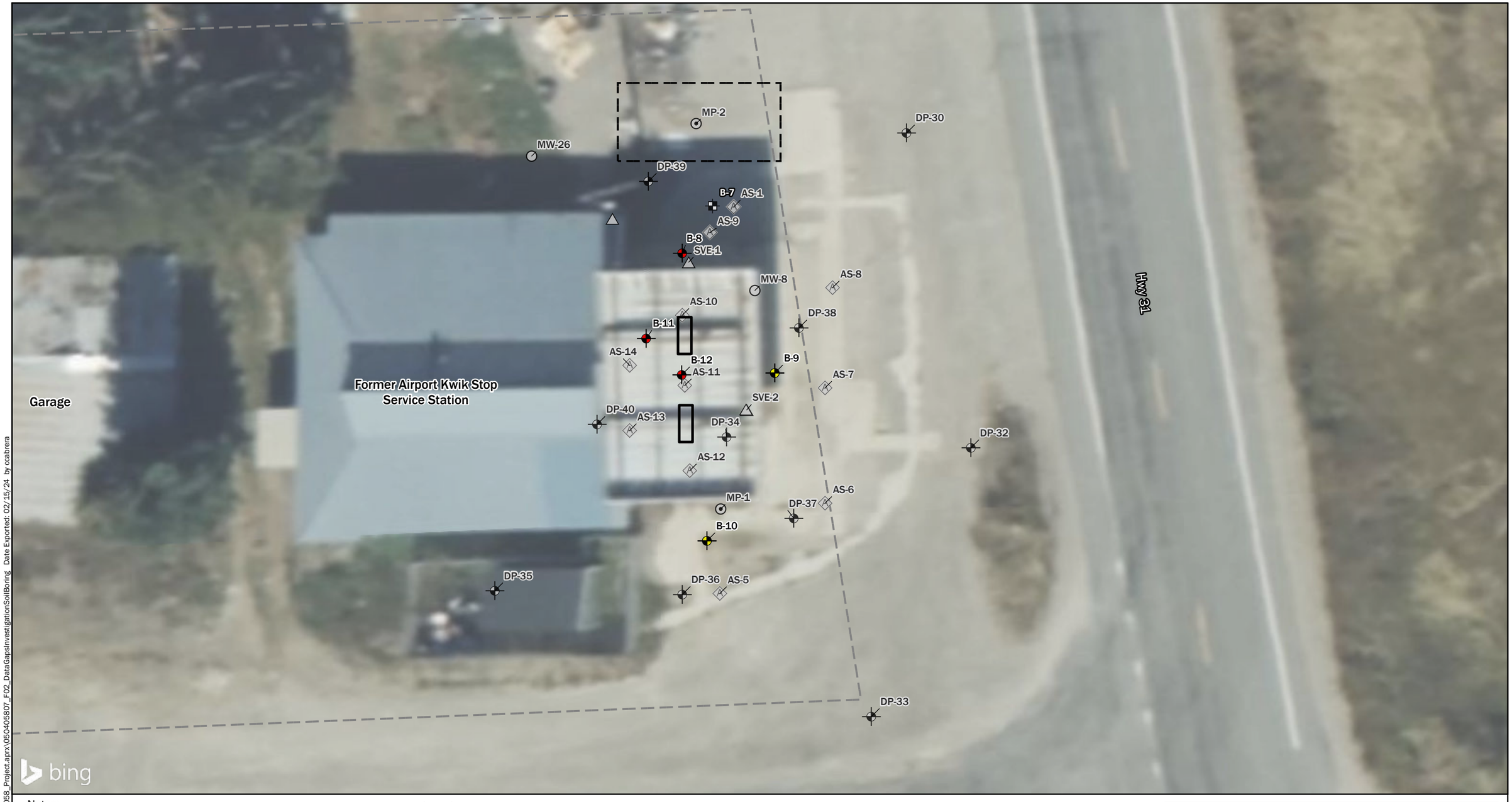
Notes:

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: Mapbox Open Street Map, 2016

Projection: NAD 1983 UTM Zone 11N

Date Exported: 08/17/23 by ccabrera



Notes:
1. GRPH = Gasoline-range petroleum hydrocarbons.
2. MTCA = Model Toxics Control Act.
3. Milligrams per kilogram = mg/kg

Source(s):
- Pend Oreille County GIS
- Bing Imagery

Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet

Legend

- B-8 — Soil Boring Location for Data Gaps Investigation
- Concentration Greater than MTCA Method A Cleanup Level (100 mg/kg)
- Concentration Detected Less than MTCA Method A Cleanup Level (100 mg/kg)
- DP-1 — Approximate Location of Former Direct-Push Boring
- MW-1 — Approximate Location of Former Monitoring Well
- MP-1 — Approximate Location of Former 2" Monitoring Point
- SVE-1 — Approximate Location of Former 4" SVE Extraction Well
- AS-1 — Approximate Location of Former Air Sparge Pilot Well
- Approximate Location of Former USTs
- Approximate Fuel Dispenser Island Location
- Property Boundary
- Approximate Parcel Boundary

N

0 15
Feet

Data Gaps Investigation Soil Borings

Airport Kwik Stop
Ione, Washington

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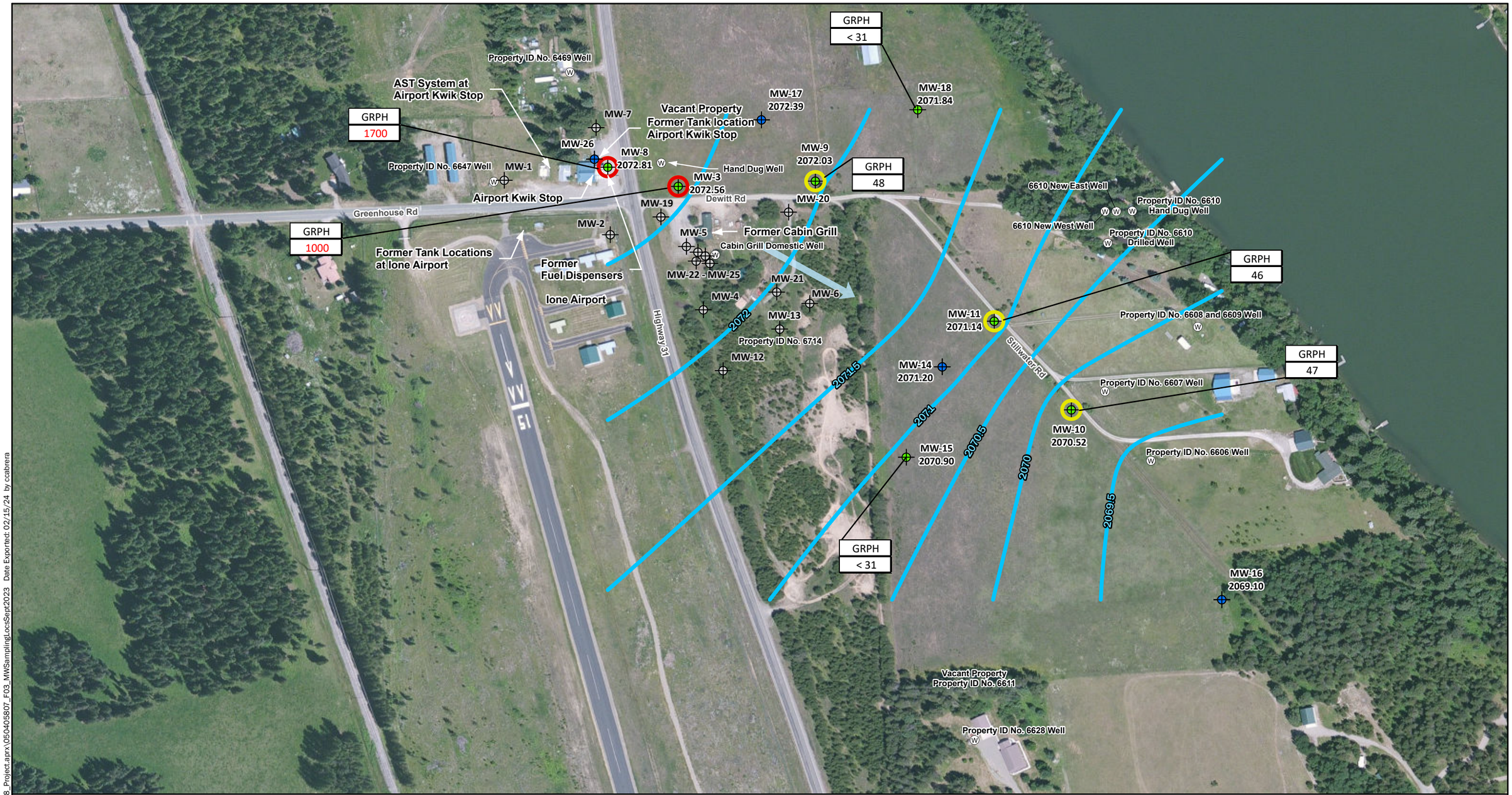
Figure 2

P:\0\0504058\GIS\0504058_Project\0504058_Project.aprx\0504058O7_F02_DataGapsInvestigationSoilBoring Date Exported: 02/15/24 by ccabrera



Notes:
1. Gasoline-range petroleum hydrocarbons (GRPH) concentrations listed are in micrograms per liter (µg/L).
2. MTCA = Model Toxics Control Act.

Source(s):
- Bing Imagery

Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet

Legend

- Monitoring Well Where Depth to Water Readings were Obtained September 2023
- Monitoring Well Sampled in September 2023
- Existing Monitoring Well
- Approximate Location of Existing Water Well
- Approximate Interpolated Groundwater Contour
- Interpreted Groundwater Flow Direction
- Contaminant Concentrations Greater than MTCA Method A Cleanup Levels
- Concentration GRPH Detected Less than MTCA Method A Cleanup Level (800 µg/L)

N

0 250

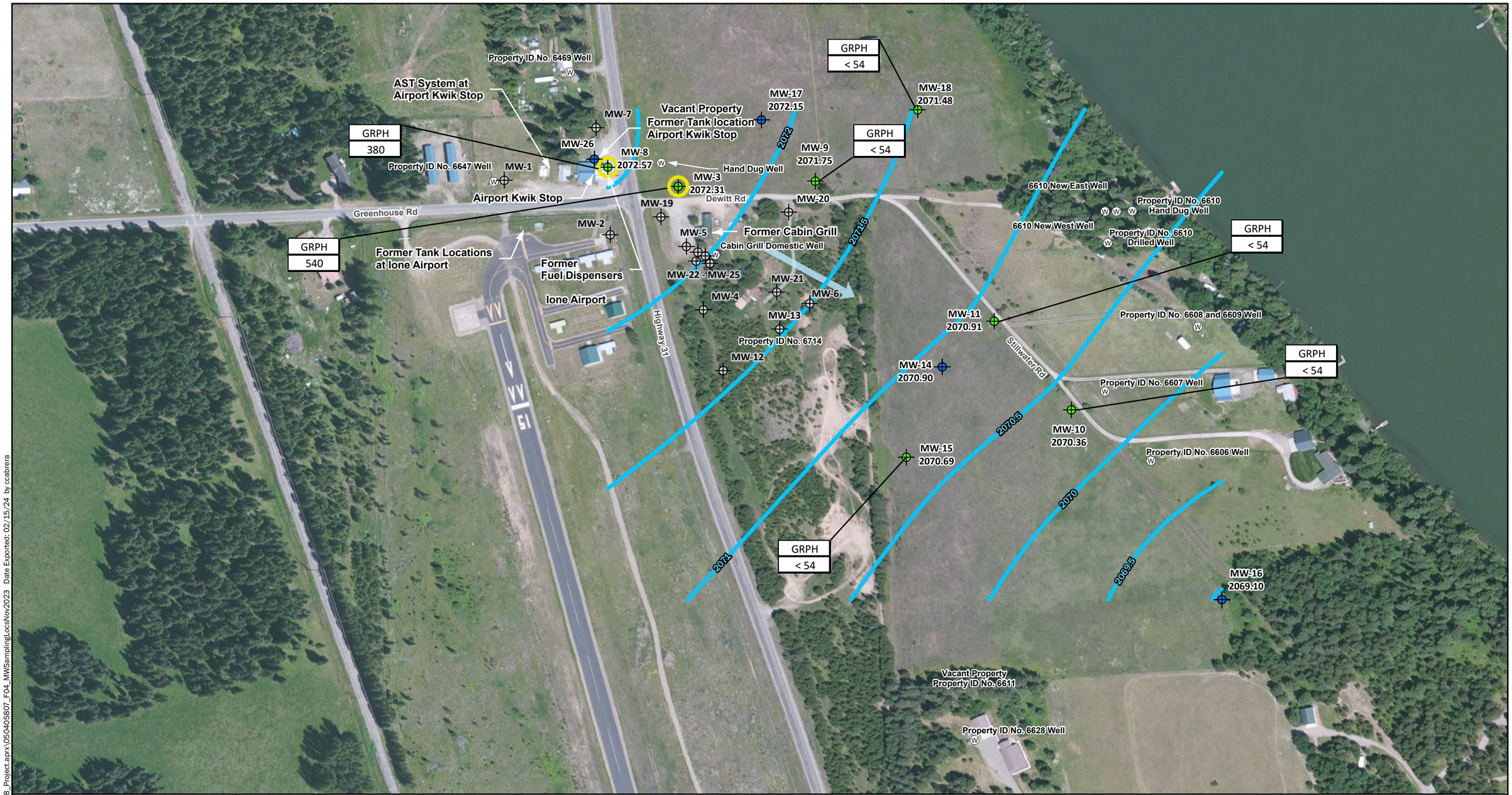
Feet

September 2023 Groundwater Monitoring Locations and Results

Airport Kwik Stop
Ione, Washington

GeoEngineers

Figure 3



Notes:
1. Gasoline-range petroleum hydrocarbons (GRPH) concentrations listed are in micrograms per liter (µg/L).
2. MTCA = Model Toxics Control Act.

Source(s):
- Bing Imagery

Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet

Legend

- Monitoring Well Where Depth to Water Readings were Obtained in November 2023
- Monitoring Well Sampled in November 2023
- Existing Monitoring Well
- Approximate Location of Existing Water Well
- Approximate Interpolated Groundwater Contour
- Interpreted Groundwater Flow Direction
- Concentration GRPH Detected Less than MTCA Method A Cleanup Level (800 µg/L)

N

0 250

Feet

November 2023 Groundwater Monitoring Locations and Results

Airport Kwik Stop
Ione, Washington

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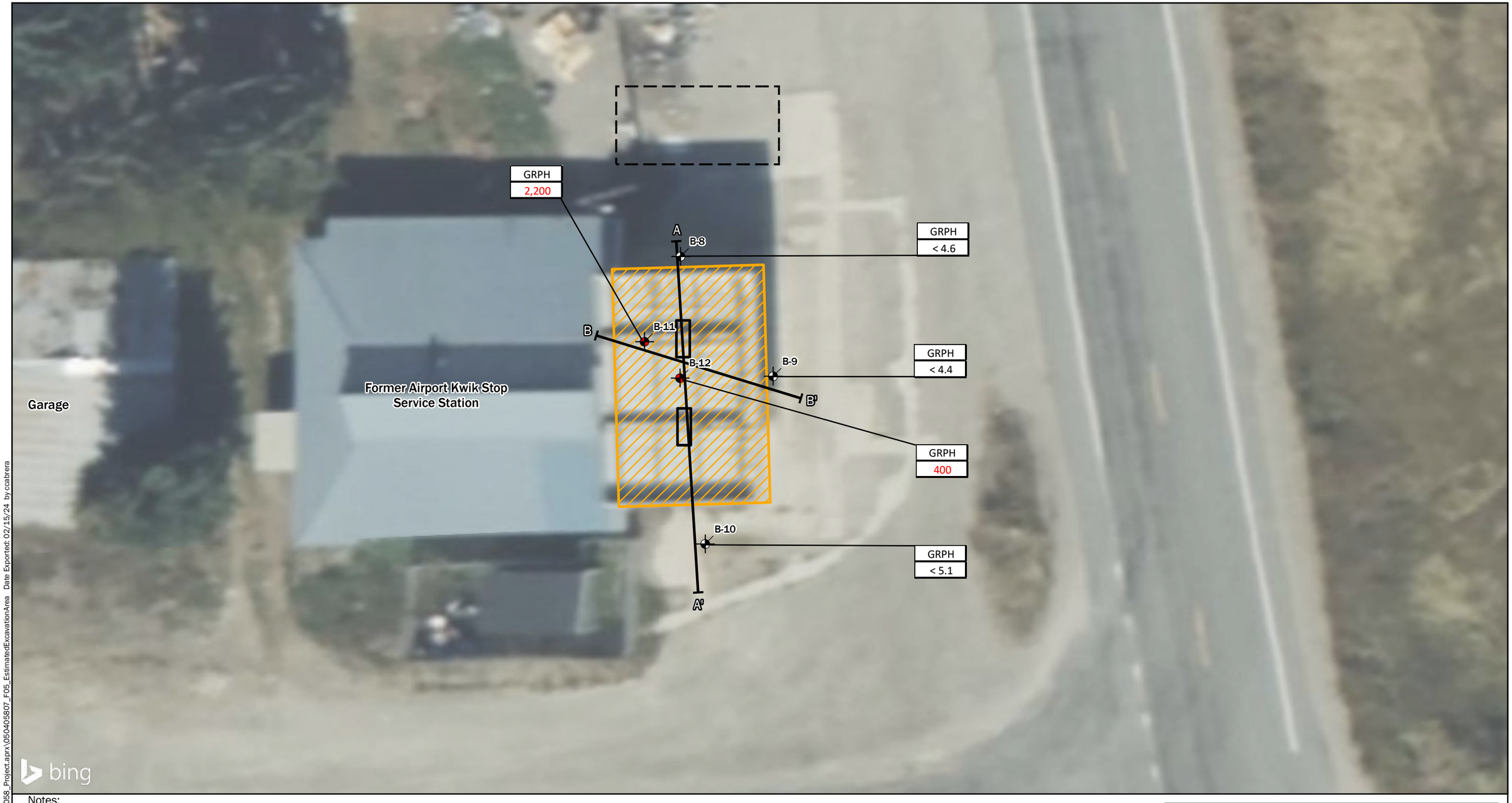
Figure 4



Notes:
1. GRPH = Gasoline-range petroleum hydrocarbons
2. mg/kg = milligrams per kilogram
3. UST = underground storage tank
4. MTCA = model toxics control act
5. bgs = below ground surface.

Source(s):
- Bing Imagery

Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet

Legend

- B-8 — Soil Boring
- GRPH concentration in soil greater than the MTCA Method A Cleanup Level (100 mg/kg) between approximately 0 and 10 feet bgs
- Approximate Location of Former USTs
- Approximate Fuel Dispenser Island Location
- Proposed Excavation Area
- Cross Section

N

0 15
Feet

Proposed Shallow Excavation Area

Airport Kwik Stop
Ione, Washington

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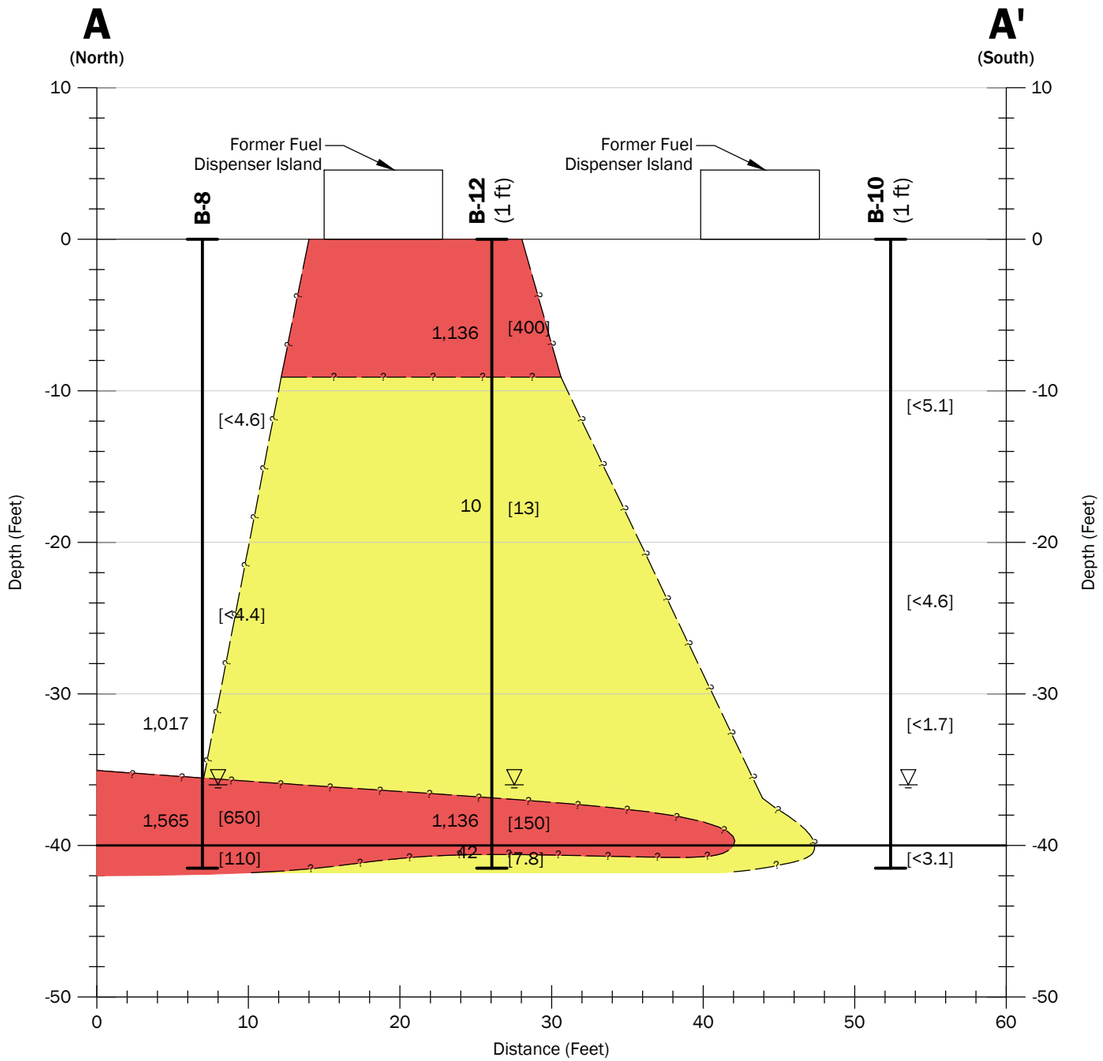
Figure 5



Legend

Boring ID (Offset)

Boring

Inferred GRPH Concetration

Observed Groundwater During Drilling

Increased Clay in Soil from 40 to 41.5 Feet

GRPH not detected in soil

GRPH in soil detected at concentration less than the MTCA Method A cleanup Level

GRPH in soil detected at concentration greater than the MTCA Method A cleanup Level

[150] GRPH concentration (mg/kg) from laboratory analytical testing

1,136 Headspace vapor concentration (ppm) from PID (Values greater than or equal to 10ppm shown)

Note(s):

1. The subsurface conditions shown are based on interpolation between widely spaced explorations and should be considered approximate; actual subsurface conditions may vary from those shown.

Datum: NAVD88

0 10
Horizontal Feet

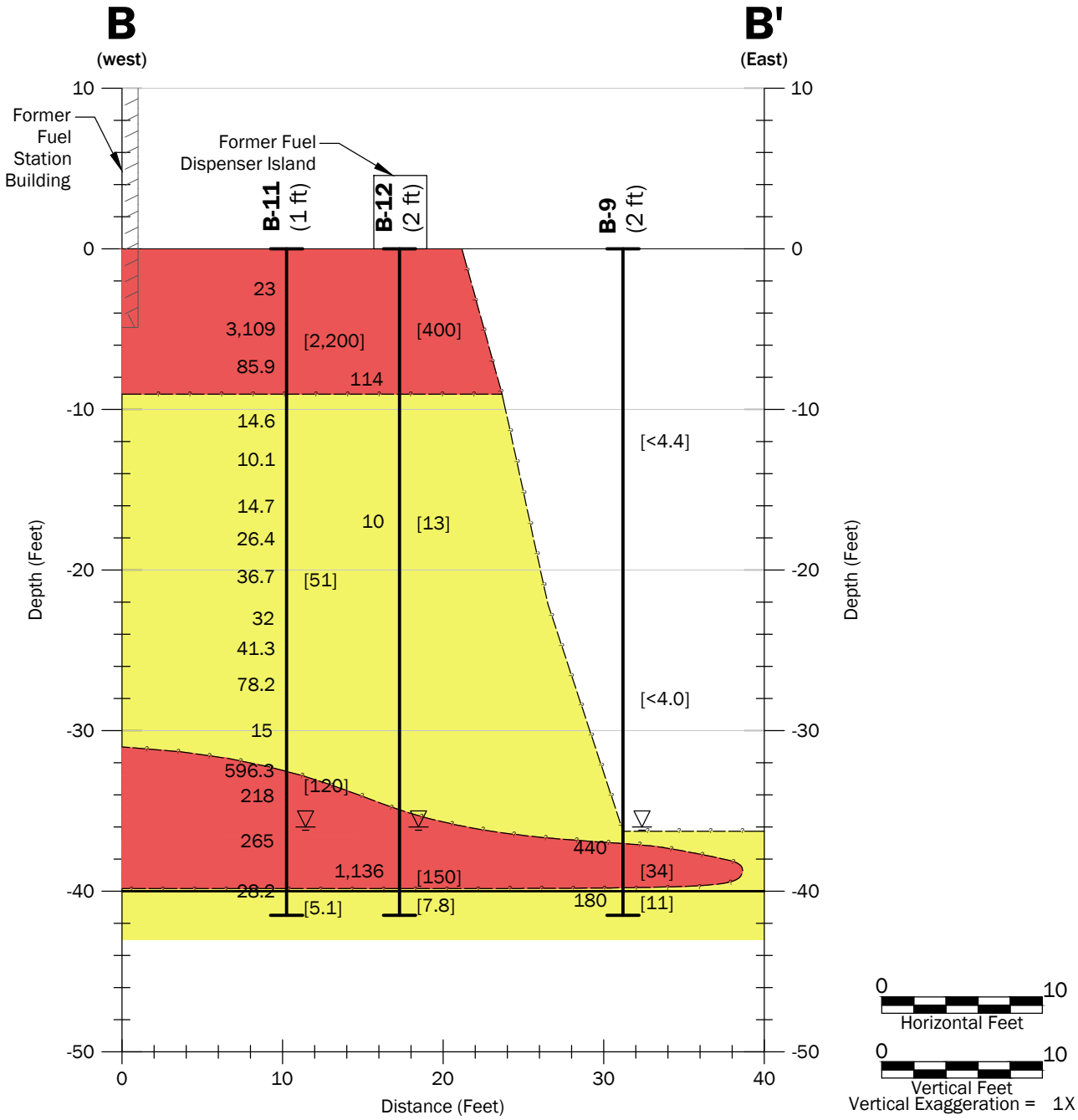
0 10
Vertical Feet
Vertical Exaggeration = 1X

Cross Section A-A'

Airport Kwik Stop
Ione, Washington

GeoEngineers

Figure 6



Legend

Boring ID (Offset)

Boring

Inferred GRPH Concetration

Observed Groundwater During Drilling

Increased clay in soil from 40 to 41.5 feet

GRPH not detected in soil

GRPH in soil detected at concentration less than the MTCA Method A cleanup Level

GRPH in soil detected at concentration greater than the MTCA Method A cleanup Level

[150] GRPH concentration (mg/kg) from laboratory analytical testing

1,136 Headspace vapor concentration (ppm) from PID (Values greater than or equal to 10ppm shown)

Note(s):

1. The subsurface conditions shown are based on interpolation between widely spaced explorations and should be considered approximate; actual subsurface conditions may vary from those shown.

Datum: NAVD88

Cross Section B-B'

Airport Kwik Stop
Ione, Washington

GeoEngineers

Figure 7

APPENDICES

GeoEngineers

APPENDIX A
Boring Logs

SOIL CLASSIFICATION CHART

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

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

ADDITIONAL MATERIAL SYMBOLS

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

Groundwater Contact

Measured groundwater level in exploration, well, or piezometer

Measured free product in well or piezometer

Graphic Log Contact

Distinct contact between soil strata

Approximate contact between soil strata

Material Description Contact

Contact between geologic units

Contact between soil of the same geologic unit

Sampler Symbol Descriptions

2.4-inch I.D. split barrel / Dames & Moore (D&M)

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
UU	Unconsolidated undrained triaxial 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 9/13/2023	End 9/13/2023	Total Depth (ft) 41.5	Logged By LTO / Checked By JDO	Driller Cascade Drilling	Drilling Method Hollow-stem Auger
Surface Elevation (ft) / Vertical Datum	Undetermined		Hammer Data	140 (lbs) / 30 (in) Drop	Drilling Equipment	SCME-55
Easting (X) / Northing (Y)			System Datum		Groundwater not measured 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						SP	Brown coarse sand with occasional gravel (loose, moist)			
		8	19		B-8 (2.5-4)				NS	2.7	
	5	15	21		B-8 (5-6.5)		SP	Brown fine sand (loose, moist)	NS	3.8	
		13	22		B-8 (7.5-9)				NS	1.7	
	10	12	21		B-8 (10-11.5)				NS	2.7	
		12	22		B-8 (12.5-14) CA				NS	1.8	
	15	10	26		B-8 (15-16.5)			Become loose to medium dense	NS	1.6	
		12	29		B-8 (17.5-19)			Becomes medium dense	NS	2.3	
	20	17	31		B-8 (20-21.5)				NS	3.3	
		17	40		B-8 (22.5-24)				NS	8.5	
	25	14	40		B-8 (25-26.5) CA				NS	3.9	
		9	42		B-8 (27.5-29)		SP	Gray fine to medium sand with occasional gravel (medium dense, moist)	NS	4.5	
	30	10	43		B-8 (30-31.5)				NS	2.9	
		13	54		B-8 (32.5-34)				NS	1.6	
	35										

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

Date:10/17/23 Path:P:\0\0504058\GINT\050405807.GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEIB_ENVIRONMENTAL_STANDARD_NO_GW

Log of Boring B-8

GeoEngineers

Project: Airport Kwik Stop
Project Location: Ione, Washington
Project Number: 0504-058-07

Figure A-2
Sheet 1 of 2

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	FIELD DATA: Blows/foot	FIELD DATA: Collected Sample / Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	35	10	56	B-8 (35-36.5)				NS	1017	
		4	36	B-8 (37.5-39) CA		SP	Gray coarse sand (medium dense, wet)	SS	1565	Petroleum odor
	40	10	43	B-8 (40-41.5) CA			Trace clay	NS	<1	Petroleum odor

Log of Boring B-8 (continued)

GeoEngineers

Project: Airport Kwik Stop
Project Location: Ione, Washington
Project Number: 0504-058-07

Figure A-2
Sheet 2 of 2

Drilled	Start 9/13/2023	End 9/13/2023	Total Depth (ft) 41.5	Logged By LTO / Checked By JDO	Driller Cascade Drilling	Drilling Method Hollow-stem Auger
Surface Elevation (ft) / Vertical Datum	Undetermined		Hammer Data	140 (lbs) / 30 (in) Drop	Drilling Equipment	SCME-55
Easting (X) / Northing (Y)			System Datum		Groundwater not measured 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					SP				
		12	21	B-9 (2.5-4)			Brown fine sand with silt (medium dense, moist)	NS	1.8	
	5	13	20	B-9 (5-6.5)				NS	1.0	
		15	27	B-9 (7.5-9)				NS	1.1	
	10	15	23	B-9 (10-11.5)			Becomes loose	NS	1.4	
		16	31	B-9 (12.5-14) CA			Become medium dense	NS	2.4	
	15	14	32	B-9 (15-16.5)				NS	2.0	
		15	35	B-9 (17.5-19)				NS	1.2	
	20	15	38	B-9 (20-21.5)				NS	<1	
		15	39	B-9 (22.5-24)				NS	1.3	
	25	13	33	B-9 (25-26.5)				NS	<1	
		11	41	B-9 (27.5-29) CA			Occasional gravel	NS	1.2	
	30	11	38	B-9 (30-31.5)				NS	1.4	
		15	42	B-9 (32.5-34)				NS	<1	
	35									

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

Log of Boring B-9

GeoEngineers

Project: Airport Kwik Stop
Project Location: Ione, Washington
Project Number: 0504-058-07

Figure A-3
Sheet 1 of 2

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	FIELD DATA: Blows/foot	FIELD DATA: Collected Sample / Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	35	15	49	B-9 (35-36.5)		SP	Brown coarse sand with occasional gravel (medium dense)	NS	1.0	
		14	36	B-9 (37.5-39) CA			Becomes wet	NS	440	Petroleum odor
	40	13	27	B-9 (40-41.5) CA			Trace clay	NS	180	Petroleum odor

Log of Boring B-9 (continued)

GeoEngineers

Project: Airport Kwik Stop
Project Location: Ione, Washington
Project Number: 0504-058-07

Figure A-3
Sheet 2 of 2

Drilled	Start 9/14/2023	End 9/14/2023	Total Depth (ft) 41.5	Logged By LTO / Checked By JDO	Driller Cascade Drilling	Drilling Method Hollow-stem Auger
Surface Elevation (ft) / Vertical Datum	Undetermined		Hammer Data	140 (lbs) / 30 (in) Drop	Drilling Equipment	SCME-55
Easting (X) / Northing (Y)			System Datum		Groundwater not measured 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					SP				
	5	5	29	B-10 (5-6.5)			Brown fine sand with occasional gravel (medium dense, moist)	NS	<1	
	10	14	30	B-10 (10-11.5) CA				NS	<1	
	15	15	36	B-10 (15-16.5)				NS	<1	
	20	14	44	B-10 (20-21.5)		SP	Brown fine to coarse sand (medium dense, moist)	NS	<1	
		10	36	B-10 (22.5-24)				NS	<1	
	25	12	43	B-10 (25-26.5) CA				NS	<1	
		13	47	B-10 (27.5-29)				NS	<1	
	30	12	46	B-10 (30-31.5)			Becomes coarse sand	NS	<1	
		11	41	B-10 (32.5-34) CA				NS	<1	
	35									

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

Log of Boring B-10

GeoEngineers

Project: Airport Kwik Stop
Project Location: Ione, Washington
Project Number: 0504-058-07

Figure A-4
Sheet 1 of 2

Elevation (feet) / Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample / Sample Name / Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
35		8	43	B-10 (35-37.5)		SP	Brown coarse sand with gravel (medium dense, moist)	NS	<1	
		9	37	B-10 (37.5-39)		SP	Brown coarse sand (medium dense, wet)	NS	<1	
40		10	44	B-10 (40-41.5) CA			With trace clay and occasional gravel (medium dense, wet)	NS	<1	

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Log of Boring B-10 (continued)

GeoEngineers

Project: Airport Kwik Stop
Project Location: Ione, Washington
Project Number: 0504-058-07

Figure A-4
Sheet 2 of 2

Drilled Start 9/14/2023 End 9/14/2023	Total Depth (ft) 41.5	Logged By LTO Checked By JDO	Driller Cascade Drilling	Drilling Method Hollow-stem Auger	
Surface Elevation (ft) Vertical Datum Undetermined		Hammer Data 140 (lbs) / 30 (in) Drop		Drilling Equipment SCME-55	
Easting (X) Northing (Y)		System Datum		Groundwater not measured 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					SP				
		6	10	B-11 (2.5-4)			Dark brown fine sand with silt (very loose, moist)	NS	23	Petroleum odor
	5	10	9	B-11 (5-6.5) CA				NS	3109	
		11	12	B-11 (7.5-9)		SP	Brown fine sand (loose, moist)	NS	85.9	
	10	10	11	B-11 (10-11.5)			Becomes very loose to loose	NS	14.6	
		12	15	B-11 (12.5-14)			Becomes loose	NS	10.1	
	15	14	19	B-11 (15-16.5)				NS	14.7	
		12	17	B-11 (17.5-19)				NS	26.4	
	20	10	13	B-11 (20-21.5) CA				NS	36.7	Petroleum odor
		10	6	B-11 (22.5-24)			Becomes very loose	NS	32	
	25	14	15	B-11 (25-26.5)			Becomes loose	NS	41.3	
		10	25	B-11 (27.5-29)		SP	Brown coarse sand with occasional gravel (loose, moist)	NS	78.2	
	30	7	21	B-11 (30-31.5)				NS	15	
		5	27	B-11 (32.5-34) CA			Becomes medium dense	NS	596.3	Petroleum odor
	35									

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

Log of Boring B-11

GeoEngineers

Project: Airport Kwik Stop
Project Location: Ione, Washington
Project Number: 0504-058-07

Figure A-5
Sheet 1 of 2

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
	35		8	16		B-11 (35-36.5)			Becomes loose	NS	218	
			11	35		B-11 (37.5-39)			Becomes medium dense, wet	NS	265	
	40		10	18		B-11 (40-41.5) CA			Trace clay (loose, wet)	NS	28.2	

Log of Boring B-11 (continued)

GeoEngineers

Project: Airport Kwik Stop
Project Location: Ione, Washington
Project Number: 0504-058-07

Figure A-5
Sheet 2 of 2

Drilled Start 9/14/2023 End 9/14/2023	Total Depth (ft) 41.5	Logged By LTO Checked By JDO	Driller Cascade Drilling	Drilling Method Hollow-stem Auger	
Surface Elevation (ft) Vertical Datum Undetermined	Hammer Data 140 (lbs) / 30 (in) Drop	Drilling Equipment SCME-55			
Easting (X) Northing (Y)	System Datum	Groundwater not measured 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					SP				
		4	12	B-12 (2.5-4)			Brown fine sand (loose, moist)	NS	<1	
	5	10	13	B-12 (5-6.5) CA				NS	114	
		6	16	B-12 (7.5-9)				NS	9.6	
	10	8	20	B-12 (10-11.5)				NS	1.3	
		14	18	B-12 (12.5-14)			Becomes medium dense	NS	3.1	
	15	12	24	B-12 (15-16.5)			Becomes loose	NS	5.2	
		13	30	B-12 (17.5-19) CA			Becomes medium dense	NS	10	
	20	12	24	B-12 (20-21.5)			Becomes loose	NS	<1	
		8	23	B-12 (22.5-24)				NS	6.2	
	25	9	24	B-12 (25-26.5)				NS	1.5	
		6	30	B-12 (27.5-29)		SP	Brown fine to coarse sand with occasional gravel (medium dense, moist)	NS	1.3	
	30	10	31	B-12 (30-31.5)				NS	1.1	
		11	26	B-12 (32.5-34)			With gravel, becomes loose to medium dense	NS	1.3	
	35									

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

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Log of Boring B-12

GeoEngineers

Project: Airport Kwik Stop
Project Location: Ione, Washington
Project Number: 0504-058-07

Figure A-6

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	FIELD DATA: Blows/foot	FIELD DATA: Collected Sample / Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	35	12	30	B-12 (35-36.5)			Becomes medium dense	NS	4.1	
		14	29	B-12 (37.5-39) CA			With occasional gravel Becomes wet	NS	1136	Petroleum odor
	40	10	31	B-12 (40-41.5) CA		SP	Brown coarse sand (medium dense, wet)	NS	42	

Log of Boring B-12 (continued)

GeoEngineers

Project: Airport Kwik Stop
Project Location: Ione, Washington
Project Number: 0504-058-07

Figure A-6
Sheet 2 of 2

APPENDIX B
Chemical Analytical Laboratory Reports and Data Validation

GeoEngineers

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

Data Validation Report

Project: Ione Kwik Stop Site – Soil and Groundwater Cleanup
November 2023 Groundwater Samples

GEI File No: 0504-058-07

Date: March 7, 2024

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 groundwater samples collected as part of the November 2023 sampling event, and the associated laboratory and field quality control (QC) samples. The samples were obtained from the Airport Kwik Stop facility located in Ione, Washington.

OBJECTIVE AND QUALITY CONTROL ELEMENTS

GeoEngineers, Inc. (GeoEngineers) completed the data validation consistent with the USEPA Contract Laboratory Program National Functional 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.

In accordance with the Quality Assurance Project Plan (QAPP), Appendix B of the Work Plan (GeoEngineers 2023), 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 Blanks
- Matrix Spikes/Matrix Spike Duplicates
- Laboratory Control Samples/Laboratory Control Sample Duplicates
- Laboratory/Field Duplicates

VALIDATED SAMPLE DELIVERY GROUPS

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

TABLE 1. SUMMARY OF VALIDATED SAMPLE DELIVERY GROUPS

Laboratory SDG	Samples Validated
590-22374-1	MW-3: 113023, MW-8: 113023, DUP 1: 113023, MW-9: 113023, MW-10: 112923, MW-11: 112923, MW-15: 112923, MW-18: 112923

CHEMICAL ANALYSIS PERFORMED

Eurofins Spokane, Environment Testing Northwest, LLC (Eurofins), 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;
- Volatile Organic Compounds (VOCs) by Method EPA8260D;
- Total and Dissolved Metals by Method EPA6020B;
- Dissolved Gases by Method RSK-175;
- Anions by Method EPA300.0;
- Total and Bicarbonate Alkalinity by Method SM2320B;
- Total Dissolved Solids by Method SM2540C; and
- Total Organic Carbon by Method SM5310B

DATA VALIDATION SUMMARY

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

Data Package Completeness

Eurofins 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 two and six 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.

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 exceptions:

SDG 590-22374-1: (Alkalinity) There was a positive result for total and bicarbonate alkalinity in the method blank digested on 12/11/2023. The positive results for these target analytes were greater than 10X the concentration in the method blank in the associated field samples; therefore, no qualifications were 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. The percent recovery control limits for MS and MSD analyses are specified in the laboratory documents, as are the RPD control limits for MS/MSD sample sets.

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.

Laboratory Control Samples/Laboratory Control 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 all samples 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/LCSD analysis should be performed for every analytical batch or every 20 field samples, whichever is more frequent. The frequency requirements were met for all analyses and the percent recovery and RPD values were within the proper control limits, with the following exception:

SDG 590-22374-1: (VOCs) The percent recovery for 2,2-Dichloropropane was greater than the control limits in the LCS extracted on 12/8/2023; however, the percent recovery for this target analyte was within the control limits in the corresponding LCSD. No action was required for this outlier.

Laboratory Duplicates

Internal laboratory duplicate analyses are performed to monitor the precision of the 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. The RPD control limits are specified in the laboratory documents. Laboratory duplicates were analyzed at the proper frequency and the specified acceptance criteria were met.

Field Duplicates

In order to assess precision, field duplicate samples were collected and analyzed along with the reviewed sample batches. The duplicate samples were analyzed for the same parameters as the associated parent samples. Precision is determined by calculating the RPD between each pair of samples. If one or more of the sample analytes has a concentration less than five times the reporting limit for that sample, then the absolute difference is used instead of the RPD. The RPD control limit water samples is 35 percent.

SDG 590-22374-1: One field duplicate sample pair, MW-8: 113023 and DUP 1: 113023, was submitted with this SDG. The precision criteria for the target analytes were met for this sample pair, with the exception of 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, gasoline-range hydrocarbons, total iron, dissolved manganese, total manganese, nitrate, n-Propylbenzene, sulfate, tert-Butylbenzene, and total dissolved solids. The positive results for these target analytes were qualified as estimated (J) in this sample pair.

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/LCSD, and MS/MSD percent recovery values, with the exception noted above. Precision was acceptable, as demonstrated by the LCS/LCSD, MS/MSD, and laboratory/field duplicate RPD values, with the exceptions noted above.

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

TABLE 2. SUMMARY OF QUALIFIED SAMPLES

Sample ID	Analyte	Qualifier	Reason
MW-8: 113023	1,2,4-Trimethylbenzene	J	Field Duplicate Precision
	1,3,5-Trimethylbenzene	J	Field Duplicate Precision
	Gasoline-range hydrocarbons	J	Field Duplicate Precision
	Total iron	J	Field Duplicate Precision
	Dissolved manganese	J	Field Duplicate Precision
	Total manganese	J	Field Duplicate Precision
	Nitrate	J	Field Duplicate Precision
	n-Propylbenzene	J	Field Duplicate Precision
	Sulfate	J	Field Duplicate Precision
	tert-Butylbenzene	J	Field Duplicate Precision
	Total dissolved solids	J	Field Duplicate Precision
DUP 1: 113023	1,2,4-Trimethylbenzene	J	Field Duplicate Precision
	1,3,5-Trimethylbenzene	J	Field Duplicate Precision
	Gasoline-range hydrocarbons	J	Field Duplicate Precision
	Total iron	J	Field Duplicate Precision
	Dissolved manganese	J	Field Duplicate Precision
	Total manganese	J	Field Duplicate Precision
	Nitrate	J	Field Duplicate Precision
	n-Propylbenzene	J	Field Duplicate Precision
	Sulfate	J	Field Duplicate Precision
	tert-Butylbenzene	J	Field Duplicate Precision
	Total dissolved solids	J	Field Duplicate Precision

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.

GeoEngineers, Inc. (GeoEngineers). "Work Plan, Airport Kwik Stop Soil and Groundwater Cleanup Data Gap Assessment," prepared for Washington State Department of Ecology. September 8, 2023.

GeoEngineers

523 East Second Avenue, Spokane, Washington 99202, Telephone: 509.363.3125, Fax: 509.363.3126 www.geoengineers.com

Data Validation Report

Project: Ione Kwik Stop Site – Soil and Groundwater Cleanup
September 2023 Soil and Groundwater Samples

GEI File No: 0504-058-07

Date: October 28, 2023

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 and groundwater samples collected as part of the September 2023 sampling event, and the associated laboratory and field quality control (QC) samples. The samples were obtained from the Airport Kwik Stop facility located in Ione, Washington.

OBJECTIVE AND QUALITY CONTROL ELEMENTS

GeoEngineers, Inc. (GeoEngineers) completed the data validation consistent with the USEPA Contract Laboratory Program National Functional 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.

In accordance with the Quality Assurance Project Plan (QAPP), Appendix B of the Work Plan (GeoEngineers 2023), 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 Blanks
- Matrix Spikes/Matrix Spike Duplicates
- Laboratory Control Samples/Laboratory Control Sample Duplicates
- Laboratory/Field Duplicates

VALIDATED SAMPLE DELIVERY GROUPS

This data validation included review of the sample delivery groups (SDGs) listed below in Table 1.

TABLE 1. SUMMARY OF VALIDATED SAMPLE DELIVERY GROUPS

Laboratory SDG	Samples Validated
590-21718-1	MW-8:091223, Dup:091223
590-21723-1	B-8 (12.5-14), B-8 (25-26.5), B-8 (37.5-39), B-8 (40-41.5), B-9 (12.5-14), B-9 (27.5-29), B-9 (37.5-39), B-9 (40-41.5), B-10 (10-11.5), B-10 (25-26.5), B-10 (32.5-34), B-10 (40-41.5), B-11 (5-6.5), B-11 (20-21.5), B-11 (32.5-34), B-11 (40-41.5), B-12 (5-6.5), B-12 (17.5-19), B-12 (37.5-39), B-12 (40-41.5), MW-3:091523, MW-9:091523, MW-10:091523, MW-11:091523, MW-15:091523, MW-18:091523

CHEMICAL ANALYSIS PERFORMED

Eurofins Spokane, Environment Testing Northwest, LLC (Eurofins), 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;
- Volatile Organic Compounds (VOCs) by Method EPA8260D;
- Total Metals by Method EPA6010D;
- Total and Dissolved Metals by Method EPA200.8;
- Dissolved Gases by Method RSK-175;
- Anions by Method EPA300.0;
- Total Alkalinity by Method SM2320B;
- Total Organic Carbon (Water) by Method SM5310C; and
- Total Organic Carbon (Soil) by Method SW9060A.

DATA VALIDATION SUMMARY

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

Data Package Completeness

Eurofins 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, with the exceptions noted below. The sample coolers arrived at the laboratory within the appropriate temperatures of between two and six degrees Celsius.

SDG 590-21718-1: (Anions) The 48-hour holding time for nitrate analysis was exceeded in Sample MW-8:091223. The positive result for nitrate was qualified as estimated (J) in this sample.

SDG 590-21723-1: (NWTPH-Gx) The 14-day holding time for gasoline-range hydrocarbons analysis was exceeded in Samples B-9 (37.5-39) and B-9 (40-41.5). The positive results for gasoline-range hydrocarbons were qualified as estimated (J) in these samples.

(VOCs) The 14-day holding time for VOCs analysis was exceeded in Samples B-9 (37.5-39) and B-9 (40-41.5). The positive result and reporting limits for the VOC target analytes were qualified as estimated (J and UJ, accordingly) in these samples.

(Anions) The 48-hour holding time for nitrate analysis was exceeded in Samples MW-3:091523, MW-9:091523, and MW-18:091523. The positive results and reporting limit for nitrate were qualified as estimated (J and UJ, accordingly) in these samples.

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 exception:

SDG 590-21723-1: (VOCs) The percent recovery for surrogate toluene-d8 was greater than the control limits in Sample B-11 (5-6.5); 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.

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 exceptions:

SDG 590-21718-1: (NWTPH-Gx) There was a positive result for gasoline-range hydrocarbons in the method blank extracted on 9/18/2023. The positive results for this target analyte were greater than 2X

the concentration in the method blank in the associated field samples; therefore, no qualifications were required.

(VOCs) There was a positive result for naphthalene in the method blank extracted on 9/18/2023. The positive results for this target analyte were qualified as non-detected (U) in Samples MW-8:091223 and Dup:091223.

(Alkalinity) There was a positive result for alkalinity in the method blank digested on 9/22/2023. The positive result for this target analyte was greater than 10X the concentration in the method blank in the associated field sample; therefore, no qualification was required.

SDG 590-21723-1: (NWTPH-Gx) There was a positive result for gasoline-range hydrocarbons in the method blank extracted on 9/19/2023. The positive results for this target analyte were qualified as non-detected (U) in Samples MW-9:091523, MW-10:091523, and MW-11:091523.

(VOCs) There was a positive result for naphthalene in the method blank extracted on 9/19/2023. The positive result for this target analyte was greater than 2X the concentration in the method blank in the associated field sample; therefore, no qualification was required.

(Alkalinity) There was a positive result for alkalinity in the method blank digested on 9/28/2023. The positive results for this target analyte were greater than 10X the concentration in the method blank in the associated field samples; therefore, no qualifications were 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. The percent recovery control limits for MS and MSD analyses are specified in the laboratory documents, as are the RPD control limits for MS/MSD sample sets.

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.

Laboratory Control Samples/Laboratory Control 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 all samples 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/LCSD analysis should be performed for every analytical batch or every 20 field samples, whichever is more frequent. The frequency requirements were met for all analyses and the percent recovery and RPD values were within the proper control limits.

Laboratory Duplicates

Internal laboratory duplicate analyses are performed to monitor the precision of the 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. The RPD control limits are specified in the laboratory documents. Laboratory duplicates were analyzed at the proper frequency and the specified acceptance criteria were met, with the following exception:

SDG 590-21723-1: (VOCs) The laboratory performed a laboratory duplicate sample set on Sample B-12 (5-6.5). The RPD for naphthalene was greater than the control limits in the laboratory duplicate extracted on 9/27/2023. The positive result for this target analyte was qualified as estimated (J) in this sample.

Field Duplicates

In order to assess precision, field duplicate samples were collected and analyzed along with the reviewed sample batches. The duplicate samples were analyzed for the same parameters as the associated parent samples. Precision is determined by calculating the RPD between each pair of samples. If one or more of the sample analytes has a concentration less than five times the reporting limit for that sample, then the absolute difference is used instead of the RPD. The RPD control limit for soil and water samples is 35 percent.

SDG 590-21718-1: One field duplicate sample pair, MW-8:091223 and Dup:091223, was submitted with this SDG. The precision criteria for all target analytes were met for this sample pair.

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/LCSD, and MS/MSD percent recovery values, with the exceptions noted above. Precision was acceptable, as demonstrated by the LCS/LCSD, MS/MSD, and laboratory/field duplicate RPD values, with the exceptions noted above.

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

TABLE 2: SUMMARY OF QUALIFIED SAMPLES

Sample ID	Analyte	Qualifier	Reason
B-9 (37.5-39)	Gasoline-range hydrocarbons	J	Holding Time
	All VOC target analytes	UJ	Holding Time
B-9 (40-41.5)	Gasoline-range hydrocarbons	J	Holding Time
	Toluene	J	Holding Time
	All other VOC target analytes	UJ	Holding Time
B-12 (5-6.5)	Naphthalene	J	Laboratory Duplicate Precision
MW-3:091523	Nitrate	UJ	Holding Time
MW-8:091223	Naphthalene	U	Method Blank Contamination
	Nitrate	J	Holding Time
Dup:091223	Naphthalene	U	Method Blank Contamination
MW-9:091523	Gasoline-range hydrocarbons	U	Method Blank Contamination
	Nitrate	J	Holding Time
MW-10:091523	Gasoline-range hydrocarbons	U	Method Blank Contamination
MW-11:091523	Gasoline-range hydrocarbons	U	Method Blank Contamination
MW-18:091523	Nitrate	J	Holding Time

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.

GeoEngineers, Inc. (GeoEngineers). "Work Plan, Airport Kwik Stop Soil and Groundwater Cleanup Data Gap Assessment," prepared for Washington State Department of Ecology. September 8, 2023.

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ANALYTICAL REPORT

PREPARED FOR

Attn: Justin Orr
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

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JOB DESCRIPTION

Ione Airport Kwik Stop/0504-05-08

JOB NUMBER

590-21718-1

Eurofins Spokane
11922 East 1st Ave
Spokane WA 99206

See page two for job notes and contact information.

Job Notes

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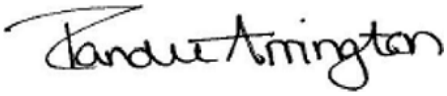

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Authorized for release by
Randee Arrington, Business Unit Manager
Randee.Arrington@et.eurofinsus.com
(509)924-9200

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Client: GeoEngineers Inc
Job ID: 590-21718-1
Project/Site: Ione Airport Kwik Stop/0504-05-08

Job ID: 590-21718-1

Laboratory: Eurofins Spokane

Narrative

Receipt
The samples were received on 9/15/2023 11:37 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 2.5º C.

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

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

GC Semi VOA
Method 300.0: The following sample was received outside of holding time: MW-8:091223 (590-21718-1).

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

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

General Chemistry
Method SM 2320B: The method blank for analytical batch 590-43632 contained Alkalinity above the method detection limit (MDL). Associated sample(s) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

No additional analytical or quality issues were noted, other than those described above or 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
Job ID: 590-21718-1
Project/Site: Ione Airport Kwik Stop/0504-05-08

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-21718-1	MW-8:091223	Water	09/12/23 15:30	09/15/23 11:37
590-21718-2	Dup:091223	Water	09/12/23 23:00	09/15/23 11:37

Definitions/Glossary

Client: GeoEngineers Inc
Job ID: 590-21718-1
Project/Site: Ione Airport Kwik Stop/0504-05-08

Qualifiers

GC/MS VOA

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.

HPLC/IC

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.
H3	Sample was received and analyzed past holding time. This does not meet regulatory requirements.

Metals

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.

General Chemistry

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: MW-8:091223
Lab Sample ID: 590-21718-1
Date Collected: 09/12/23 15:30
Matrix: Water
Date Received: 09/15/23 11:37

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.093	ug/L			09/18/23 22:44	1
Ethylbenzene	ND		1.0	0.20	ug/L			09/18/23 22:44	1
m,p-Xylene	ND		2.0	0.28	ug/L			09/18/23 22:44	1
Naphthalene	**0.94**	**J B**	2.0	0.63	ug/L			09/18/23 22:44	1
o-Xylene	ND		1.0	0.16	ug/L			09/18/23 22:44	1
Toluene	**0.32**	**J**	1.0	0.31	ug/L			09/18/23 22:44	1
Xylenes, Total	ND		3.0	0.44	ug/L			09/18/23 22:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*80 - 120*		*09/18/23 22:44*	*1*
4-Bromofluorobenzene (Surr)	*98*		*76 - 120*		*09/18/23 22:44*	*1*
Dibromofluoromethane (Surr)	*91*		*80 - 123*		*09/18/23 22:44*	*1*
Toluene-d8 (Surr)	*106*		*80 - 120*		*09/18/23 22:44*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**1700**	**B**	150	31	ug/L			09/18/23 22:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*68.7 - 141*		*09/18/23 22:44*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	ND		5.0	0.63	ug/L			09/19/23 19:55	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**2.3**	**H H3**	0.20	0.057	mg/L			09/15/23 17:49	1
Sulfate	**150**		5.0	1.3	mg/L			09/18/23 16:21	10

Method: EPA 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**0.88**		0.10	0.013	mg/L		09/19/23 16:02	09/20/23 13:42	1
Manganese	**0.62**		0.0020	0.00046	mg/L		09/19/23 16:02	09/20/23 13:42	1

Method: EPA 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**0.077**	**J**	0.10	0.013	mg/L		09/21/23 17:58	09/22/23 14:07	1
Manganese	**0.46**		0.0020	0.00046	mg/L		09/21/23 17:58	09/22/23 14:07	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity (SM 2320B)	**340**	**B**	20	5.0	mg/L			09/22/23 13:00	1
Total Organic Carbon (SM 5310C)	**4.5**		1.5	0.38	mg/L			09/21/23 21:29	1

Client Sample ID: Dup:091223
Lab Sample ID: 590-21718-2
Date Collected: 09/12/23 23:00
Matrix: Water
Date Received: 09/15/23 11:37

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.093	ug/L			09/18/23 23:06	1

Client: GeoEngineers Inc
Job ID: 590-21718-1
Project/Site: Ione Airport Kwik Stop/0504-05-08

Client Sample ID: Dup:091223
Lab Sample ID: 590-21718-2
Date Collected: 09/12/23 23:00
Matrix: Water
Date Received: 09/15/23 11:37

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		1.0	0.20	ug/L			09/18/23 23:06	1
m,p-Xylene	ND		2.0	0.28	ug/L			09/18/23 23:06	1
Naphthalene	**0.84**	**J B**	2.0	0.63	ug/L			09/18/23 23:06	1
o-Xylene	ND		1.0	0.16	ug/L			09/18/23 23:06	1
Toluene	ND		1.0	0.31	ug/L			09/18/23 23:06	1
Xylenes, Total	ND		3.0	0.44	ug/L			09/18/23 23:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*90*		*80 - 120*		*09/18/23 23:06*	*1*
4-Bromofluorobenzene (Surr)	*97*		*76 - 120*		*09/18/23 23:06*	*1*
Dibromofluoromethane (Surr)	*93*		*80 - 123*		*09/18/23 23:06*	*1*
Toluene-d8 (Surr)	*107*		*80 - 120*		*09/18/23 23:06*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**1800**	**B**	150	31	ug/L			09/18/23 23:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*68.7 - 141*		*09/18/23 23:06*	*1*

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

Lab Sample ID: MB 590-43533/12
Matrix: Water
Analysis Batch: 43533

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.093	ug/L			09/18/23 14:29	1
Ethylbenzene	ND		1.0	0.20	ug/L			09/18/23 14:29	1
m,p-Xylene	ND		2.0	0.28	ug/L			09/18/23 14:29	1
Naphthalene	0.673	J	2.0	0.63	ug/L			09/18/23 14:29	1
o-Xylene	ND		1.0	0.16	ug/L			09/18/23 14:29	1
Toluene	ND		1.0	0.31	ug/L			09/18/23 14:29	1
Xylenes, Total	ND		3.0	0.44	ug/L			09/18/23 14:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*80 - 120*		*09/18/23 14:29*	*1*
4-Bromofluorobenzene (Surr)	*108*		*76 - 120*		*09/18/23 14:29*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 123*		*09/18/23 14:29*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*		*09/18/23 14:29*	*1*

Lab Sample ID: LCS 590-43533/1009
Matrix: Water
Analysis Batch: 43533

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			10.0	10.4		ug/L		104	80 - 120		
Ethylbenzene			10.0	10.1		ug/L		101	80 - 122		
m,p-Xylene			10.0	9.78		ug/L		98	80 - 125		
Naphthalene			10.0	9.33		ug/L		93	61 - 140		
o-Xylene			10.0	9.31		ug/L		93	80 - 130		
Toluene			10.0	10.0		ug/L		100	80 - 129		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*99*		*80 - 120*
4-Bromofluorobenzene (Surr)	*97*		*76 - 120*
Dibromofluoromethane (Surr)	*98*		*80 - 123*
Toluene-d8 (Surr)	*96*		*80 - 120*

Lab Sample ID: LCSD 590-43533/10
Matrix: Water
Analysis Batch: 43533

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			10.0	9.99		ug/L		100	80 - 120	4	15
Ethylbenzene			10.0	9.70		ug/L		97	80 - 122	4	35
m,p-Xylene			10.0	9.43		ug/L		94	80 - 125	4	35
Naphthalene			10.0	9.32		ug/L		93	61 - 140	0	25
o-Xylene			10.0	9.24		ug/L		92	80 - 130	1	35
Toluene			10.0	9.89		ug/L		99	80 - 129	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*97*		*80 - 120*
4-Bromofluorobenzene (Surr)	*97*		*76 - 120*

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

Lab Sample ID: LCSD 590-43533/10
Matrix: Water
Analysis Batch: 43533

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

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*97*		*80 - 123*
Toluene-d8 (Surr)	*100*		*80 - 120*

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

Lab Sample ID: MB 590-43532/12
Matrix: Water
Analysis Batch: 43532

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	44.7	J	150	31	ug/L			09/18/23 14:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*68.7 - 141*		*09/18/23 14:29*	*1*

Lab Sample ID: LCS 590-43532/1011
Matrix: Water
Analysis Batch: 43532

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline			1000	1040		ug/L		104	80 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*68.7 - 141*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 280-626748/5
Matrix: Water
Analysis Batch: 626748

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	ND		5.0	0.63	ug/L			09/19/23 19:42	1

Lab Sample ID: LCS 280-626748/3
Matrix: Water
Analysis Batch: 626748

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Methane			65.7	72.1		ug/L		110	75 - 125		

Lab Sample ID: LCSD 280-626748/4
Matrix: Water
Analysis Batch: 626748

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methane			65.7	72.0		ug/L		110	75 - 125	0	20

Method: RSK-175 - Dissolved Gases (GC) (Continued)

Lab Sample ID: 590-21718-1 DU
Matrix: Water
Analysis Batch: 626748

Client Sample ID: MW-8:091223
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Methane	ND		ND		ug/L		NC	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 590-43516/1003
Matrix: Water
Analysis Batch: 43516

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.20	0.057	mg/L			09/15/23 14:55	1

Lab Sample ID: LCS 590-43516/1004
Matrix: Water
Analysis Batch: 43516

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	5.00	5.06		mg/L		101	90 - 110

Lab Sample ID: MB 590-43518/1003
Matrix: Water
Analysis Batch: 43518

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	ND		0.50	0.13	mg/L			09/18/23 15:21	1

Lab Sample ID: LCS 590-43518/1004
Matrix: Water
Analysis Batch: 43518

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	12.5	12.6		mg/L		101	90 - 110

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 580-437983/26-A
Matrix: Water
Analysis Batch: 438195

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 437983

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.10	0.013	mg/L		09/19/23 16:02	09/20/23 12:48	1
Manganese	ND		0.0020	0.00046	mg/L		09/19/23 16:02	09/20/23 12:48	1

Lab Sample ID: LCS 580-437983/27-A
Matrix: Water
Analysis Batch: 438195

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 437983

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	20.0	20.6		mg/L		103	85 - 115
Manganese	1.00	1.03		mg/L		103	85 - 115

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCSD 580-437983/28-A
Client Sample ID: Lab Control Sample Dup
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 438195
Prep Batch: 437983

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Iron			20.0	21.5		mg/L		108	85 - 115	4	20
Manganese			1.00	1.07		mg/L		107	85 - 115	4	20

Lab Sample ID: MB 580-438128/1-B
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Dissolved
Analysis Batch: 438541
Prep Batch: 438340

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.10	0.013	mg/L		09/21/23 17:58	09/22/23 14:37	1
Manganese	ND		0.0020	0.00046	mg/L		09/21/23 17:58	09/22/23 14:37	1

Lab Sample ID: LCS 580-438128/2-B
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Dissolved
Analysis Batch: 438541
Prep Batch: 438340

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron			20.0	21.3		mg/L		107	85 - 115
Manganese			1.00	1.04		mg/L		104	85 - 115

Lab Sample ID: LCSD 580-438128/3-B
Client Sample ID: Lab Control Sample Dup
Matrix: Water
Prep Type: Dissolved
Analysis Batch: 438541
Prep Batch: 438340

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Iron			20.0	21.5		mg/L		107	85 - 115	1	20
Manganese			1.00	1.04		mg/L		104	85 - 115	0	20

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 590-43632/1
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 43632

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	5.00	J	20	5.0	mg/L			09/22/23 13:00	1

Lab Sample ID: LCS 590-43632/2
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 43632

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity			501	505		mg/L		101	90 - 110

Method: SM 5310C - TOC

Lab Sample ID: MB 580-438354/3
Matrix: Water
Analysis Batch: 438354

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.5	0.38	mg/L			09/21/23 13:46	1

Lab Sample ID: LCS 580-438354/4
Matrix: Water
Analysis Batch: 438354

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Organic Carbon			10.0	9.77		mg/L		98	85 - 115		

Lab Sample ID: LCSD 580-438354/5
Matrix: Water
Analysis Batch: 438354

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Organic Carbon			10.0	9.38		mg/L		94	85 - 115	4	20

Lab Chronicle

Client: GeoEngineers Inc
Job ID: 590-21718-1
Project/Site: Ione Airport Kwik Stop/0504-05-08

Client Sample ID: MW-8:091223
Lab Sample ID: 590-21718-1
Date Collected: 09/12/23 15:30
Matrix: Water
Date Received: 09/15/23 11:37

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	43533	09/18/23 22:44	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	43532	09/18/23 22:44	JSP	EET SPK
Total/NA	Analysis	RSK-175		1	20 mL	20 mL	626748	09/19/23 19:55	SJD	EET DEN
Total/NA	Analysis	300.0		1	5 mL	5 mL	43516	09/15/23 17:49	NMI	EET SPK
Total/NA	Analysis	300.0		10	5 mL	5 mL	43518	09/18/23 16:21	NMI	EET SPK
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	438128	09/20/23 15:59	AUA	EET SEA
Dissolved	Prep	200.8			50 mL	50 mL	438340	09/21/23 17:58	JLS	EET SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	438541	09/22/23 14:07	FCW	EET SEA
Total/NA	Prep	200.8			50 mL	50 mL	437983	09/19/23 16:02	JLS	EET SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	438195	09/20/23 13:42	FCW	EET SEA
Total/NA	Analysis	SM 2320B		1	100 mL	100 mL	43632	09/22/23 13:00	AMB	EET SPK
Total/NA	Analysis	SM 5310C		1	40 mL	40 mL	438354	09/21/23 21:29	AUA	EET SEA

Client Sample ID: Dup:091223
Lab Sample ID: 590-21718-2
Date Collected: 09/12/23 23:00
Matrix: Water
Date Received: 09/15/23 11:37

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	43533	09/18/23 23:06	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	43532	09/18/23 23:06	JSP	EET SPK

Laboratory References:
EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
EET SEA = Eurofins Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310
EET SPK = Eurofins Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Accreditation/Certification Summary

Client: GeoEngineers Inc
Job ID: 590-21718-1
Project/Site: Ione Airport Kwik Stop/0504-05-08

Laboratory: Eurofins Spokane

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

Authority	Program	Identification Number	Expiration Date
Washington	State	C569	01-07-24

Laboratory: Eurofins Denver

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

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-23
A2LA	ISO/IEC 17025	2907.01	10-31-23
Alabama	State Program	40730	09-30-12 *
Alaska (UST)	State	18-001	02-10-24
Arizona	State	AZ0713	12-20-23
Arkansas DEQ	State	19-047-0	05-31-23 *
California	State	2513	01-09-24
Connecticut	State	PH-0686	09-30-24
Florida	NELAP	E87667-57	06-30-24
Georgia	State	4025-011	01-08-24
Illinois	NELAP	2000172019-1	04-30-24
Iowa	State	370	12-01-24
Kansas	NELAP	E-10166	04-30-24
Kentucky (WW)	State	KY98047	12-31-23
Louisiana	NELAP	30785	06-30-14 *
Louisiana	NELAP	30785	06-30-23 *
Louisiana (All)	NELAP	30785	06-30-24
Minnesota	NELAP	1788752	12-31-23
Nevada	State	CO000262020-1	07-31-24
New Hampshire	NELAP	2053	04-28-24
New Jersey	NELAP	230001	06-30-24
New York	NELAP	59923	03-31-24
North Carolina (WW/SW)	State	358	12-31-23
North Dakota	State	R-034	01-08-24
Oregon	NELAP	4025-019	01-08-24
Pennsylvania	NELAP	013	07-31-24
South Carolina	State	72002001	01-08-24
Texas	NELAP	TX104704183-08-TX	09-30-09 *
Texas	NELAP	T104704183-21-19	09-30-23
USDA	US Federal Programs	P330-20-00065	12-19-25
Utah	NELAP	QUAN5	06-30-13 *
Utah	NELAP	CO000262019-11	07-31-23 *
Virginia	NELAP	12037	06-14-23 *
Washington	State	C583-19	08-03-23 *
West Virginia DEP	State	354	11-30-23
Wisconsin	State	999615430	08-31-24
Wyoming (UST)	A2LA	2907.01	10-31-22 *

Laboratory: Eurofins Seattle

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

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-004	02-19-25
ANAB	Dept. of Defense ELAP	L2236	01-19-25
ANAB	Dept. of Energy	L2236	01-19-25

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: GeoEngineers Inc
Job ID: 590-21718-1
Project/Site: Ione Airport Kwik Stop/0504-05-08

Laboratory: Eurofins Seattle (Continued)

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

Authority	Program	Identification Number	Expiration Date
ANAB	ISO/IEC 17025	L2236	01-19-25
California	State	2954	07-07-23 *
Florida	NELAP	E87575	06-30-23 *
Louisiana (All)	NELAP	03073	07-01-24
Maine	State	WA01273	05-02-24
Montana (UST)	State	NA	04-14-27
New Jersey	NELAP	WA014	06-30-24
New York	NELAP	11662	03-31-24
Oregon	NELAP	4167	07-07-24
US Fish & Wildlife	US Federal Programs	A20571	06-30-23 *
USDA	US Federal Programs	525-23-4-22573	01-04-26
Washington	State	C788	07-13-24
Wisconsin	State	399133460	08-31-24

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: GeoEngineers Inc
Job ID: 590-21718-1
Project/Site: Ione Airport Kwik Stop/0504-05-08

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET SPK
NWTPH-Gx	Northwest - Volatile Petroleum Products (GC/MS)	NWTPH	EET SPK
RSK-175	Dissolved Gases (GC)	RSK	EET DEN
300.0	Anions, Ion Chromatography	EPA	EET SPK
200.8	Metals (ICP/MS)	EPA	EET SEA
SM 2320B	Alkalinity	SM	EET SPK
SM 5310C	TOC	SM	EET SEA
200.8	Preparation, Total Metals	EPA	EET SEA
5030C	Purge and Trap	SW846	EET SPK
FILTRATION	Sample Filtration	None	EET SEA

Protocol References:

EPA = US Environmental Protection Agency

None = None

NWTPH = Northwest Total Petroleum Hydrocarbon

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique, RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab

SM = "Standard Methods For The Examination Of Water And Wastewater"

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

Laboratory References:

EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

EET SEA = Eurofins Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

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

Eurofins Spokane
11922 E 1st Avenue

Spokane, WA 99206-5302
phone 509.924.9200 fax 509.924.9290

Chain of Custody Record

eurofins | Environment Testing America

Regulatory Program ☐ DW ☐ NPDES ☐ RCRA ☐ Other

Eurofins Environment Testing America

Client Contact	Project Manager: Justin Orr	Site Contact:	Date
Your Company Name here: GeoEngineers	Email: jorr@geoengineers	Lab Contact:	Carrier:
Address: 523 E 2nd Ave	Tel/Fax		
City/State/Zip: Spokane WA	**Analysis Turnaround Time**		
(xxx) xxx-xxxx Phone: (509) 363-3125	☐ CALENDAR DAYS ☐ WORKING DAYS		
(xxx) xxx-xxxx FAX	TAT if different from Below ____		
Project Name: Ione	☒ 2 weeks		
Site: Airport Kwik Stop	☐ 1 week		
PO# 0504-058-07	☐ 2 days		
	☐ 1 day		

COC No:	
____ of ____ COCs	
TALS Project #:	
Sampler:	
For Lab Use Only:	
Walk-in Client:	
Lab Sampling:	
Job / SDG No.	

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	GPH/BTEX	Tot. Diss. Iron	+ Manganese	Nitrate + Sulfate	TOC SM 5310B	Methane	Alkalinity	Sample Specific Notes:
MW-8:091123	9/12/23	1530	G	W	9 tot			X	X	X	X	X	X	X	
Dup:091223	9/12/23	2300	G	W	2			X							

590-21718 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other ____

Possible Hazard Identification
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☐ Disposal by Lab ☐ Archive for ____ Months

Special Instructions/QC Requirements & Comments

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.		Cooler Temp. (°C): Obs'd: 2.2	Corr'd: 2.5	Therm ID No.: IR010
Relinquished by: S. Lathrop	Company: GE	Date/Time: 9/15/23 1137	Received by:	Company: EETNW	Date/Time: 9/15/23 1137
Relinquished by	Company	Date/Time:	Received by	Company	Date/Time:
Relinquished by	Company	Date/Time:	Received in Laboratory by	Company	Date/Time:

9/25/2023

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

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-8252.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Randee.Arrington@et.eurofinsus.com	State of Origin: Washington	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Washington		Job #: 590-21718-1
Address: 4955 Yarrow Street, ,	Due Date Requested: 9/28/2023			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: Kwik Stop/0504-05-07	Project #: 59002658			
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, Y - Trizma, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	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)	RSK_175/ (MOD) Methane	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-8:091223 (590-21718-1)	9/12/23	15:30 Pacific		Water			X	3	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Northwest, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing Northwest, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing Northwest, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing Northwest, LLC.

Possible Hazard Identification	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)***
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

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

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	9/15/23 14:40	ET SPO	[signature]	9-16-23 0930	EETSPO
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 0.7 CF 0.3 IR MOMD

Ver: 06/08/2021

9/25/2023

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

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-8254.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Randee.Arrington@et.eurofinsus.com	State of Origin: Washington	Page: Page 1 of 1
Company: Eurofins Environment Testing Northwest,		Accreditations Required (See note): State Program - Washington		Job #: 590-21718-1
Address: 5755 8th Street East, ,	Due Date Requested: 9/28/2023			
City: Tacoma	TAT Requested (days):			
State, Zip: WA, 98424	PO #:			
Phone: 253-922-2310(Tel)	WO #:			
Email:	Project #: 59002658			
Project Name: Kwik Stop/0504-05-07	SSOW#:			
Site:				

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, Y - Trizma, Z - other (specify)

Other:

Analysis Requested

Sample Identification - Client ID (Lab ID)	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)	200.8_CWA/200.8_P_TOT (MOD)Total Iron & Manganese	200.8_CWA/FILTRATION (MOD) Diss Iron & Manganese	5310C/ Total Organic Carbon	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
MW-8:091223 (590-21718-1)	9/12/23	15:30 Pacific		Water			X	X	X	3	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Northwest, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing Northwest, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing Northwest, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing Northwest, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

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

	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	9/15/23 15:00	EET SPO		9/16/23 0715	EET N
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: IR11 3.2/3.4

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-21718-1

Login Number: 21718
List Number: 1
Creator: Morris, Mackenzie 1

List Source: Eurofins 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	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-21718-1

Login Number: 21718
List Number: 2
Creator: Martinez, Anthony

List Source: Eurofins Denver
List Creation: 09/16/23 01:20 PM

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.	True	
Sample custody seals, if present, are intact.	True	
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?	N/A	
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.	True	
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	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-21718-1

Login Number: 21718
List Number: 3
Creator: Prigge, Madison

List Source: Eurofins Seattle
List Creation: 09/16/23 02:28 PM

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.	True	
Sample custody seals, if present, are intact.	True	
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	IR11 3.2/3.4
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?	N/A	Received project as a subcontract.
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.	True	
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

PREPARED FOR

Attn: Justin Orr
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Generated 10/6/2023 8:32:36 AM

JOB DESCRIPTION

Kwik Stop/0504-05-07

JOB NUMBER

590-21723-1

Eurofins Spokane
11922 East 1st Ave
Spokane WA 99206

See page two for job notes and contact information.

Job Notes

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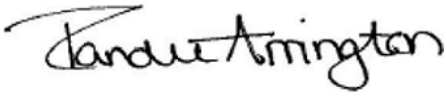

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Authorized for release by
Randee Arrington, Business Unit Manager
Randee.Arrington@et.eurofinsus.com
(509)924-9200

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Case Narrative

Client: GeoEngineers Inc
Job ID: 590-21723-1
Project/Site: Kwik Stop/0504-05-07

Job ID: 590-21723-1

Laboratory: Eurofins Spokane

Narrative

Job Narrative
590-21723-1

Receipt
The samples were received on 9/18/2023 9:23 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 2.4º C and 6.0º C.

Receipt Exceptions
Method 300.0: The following samples were received outside of holding time: MW-3:091523 (590-21723-24), MW-9:091523 (590-21723-25) and MW-18:091523 (590-21723-29).

GC/MS VOA
Method NWTPH-Gx: The method blank for analytical batch 590-43561 contained Gasoline above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8260D: The method blank for analytical batch 590-43562 contained Naphthalene above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8260D: Surrogate recovery for the following sample was outside control limits: B-11 (5-6.5) (590-21723-31). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method NWTPH-Gx: The following samples were analyzed outside of analytical holding time due to analyst error: B-9 (37.5-39) (590-21723-74) and B-9 (40-41.5) (590-21723-75).

Method 8260D: The following samples were analyzed outside of analytical holding time due to analyst error: B-9 (37.5-39) (590-21723-74) and B-9 (40-41.5) (590-21723-75).

Method NWTPH-Gx: Insufficient sample volume was available to perform a sample duplicate (DUP) associated with preparation batch 590-43762 and analytical batch 590-43764.

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

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

GC Semi VOA
Method 300.0: The following samples were received outside of holding time: MW-3:091523 (590-21723-24), MW-9:091523 (590-21723-25) and MW-18:091523 (590-21723-29).

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

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

General Chemistry
Method SM 2320B: The method blank for analytical batch 590-43814 contained Alkalinity above the method detection limit (MDL) and below the reporting limit (RL). Associated samples were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

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

VOA Prep
Method 5035: The following sample, MeOH VOA vial contains no soil sample and the unpreserved bulk sample jar was used instead with

Job ID: 590-21723-1 (Continued)

Laboratory: Eurofins Spokane (Continued)

client approval: B-10 (32.5-34) (590-21723-54)

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

Sample Summary

Client: GeoEngineers Inc
Project/Site: Kwik Stop/0504-05-07

Job ID: 590-21723-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-21723-2	B-12 (5-6.5)	Solid	09/14/23 10:35	09/18/23 09:23
590-21723-7	B-12 (17.5-19)	Solid	09/14/23 11:10	09/18/23 09:23
590-21723-15	B-12 (37.5-39)	Solid	09/14/23 12:30	09/18/23 09:23
590-21723-16	B-12 (40-41.5)	Solid	09/14/23 12:40	09/18/23 09:23
590-21723-19	B-9 (12.5-14)	Solid	09/13/23 14:40	09/18/23 09:23
590-21723-23	B-9 (27.5-29)	Solid	09/13/23 15:00	09/18/23 09:23
590-21723-24	MW-3:091523	Water	09/15/23 08:55	09/18/23 09:23
590-21723-25	MW-9:091523	Water	09/15/23 10:02	09/18/23 09:23
590-21723-26	MW-10:091523	Water	09/15/23 12:23	09/18/23 09:23
590-21723-27	MW-11:091523	Water	09/15/23 11:39	09/18/23 09:23
590-21723-28	MW-15:091523	Water	09/15/23 13:15	09/18/23 09:23
590-21723-29	MW-18:091523	Water	09/15/23 10:57	09/18/23 09:23
590-21723-31	B-11 (5-6.5)	Solid	09/14/23 13:45	09/18/23 09:23
590-21723-37	B-11 (20-21.5)	Solid	09/14/23 14:15	09/18/23 09:23
590-21723-42	B-11 (32.5-34)	Solid	09/14/23 15:00	09/18/23 09:23
590-21723-45	B-11 (40-41.5)	Solid	09/14/23 15:35	09/18/23 09:23
590-21723-47	B-10 (10-11.5)	Solid	09/14/23 08:26	09/18/23 09:23
590-21723-51	B-10 (25-26.5)	Solid	09/14/23 08:44	09/18/23 09:23
590-21723-54	B-10 (32.5-34)	Solid	09/14/23 09:00	09/18/23 09:23
590-21723-56	B-10 (40-41.5)	Solid	09/14/23 09:25	09/18/23 09:23
590-21723-62	B-8 (12.5-14)	Solid	09/13/23 12:40	09/18/23 09:23
590-21723-67	B-8 (25-26.5)	Solid	09/13/23 13:20	09/18/23 09:23
590-21723-72	B-8 (37.5-39)	Solid	09/13/23 13:45	09/18/23 09:23
590-21723-73	B-8 (40-41.5)	Solid	09/13/23 14:00	09/18/23 09:23
590-21723-74	B-9 (37.5-39)	Solid	09/13/23 15:20	09/18/23 09:23
590-21723-75	B-9 (40-41.5)	Solid	09/13/23 15:50	09/18/23 09:23

Definitions/Glossary

Client: GeoEngineers Inc
Project/Site: Kwik Stop/0504-05-07

Job ID: 590-21723-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
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.
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.
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.

HPLC/IC

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.
H3	Sample was received and analyzed past holding time. This does not meet regulatory requirements.

Metals

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.

General Chemistry

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)

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Client Sample ID: B-12 (5-6.5)

Lab Sample ID: 590-21723-2
Date Collected: 09/14/23 10:35
Matrix: Solid
Date Received: 09/18/23 09:23
Percent Solids: 81.2

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.042	0.021	mg/Kg	☼	09/27/23 10:40	09/27/23 14:05	1
Ethylbenzene	ND		0.21	0.034	mg/Kg	☼	09/27/23 10:40	09/27/23 14:05	1
m,p-Xylene	ND		0.85	0.061	mg/Kg	☼	09/27/23 10:40	09/27/23 14:05	1
o-Xylene	ND		0.42	0.049	mg/Kg	☼	09/27/23 10:40	09/27/23 14:05	1
Toluene	**0.073**	**J**	0.21	0.028	mg/Kg	☼	09/27/23 10:40	09/27/23 14:05	1
Naphthalene	**0.19**	**J**	0.42	0.059	mg/Kg	☼	09/27/23 10:40	09/27/23 14:05	1
Xylenes, Total	ND		1.3	0.11	mg/Kg	☼	09/27/23 10:40	09/27/23 14:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*79 - 124*	*09/27/23 10:40*	*09/27/23 14:05*	*1*
4-Bromofluorobenzene (Surr)	*105*		*66 - 129*	*09/27/23 10:40*	*09/27/23 14:05*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 120*	*09/27/23 10:40*	*09/27/23 14:05*	*1*
Toluene-d8 (Surr)	*108*		*80 - 120*	*09/27/23 10:40*	*09/27/23 14:05*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**400**		11	3.8	mg/Kg	☼	09/27/23 10:40	09/27/23 14:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*41.5 - 162*	*09/27/23 10:40*	*09/27/23 14:05*	*1*

Method: SW846 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	**3400**		410	120	mg/Kg	☼	09/29/23 14:01	09/29/23 16:04	5
Iron	**21000**		410	170	mg/Kg	☼	09/29/23 14:01	09/29/23 16:04	5
Magnesium	**4500**		200	36	mg/Kg	☼	09/29/23 14:01	09/29/23 16:04	5
Manganese	**390**		61	4.2	mg/Kg	☼	09/29/23 14:01	09/29/23 16:04	5
Potassium	**2000**		100	51	mg/Kg	☼	09/29/23 14:01	10/03/23 19:21	5
Sodium	**160**		100	42	mg/Kg	☼	09/29/23 14:01	09/29/23 16:04	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup (SW846 9060A)	**1500**	**J**	2000	97	mg/Kg			10/05/23 21:52	1

Client Sample ID: B-12 (17.5-19)

Lab Sample ID: 590-21723-7
Date Collected: 09/14/23 11:10
Matrix: Solid
Date Received: 09/18/23 09:23
Percent Solids: 93.2

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.051	0.026	mg/Kg	☼	09/27/23 10:40	09/27/23 14:48	1
Ethylbenzene	ND		0.26	0.042	mg/Kg	☼	09/27/23 10:40	09/27/23 14:48	1
m,p-Xylene	ND		1.0	0.074	mg/Kg	☼	09/27/23 10:40	09/27/23 14:48	1
o-Xylene	ND		0.51	0.059	mg/Kg	☼	09/27/23 10:40	09/27/23 14:48	1
Toluene	ND		0.26	0.034	mg/Kg	☼	09/27/23 10:40	09/27/23 14:48	1
Naphthalene	ND		0.51	0.072	mg/Kg	☼	09/27/23 10:40	09/27/23 14:48	1
Xylenes, Total	ND		1.5	0.13	mg/Kg	☼	09/27/23 10:40	09/27/23 14:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*79 - 124*	*09/27/23 10:40*	*09/27/23 14:48*	*1*
4-Bromofluorobenzene (Surr)	*104*		*66 - 129*	*09/27/23 10:40*	*09/27/23 14:48*	*1*

Client Sample ID: B-12 (17.5-19)
Lab Sample ID: 590-21723-7
Date Collected: 09/14/23 11:10
Matrix: Solid
Date Received: 09/18/23 09:23
Percent Solids: 93.2

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*102*		*80 - 120*	*09/27/23 10:40*	*09/27/23 14:48*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*	*09/27/23 10:40*	*09/27/23 14:48*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**13**		13	4.6	mg/Kg	☼	09/27/23 10:40	09/27/23 14:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*41.5 - 162*	*09/27/23 10:40*	*09/27/23 14:48*	*1*

Client Sample ID: B-12 (37.5-39)
Lab Sample ID: 590-21723-15
Date Collected: 09/14/23 12:30
Matrix: Solid
Date Received: 09/18/23 09:23
Percent Solids: 87.4

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.041	0.021	mg/Kg	☼	09/27/23 10:40	09/27/23 16:14	1
Ethylbenzene	ND		0.21	0.034	mg/Kg	☼	09/27/23 10:40	09/27/23 16:14	1
m,p-Xylene	ND		0.83	0.059	mg/Kg	☼	09/27/23 10:40	09/27/23 16:14	1
o-Xylene	ND		0.41	0.048	mg/Kg	☼	09/27/23 10:40	09/27/23 16:14	1
Toluene	**0.055**	**J**	0.21	0.028	mg/Kg	☼	09/27/23 10:40	09/27/23 16:14	1
Naphthalene	**0.11**	**J**	0.41	0.058	mg/Kg	☼	09/27/23 10:40	09/27/23 16:14	1
Xylenes, Total	ND		1.2	0.11	mg/Kg	☼	09/27/23 10:40	09/27/23 16:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*79 - 124*	*09/27/23 10:40*	*09/27/23 16:14*	*1*
4-Bromofluorobenzene (Surr)	*103*		*66 - 129*	*09/27/23 10:40*	*09/27/23 16:14*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 120*	*09/27/23 10:40*	*09/27/23 16:14*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*	*09/27/23 10:40*	*09/27/23 16:14*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**150**		10	3.7	mg/Kg	☼	09/27/23 10:40	09/27/23 16:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*41.5 - 162*	*09/27/23 10:40*	*09/27/23 16:14*	*1*

Client Sample ID: B-12 (40-41.5)
Lab Sample ID: 590-21723-16
Date Collected: 09/14/23 12:40
Matrix: Solid
Date Received: 09/18/23 09:23
Percent Solids: 79.5

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.052	0.026	mg/Kg	☼	09/27/23 10:40	09/27/23 16:35	1
Ethylbenzene	ND		0.26	0.042	mg/Kg	☼	09/27/23 10:40	09/27/23 16:35	1
m,p-Xylene	ND		1.0	0.074	mg/Kg	☼	09/27/23 10:40	09/27/23 16:35	1
o-Xylene	ND		0.52	0.059	mg/Kg	☼	09/27/23 10:40	09/27/23 16:35	1
Toluene	**0.29**		0.26	0.034	mg/Kg	☼	09/27/23 10:40	09/27/23 16:35	1
Naphthalene	ND		0.52	0.072	mg/Kg	☼	09/27/23 10:40	09/27/23 16:35	1
Xylenes, Total	ND		1.5	0.13	mg/Kg	☼	09/27/23 10:40	09/27/23 16:35	1

Client Sample ID: B-12 (40-41.5)
Lab Sample ID: 590-21723-16

Date Collected: 09/14/23 12:40
Matrix: Solid
Date Received: 09/18/23 09:23
Percent Solids: 79.5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*79 - 124*	*09/27/23 10:40*	*09/27/23 16:35*	*1*
4-Bromofluorobenzene (Surr)	*97*		*66 - 129*	*09/27/23 10:40*	*09/27/23 16:35*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 120*	*09/27/23 10:40*	*09/27/23 16:35*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*	*09/27/23 10:40*	*09/27/23 16:35*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**7.8**	**J**	13	4.6	mg/Kg	☼	09/27/23 10:40	09/27/23 16:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*41.5 - 162*	*09/27/23 10:40*	*09/27/23 16:35*	*1*

Client Sample ID: B-9 (12.5-14)
Lab Sample ID: 590-21723-19

Date Collected: 09/13/23 14:40
Matrix: Solid
Date Received: 09/18/23 09:23
Percent Solids: 94.4

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.049	0.024	mg/Kg	☼	09/27/23 10:40	09/27/23 16:57	1
Ethylbenzene	ND		0.24	0.040	mg/Kg	☼	09/27/23 10:40	09/27/23 16:57	1
m,p-Xylene	ND		0.98	0.070	mg/Kg	☼	09/27/23 10:40	09/27/23 16:57	1
o-Xylene	ND		0.49	0.056	mg/Kg	☼	09/27/23 10:40	09/27/23 16:57	1
Toluene	ND		0.24	0.032	mg/Kg	☼	09/27/23 10:40	09/27/23 16:57	1
Naphthalene	ND		0.49	0.068	mg/Kg	☼	09/27/23 10:40	09/27/23 16:57	1
Xylenes, Total	ND		1.5	0.13	mg/Kg	☼	09/27/23 10:40	09/27/23 16:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*79 - 124*	*09/27/23 10:40*	*09/27/23 16:57*	*1*
4-Bromofluorobenzene (Surr)	*101*		*66 - 129*	*09/27/23 10:40*	*09/27/23 16:57*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 120*	*09/27/23 10:40*	*09/27/23 16:57*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*	*09/27/23 10:40*	*09/27/23 16:57*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		12	4.4	mg/Kg	☼	09/27/23 10:40	09/27/23 16:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*41.5 - 162*	*09/27/23 10:40*	*09/27/23 16:57*	*1*

Client Sample ID: B-9 (27.5-29)
Lab Sample ID: 590-21723-23

Date Collected: 09/13/23 15:00
Matrix: Solid
Date Received: 09/18/23 09:23
Percent Solids: 94.2

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.045	0.022	mg/Kg	☼	09/27/23 10:40	09/27/23 17:18	1
Ethylbenzene	ND		0.22	0.036	mg/Kg	☼	09/27/23 10:40	09/27/23 17:18	1
m,p-Xylene	ND		0.90	0.064	mg/Kg	☼	09/27/23 10:40	09/27/23 17:18	1
o-Xylene	ND		0.45	0.052	mg/Kg	☼	09/27/23 10:40	09/27/23 17:18	1
Toluene	ND		0.22	0.030	mg/Kg	☼	09/27/23 10:40	09/27/23 17:18	1
Naphthalene	ND		0.45	0.063	mg/Kg	☼	09/27/23 10:40	09/27/23 17:18	1
Xylenes, Total	ND		1.3	0.12	mg/Kg	☼	09/27/23 10:40	09/27/23 17:18	1

Client Sample ID: B-9 (27.5-29)

Lab Sample ID: 590-21723-23

Date Collected: 09/13/23 15:00
Matrix: Solid
Date Received: 09/18/23 09:23
Percent Solids: 94.2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*79 - 124*	*09/27/23 10:40*	*09/27/23 17:18*	*1*
4-Bromofluorobenzene (Surr)	*101*		*66 - 129*	*09/27/23 10:40*	*09/27/23 17:18*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*	*09/27/23 10:40*	*09/27/23 17:18*	*1*
Toluene-d8 (Surr)	*94*		*80 - 120*	*09/27/23 10:40*	*09/27/23 17:18*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		11	4.0	mg/Kg	☼	09/27/23 10:40	09/27/23 17:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*41.5 - 162*	*09/27/23 10:40*	*09/27/23 17:18*	*1*

Client Sample ID: MW-3:091523

Lab Sample ID: 590-21723-24

Date Collected: 09/15/23 08:55
Matrix: Water
Date Received: 09/18/23 09:23

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.093	ug/L			09/19/23 23:52	1
Ethylbenzene	**1.9**		1.0	0.20	ug/L			09/19/23 23:52	1
m,p-Xylene	**4.0**		2.0	0.28	ug/L			09/19/23 23:52	1
Naphthalene	**3.6**	**B**	2.0	0.63	ug/L			09/19/23 23:52	1
o-Xylene	ND		1.0	0.16	ug/L			09/19/23 23:52	1
Toluene	ND		1.0	0.31	ug/L			09/19/23 23:52	1
Xylenes, Total	**4.0**		3.0	0.44	ug/L			09/19/23 23:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*80 - 120*		*09/19/23 23:52*	*1*
4-Bromofluorobenzene (Surr)	*93*		*76 - 120*		*09/19/23 23:52*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 123*		*09/19/23 23:52*	*1*
Toluene-d8 (Surr)	*109*		*80 - 120*		*09/19/23 23:52*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**1000**	**B**	150	31	ug/L			09/19/23 23:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*68.7 - 141*		*09/19/23 23:52*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	ND		5.0	0.63	ug/L			09/22/23 00:50	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND	H H3	0.20	0.057	mg/L			09/19/23 15:40	1
Sulfate	**13**		0.50	0.13	mg/L			09/19/23 15:40	1

Method: EPA 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**7.1**		0.10	0.013	mg/L		09/25/23 16:28	09/27/23 03:56	1
Manganese	**1.2**		0.0020	0.00046	mg/L		09/25/23 16:28	09/27/23 03:56	1

Client Sample ID: MW-3:091523

Lab Sample ID: 590-21723-24

Date Collected: 09/15/23 08:55

Matrix: Water

Date Received: 09/18/23 09:23

Method: EPA 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.091	J	0.10	0.013	mg/L		09/21/23 17:58	09/22/23 14:05	1
Manganese	0.89		0.0020	0.00046	mg/L		09/21/23 17:58	09/22/23 14:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity (SM 2320B)	160	B	20	5.0	mg/L			09/28/23 15:05	1
Total Organic Carbon (SM 5310C)	5.0		1.5	0.38	mg/L			09/29/23 18:48	1

Client Sample ID: MW-9:091523

Lab Sample ID: 590-21723-25

Date Collected: 09/15/23 10:02

Matrix: Water

Date Received: 09/18/23 09:23

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.093	ug/L			09/20/23 00:14	1
Ethylbenzene	ND		1.0	0.20	ug/L			09/20/23 00:14	1
m,p-Xylene	ND		2.0	0.28	ug/L			09/20/23 00:14	1
Naphthalene	ND		2.0	0.63	ug/L			09/20/23 00:14	1
o-Xylene	ND		1.0	0.16	ug/L			09/20/23 00:14	1
Toluene	ND		1.0	0.31	ug/L			09/20/23 00:14	1
Xylenes, Total	ND		3.0	0.44	ug/L			09/20/23 00:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*80 - 120*		*09/20/23 00:14*	*1*
4-Bromofluorobenzene (Surr)	*110*		*76 - 120*		*09/20/23 00:14*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 123*		*09/20/23 00:14*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*		*09/20/23 00:14*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	48	J B	150	31	ug/L			09/20/23 00:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*68.7 - 141*		*09/20/23 00:14*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	ND		5.0	0.63	ug/L			09/22/23 01:03	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	4.7	H H3	0.20	0.057	mg/L			09/19/23 15:50	1
Sulfate	18		0.50	0.13	mg/L			09/19/23 15:50	1

Method: EPA 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.30		0.10	0.013	mg/L		09/25/23 16:28	09/27/23 03:59	1
Manganese	0.35		0.0020	0.00046	mg/L		09/25/23 16:28	09/27/23 03:59	1

Method: EPA 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.065	J	0.10	0.013	mg/L		09/21/23 17:58	09/22/23 14:02	1

Client Sample ID: MW-9:091523

Lab Sample ID: 590-21723-25

Date Collected: 09/15/23 10:02
Matrix: Water
Date Received: 09/18/23 09:23

Method: EPA 200.8 - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.00070	J	0.0020	0.00046	mg/L		09/21/23 17:58	09/22/23 14:02	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity (SM 2320B)	170	B	20	5.0	mg/L			09/28/23 15:05	1
Total Organic Carbon (SM 5310C)	2.1		1.5	0.38	mg/L			09/29/23 19:05	1

Client Sample ID: MW-10:091523

Lab Sample ID: 590-21723-26

Date Collected: 09/15/23 12:23
Matrix: Water
Date Received: 09/18/23 09:23

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.093	ug/L			09/20/23 00:36	1
Ethylbenzene	ND		1.0	0.20	ug/L			09/20/23 00:36	1
m,p-Xylene	ND		2.0	0.28	ug/L			09/20/23 00:36	1
Naphthalene	ND		2.0	0.63	ug/L			09/20/23 00:36	1
o-Xylene	ND		1.0	0.16	ug/L			09/20/23 00:36	1
Toluene	ND		1.0	0.31	ug/L			09/20/23 00:36	1
Xylenes, Total	ND		3.0	0.44	ug/L			09/20/23 00:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*80 - 120*		*09/20/23 00:36*	*1*
4-Bromofluorobenzene (Surr)	*105*		*76 - 120*		*09/20/23 00:36*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 123*		*09/20/23 00:36*	*1*
Toluene-d8 (Surr)	*105*		*80 - 120*		*09/20/23 00:36*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	47	J B	150	31	ug/L			09/20/23 00:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*68.7 - 141*		*09/20/23 00:36*	*1*

Client Sample ID: MW-11:091523

Lab Sample ID: 590-21723-27

Date Collected: 09/15/23 11:39
Matrix: Water
Date Received: 09/18/23 09:23

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.093	ug/L			09/20/23 00:58	1
Ethylbenzene	ND		1.0	0.20	ug/L			09/20/23 00:58	1
m,p-Xylene	ND		2.0	0.28	ug/L			09/20/23 00:58	1
Naphthalene	ND		2.0	0.63	ug/L			09/20/23 00:58	1
o-Xylene	ND		1.0	0.16	ug/L			09/20/23 00:58	1
Toluene	ND		1.0	0.31	ug/L			09/20/23 00:58	1
Xylenes, Total	ND		3.0	0.44	ug/L			09/20/23 00:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*80 - 120*		*09/20/23 00:58*	*1*
4-Bromofluorobenzene (Surr)	*106*		*76 - 120*		*09/20/23 00:58*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 123*		*09/20/23 00:58*	*1*

Client Sample ID: MW-11:091523
Lab Sample ID: 590-21723-27
Date Collected: 09/15/23 11:39
Matrix: Water
Date Received: 09/18/23 09:23

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*105*		*80 - 120*		*09/20/23 00:58*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	46	J B	150	31	ug/L			09/20/23 00:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*68.7 - 141*		*09/20/23 00:58*	*1*

Client Sample ID: MW-15:091523
Lab Sample ID: 590-21723-28
Date Collected: 09/15/23 13:15
Matrix: Water
Date Received: 09/18/23 09:23

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.093	ug/L			09/20/23 01:42	1
Ethylbenzene	ND		1.0	0.20	ug/L			09/20/23 01:42	1
m,p-Xylene	ND		2.0	0.28	ug/L			09/20/23 01:42	1
Naphthalene	ND		2.0	0.63	ug/L			09/20/23 01:42	1
o-Xylene	ND		1.0	0.16	ug/L			09/20/23 01:42	1
Toluene	ND		1.0	0.31	ug/L			09/20/23 01:42	1
Xylenes, Total	ND		3.0	0.44	ug/L			09/20/23 01:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*80 - 120*		*09/20/23 01:42*	*1*
4-Bromofluorobenzene (Surr)	*100*		*76 - 120*		*09/20/23 01:42*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 123*		*09/20/23 01:42*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*		*09/20/23 01:42*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150	31	ug/L			09/26/23 00:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*68.7 - 141*		*09/26/23 00:00*	*1*

Client Sample ID: MW-18:091523
Lab Sample ID: 590-21723-29
Date Collected: 09/15/23 10:57
Matrix: Water
Date Received: 09/18/23 09:23

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.093	ug/L			09/20/23 02:04	1
Ethylbenzene	ND		1.0	0.20	ug/L			09/20/23 02:04	1
m,p-Xylene	ND		2.0	0.28	ug/L			09/20/23 02:04	1
Naphthalene	ND		2.0	0.63	ug/L			09/20/23 02:04	1
o-Xylene	ND		1.0	0.16	ug/L			09/20/23 02:04	1
Toluene	ND		1.0	0.31	ug/L			09/20/23 02:04	1
Xylenes, Total	ND		3.0	0.44	ug/L			09/20/23 02:04	1

Client Sample ID: MW-18:091523
Lab Sample ID: 590-21723-29
Date Collected: 09/15/23 10:57
Matrix: Water
Date Received: 09/18/23 09:23

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*80 - 120*		*09/20/23 02:04*	*1*
4-Bromofluorobenzene (Surr)	*106*		*76 - 120*		*09/20/23 02:04*	*1*
Dibromofluoromethane (Surr)	*107*		*80 - 123*		*09/20/23 02:04*	*1*
Toluene-d8 (Surr)	*105*		*80 - 120*		*09/20/23 02:04*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150	31	ug/L			09/26/23 00:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*68.7 - 141*		*09/26/23 00:21*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	ND		5.0	0.63	ug/L			09/22/23 01:16	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**0.56**	**H H3**	0.20	0.057	mg/L			09/19/23 16:01	1
Sulfate	**3.8**		0.50	0.13	mg/L			09/19/23 16:01	1

Method: EPA 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**0.058**	**J**	0.10	0.013	mg/L		09/25/23 16:28	09/27/23 02:20	1
Manganese	**0.0013**	**J**	0.0020	0.00046	mg/L		09/25/23 16:28	09/27/23 02:20	1

Method: EPA 200.8 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**0.049**	**J**	0.10	0.013	mg/L		09/21/23 17:58	09/22/23 14:40	1
Manganese	ND		0.0020	0.00046	mg/L		09/21/23 17:58	09/22/23 14:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity (SM 2320B)	**160**	**B**	20	5.0	mg/L			09/28/23 15:05	1
Total Organic Carbon (SM 5310C)	**1.6**		1.5	0.38	mg/L			09/29/23 19:23	1

Client Sample ID: B-11 (5-6.5)
Lab Sample ID: 590-21723-31
Date Collected: 09/14/23 13:45
Matrix: Solid
Date Received: 09/18/23 09:23
Percent Solids: 82.9

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.041	0.020	mg/Kg	☼	09/27/23 10:40	09/27/23 17:40	1
Ethylbenzene	**0.31**		0.20	0.033	mg/Kg	☼	09/27/23 10:40	09/27/23 17:40	1
m,p-Xylene	**72**		8.1	0.58	mg/Kg	☼	09/27/23 10:40	09/28/23 14:30	10
o-Xylene	**37**		4.1	0.47	mg/Kg	☼	09/27/23 10:40	09/28/23 14:30	10
Toluene	**0.31**		0.20	0.027	mg/Kg	☼	09/27/23 10:40	09/27/23 17:40	1
Naphthalene	**12**		4.1	0.57	mg/Kg	☼	09/27/23 10:40	09/28/23 14:30	10
Xylenes, Total	**110**		12	1.0	mg/Kg	☼	09/27/23 10:40	09/28/23 14:30	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*79 - 124*	*09/27/23 10:40*	*09/27/23 17:40*	*1*

Client Sample ID: B-11 (5-6.5)

Lab Sample ID: 590-21723-31
Date Collected: 09/14/23 13:45
Matrix: Solid
Date Received: 09/18/23 09:23
Percent Solids: 82.9

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*79 - 124*	*09/27/23 10:40*	*09/28/23 14:30*	*10*
4-Bromofluorobenzene (Surr)	*81*		*66 - 129*	*09/27/23 10:40*	*09/27/23 17:40*	*1*
4-Bromofluorobenzene (Surr)	*103*		*66 - 129*	*09/27/23 10:40*	*09/28/23 14:30*	*10*
Dibromofluoromethane (Surr)	*102*		*80 - 120*	*09/27/23 10:40*	*09/27/23 17:40*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 120*	*09/27/23 10:40*	*09/28/23 14:30*	*10*
Toluene-d8 (Surr)	*122*	*S1+*	*80 - 120*	*09/27/23 10:40*	*09/27/23 17:40*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*	*09/27/23 10:40*	*09/28/23 14:30*	*10*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**2200**		100	36	mg/Kg	☼	09/27/23 10:40	09/28/23 14:30	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*41.5 - 162*	*09/27/23 10:40*	*09/28/23 14:30*	*10*
4-Bromofluorobenzene (Surr)	*105*		*41.5 - 162*	*09/27/23 10:40*	*09/28/23 14:52*	*100*

Method: SW846 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	**3200**		420	130	mg/Kg	☼	09/29/23 14:01	09/29/23 16:08	5
Iron	**21000**		420	180	mg/Kg	☼	09/29/23 14:01	09/29/23 16:08	5
Magnesium	**4500**		210	38	mg/Kg	☼	09/29/23 14:01	09/29/23 16:08	5
Manganese	**410**		64	4.4	mg/Kg	☼	09/29/23 14:01	09/29/23 16:08	5
Potassium	**2000**		110	53	mg/Kg	☼	09/29/23 14:01	10/03/23 19:25	5
Sodium	**150**		110	44	mg/Kg	☼	09/29/23 14:01	09/29/23 16:08	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup (SW846 9060A)	**1300**	**J**	2000	97	mg/Kg			10/05/23 22:05	1

Client Sample ID: B-11 (20-21.5)

Lab Sample ID: 590-21723-37
Date Collected: 09/14/23 14:15
Matrix: Solid
Date Received: 09/18/23 09:23
Percent Solids: 94.7

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.050	0.025	mg/Kg	☼	09/27/23 10:40	09/27/23 18:02	1
Ethylbenzene	ND		0.25	0.040	mg/Kg	☼	09/27/23 10:40	09/27/23 18:02	1
m,p-Xylene	ND		0.99	0.071	mg/Kg	☼	09/27/23 10:40	09/27/23 18:02	1
o-Xylene	ND		0.50	0.057	mg/Kg	☼	09/27/23 10:40	09/27/23 18:02	1
Toluene	ND		0.25	0.033	mg/Kg	☼	09/27/23 10:40	09/27/23 18:02	1
Naphthalene	**0.36**	**J**	0.50	0.070	mg/Kg	☼	09/27/23 10:40	09/27/23 18:02	1
Xylenes, Total	ND		1.5	0.13	mg/Kg	☼	09/27/23 10:40	09/27/23 18:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*79 - 124*	*09/27/23 10:40*	*09/27/23 18:02*	*1*
4-Bromofluorobenzene (Surr)	*106*		*66 - 129*	*09/27/23 10:40*	*09/27/23 18:02*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 120*	*09/27/23 10:40*	*09/27/23 18:02*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*	*09/27/23 10:40*	*09/27/23 18:02*	*1*

Client Sample ID: B-11 (20-21.5)
Lab Sample ID: 590-21723-37
Date Collected: 09/14/23 14:15
Matrix: Solid
Date Received: 09/18/23 09:23
Percent Solids: 94.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**51**		12	4.5	mg/Kg	☼	09/27/23 10:40	09/27/23 18:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*41.5 - 162*	*09/27/23 10:40*	*09/27/23 18:02*	*1*

Client Sample ID: B-11 (32.5-34)
Lab Sample ID: 590-21723-42
Date Collected: 09/14/23 15:00
Matrix: Solid
Date Received: 09/18/23 09:23
Percent Solids: 93.5

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.041	0.021	mg/Kg	☼	09/27/23 10:40	09/27/23 18:24	1
Ethylbenzene	ND		0.21	0.033	mg/Kg	☼	09/27/23 10:40	09/27/23 18:24	1
m,p-Xylene	**2.4**		0.82	0.059	mg/Kg	☼	09/27/23 10:40	09/27/23 18:24	1
o-Xylene	**1.4**		0.41	0.047	mg/Kg	☼	09/27/23 10:40	09/27/23 18:24	1
Toluene	ND		0.21	0.027	mg/Kg	☼	09/27/23 10:40	09/27/23 18:24	1
Naphthalene	**0.62**		0.41	0.058	mg/Kg	☼	09/27/23 10:40	09/27/23 18:24	1
Xylenes, Total	**3.8**		1.2	0.11	mg/Kg	☼	09/27/23 10:40	09/27/23 18:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*79 - 124*	*09/27/23 10:40*	*09/27/23 18:24*	*1*
4-Bromofluorobenzene (Surr)	*106*		*66 - 129*	*09/27/23 10:40*	*09/27/23 18:24*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*	*09/27/23 10:40*	*09/27/23 18:24*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*	*09/27/23 10:40*	*09/27/23 18:24*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**120**		10	3.7	mg/Kg	☼	09/27/23 10:40	09/27/23 18:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*41.5 - 162*	*09/27/23 10:40*	*09/27/23 18:24*	*1*

Client Sample ID: B-11 (40-41.5)
Lab Sample ID: 590-21723-45
Date Collected: 09/14/23 15:35
Matrix: Solid
Date Received: 09/18/23 09:23
Percent Solids: 80.5

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.045	0.023	mg/Kg	☼	09/27/23 10:40	09/27/23 18:46	1
Ethylbenzene	ND		0.23	0.037	mg/Kg	☼	09/27/23 10:40	09/27/23 18:46	1
m,p-Xylene	ND		0.91	0.065	mg/Kg	☼	09/27/23 10:40	09/27/23 18:46	1
o-Xylene	ND		0.45	0.052	mg/Kg	☼	09/27/23 10:40	09/27/23 18:46	1
Toluene	**0.039**	**J**	0.23	0.030	mg/Kg	☼	09/27/23 10:40	09/27/23 18:46	1
Naphthalene	ND		0.45	0.064	mg/Kg	☼	09/27/23 10:40	09/27/23 18:46	1
Xylenes, Total	ND		1.4	0.12	mg/Kg	☼	09/27/23 10:40	09/27/23 18:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*79 - 124*	*09/27/23 10:40*	*09/27/23 18:46*	*1*
4-Bromofluorobenzene (Surr)	*100*		*66 - 129*	*09/27/23 10:40*	*09/27/23 18:46*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 120*	*09/27/23 10:40*	*09/27/23 18:46*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*	*09/27/23 10:40*	*09/27/23 18:46*	*1*

Client Sample ID: B-11 (40-41.5)
Lab Sample ID: 590-21723-45
Date Collected: 09/14/23 15:35
Matrix: Solid
Date Received: 09/18/23 09:23
Percent Solids: 80.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	5.1	J	11	4.1	mg/Kg	☼	09/27/23 10:40	09/27/23 18:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*41.5 - 162*	*09/27/23 10:40*	*09/27/23 18:46*	*1*

Client Sample ID: B-10 (10-11.5)
Lab Sample ID: 590-21723-47
Date Collected: 09/14/23 08:26
Matrix: Solid
Date Received: 09/18/23 09:23
Percent Solids: 89.2

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.056	0.028	mg/Kg	☼	09/27/23 10:40	09/27/23 19:08	1
Ethylbenzene	ND		0.28	0.045	mg/Kg	☼	09/27/23 10:40	09/27/23 19:08	1
m,p-Xylene	ND		1.1	0.081	mg/Kg	☼	09/27/23 10:40	09/27/23 19:08	1
o-Xylene	ND		0.56	0.065	mg/Kg	☼	09/27/23 10:40	09/27/23 19:08	1
Toluene	ND		0.28	0.037	mg/Kg	☼	09/27/23 10:40	09/27/23 19:08	1
Naphthalene	ND		0.56	0.079	mg/Kg	☼	09/27/23 10:40	09/27/23 19:08	1
Xylenes, Total	ND		1.7	0.15	mg/Kg	☼	09/27/23 10:40	09/27/23 19:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*79 - 124*	*09/27/23 10:40*	*09/27/23 19:08*	*1*
4-Bromofluorobenzene (Surr)	*98*		*66 - 129*	*09/27/23 10:40*	*09/27/23 19:08*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 120*	*09/27/23 10:40*	*09/27/23 19:08*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*	*09/27/23 10:40*	*09/27/23 19:08*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		14	5.1	mg/Kg	☼	09/27/23 10:40	09/27/23 19:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*41.5 - 162*	*09/27/23 10:40*	*09/27/23 19:08*	*1*

Client Sample ID: B-10 (25-26.5)
Lab Sample ID: 590-21723-51
Date Collected: 09/14/23 08:44
Matrix: Solid
Date Received: 09/18/23 09:23
Percent Solids: 93.2

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.051	0.025	mg/Kg	☼	09/27/23 10:40	09/27/23 19:51	1
Ethylbenzene	ND		0.25	0.041	mg/Kg	☼	09/27/23 10:40	09/27/23 19:51	1
m,p-Xylene	ND		1.0	0.073	mg/Kg	☼	09/27/23 10:40	09/27/23 19:51	1
o-Xylene	ND		0.51	0.058	mg/Kg	☼	09/27/23 10:40	09/27/23 19:51	1
Toluene	ND		0.25	0.034	mg/Kg	☼	09/27/23 10:40	09/27/23 19:51	1
Naphthalene	ND		0.51	0.071	mg/Kg	☼	09/27/23 10:40	09/27/23 19:51	1
Xylenes, Total	ND		1.5	0.13	mg/Kg	☼	09/27/23 10:40	09/27/23 19:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*79 - 124*	*09/27/23 10:40*	*09/27/23 19:51*	*1*
4-Bromofluorobenzene (Surr)	*101*		*66 - 129*	*09/27/23 10:40*	*09/27/23 19:51*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*	*09/27/23 10:40*	*09/27/23 19:51*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*	*09/27/23 10:40*	*09/27/23 19:51*	*1*

Client Sample ID: B-10 (25-26.5)
Lab Sample ID: 590-21723-51
Date Collected: 09/14/23 08:44
Matrix: Solid
Date Received: 09/18/23 09:23
Percent Solids: 93.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		13	4.6	mg/Kg	☼	09/27/23 10:40	09/27/23 19:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*41.5 - 162*	*09/27/23 10:40*	*09/27/23 19:51*	*1*

Client Sample ID: B-10 (32.5-34)
Lab Sample ID: 590-21723-54
Date Collected: 09/14/23 09:00
Matrix: Solid
Date Received: 09/18/23 09:23
Percent Solids: 94.5

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.019	0.0095	mg/Kg	☼	09/27/23 10:40	09/27/23 20:13	1
Ethylbenzene	ND		0.095	0.015	mg/Kg	☼	09/27/23 10:40	09/27/23 20:13	1
m,p-Xylene	ND		0.38	0.027	mg/Kg	☼	09/27/23 10:40	09/27/23 20:13	1
o-Xylene	ND		0.19	0.022	mg/Kg	☼	09/27/23 10:40	09/27/23 20:13	1
Toluene	ND		0.095	0.013	mg/Kg	☼	09/27/23 10:40	09/27/23 20:13	1
Naphthalene	ND		0.19	0.027	mg/Kg	☼	09/27/23 10:40	09/27/23 20:13	1
Xylenes, Total	ND		0.57	0.049	mg/Kg	☼	09/27/23 10:40	09/27/23 20:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*79 - 124*	*09/27/23 10:40*	*09/27/23 20:13*	*1*
4-Bromofluorobenzene (Surr)	*97*		*66 - 129*	*09/27/23 10:40*	*09/27/23 20:13*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 120*	*09/27/23 10:40*	*09/27/23 20:13*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*	*09/27/23 10:40*	*09/27/23 20:13*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		4.8	1.7	mg/Kg	☼	09/27/23 10:40	09/27/23 20:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*41.5 - 162*	*09/27/23 10:40*	*09/27/23 20:13*	*1*

Client Sample ID: B-10 (40-41.5)
Lab Sample ID: 590-21723-56
Date Collected: 09/14/23 09:25
Matrix: Solid
Date Received: 09/18/23 09:23
Percent Solids: 83.9

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.034	0.017	mg/Kg	☼	09/27/23 10:40	09/27/23 20:35	1
Ethylbenzene	ND		0.17	0.028	mg/Kg	☼	09/27/23 10:40	09/27/23 20:35	1
m,p-Xylene	ND		0.69	0.049	mg/Kg	☼	09/27/23 10:40	09/27/23 20:35	1
o-Xylene	ND		0.34	0.039	mg/Kg	☼	09/27/23 10:40	09/27/23 20:35	1
Toluene	ND		0.17	0.023	mg/Kg	☼	09/27/23 10:40	09/27/23 20:35	1
Naphthalene	ND		0.34	0.048	mg/Kg	☼	09/27/23 10:40	09/27/23 20:35	1
Xylenes, Total	ND		1.0	0.089	mg/Kg	☼	09/27/23 10:40	09/27/23 20:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*79 - 124*	*09/27/23 10:40*	*09/27/23 20:35*	*1*
4-Bromofluorobenzene (Surr)	*101*		*66 - 129*	*09/27/23 10:40*	*09/27/23 20:35*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 120*	*09/27/23 10:40*	*09/27/23 20:35*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*	*09/27/23 10:40*	*09/27/23 20:35*	*1*

Client Sample ID: B-10 (40-41.5)
Lab Sample ID: 590-21723-56
Date Collected: 09/14/23 09:25
Matrix: Solid
Date Received: 09/18/23 09:23
Percent Solids: 83.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		8.6	3.1	mg/Kg	☼	09/27/23 10:40	09/27/23 20:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*41.5 - 162*	*09/27/23 10:40*	*09/27/23 20:35*	*1*

Client Sample ID: B-8 (12.5-14)
Lab Sample ID: 590-21723-62
Date Collected: 09/13/23 12:40
Matrix: Solid
Date Received: 09/18/23 09:23
Percent Solids: 93.2

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.051	0.026	mg/Kg	☼	09/27/23 10:40	09/27/23 20:57	1
Ethylbenzene	ND		0.26	0.041	mg/Kg	☼	09/27/23 10:40	09/27/23 20:57	1
m,p-Xylene	ND		1.0	0.073	mg/Kg	☼	09/27/23 10:40	09/27/23 20:57	1
o-Xylene	ND		0.51	0.059	mg/Kg	☼	09/27/23 10:40	09/27/23 20:57	1
Toluene	ND		0.26	0.034	mg/Kg	☼	09/27/23 10:40	09/27/23 20:57	1
Naphthalene	ND		0.51	0.072	mg/Kg	☼	09/27/23 10:40	09/27/23 20:57	1
Xylenes, Total	ND		1.5	0.13	mg/Kg	☼	09/27/23 10:40	09/27/23 20:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*79 - 124*	*09/27/23 10:40*	*09/27/23 20:57*	*1*
4-Bromofluorobenzene (Surr)	*98*		*66 - 129*	*09/27/23 10:40*	*09/27/23 20:57*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 120*	*09/27/23 10:40*	*09/27/23 20:57*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*	*09/27/23 10:40*	*09/27/23 20:57*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		13	4.6	mg/Kg	☼	09/27/23 10:40	09/27/23 20:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*41.5 - 162*	*09/27/23 10:40*	*09/27/23 20:57*	*1*

Client Sample ID: B-8 (25-26.5)
Lab Sample ID: 590-21723-67
Date Collected: 09/13/23 13:20
Matrix: Solid
Date Received: 09/18/23 09:23
Percent Solids: 96.0

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.048	0.024	mg/Kg	☼	09/27/23 10:40	09/27/23 21:18	1
Ethylbenzene	ND		0.24	0.039	mg/Kg	☼	09/27/23 10:40	09/27/23 21:18	1
m,p-Xylene	ND		0.97	0.069	mg/Kg	☼	09/27/23 10:40	09/27/23 21:18	1
o-Xylene	ND		0.48	0.056	mg/Kg	☼	09/27/23 10:40	09/27/23 21:18	1
Toluene	ND		0.24	0.032	mg/Kg	☼	09/27/23 10:40	09/27/23 21:18	1
Naphthalene	ND		0.48	0.068	mg/Kg	☼	09/27/23 10:40	09/27/23 21:18	1
Xylenes, Total	ND		1.5	0.12	mg/Kg	☼	09/27/23 10:40	09/27/23 21:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*79 - 124*	*09/27/23 10:40*	*09/27/23 21:18*	*1*
4-Bromofluorobenzene (Surr)	*102*		*66 - 129*	*09/27/23 10:40*	*09/27/23 21:18*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 120*	*09/27/23 10:40*	*09/27/23 21:18*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*	*09/27/23 10:40*	*09/27/23 21:18*	*1*

Client Sample ID: B-8 (25-26.5)
Lab Sample ID: 590-21723-67
Date Collected: 09/13/23 13:20
Matrix: Solid
Date Received: 09/18/23 09:23
Percent Solids: 96.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		12	4.4	mg/Kg	☼	09/27/23 10:40	09/27/23 21:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*41.5 - 162*	*09/27/23 10:40*	*09/27/23 21:18*	*1*

Client Sample ID: B-8 (37.5-39)
Lab Sample ID: 590-21723-72
Date Collected: 09/13/23 13:45
Matrix: Solid
Date Received: 09/18/23 09:23
Percent Solids: 87.3

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.043	0.021	mg/Kg	☼	09/27/23 10:40	09/27/23 21:40	1
Ethylbenzene	ND		0.21	0.035	mg/Kg	☼	09/27/23 10:40	09/27/23 21:40	1
m,p-Xylene	ND		0.85	0.061	mg/Kg	☼	09/27/23 10:40	09/27/23 21:40	1
o-Xylene	ND		0.43	0.049	mg/Kg	☼	09/27/23 10:40	09/27/23 21:40	1
Toluene	ND		0.21	0.028	mg/Kg	☼	09/27/23 10:40	09/27/23 21:40	1
Naphthalene	**0.11**	**J**	0.43	0.060	mg/Kg	☼	09/27/23 10:40	09/27/23 21:40	1
Xylenes, Total	ND		1.3	0.11	mg/Kg	☼	09/27/23 10:40	09/27/23 21:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*89*		*79 - 124*	*09/27/23 10:40*	*09/27/23 21:40*	*1*
4-Bromofluorobenzene (Surr)	*100*		*66 - 129*	*09/27/23 10:40*	*09/27/23 21:40*	*1*
Dibromofluoromethane (Surr)	*92*		*80 - 120*	*09/27/23 10:40*	*09/27/23 21:40*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*	*09/27/23 10:40*	*09/27/23 21:40*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**650**		11	3.8	mg/Kg	☼	09/27/23 10:40	09/27/23 21:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*41.5 - 162*	*09/27/23 10:40*	*09/27/23 21:40*	*1*

Client Sample ID: B-8 (40-41.5)
Lab Sample ID: 590-21723-73
Date Collected: 09/13/23 14:00
Matrix: Solid
Date Received: 09/18/23 09:23
Percent Solids: 87.5

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.033	0.017	mg/Kg	☼	09/27/23 10:40	09/27/23 22:02	1
Ethylbenzene	ND		0.17	0.027	mg/Kg	☼	09/27/23 10:40	09/27/23 22:02	1
m,p-Xylene	ND		0.67	0.048	mg/Kg	☼	09/27/23 10:40	09/27/23 22:02	1
o-Xylene	ND		0.33	0.038	mg/Kg	☼	09/27/23 10:40	09/27/23 22:02	1
Toluene	**0.057**	**J**	0.17	0.022	mg/Kg	☼	09/27/23 10:40	09/27/23 22:02	1
Naphthalene	ND		0.33	0.047	mg/Kg	☼	09/27/23 10:40	09/27/23 22:02	1
Xylenes, Total	ND		1.0	0.086	mg/Kg	☼	09/27/23 10:40	09/27/23 22:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*79 - 124*	*09/27/23 10:40*	*09/27/23 22:02*	*1*
4-Bromofluorobenzene (Surr)	*96*		*66 - 129*	*09/27/23 10:40*	*09/27/23 22:02*	*1*
Dibromofluoromethane (Surr)	*96*		*80 - 120*	*09/27/23 10:40*	*09/27/23 22:02*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*	*09/27/23 10:40*	*09/27/23 22:02*	*1*

Client Sample ID: B-8 (40-41.5)

Lab Sample ID: 590-21723-73
Date Collected: 09/13/23 14:00
Matrix: Solid
Date Received: 09/18/23 09:23
Percent Solids: 87.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	110		8.3	3.0	mg/Kg	☼	09/27/23 10:40	09/27/23 22:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*41.5 - 162*	*09/27/23 10:40*	*09/27/23 22:02*	*1*

Method: SW846 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	15000		410	120	mg/Kg	☼	09/27/23 10:57	09/27/23 21:15	5
Iron	7900		410	180	mg/Kg	☼	09/27/23 10:57	09/27/23 21:15	5
Magnesium	7800		200	36	mg/Kg	☼	09/27/23 10:57	09/27/23 21:15	5
Manganese	170		61	4.2	mg/Kg	☼	09/27/23 10:57	09/27/23 21:15	5
Potassium	520		100	51	mg/Kg	☼	09/27/23 10:57	09/27/23 21:15	5
Sodium	92	J	100	42	mg/Kg	☼	09/27/23 10:57	09/27/23 21:15	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup (SW846 9060A)	5200		2000	97	mg/Kg			10/05/23 22:10	1

Client Sample ID: B-9 (37.5-39)

Lab Sample ID: 590-21723-74
Date Collected: 09/13/23 15:20
Matrix: Solid
Date Received: 09/18/23 09:23
Percent Solids: 90.1

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND	H	0.043	0.021	mg/Kg	☼	09/27/23 15:18	09/28/23 01:38	1
Ethylbenzene	ND	H	0.21	0.035	mg/Kg	☼	09/27/23 15:18	09/28/23 01:38	1
m,p-Xylene	ND	H	0.86	0.062	mg/Kg	☼	09/27/23 15:18	09/28/23 01:38	1
o-Xylene	ND	H	0.43	0.049	mg/Kg	☼	09/27/23 15:18	09/28/23 01:38	1
Toluene	ND	H	0.21	0.029	mg/Kg	☼	09/27/23 15:18	09/28/23 01:38	1
Naphthalene	ND	H	0.43	0.060	mg/Kg	☼	09/27/23 15:18	09/28/23 01:38	1
Xylenes, Total	ND	H	1.3	0.11	mg/Kg	☼	09/27/23 15:18	09/28/23 01:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*79 - 124*	*09/27/23 15:18*	*09/28/23 01:38*	*1*
4-Bromofluorobenzene (Surr)	*99*		*66 - 129*	*09/27/23 15:18*	*09/28/23 01:38*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*	*09/27/23 15:18*	*09/28/23 01:38*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*	*09/27/23 15:18*	*09/28/23 01:38*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	34	H	11	3.9	mg/Kg	☼	09/27/23 15:18	09/28/23 01:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*41.5 - 162*	*09/27/23 15:18*	*09/28/23 01:38*	*1*

Client Sample ID: B-9 (40-41.5)

Date Collected: 09/13/23 15:50
Date Received: 09/18/23 09:23

Lab Sample ID: 590-21723-75

Matrix: Solid
Percent Solids: 85.5

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND	H	0.046	0.023	mg/Kg	☼	09/27/23 15:18	09/28/23 02:00	1
Ethylbenzene	ND	H	0.23	0.038	mg/Kg	☼	09/27/23 15:18	09/28/23 02:00	1
m,p-Xylene	ND	H	0.93	0.067	mg/Kg	☼	09/27/23 15:18	09/28/23 02:00	1
o-Xylene	ND	H	0.46	0.053	mg/Kg	☼	09/27/23 15:18	09/28/23 02:00	1
Toluene	**0.28**	**H**	0.23	0.031	mg/Kg	☼	09/27/23 15:18	09/28/23 02:00	1
Naphthalene	ND	H	0.46	0.065	mg/Kg	☼	09/27/23 15:18	09/28/23 02:00	1
Xylenes, Total	ND	H	1.4	0.12	mg/Kg	☼	09/27/23 15:18	09/28/23 02:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*79 - 124*	*09/27/23 15:18*	*09/28/23 02:00*	*1*
4-Bromofluorobenzene (Surr)	*91*		*66 - 129*	*09/27/23 15:18*	*09/28/23 02:00*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*	*09/27/23 15:18*	*09/28/23 02:00*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*	*09/27/23 15:18*	*09/28/23 02:00*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**11**	**J H**	12	4.2	mg/Kg	☼	09/27/23 15:18	09/28/23 02:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*41.5 - 162*	*09/27/23 15:18*	*09/28/23 02:00*	*1*

Method: SW846 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	**13000**		400	120	mg/Kg	☼	09/27/23 10:57	09/27/23 21:32	5
Iron	**9700**		400	170	mg/Kg	☼	09/27/23 10:57	09/27/23 21:32	5
Magnesium	**7600**		200	36	mg/Kg	☼	09/27/23 10:57	09/27/23 21:32	5
Manganese	**140**		61	4.2	mg/Kg	☼	09/27/23 10:57	09/27/23 21:32	5
Potassium	**540**		100	50	mg/Kg	☼	09/27/23 10:57	09/27/23 21:32	5
Sodium	**91**	**J**	100	42	mg/Kg	☼	09/27/23 10:57	09/27/23 21:32	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup (SW846 9060A)	**3100**		2000	97	mg/Kg			10/05/23 22:14	1

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

Lab Sample ID: MB 590-43562/6
Matrix: Water
Analysis Batch: 43562

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40	0.093	ug/L			09/19/23 17:36	1
Ethylbenzene	ND		1.0	0.20	ug/L			09/19/23 17:36	1
m,p-Xylene	ND		2.0	0.28	ug/L			09/19/23 17:36	1
Naphthalene	0.666	J	2.0	0.63	ug/L			09/19/23 17:36	1
o-Xylene	ND		1.0	0.16	ug/L			09/19/23 17:36	1
Toluene	ND		1.0	0.31	ug/L			09/19/23 17:36	1
Xylenes, Total	ND		3.0	0.44	ug/L			09/19/23 17:36	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*80 - 120*		*09/19/23 17:36*	*1*
4-Bromofluorobenzene (Surr)	*107*		*76 - 120*		*09/19/23 17:36*	*1*
Dibromofluoromethane (Surr)	*93*		*80 - 123*		*09/19/23 17:36*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*		*09/19/23 17:36*	*1*

Lab Sample ID: LCS 590-43562/1003
Matrix: Water
Analysis Batch: 43562

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzene			10.0	9.97		ug/L		100	80 - 120		
Ethylbenzene			10.0	9.75		ug/L		98	80 - 122		
m,p-Xylene			10.0	9.11		ug/L		91	80 - 125		
Naphthalene			10.0	9.38		ug/L		94	61 - 140		
o-Xylene			10.0	8.80		ug/L		88	80 - 130		
Toluene			10.0	9.87		ug/L		99	80 - 129		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*86*		*80 - 120*
4-Bromofluorobenzene (Surr)	*104*		*76 - 120*
Dibromofluoromethane (Surr)	*87*		*80 - 123*
Toluene-d8 (Surr)	*98*		*80 - 120*

Lab Sample ID: LCSD 590-43562/4
Matrix: Water
Analysis Batch: 43562

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene			10.0	10.5		ug/L		105	80 - 120	5	15
Ethylbenzene			10.0	11.0		ug/L		110	80 - 122	12	35
m,p-Xylene			10.0	10.5		ug/L		105	80 - 125	14	35
Naphthalene			10.0	11.3		ug/L		113	61 - 140	19	25
o-Xylene			10.0	10.1		ug/L		101	80 - 130	14	35
Toluene			10.0	11.1		ug/L		111	80 - 129	12	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*90*		*80 - 120*
4-Bromofluorobenzene (Surr)	*105*		*76 - 120*

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

Lab Sample ID: LCSD 590-43562/4
Matrix: Water
Analysis Batch: 43562

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

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*90*		*80 - 123*
Toluene-d8 (Surr)	*102*		*80 - 120*

Lab Sample ID: MB 590-43741/1-A
Matrix: Solid
Analysis Batch: 43751

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 43741

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.020	0.010	mg/Kg		09/27/23 10:40	09/27/23 12:17	1
Ethylbenzene	ND		0.10	0.016	mg/Kg		09/27/23 10:40	09/27/23 12:17	1
m,p-Xylene	ND		0.40	0.029	mg/Kg		09/27/23 10:40	09/27/23 12:17	1
Naphthalene	ND		0.20	0.028	mg/Kg		09/27/23 10:40	09/27/23 12:17	1
o-Xylene	ND		0.20	0.023	mg/Kg		09/27/23 10:40	09/27/23 12:17	1
Toluene	ND		0.10	0.013	mg/Kg		09/27/23 10:40	09/27/23 12:17	1
Xylenes, Total	ND		0.60	0.052	mg/Kg		09/27/23 10:40	09/27/23 12:17	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*79 - 124*	*09/27/23 10:40*	*09/27/23 12:17*	*1*
4-Bromofluorobenzene (Surr)	*102*		*66 - 129*	*09/27/23 10:40*	*09/27/23 12:17*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 120*	*09/27/23 10:40*	*09/27/23 12:17*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*	*09/27/23 10:40*	*09/27/23 12:17*	*1*

Lab Sample ID: LCS 590-43741/2-A
Matrix: Solid
Analysis Batch: 43751

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 43741

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.500	0.509		mg/Kg		102	80 - 128
Ethylbenzene	0.500	0.513		mg/Kg		103	80 - 127
m,p-Xylene	0.500	0.522		mg/Kg		104	80 - 131
Naphthalene	0.500	0.504		mg/Kg		101	57 - 131
o-Xylene	0.500	0.522		mg/Kg		104	78 - 128
Toluene	0.500	0.508		mg/Kg		102	79 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*79 - 124*
4-Bromofluorobenzene (Surr)	*103*		*66 - 129*
Dibromofluoromethane (Surr)	*104*		*80 - 120*
Toluene-d8 (Surr)	*98*		*80 - 120*

Lab Sample ID: 590-21723-7 MS
Matrix: Solid
Analysis Batch: 43751

Client Sample ID: B-12 (17.5-19)
Prep Type: Total/NA
Prep Batch: 43741

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	ND		1.29	1.33		mg/Kg	☼	103	80 - 128
Ethylbenzene	ND		1.29	1.36		mg/Kg	☼	106	80 - 127
m,p-Xylene	ND		1.29	1.39		mg/Kg	☼	108	80 - 131

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

Lab Sample ID: 590-21723-7 MS
Matrix: Solid
Analysis Batch: 43751

Client Sample ID: B-12 (17.5-19)
Prep Type: Total/NA
Prep Batch: 43741

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Naphthalene	ND		1.29	1.29		mg/Kg	☼	100	57 - 131
o-Xylene	ND		1.29	1.39		mg/Kg	☼	108	78 - 128
Toluene	ND		1.29	1.32		mg/Kg	☼	103	79 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*95*		*79 - 124*
4-Bromofluorobenzene (Surr)	*103*		*66 - 129*
Dibromofluoromethane (Surr)	*103*		*80 - 120*
Toluene-d8 (Surr)	*98*		*80 - 120*

Lab Sample ID: 590-21723-7 MSD
Matrix: Solid
Analysis Batch: 43751

Client Sample ID: B-12 (17.5-19)
Prep Type: Total/NA
Prep Batch: 43741

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	ND		1.29	1.31		mg/Kg	☼	102	80 - 128	1	17
Ethylbenzene	ND		1.29	1.35		mg/Kg	☼	105	80 - 127	1	19
m,p-Xylene	ND		1.29	1.37		mg/Kg	☼	106	80 - 131	2	19
Naphthalene	ND		1.29	1.23		mg/Kg	☼	96	57 - 131	4	34
o-Xylene	ND		1.29	1.39		mg/Kg	☼	108	78 - 128	0	19
Toluene	ND		1.29	1.30		mg/Kg	☼	101	79 - 130	2	21

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*79 - 124*
4-Bromofluorobenzene (Surr)	*104*		*66 - 129*
Dibromofluoromethane (Surr)	*102*		*80 - 120*
Toluene-d8 (Surr)	*95*		*80 - 120*

Lab Sample ID: 590-21723-2 DU
Matrix: Solid
Analysis Batch: 43751

Client Sample ID: B-12 (5-6.5)
Prep Type: Total/NA
Prep Batch: 43741

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Benzene	ND		ND		mg/Kg	☼	NC	17
Ethylbenzene	ND		ND		mg/Kg	☼	NC	19
m,p-Xylene	ND		ND		mg/Kg	☼	NC	19
Naphthalene	0.19	J	0.122	J F5	mg/Kg	☼	46	34
o-Xylene	ND		ND		mg/Kg	☼	NC	19
Toluene	0.073	J	0.0739	J	mg/Kg	☼	0.7	21
Xylenes, Total	ND		ND		mg/Kg	☼	NC	25

Surrogate	*DU %Recovery*	*DU Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*79 - 124*
4-Bromofluorobenzene (Surr)	*109*		*66 - 129*
Dibromofluoromethane (Surr)	*104*		*80 - 120*
Toluene-d8 (Surr)	*108*		*80 - 120*

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

Lab Sample ID: MB 590-43762/1-A
Matrix: Solid
Analysis Batch: 43765

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 43762

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.020	0.010	mg/Kg		09/27/23 15:18	09/28/23 00:33	1
Ethylbenzene	ND		0.10	0.016	mg/Kg		09/27/23 15:18	09/28/23 00:33	1
m,p-Xylene	ND		0.40	0.029	mg/Kg		09/27/23 15:18	09/28/23 00:33	1
Naphthalene	ND		0.20	0.028	mg/Kg		09/27/23 15:18	09/28/23 00:33	1
o-Xylene	ND		0.20	0.023	mg/Kg		09/27/23 15:18	09/28/23 00:33	1
Toluene	ND		0.10	0.013	mg/Kg		09/27/23 15:18	09/28/23 00:33	1
Xylenes, Total	ND		0.60	0.052	mg/Kg		09/27/23 15:18	09/28/23 00:33	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*79 - 124*	*09/27/23 15:18*	*09/28/23 00:33*	*1*
4-Bromofluorobenzene (Surr)	*98*		*66 - 129*	*09/27/23 15:18*	*09/28/23 00:33*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 120*	*09/27/23 15:18*	*09/28/23 00:33*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*	*09/27/23 15:18*	*09/28/23 00:33*	*1*

Lab Sample ID: LCS 590-43762/2-A
Matrix: Solid
Analysis Batch: 43765

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 43762

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.500	0.525		mg/Kg		105	80 - 128
Ethylbenzene	0.500	0.536		mg/Kg		107	80 - 127
m,p-Xylene	0.500	0.539		mg/Kg		108	80 - 131
Naphthalene	0.500	0.527		mg/Kg		105	57 - 131
o-Xylene	0.500	0.543		mg/Kg		109	78 - 128
Toluene	0.500	0.534		mg/Kg		107	79 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*79 - 124*
4-Bromofluorobenzene (Surr)	*100*		*66 - 129*
Dibromofluoromethane (Surr)	*103*		*80 - 120*
Toluene-d8 (Surr)	*98*		*80 - 120*

Lab Sample ID: MB 590-43783/1-A
Matrix: Solid
Analysis Batch: 43781

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 43783

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.020	0.010	mg/Kg		09/28/23 13:29	09/28/23 15:14	1
Ethylbenzene	ND		0.10	0.016	mg/Kg		09/28/23 13:29	09/28/23 15:14	1
m,p-Xylene	ND		0.40	0.029	mg/Kg		09/28/23 13:29	09/28/23 15:14	1
Naphthalene	ND		0.20	0.028	mg/Kg		09/28/23 13:29	09/28/23 15:14	1
o-Xylene	ND		0.20	0.023	mg/Kg		09/28/23 13:29	09/28/23 15:14	1
Toluene	ND		0.10	0.013	mg/Kg		09/28/23 13:29	09/28/23 15:14	1
Xylenes, Total	ND		0.60	0.052	mg/Kg		09/28/23 13:29	09/28/23 15:14	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*79 - 124*	*09/28/23 13:29*	*09/28/23 15:14*	*1*

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

Lab Sample ID: MB 590-43783/1-A
Matrix: Solid
Analysis Batch: 43781

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 43783

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		66 - 129	09/28/23 13:29	09/28/23 15:14	1
Dibromofluoromethane (Surr)	104		80 - 120	09/28/23 13:29	09/28/23 15:14	1
Toluene-d8 (Surr)	100		80 - 120	09/28/23 13:29	09/28/23 15:14	1

Lab Sample ID: LCS 590-43783/2-A
Matrix: Solid
Analysis Batch: 43781

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 43783

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	0.500	0.509		mg/Kg		102	80 - 128
Ethylbenzene	0.500	0.525		mg/Kg		105	80 - 127
m,p-Xylene	0.500	0.528		mg/Kg		106	80 - 131
Naphthalene	0.500	0.454		mg/Kg		91	57 - 131
o-Xylene	0.500	0.531		mg/Kg		106	78 - 128
Toluene	0.500	0.517		mg/Kg		103	79 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	98		79 - 124
4-Bromofluorobenzene (Surr)	99		66 - 129
Dibromofluoromethane (Surr)	103		80 - 120
Toluene-d8 (Surr)	98		80 - 120

Lab Sample ID: LCSD 590-43783/3-A
Matrix: Solid
Analysis Batch: 43781

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 43783

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzene	0.500	0.485		mg/Kg		97	80 - 128	5	17
Ethylbenzene	0.500	0.494		mg/Kg		99	80 - 127	6	19
m,p-Xylene	0.500	0.500		mg/Kg		100	80 - 131	5	19
Naphthalene	0.500	0.452		mg/Kg		90	57 - 131	0	34
o-Xylene	0.500	0.512		mg/Kg		102	78 - 128	4	19
Toluene	0.500	0.482		mg/Kg		96	79 - 130	7	21

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	98		79 - 124
4-Bromofluorobenzene (Surr)	98		66 - 129
Dibromofluoromethane (Surr)	103		80 - 120
Toluene-d8 (Surr)	96		80 - 120

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

Lab Sample ID: MB 590-43561/6
Matrix: Water
Analysis Batch: 43561

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	45.5	J	150	31	ug/L			09/19/23 17:36	1

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

Lab Sample ID: MB 590-43561/6
Matrix: Water
Analysis Batch: 43561

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

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		68.7 - 141		09/19/23 17:36	1

Lab Sample ID: LCS 590-43561/1005
Matrix: Water
Analysis Batch: 43561

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline			1000	1090		ug/L		109	80 - 120		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	103		68.7 - 141

Lab Sample ID: LCSD 590-43561/1016
Matrix: Water
Analysis Batch: 43561

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline			1000	1050		ug/L		105	80 - 120	4	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	108		68.7 - 141

Lab Sample ID: MB 590-43696/7
Matrix: Water
Analysis Batch: 43696

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150	31	ug/L			09/25/23 22:35	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		68.7 - 141		09/25/23 22:35	1

Lab Sample ID: LCS 590-43696/1006
Matrix: Water
Analysis Batch: 43696

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline			1000	810		ug/L		81	80 - 120		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	104		68.7 - 141

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

Lab Sample ID: LCSD 590-43696/1015
Matrix: Water
Analysis Batch: 43696

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline			1000	867		ug/L		87	80 - 120	7	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*68.7 - 141*

Lab Sample ID: MB 590-43741/1-A
Matrix: Solid
Analysis Batch: 43750

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 43741

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		5.0	1.8	mg/Kg		09/27/23 10:40	09/27/23 12:17	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*41.5 - 162*	*09/27/23 10:40*	*09/27/23 12:17*	*1*

Lab Sample ID: LCS 590-43741/3-A
Matrix: Solid
Analysis Batch: 43750

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 43741

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline			50.0	47.5		mg/Kg		95	74.4 - 124		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*41.5 - 162*

Lab Sample ID: 590-21723-2 DU
Matrix: Solid
Analysis Batch: 43750

Client Sample ID: B-12 (5-6.5)
Prep Type: Total/NA
Prep Batch: 43741

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Gasoline	400			371		mg/Kg	☼			7	32.3

Surrogate	*DU %Recovery*	*DU Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*109*		*41.5 - 162*

Lab Sample ID: MB 590-43762/1-A
Matrix: Solid
Analysis Batch: 43764

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 43762

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		5.0	1.8	mg/Kg		09/27/23 15:18	09/28/23 00:33	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*41.5 - 162*	*09/27/23 15:18*	*09/28/23 00:33*	*1*

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

Lab Sample ID: LCS 590-43762/3-A
Matrix: Solid
Analysis Batch: 43764

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 43762

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline	50.0	45.7		mg/Kg		91	74.4 - 124

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*41.5 - 162*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 280-627040/5
Matrix: Water
Analysis Batch: 627040

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	ND		5.0	0.63	ug/L			09/21/23 21:03	1

Lab Sample ID: LCS 280-627040/3
Matrix: Water
Analysis Batch: 627040

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methane	65.7	69.8		ug/L		106	75 - 125

Lab Sample ID: LCSD 280-627040/4
Matrix: Water
Analysis Batch: 627040

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methane	65.7	70.7		ug/L		108	75 - 125	1	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 590-43549/1003
Matrix: Water
Analysis Batch: 43549

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.20	0.057	mg/L			09/19/23 12:31	1

Lab Sample ID: LCS 590-43549/1004
Matrix: Water
Analysis Batch: 43549

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	5.00	5.10		mg/L		102	90 - 110

Lab Sample ID: MB 590-43550/1003
Matrix: Water
Analysis Batch: 43550

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	ND		0.50	0.13	mg/L			09/19/23 12:31	1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: LCS 590-43550/1004
Matrix: Water
Analysis Batch: 43550

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	12.5	12.7		mg/L		101	90 - 110

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 580-438669/26-A
Matrix: Water
Analysis Batch: 438895

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 438669

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.10	0.013	mg/L		09/25/23 16:28	09/27/23 02:17	1
Manganese	ND		0.0020	0.00046	mg/L		09/25/23 16:28	09/27/23 02:17	1

Lab Sample ID: LCS 580-438669/27-A
Matrix: Water
Analysis Batch: 438895

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 438669

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	20.0	18.4		mg/L		92	85 - 115
Manganese	1.00	0.910		mg/L		91	85 - 115

Lab Sample ID: LCSD 580-438669/28-A
Matrix: Water
Analysis Batch: 438895

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 438669

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Iron	20.0	18.0		mg/L		90	85 - 115	2	20
Manganese	1.00	0.903		mg/L		90	85 - 115	1	20

Lab Sample ID: MB 580-438128/1-B
Matrix: Water
Analysis Batch: 438541

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 438340

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.10	0.013	mg/L		09/21/23 17:58	09/22/23 14:37	1
Manganese	ND		0.0020	0.00046	mg/L		09/21/23 17:58	09/22/23 14:37	1

Lab Sample ID: LCS 580-438128/2-B
Matrix: Water
Analysis Batch: 438541

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 438340

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	20.0	21.3		mg/L		107	85 - 115
Manganese	1.00	1.04		mg/L		104	85 - 115

Lab Sample ID: LCSD 580-438128/3-B
Matrix: Water
Analysis Batch: 438541

Client Sample ID: Lab Control Sample Dup
Prep Type: Dissolved
Prep Batch: 438340

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Iron	20.0	21.5		mg/L		107	85 - 115	1	20

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCSD 580-438128/3-B
Matrix: Water
Analysis Batch: 438541

Client Sample ID: Lab Control Sample Dup
Prep Type: Dissolved
Prep Batch: 438340

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Manganese			1.00	1.04		mg/L		104	85 - 115	0	20

Lab Sample ID: 590-21723-29 MS
Matrix: Water
Analysis Batch: 438541

Client Sample ID: MW-18:091523
Prep Type: Dissolved
Prep Batch: 438340

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Iron	0.049	J	20.0	22.2		mg/L		111	70 - 130		
Manganese	ND		1.00	1.10		mg/L		110	70 - 130		

Lab Sample ID: 590-21723-29 MSD
Matrix: Water
Analysis Batch: 438541

Client Sample ID: MW-18:091523
Prep Type: Dissolved
Prep Batch: 438340

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Iron	0.049	J	20.0	22.5		mg/L		112	70 - 130	1	20
Manganese	ND		1.00	1.10		mg/L		110	70 - 130	0	20

Lab Sample ID: 590-21723-29 DU
Matrix: Water
Analysis Batch: 438541

Client Sample ID: MW-18:091523
Prep Type: Dissolved
Prep Batch: 438340

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Iron	0.049	J		0.0467	J	mg/L				4	20
Manganese	ND			ND		mg/L				NC	20

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 590-43745/2-A
Matrix: Solid
Analysis Batch: 43775

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 43745

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	ND		100	30	mg/Kg		09/27/23 10:57	09/27/23 19:20	1
Iron	ND		100	43	mg/Kg		09/27/23 10:57	09/27/23 19:20	1
Magnesium	ND		50	8.9	mg/Kg		09/27/23 10:57	09/27/23 19:20	1
Manganese	ND		15	1.0	mg/Kg		09/27/23 10:57	09/27/23 19:20	1
Potassium	ND		25	13	mg/Kg		09/27/23 10:57	09/27/23 19:20	1

Lab Sample ID: LCS 590-43745/1-A
Matrix: Solid
Analysis Batch: 43775

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 43745

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Calcium			2500	2610		mg/Kg		104	80 - 120		
Iron			500	488		mg/Kg		98	80 - 120		
Magnesium			2500	2450		mg/Kg		98	80 - 120		
Manganese			50.0	49.8		mg/Kg		100	80 - 120		
Potassium			2500	2610		mg/Kg		104	80 - 120		

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

Lab Sample ID: MB 590-43818/2-A
Matrix: Solid
Analysis Batch: 43833

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 43818

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	ND		100	30	mg/Kg		09/29/23 14:01	09/29/23 15:35	1
Iron	ND		100	43	mg/Kg		09/29/23 14:01	09/29/23 15:35	1
Magnesium	ND		50	8.9	mg/Kg		09/29/23 14:01	09/29/23 15:35	1
Manganese	ND		15	1.0	mg/Kg		09/29/23 14:01	09/29/23 15:35	1
Sodium	ND		25	10	mg/Kg		09/29/23 14:01	09/29/23 15:35	1

Lab Sample ID: MB 590-43818/2-A
Matrix: Solid
Analysis Batch: 43898

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 43818

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	ND		25	13	mg/Kg		09/29/23 14:01	10/03/23 18:40	1

Lab Sample ID: LCS 590-43818/1-A
Matrix: Solid
Analysis Batch: 43833

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 43818

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	2500	2580		mg/Kg		103	80 - 120
Iron	500	504		mg/Kg		101	80 - 120
Magnesium	2500	2480		mg/Kg		99	80 - 120
Manganese	50.0	50.8		mg/Kg		102	80 - 120
Sodium	2500	2590		mg/Kg		104	80 - 120

Lab Sample ID: LCS 590-43818/1-A
Matrix: Solid
Analysis Batch: 43898

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 43818

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Potassium	2500	2530		mg/Kg		101	80 - 120

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 580-440030/5
Matrix: Solid
Analysis Batch: 440030

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	ND		2000	97	mg/Kg			10/05/23 21:44	1

Lab Sample ID: LCS 580-440030/6
Matrix: Solid
Analysis Batch: 440030

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon - Average Dup	120000	120000		mg/Kg		100	80 - 120

Method: 9060A - Organic Carbon, Total (TOC) (Continued)

Lab Sample ID: LCSD 580-440030/7
Matrix: Solid
Analysis Batch: 440030

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Organic Carbon - Average Dup			120000	120000		mg/Kg		100	80 - 120	0	20

Lab Sample ID: 590-21723-2 MS
Matrix: Solid
Analysis Batch: 440030

Client Sample ID: B-12 (5-6.5)
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Organic Carbon - Average Dup	1500	J	120000	117000		mg/Kg		97	75 - 125		

Lab Sample ID: 590-21723-2 MSD
Matrix: Solid
Analysis Batch: 440030

Client Sample ID: B-12 (5-6.5)
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Organic Carbon - Average Dup	1500	J	120000	119000		mg/Kg		98	75 - 125	1	20

Lab Sample ID: 590-21723-2 DU
Matrix: Solid
Analysis Batch: 440030

Client Sample ID: B-12 (5-6.5)
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Organic Carbon - Average Dup	1500	J		1630	J	mg/Kg				10	20

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 590-43814/1
Matrix: Water
Analysis Batch: 43814

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	5.00	J	20	5.0	mg/L			09/28/23 15:05	1

Lab Sample ID: LCS 590-43814/2
Matrix: Water
Analysis Batch: 43814

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Alkalinity			501	495		mg/L		99	90 - 110		

Method: SM 5310C - TOC

Lab Sample ID: MB 580-439425/3
Matrix: Water
Analysis Batch: 439425

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.5	0.38	mg/L			09/29/23 14:18	1

Client: GeoEngineers Inc
Project/Site: Kwik Stop/0504-05-07

Job ID: 590-21723-1

Method: SM 5310C - TOC (Continued)

Lab Sample ID: LCS 580-439425/4
Matrix: Water
Analysis Batch: 439425

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Organic Carbon			10.0	9.27		mg/L		93	85 - 115		

Lab Sample ID: LCSD 580-439425/5
Matrix: Water
Analysis Batch: 439425

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Organic Carbon			10.0	9.45		mg/L		95	85 - 115	2	20

Client Sample ID: B-12 (5-6.5)
Lab Sample ID: 590-21723-2
Date Collected: 09/14/23 10:35
Matrix: Solid
Date Received: 09/18/23 09:23

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060A		1			440030	10/05/23 21:52	AUA	EET SEA
Total/NA	Analysis	Moisture		1			43555	09/19/23 14:38	MRV	EET SPK

Client Sample ID: B-12 (5-6.5)
Lab Sample ID: 590-21723-2
Date Collected: 09/14/23 10:35
Matrix: Solid
Date Received: 09/18/23 09:23
Percent Solids: 81.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.529 g	10 mL	43741	09/27/23 10:40	JSP	EET SPK
Total/NA	Analysis	8260D		1	0.86 mL	43 mL	43751	09/27/23 14:05	JSP	EET SPK
Total/NA	Prep	5035			6.529 g	10 mL	43741	09/27/23 10:40	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	0.86 mL	43 mL	43750	09/27/23 14:05	JSP	EET SPK
Total/NA	Prep	3050B			1.52 g	50 mL	43818	09/29/23 14:01	AMB	EET SPK
Total/NA	Analysis	6010D		5			43833	09/29/23 16:04	AMB	EET SPK
Total/NA	Prep	3050B			1.52 g	50 mL	43818	09/29/23 14:01	AMB	EET SPK
Total/NA	Analysis	6010D		5			43898	10/03/23 19:21	AMB	EET SPK

Client Sample ID: B-12 (17.5-19)
Lab Sample ID: 590-21723-7
Date Collected: 09/14/23 11:10
Matrix: Solid
Date Received: 09/18/23 09:23

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			43555	09/19/23 14:38	MRV	EET SPK

Client Sample ID: B-12 (17.5-19)
Lab Sample ID: 590-21723-7
Date Collected: 09/14/23 11:10
Matrix: Solid
Date Received: 09/18/23 09:23
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	5035			4.29 g	10 mL	43741	09/27/23 10:40	JSP	EET SPK
Total/NA	Analysis	8260D		1	0.86 mL	43 mL	43751	09/27/23 14:48	JSP	EET SPK
Total/NA	Prep	5035			4.29 g	10 mL	43741	09/27/23 10:40	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	0.86 mL	43 mL	43750	09/27/23 14:48	JSP	EET SPK

Client Sample ID: B-12 (37.5-39)
Lab Sample ID: 590-21723-15
Date Collected: 09/14/23 12:30
Matrix: Solid
Date Received: 09/18/23 09:23

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			43555	09/19/23 14:38	MRV	EET SPK

Client Sample ID: B-12 (37.5-39)
Date Collected: 09/14/23 12:30
Date Received: 09/18/23 09:23

Lab Sample ID: 590-21723-15
Matrix: Solid
Percent Solids: 87.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.936 g	10 mL	43741	09/27/23 10:40	JSP	EET SPK
Total/NA	Analysis	8260D		1	0.86 mL	43 mL	43751	09/27/23 16:14	JSP	EET SPK
Total/NA	Prep	5035			5.936 g	10 mL	43741	09/27/23 10:40	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	0.86 mL	43 mL	43750	09/27/23 16:14	JSP	EET SPK

Client Sample ID: B-12 (40-41.5)
Date Collected: 09/14/23 12:40
Date Received: 09/18/23 09:23

Lab Sample ID: 590-21723-16
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			43555	09/19/23 14:38	MRV	EET SPK

Client Sample ID: B-12 (40-41.5)
Date Collected: 09/14/23 12:40
Date Received: 09/18/23 09:23

Lab Sample ID: 590-21723-16
Matrix: Solid
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	5035			5.417 g	10 mL	43741	09/27/23 10:40	JSP	EET SPK
Total/NA	Analysis	8260D		1	0.86 mL	43 mL	43751	09/27/23 16:35	JSP	EET SPK
Total/NA	Prep	5035			5.417 g	10 mL	43741	09/27/23 10:40	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	0.86 mL	43 mL	43750	09/27/23 16:35	JSP	EET SPK

Client Sample ID: B-9 (12.5-14)
Date Collected: 09/13/23 14:40
Date Received: 09/18/23 09:23

Lab Sample ID: 590-21723-19
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			43555	09/19/23 14:38	MRV	EET SPK

Client Sample ID: B-9 (12.5-14)
Date Collected: 09/13/23 14:40
Date Received: 09/18/23 09:23

Lab Sample ID: 590-21723-19
Matrix: Solid
Percent Solids: 94.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.447 g	10 mL	43741	09/27/23 10:40	JSP	EET SPK
Total/NA	Analysis	8260D		1	0.86 mL	43 mL	43751	09/27/23 16:57	JSP	EET SPK
Total/NA	Prep	5035			4.447 g	10 mL	43741	09/27/23 10:40	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	0.86 mL	43 mL	43750	09/27/23 16:57	JSP	EET SPK

Client Sample ID: B-9 (27.5-29)
Date Collected: 09/13/23 15:00
Date Received: 09/18/23 09:23

Lab Sample ID: 590-21723-23
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			43555	09/19/23 14:38	MRV	EET SPK

Lab Chronicle

Client: GeoEngineers Inc
Job ID: 590-21723-1
Project/Site: Kwik Stop/0504-05-07

Client Sample ID: B-9 (27.5-29)
Lab Sample ID: 590-21723-23
Date Collected: 09/13/23 15:00
Matrix: Solid
Date Received: 09/18/23 09:23
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	5035			4.873 g	10 mL	43741	09/27/23 10:40	JSP	EET SPK
Total/NA	Analysis	8260D		1	0.86 mL	43 mL	43751	09/27/23 17:18	JSP	EET SPK
Total/NA	Prep	5035			4.873 g	10 mL	43741	09/27/23 10:40	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	0.86 mL	43 mL	43750	09/27/23 17:18	JSP	EET SPK

Client Sample ID: MW-3:091523
Lab Sample ID: 590-21723-24
Date Collected: 09/15/23 08:55
Matrix: Water
Date Received: 09/18/23 09:23

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	43562	09/19/23 23:52	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	43561	09/19/23 23:52	JSP	EET SPK
Total/NA	Analysis	RSK-175		1	20 mL	20 mL	627040	09/22/23 00:50	SJD	EET DEN
Total/NA	Analysis	300.0		1	5 mL	5 mL	43549	09/19/23 15:40	NMI	EET SPK
Total/NA	Analysis	300.0		1	5 mL	5 mL	43550	09/19/23 15:40	NMI	EET SPK
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	438128	09/20/23 15:59	AUA	EET SEA
Dissolved	Prep	200.8			50 mL	50 mL	438340	09/21/23 17:58	JLS	EET SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	438541	09/22/23 14:05	FCW	EET SEA
Total/NA	Prep	200.8			50 mL	50 mL	438669	09/25/23 16:28	TMH	EET SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	438895	09/27/23 03:56	FCW	EET SEA
Total/NA	Analysis	SM 2320B		1	100 mL	100 mL	43814	09/28/23 15:05	AMB	EET SPK
Total/NA	Analysis	SM 5310C		1			439425	09/29/23 18:48	AUA	EET SEA

Client Sample ID: MW-9:091523
Lab Sample ID: 590-21723-25
Date Collected: 09/15/23 10:02
Matrix: Water
Date Received: 09/18/23 09:23

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	43562	09/20/23 00:14	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	43561	09/20/23 00:14	JSP	EET SPK
Total/NA	Analysis	RSK-175		1	20 mL	20 mL	627040	09/22/23 01:03	SJD	EET DEN
Total/NA	Analysis	300.0		1	5 mL	5 mL	43549	09/19/23 15:50	NMI	EET SPK
Total/NA	Analysis	300.0		1	5 mL	5 mL	43550	09/19/23 15:50	NMI	EET SPK
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	438128	09/20/23 16:00	AUA	EET SEA
Dissolved	Prep	200.8			50 mL	50 mL	438340	09/21/23 17:58	JLS	EET SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	438541	09/22/23 14:02	FCW	EET SEA
Total/NA	Prep	200.8			50 mL	50 mL	438669	09/25/23 16:28	TMH	EET SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	438895	09/27/23 03:59	FCW	EET SEA
Total/NA	Analysis	SM 2320B		1	100 mL	100 mL	43814	09/28/23 15:05	AMB	EET SPK
Total/NA	Analysis	SM 5310C		1			439425	09/29/23 19:05	AUA	EET SEA

Lab Chronicle

Client: GeoEngineers Inc
Job ID: 590-21723-1
Project/Site: Kwik Stop/0504-05-07

Client Sample ID: MW-10:091523
Lab Sample ID: 590-21723-26
Date Collected: 09/15/23 12:23
Matrix: Water
Date Received: 09/18/23 09:23

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	43562	09/20/23 00:36	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	43561	09/20/23 00:36	JSP	EET SPK

Client Sample ID: MW-11:091523
Lab Sample ID: 590-21723-27
Date Collected: 09/15/23 11:39
Matrix: Water
Date Received: 09/18/23 09:23

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	43562	09/20/23 00:58	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	43561	09/20/23 00:58	JSP	EET SPK

Client Sample ID: MW-15:091523
Lab Sample ID: 590-21723-28
Date Collected: 09/15/23 13:15
Matrix: Water
Date Received: 09/18/23 09:23

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	43562	09/20/23 01:42	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	43696	09/26/23 00:00	JSP	EET SPK

Client Sample ID: MW-18:091523
Lab Sample ID: 590-21723-29
Date Collected: 09/15/23 10:57
Matrix: Water
Date Received: 09/18/23 09:23

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	43562	09/20/23 02:04	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	43696	09/26/23 00:21	JSP	EET SPK
Total/NA	Analysis	RSK-175		1	20 mL	20 mL	627040	09/22/23 01:16	SJD	EET DEN
Total/NA	Analysis	300.0		1	5 mL	5 mL	43549	09/19/23 16:01	NMI	EET SPK
Total/NA	Analysis	300.0		1	5 mL	5 mL	43550	09/19/23 16:01	NMI	EET SPK
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	438128	09/20/23 16:00	AUA	EET SEA
Dissolved	Prep	200.8			50 mL	50 mL	438340	09/21/23 17:58	JLS	EET SEA
Dissolved	Analysis	200.8		1	50 mL	50 mL	438541	09/22/23 14:40	FCW	EET SEA
Total/NA	Prep	200.8			50 mL	50 mL	438669	09/25/23 16:28	TMH	EET SEA
Total/NA	Analysis	200.8		1	50 mL	50 mL	438895	09/27/23 02:20	FCW	EET SEA
Total/NA	Analysis	SM 2320B		1	100 mL	100 mL	43814	09/28/23 15:05	AMB	EET SPK
Total/NA	Analysis	SM 5310C		1			439425	09/29/23 19:23	AUA	EET SEA

Client Sample ID: B-11 (5-6.5)
Lab Sample ID: 590-21723-31
Date Collected: 09/14/23 13:45
Matrix: Solid
Date Received: 09/18/23 09:23

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060A		1			440030	10/05/23 22:05	AUA	EET SEA
Total/NA	Analysis	Moisture		1			43555	09/19/23 14:38	MRV	EET SPK

Client Sample ID: B-11 (5-6.5)

Lab Sample ID: 590-21723-31
Date Collected: 09/14/23 13:45
Matrix: Solid
Date Received: 09/18/23 09:23
Percent Solids: 82.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.625 g	10 mL	43741	09/27/23 10:40	JSP	EET SPK
Total/NA	Analysis	8260D		1	0.86 mL	43 mL	43751	09/27/23 17:40	JSP	EET SPK
Total/NA	Prep	5035			6.625 g	10 mL	43741	09/27/23 10:40	JSP	EET SPK
Total/NA	Analysis	8260D		10	0.86 mL	43 mL	43781	09/28/23 14:30	JSP	EET SPK
Total/NA	Prep	5035			6.625 g	10 mL	43741	09/27/23 10:40	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		10	0.86 mL	43 mL	43780	09/28/23 14:30	JSP	EET SPK
Total/NA	Prep	5035			6.625 g	10 mL	43741	09/27/23 10:40	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		100	0.86 mL	43 mL	43780	09/28/23 14:52	JSP	EET SPK
Total/NA	Prep	3050B			1.42 g	50 mL	43818	09/29/23 14:01	AMB	EET SPK
Total/NA	Analysis	6010D		5			43833	09/29/23 16:08	AMB	EET SPK
Total/NA	Prep	3050B			1.42 g	50 mL	43818	09/29/23 14:01	AMB	EET SPK
Total/NA	Analysis	6010D		5			43898	10/03/23 19:25	AMB	EET SPK

Client Sample ID: B-11 (20-21.5)

Lab Sample ID: 590-21723-37
Date Collected: 09/14/23 14:15
Matrix: Solid
Date Received: 09/18/23 09:23

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			43555	09/19/23 14:38	MRV	EET SPK

Client Sample ID: B-11 (20-21.5)

Lab Sample ID: 590-21723-37
Date Collected: 09/14/23 14:15
Matrix: Solid
Date Received: 09/18/23 09:23
Percent Solids: 94.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.345 g	10 mL	43741	09/27/23 10:40	JSP	EET SPK
Total/NA	Analysis	8260D		1	0.86 mL	43 mL	43751	09/27/23 18:02	JSP	EET SPK
Total/NA	Prep	5035			4.345 g	10 mL	43741	09/27/23 10:40	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	0.86 mL	43 mL	43750	09/27/23 18:02	JSP	EET SPK

Client Sample ID: B-11 (32.5-34)

Lab Sample ID: 590-21723-42
Date Collected: 09/14/23 15:00
Matrix: Solid
Date Received: 09/18/23 09:23

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			43555	09/19/23 14:38	MRV	EET SPK

Client Sample ID: B-11 (32.5-34)

Lab Sample ID: 590-21723-42
Date Collected: 09/14/23 15:00
Matrix: Solid
Date Received: 09/18/23 09:23
Percent Solids: 93.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.372 g	10 mL	43741	09/27/23 10:40	JSP	EET SPK
Total/NA	Analysis	8260D		1	0.86 mL	43 mL	43751	09/27/23 18:24	JSP	EET SPK
Total/NA	Prep	5035			5.372 g	10 mL	43741	09/27/23 10:40	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	0.86 mL	43 mL	43750	09/27/23 18:24	JSP	EET SPK

Client Sample ID: B-11 (40-41.5)
Lab Sample ID: 590-21723-45

Date Collected: 09/14/23 15:35
Matrix: Solid
Date Received: 09/18/23 09:23

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			43555	09/19/23 14:38	MRV	EET SPK

Client Sample ID: B-11 (40-41.5)
Lab Sample ID: 590-21723-45

Date Collected: 09/14/23 15:35
Matrix: Solid
Date Received: 09/18/23 09:23
Percent Solids: 80.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.127 g	10 mL	43741	09/27/23 10:40	JSP	EET SPK
Total/NA	Analysis	8260D		1	0.86 mL	43 mL	43751	09/27/23 18:46	JSP	EET SPK
Total/NA	Prep	5035			6.127 g	10 mL	43741	09/27/23 10:40	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	0.86 mL	43 mL	43750	09/27/23 18:46	JSP	EET SPK

Client Sample ID: B-10 (10-11.5)
Lab Sample ID: 590-21723-47

Date Collected: 09/14/23 08:26
Matrix: Solid
Date Received: 09/18/23 09:23

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			43555	09/19/23 14:38	MRV	EET SPK

Client Sample ID: B-10 (10-11.5)
Lab Sample ID: 590-21723-47

Date Collected: 09/14/23 08:26
Matrix: Solid
Date Received: 09/18/23 09:23
Percent Solids: 89.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.175 g	10 mL	43741	09/27/23 10:40	JSP	EET SPK
Total/NA	Analysis	8260D		1	0.86 mL	43 mL	43751	09/27/23 19:08	JSP	EET SPK
Total/NA	Prep	5035			4.175 g	10 mL	43741	09/27/23 10:40	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	0.86 mL	43 mL	43750	09/27/23 19:08	JSP	EET SPK

Client Sample ID: B-10 (25-26.5)
Lab Sample ID: 590-21723-51

Date Collected: 09/14/23 08:44
Matrix: Solid
Date Received: 09/18/23 09:23

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			43555	09/19/23 14:38	MRV	EET SPK

Client Sample ID: B-10 (25-26.5)
Lab Sample ID: 590-21723-51

Date Collected: 09/14/23 08:44
Matrix: Solid
Date Received: 09/18/23 09:23
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	5035			4.344 g	10 mL	43741	09/27/23 10:40	JSP	EET SPK
Total/NA	Analysis	8260D		1	0.86 mL	43 mL	43751	09/27/23 19:51	JSP	EET SPK
Total/NA	Prep	5035			4.344 g	10 mL	43741	09/27/23 10:40	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	0.86 mL	43 mL	43750	09/27/23 19:51	JSP	EET SPK

Client Sample ID: B-10 (32.5-34)
Date Collected: 09/14/23 09:00
Date Received: 09/18/23 09:23

Lab Sample ID: 590-21723-54
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			43555	09/19/23 14:38	MRV	EET SPK

Client Sample ID: B-10 (32.5-34)
Date Collected: 09/14/23 09:00
Date Received: 09/18/23 09:23

Lab Sample ID: 590-21723-54
Matrix: Solid
Percent Solids: 94.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			+5.90 g	5 mL	43741	09/27/23 10:40	JSP	EET SPK
Total/NA	Analysis	8260D		1	0.86 mL	43 mL	43751	09/27/23 20:13	JSP	EET SPK
Total/NA	Prep	5035			+5.90 g	5 mL	43741	09/27/23 10:40	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	0.86 mL	43 mL	43750	09/27/23 20:13	JSP	EET SPK

Client Sample ID: B-10 (40-41.5)
Date Collected: 09/14/23 09:25
Date Received: 09/18/23 09:23

Lab Sample ID: 590-21723-56
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			43555	09/19/23 14:38	MRV	EET SPK

Client Sample ID: B-10 (40-41.5)
Date Collected: 09/14/23 09:25
Date Received: 09/18/23 09:23

Lab Sample ID: 590-21723-56
Matrix: Solid
Percent Solids: 83.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			7.813 g	10 mL	43741	09/27/23 10:40	JSP	EET SPK
Total/NA	Analysis	8260D		1	0.86 mL	43 mL	43751	09/27/23 20:35	JSP	EET SPK
Total/NA	Prep	5035			7.813 g	10 mL	43741	09/27/23 10:40	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	0.86 mL	43 mL	43750	09/27/23 20:35	JSP	EET SPK

Client Sample ID: B-8 (12.5-14)
Date Collected: 09/13/23 12:40
Date Received: 09/18/23 09:23

Lab Sample ID: 590-21723-62
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			43555	09/19/23 14:38	MRV	EET SPK

Client Sample ID: B-8 (12.5-14)
Date Collected: 09/13/23 12:40
Date Received: 09/18/23 09:23

Lab Sample ID: 590-21723-62
Matrix: Solid
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	5035			4.321 g	10 mL	43741	09/27/23 10:40	JSP	EET SPK
Total/NA	Analysis	8260D		1	0.86 mL	43 mL	43751	09/27/23 20:57	JSP	EET SPK
Total/NA	Prep	5035			4.321 g	10 mL	43741	09/27/23 10:40	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	0.86 mL	43 mL	43750	09/27/23 20:57	JSP	EET SPK

Client Sample ID: B-8 (25-26.5)
Lab Sample ID: 590-21723-67
Date Collected: 09/13/23 13:20
Matrix: Solid
Date Received: 09/18/23 09:23

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			43555	09/19/23 14:38	MRV	EET SPK

Client Sample ID: B-8 (25-26.5)
Lab Sample ID: 590-21723-67
Date Collected: 09/13/23 13:20
Matrix: Solid
Date Received: 09/18/23 09:23
Percent Solids: 96.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.384 g	10 mL	43741	09/27/23 10:40	JSP	EET SPK
Total/NA	Analysis	8260D		1	0.86 mL	43 mL	43751	09/27/23 21:18	JSP	EET SPK
Total/NA	Prep	5035			4.384 g	10 mL	43741	09/27/23 10:40	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	0.86 mL	43 mL	43750	09/27/23 21:18	JSP	EET SPK

Client Sample ID: B-8 (37.5-39)
Lab Sample ID: 590-21723-72
Date Collected: 09/13/23 13:45
Matrix: Solid
Date Received: 09/18/23 09:23

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			43555	09/19/23 14:38	MRV	EET SPK

Client Sample ID: B-8 (37.5-39)
Lab Sample ID: 590-21723-72
Date Collected: 09/13/23 13:45
Matrix: Solid
Date Received: 09/18/23 09:23
Percent Solids: 87.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.763 g	10 mL	43741	09/27/23 10:40	JSP	EET SPK
Total/NA	Analysis	8260D		1	0.86 mL	43 mL	43751	09/27/23 21:40	JSP	EET SPK
Total/NA	Prep	5035			5.763 g	10 mL	43741	09/27/23 10:40	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	0.86 mL	43 mL	43750	09/27/23 21:40	JSP	EET SPK

Client Sample ID: B-8 (40-41.5)
Lab Sample ID: 590-21723-73
Date Collected: 09/13/23 14:00
Matrix: Solid
Date Received: 09/18/23 09:23

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060A		1			440030	10/05/23 22:10	AUA	EET SEA
Total/NA	Analysis	Moisture		1			43555	09/19/23 14:38	MRV	EET SPK

Client Sample ID: B-8 (40-41.5)
Lab Sample ID: 590-21723-73
Date Collected: 09/13/23 14:00
Matrix: Solid
Date Received: 09/18/23 09:23
Percent Solids: 87.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			7.497 g	10 mL	43741	09/27/23 10:40	JSP	EET SPK
Total/NA	Analysis	8260D		1	0.86 mL	43 mL	43751	09/27/23 22:02	JSP	EET SPK
Total/NA	Prep	5035			7.497 g	10 mL	43741	09/27/23 10:40	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	0.86 mL	43 mL	43750	09/27/23 22:02	JSP	EET SPK

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Kwik Stop/0504-05-07

Job ID: 590-21723-1

Client Sample ID: B-8 (40-41.5)
Date Collected: 09/13/23 14:00
Date Received: 09/18/23 09:23

Lab Sample ID: 590-21723-73
Matrix: Solid
Percent Solids: 87.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.41 g	50 mL	43745	09/27/23 10:57	AMB	EET SPK
Total/NA	Analysis	6010D		5			43775	09/27/23 21:15	AMB	EET SPK

Client Sample ID: B-9 (37.5-39)
Date Collected: 09/13/23 15:20
Date Received: 09/18/23 09:23

Lab Sample ID: 590-21723-74
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			43555	09/19/23 14:38	MRV	EET SPK

Client Sample ID: B-9 (37.5-39)
Date Collected: 09/13/23 15:20
Date Received: 09/18/23 09:23

Lab Sample ID: 590-21723-74
Matrix: Solid
Percent Solids: 90.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.454 g	10 mL	43762	09/27/23 15:18	JSP	EET SPK
Total/NA	Analysis	8260D		1	0.86 mL	43 mL	43765	09/28/23 01:38	JSP	EET SPK
Total/NA	Prep	5035			5.454 g	10 mL	43762	09/27/23 15:18	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	0.86 mL	43 mL	43764	09/28/23 01:38	JSP	EET SPK

Client Sample ID: B-9 (40-41.5)
Date Collected: 09/13/23 15:50
Date Received: 09/18/23 09:23

Lab Sample ID: 590-21723-75
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9060A		1			440030	10/05/23 22:14	AUA	EET SEA
Total/NA	Analysis	Moisture		1			43555	09/19/23 14:38	MRV	EET SPK

Client Sample ID: B-9 (40-41.5)
Date Collected: 09/13/23 15:50
Date Received: 09/18/23 09:23

Lab Sample ID: 590-21723-75
Matrix: Solid
Percent Solids: 85.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.446 g	10 mL	43762	09/27/23 15:18	JSP	EET SPK
Total/NA	Analysis	8260D		1	0.86 mL	43 mL	43765	09/28/23 02:00	JSP	EET SPK
Total/NA	Prep	5035			5.446 g	10 mL	43762	09/27/23 15:18	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	0.86 mL	43 mL	43764	09/28/23 02:00	JSP	EET SPK
Total/NA	Prep	3050B			1.45 g	50 mL	43745	09/27/23 10:57	AMB	EET SPK
Total/NA	Analysis	6010D		5			43775	09/27/23 21:32	AMB	EET SPK

Laboratory References:

EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
EET SEA = Eurofins Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310
EET SPK = Eurofins Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Accreditation/Certification Summary

Client: GeoEngineers Inc
Project/Site: Kwik Stop/0504-05-07

Job ID: 590-21723-1

Laboratory: Eurofins 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	01-07-24

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

Laboratory: Eurofins Denver

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

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-23
A2LA	ISO/IEC 17025	2907.01	10-31-23
Alabama	State Program	40730	09-30-12 *
Alaska (UST)	State	18-001	02-10-24
Arizona	State	AZ0713	12-20-23
Arkansas DEQ	State	19-047-0	05-31-23 *
California	State	2513	01-09-24
Connecticut	State	PH-0686	09-30-24
Florida	NELAP	E87667-57	06-30-24
Georgia	State	4025-011	01-08-24
Illinois	NELAP	2000172019-1	04-30-24
Iowa	State	370	12-01-24
Kansas	NELAP	E-10166	04-30-24
Kentucky (WW)	State	KY98047	12-31-23
Louisiana	NELAP	30785	06-30-14 *
Louisiana	NELAP	30785	06-30-23 *
Louisiana (All)	NELAP	30785	06-30-24
Minnesota	NELAP	1788752	12-31-23
Nevada	State	CO000262020-1	07-31-24
New Hampshire	NELAP	2053	04-28-24
New Jersey	NELAP	230001	06-30-24
New York	NELAP	59923	03-31-24
North Carolina (WW/SW)	State	358	12-31-23
North Dakota	State	R-034	01-08-24
Oregon	NELAP	4025-019	01-08-24
Pennsylvania	NELAP	013	07-31-24
South Carolina	State	72002001	01-08-24
Texas	NELAP	TX104704183-08-TX	09-30-09 *
Texas	NELAP	T104704183-21-19	09-30-23
USDA	US Federal Programs	P330-20-00065	12-19-25
Utah	NELAP	QUAN5	06-30-13 *
Utah	NELAP	CO000262019-11	07-31-23 *
Virginia	NELAP	460232	06-14-24
Washington	State	C583-19	08-03-23 *
West Virginia DEP	State	354	11-30-23
Wisconsin	State	999615430	08-31-24
Wyoming (UST)	A2LA	2907.01	10-31-22 *

Laboratory: Eurofins Seattle

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: GeoEngineers Inc
Job ID: 590-21723-1
Project/Site: Kwik Stop/0504-05-07

Laboratory: Eurofins Seattle (Continued)

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

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-004	02-19-25
ANAB	Dept. of Defense ELAP	L2236	01-19-25
ANAB	Dept. of Energy	L2236	01-19-25
ANAB	ISO/IEC 17025	L2236	01-19-25
California	State	2954	07-07-23 *
Florida	NELAP	E87575	06-30-23 *
Louisiana (All)	NELAP	03073	07-01-24
Maine	State	WA01273	05-02-24
Montana (UST)	State	NA	04-14-27
New Jersey	NELAP	WA014	06-30-24
New York	NELAP	11662	03-31-24
Oregon	NELAP	4167	07-07-24
US Fish & Wildlife	US Federal Programs	A20571	06-30-23 *
USDA	US Federal Programs	525-23-4-22573	01-04-26
Washington	State	C788	07-13-24
Wisconsin	State	399133460	08-31-24

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: GeoEngineers Inc
Project/Site: Kwik Stop/0504-05-07

Job ID: 590-21723-1

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET SPK
NWTPH-Gx	Northwest - Volatile Petroleum Products (GC/MS)	NWTPH	EET SPK
RSK-175	Dissolved Gases (GC)	RSK	EET DEN
300.0	Anions, Ion Chromatography	EPA	EET SPK
200.8	Metals (ICP/MS)	EPA	EET SEA
6010D	Metals (ICP)	SW846	EET SPK
9060A	Organic Carbon, Total (TOC)	SW846	EET SEA
Moisture	Percent Moisture	EPA	EET SPK
SM 2320B	Alkalinity	SM	EET SPK
SM 5310C	TOC	SM	EET SEA
200.8	Preparation, Total Metals	EPA	EET SEA
3050B	Preparation, Metals	SW846	EET SPK
5030C	Purge and Trap	SW846	EET SPK
5035	Closed System Purge and Trap	SW846	EET SPK
FILTRATION	Sample Filtration	None	EET SEA

Protocol References:

EPA = US Environmental Protection Agency

None = None

NWTPH = Northwest Total Petroleum Hydrocarbon

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique, RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab

SM = "Standard Methods For The Examination Of Water And Wastewater"

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

Laboratory References:

EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

EET SEA = Eurofins Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

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

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

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-8951-2569.1
Client Contact: Justin Orr	Phone:	E-Mail: Randee.Arrington@et.eurofinsus.com	State of Origin:	Page: Page 1 of 11
Company: GeoEngineers Inc	PWSID:			Job #:
Address: 523 East Second Ave	Due Date Requested:			
City: Spokane	TAT Requested (days):			
State, Zip: WA, 99202	Compliance Project: Δ Yes Δ No			
Phone:	PO #: Purchase Order not required			
Email: jorr@geoengineers.com	WO #: 0504-058-07			
Project Name: Kwik Stop/0504-05-07	Project #: 59002658			
Site:	SSOW#:			

Analysis Requested

Preservation Codes.

A	HCL	M	Hexane
B	NaOH	N	None
C	Zn Acetate	O	AsNaO2
D	Nitric Acid	P	Na2O4S
E	NaHSO4	Q	Na2SO3
F	MeOH	R	Na2S2O3
G	Amchlor	S	H2SO4
H	Ascorbic Acid	T	TSP Dodecahydrate
I	Ice	U	Acetone
J	DI Water	V	MCAA
K	EDTA	W	pH 4-5
L	EDA	Y	Trizma
		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)	8260D, NWTPH_Gx_MS	9060A Standard Soil TOC	Moisture Local Method	8260D, NWTPH_Gx_MS	200.8_CWA Total Iron & Manganese	200.8_CWA Diss Iron & Manganese	2320B, 300_ORGFM_28D, 300_ORGFMS	5310C Total Organic Carbon	RSK_175 Methane					Total Number of containers	Special Instructions/Note:
			Preservation Code:				F	N	N	A	D	N	N	S	A						
B 12 (2 5 -4)	09/14/23	1030	G	Solid																1	
B-12 (5-6 5)		1035		Solid																4	
B 12 (7 5-9)		1041		Solid																1	
B-12 (10-11 5)		1045		Solid																1	
B-12 (12 5-14)		1050		Solid																1	
B-12 (15-10 5)		1055		Solid																1	
B 12 (17 5-19)		1110		Solid																3	
B-12 (20-21 5)		1115		Solid																1	
B-12 (22 5-24)		1130		Solid																1	
B-12 (25-26 5)		1140		Solid																1	
B-12 (27 5-29)		1145		Solid																1	

590-21723 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 long
☐ 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
1	[redacted]	9/15/23 0930	GEI		9/18/23 9:23	EET SPS
2	Bruce Hanson	Date/Time:	Company	Received by:	Date/Time:	Company
3	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: 2.1, 2.4 cor + 5.7, 6.0 cor IR Gun

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

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-8951-2569.2
Client Contact: Justin Orr	Phone:	E-Mail: Randee.Arrington@et.eurofinsus.com	State of Origin:	Page: Page 2 of 11
Company: GeoEngineers Inc	PWSID:			Job #:
Address: 523 East Second Ave	Due Date Requested:			
City: Spokane	TAT Requested (days):			
State, Zip: WA, 99202	Compliance Project: Δ Yes Δ No			
Phone:	PO #: Purchase Order not required			
Email: jorr@geoengineers.com	WO #: 0504-058-07			
Project Name: Kwik Stop/0504-05-07	Project #: 59002658			
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, Y Trizma, 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)	8260D_NWTPH_Gx_MS	9060A Standard Soil TOC	Moisture Local Method	8260D_NWTPH_Gx_MS	200.8_CWA Total Iron & Manganese	200.8_CWA Diss Iron & Manganese	2320B, 300_ORGFM_28D, 300_ORGFMS	5310C Total Organic Carbon	RSK_175 Methane				Total Number of containers	Special Instructions/Note:
			Preservation Code:				F	N	N	A	D	N	N	S	A					
B-12 (30-31.5)	09/14/23	1155	G	Solid															1	
B-12 (32.5-34)	"	1205	"	Solid															1	
B-12 (35-36.5)	"	1220	"	Solid															1	
B-12 (37.5-39)	"	1230	"	Solid															1	
B-12 (40-41.5)	"	1240	"	Solid															1	
				Solid																
				Solid																
				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
Bruce Hansen	9/18/23 0920	GEI		9/18/23 9:23	EET SAC
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: 2.1, 2.4 corr + 5.7, 6.0 corr IR006

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

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-8951-2569.3
Client Contact: Justin Orr	Phone:	E-Mail: Randee.Arrington@et.eurofinsus.com	State of Origin:	Page: Page 3 of 11
Company: GeoEngineers Inc	PWSID:			Job #:
Address: 523 East Second Ave	Due Date Requested:			
City: Spokane	TAT Requested (days):			
State, Zip: WA, 99202	Compliance Project: Δ Yes Δ No			
Phone:	PO #: Purchase Order not required			
Email: jorr@geoengineers.com	WO #: 0504-058-07			
Project Name: Kwik Stop/0504-05-07	Project #: 59002658			
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, Y Trizma, 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)	8260D_NWTPH_Gx_MS	Standard Soil TOC	Moisture	8260D_NWTPH_Gx_MS	Total Iron & Manganese	Diss Iron & Manganese	300_ORGFM_28D	Total Organic Carbon	Methane	Total Number of containers	Special Instructions/Note:
		Preservation Code:					F	N	N	A	D	N	N	S	A		
~~B-9 (2.5-5)~~	09/13/23	1405	G	Solid												X	
B-9 (5-6.5)		1415		Solid												1	
B-9 (7.5-9)		1420		Solid												1	
~~B-9 (10-11.5)~~		1425		Solid												X	
B-9 (12.5-14)		1440		Solid												3	
B-9 (15-16.5)		1445		Solid												1	
B-9 (17.5-19)		1450		Solid												1	
~~B-9 (20-21.5)~~		1455		Solid												X	
B-9 (22.5-24)		1458		Solid												1	
~~B-9 (25-26.5)~~		1500		Solid												X	
B-9 (27.5-29)		1500		Solid												3	

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
Bryce Hansen	9/18/23 0920	GET		9/18/23 9:23	GET SRO
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: 2.1, 2.4/corr + 5.7, 6.0 corr/BT

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

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: Lola Gracie	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-8951-2569.4
Client Contact: Justin Orr	Phone:	E-Mail: Randee.Arrington@et.eurofinsus.com	State of Origin:	Page: Page 4 of 11
Company: GeoEngineers Inc	PWSID:	Analysis Requested		Job #:
Address: 523 East Second Ave	Due Date Requested:			Preservation Codes:
City: Spokane	TAT Requested (days): STD			
State, Zip: WA, 99202	Compliance Project: Δ Yes Δ No			
Phone:	PO #: Purchase Order not required			
Email: jorr@geoengineers.com	WO #: 0504-058-07			
Project Name: Kwik Stop/0504-05-07	Project #: 59002658			
Site:	SSOW#:			Other:

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, Y Trizma, Z other (specify)

Sample Identification	Sample Date (09/15/23)	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)	8260D, NWTPH_Gx_MS	9060A Standard Soil TOC	Moisture Local Method	8260D, NWTPH_Gx_MS	200.8_CWA Total Iron & Manganese	200.8_CWA Diss Iron & Manganese	2320B, 300_ORGFM_28D, 300_ORGFMS	5310C Total Organic Carbon	RSK_175 Methane	Total Number of containers	Special Instructions/Note:
				Preservation Code:	X	X	F	N	N	A	D	N	N	S	A	X	
MW-3:091523	09/15/23	0855	G	W ~~Solid~~			X				X	X		X	X	9	
MW-9:091523	|	1002	|	W ~~Solid~~			X				X	X		X	X	9	
MW-10:091523	|	1223	|	W ~~Solid~~			X									2	
MW-11:091523	|	1139	|	W ~~Solid~~			X									2	
MW-15 091523	|	1315	|	W ~~Solid~~			X									2	
MW-18:091523	|	1057	|	W ~~Solid~~			X				X	X		X	X	9	
				~~Solid~~													
				~~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
Bryce Harrison [signature]	9/18/23 0920	GEI	[signature]	9/18/23 9:23	EET SPO

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks: 2.1, 2.4 corr + 5.7, 6.0 corr IR006

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

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-8951-2569.6
Client Contact: Justin Orr	Phone:	E-Mail: Randee.Arrington@et.eurofinsus.com	State of Origin:	Page: Page 6 of 11
Company: GeoEngineers Inc	PWSID:			Job #:
Address: 523 East Second Ave	Due Date Requested:			
City: Spokane	TAT Requested (days):			
State, Zip: WA, 99202	Compliance Project: Δ Yes Δ No			
Phone:	PO #: Purchase Order not required			
Email: jorr@geoengineers.com	WO #: 0504-058-07			
Project Name: Kwik Stop/0504-05-07	Project #: 59002658			
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, Y Trizma, 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)	8260D, NWTPH_Gx_MS	9060A Standard Soil TOC	Moisture Local Method	8260D, NWTPH_Gx_MS	200.8_CWA Total Iron & Manganese	200.8_CWA Diss Iron & Manganese	2320B, 300_ORGFM_28D, 300_ORGFMS	5310C Total Organic Carbon	RSK_175 Methane					Total Number of containers	Special Instructions/Note.
			Preservation Code:				F	N	N	A	D	N	N	S	A						
B-11 (2.5-4)	09/14/23	1340	G	Solid																1	
B-11 (5-6.5)		1345		Solid																4	
B-11 (7.5-9)		1350		Solid																1	
B-11 (10-11.5)		1355		Solid																1	
B-11 (12.5-14)		1400		Solid																1	
B-11 (15-16.5)		1405		Solid																1	
B-11 (17.5-19)		1410		Solid																1	
B-11 (20-21.5)		1415		Solid																4	
B-11 (22.5-24)		1420		Solid																1	
B-11 (25-26.5)		1430		Solid																1	
B-11 (27.5-29)		1440		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
1		9/18/23 0920	GEI		9/18/23 9:23	EBT SRS
2	Bryce Hansen	Date/Time:	Company	Received by:	Date/Time:	Company
3	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: 2.1, 2.4 corr + 5.7, 6.0 corr IR GUN

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

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-8951-2569.7
Client Contact: Justin Orr	Phone:	E-Mail: Randee.Arrington@et.eurofinsus.com	State of Origin:	Page: Page 7 of 11
Company: GeoEngineers Inc	PWSID:			Job #:
Address: 523 East Second Ave	Due Date Requested:			
City: Spokane	TAT Requested (days):			
State, Zip: WA, 99202	Compliance Project: Δ Yes Δ No			
Phone:	PO #: Purchase Order not required			
Email: jorr@geoengineers.com	WO #: 0504-058-07			
Project Name: Kwik Stop/0504-05-07	Project #: 59002658			
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, Y Trizma, 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)	8260D, NWTPH_Gx_MS	9060A Standard Soil TOC	Moisture Local Method	8260D, NWTPH_Gx_MS	200.8_CWA Total Iron & Manganese	200.8_CWA Diss Iron & Manganese	2320B, 300_ORGFM_28D, 300_ORGFMS	5310C Total Organic Carbon	RSK_175 Methane					Total Number of containers	Special Instructions/Note
			Preservation Code:				F	N	N	A	D	N	N	S	A						
B-11 (30-31.5)	09/14/23	1455	G	Solid																1	
B-11 (32.5-34)		1500		Solid																4	
B-11 (35-36.5)		1510		Solid																1	
B-11 (37.5-39)		1515		Solid																1	
B-11 (40-41.5)		1535		Solid																4	
				Solid																	
				Solid																	
				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
Bryce Hanson	9/18/23 0920	GEI		9/18/23 9:23	EET SPK
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, 2.4 cor + 5.7, 6.0 cor IR9016

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

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-8951-2569.8
Client Contact: Justin Orr	Phone:	E-Mail: Randee.Arrington@et.eurofinsus.com	State of Origin:	Page: Page 8 of 11
Company: GeoEngineers Inc	PWSID:			Job #:
Address: 523 East Second Ave	Due Date Requested:			
City: Spokane	TAT Requested (days):			
State, Zip: WA, 99202	Compliance Project: Δ Yes Δ No			
Phone:	PO #: Purchase Order not required			
Email: jorr@geoengineers.com	WO #: 0504-058-07			
Project Name: Kwik Stop/0504-05-07	Project #: 59002658			
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, Y Trizma, 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)	8260D, NWTPH_Gx_MS	9060A Standard Soil TOC	Moisture Local Method	8260D, NWTPH_Gx_MS	200.8_CWA Total Iron & Manganese	200.8_CWA Diss Iron & Manganese	2320B, 300_ORGFM_28D, 300_ORGFMS	5310C Total Organic Carbon	RSK_175 Methane					Total Number of containers	Special Instructions/Note:
			Preservation Code:				F	N	N	A	D	N	N	S	A						
B-10(5-6.5)	09/14/23	0822	G	Solid																1	
B-10(10-11.5)		0826		Solid																3	
B-10(15-16.5)		0833		Solid																1	
B-10(20-21.5)		0837		Solid																1	
B-10(22.5-24)		0841		Solid																1	
B-10(25-26.5)		0844		Solid																4	
B-10(27.5-29)		0850		Solid																1	
B-10(30-31.5)		0855		Solid																1	
B-10(32.5-34)		0900		Solid																3	
B-10(37.5-39)		0920		Solid																1	
B-10(40-41.5)		0925		Solid																4	

Possible Hazard Identification + B-10(35-36.5) 09/0
☐ 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
[illegible]	9/18/23 0920	GE	[illegible]	9/18/23 9:23	BET SPS
Relinquished by: Bruce Hanson	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: 2.1, 2.4 corr +5.7, 6.0 corr IR Gun

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

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-8951-2569.9
Client Contact: Justin Orr	Phone:	E-Mail: Randee.Arrington@et.eurofinsus.com	State of Origin:	Page: Page 9 of 11
Company: GeoEngineers Inc	PWSID:			Job #:
Address: 523 East Second Ave	Due Date Requested:			
City: Spokane	TAT Requested (days):			
State, Zip: WA, 99202	Compliance Project: Δ Yes Δ No			
Phone:	PO #: Purchase Order not required			
Email: jorr@geoengineers.com	WO #: 0504-058-07			
Project Name: Kwik Stop/0504-05-07	Project #: 59002658			
Site:	SSOW#:			

Analysis Requested (Preservation Code):
- Field Filtered Sample (Yes or No)
- Perform MS/MSD (Yes or No)
- 8260D, NWTPH_Gx_MS — F
- 9060A Standard Soil TOC — N
- Moisture Local Method — N
- 8260D, NWTPH_Gx_MS — A
- 200.8_CWA Total Iron & Manganese — D
- 200.8_CWA Diss Iron & Manganese — N
- 2320B, 300_ORGFM_28D, 300_ORGFMS — N
- 5310C Total Organic Carbon — S
- RSK_175 Methane — A
- Total Number of containers

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, Y Trizma, 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)	Total Number of containers	Special Instructions/Note:
B-8 (2-5-4)	09/13/23	1200	G	Solid	1	
B-8 (5-6 5)		1220		Solid	1	
B-8 (7 5-9)		1235		Solid	1	
B 8 (10 11 5)		1235		Solid	1	
B-8 (12-5-14)		1240		Solid	3	
B-8 (15-16 5)		1250		Solid	1	
B 8 (17 5-19)		1255		Solid	1	
B-8 (20-21 5)		1300		Solid	1	
B 8 (22 5-24)		1310		Solid	1	
B 8 (25-26 5)		1320		Solid	3	
B-8 (27 5-29)		1325		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
Bryce Hansen [signature]	9/18/23 0920	GEI	[signature]	9/18/23 9:23	EEC8Ro
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: 2/2.4/corr 1Recode 5.7/6.0 1Recode

Ver: 06/08/2021

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

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-8951-2569.10
Client Contact: Justin Orr	Phone:	E-Mail: Randee.Arrington@et.eurofinsus.com	State of Origin:	Page: Page 10 of 11
Company: GeoEngineers Inc	PWSID:			Job #:
Address: 523 East Second Ave	Due Date Requested:			
City: Spokane	TAT Requested (days):			
State, Zip: WA, 99202	Compliance Project: Δ Yes Δ No			
Phone:	PO #: Purchase Order not required			
Email: jorr@geoengineers.com	WO #: 0504-058-07			
Project Name: Kwik Stop/0504-05-07	Project #: 59002658			
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, Y Trizma, 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)	8260D, NWTPH_Gx_MS	9060A Standard Soil TOC	Moisture Local Method	8260D, NWTPH_Gx_MS	200.8_CWA Total Iron & Manganese	200.8_CWA Diss Iron & Manganese	2320B, 300_ORGFM_28D, 300_ORGFMS	5310C Total Organic Carbon	RSK_175 Methane				Total Number of containers	Special Instructions/Note:
			Preservation Code:				F	N	N	A	D	N	N	S	A					
B-8 (30-31.5)	9/13/23	1330	G	Solid															1	
B-8 (32.5-34)		1335		Solid															1	
B-8 (35-36.5)		1340		Solid															1	
B-8 (37.5-39)		1345		Solid															4	
B-8 (40-41.5)		1400		Solid															4	
				Solid																
				Solid																
				Solid																
				Water																
				Water																
				Water																

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
1	Bruce Hansen	9/18/23 0900	GED		9/18/23 9:23	EETSPO
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	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: 2.1, 2.4 corr + 5.7, 6.0 corr 1120006

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

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-8951-2569.11
Client Contact: Justin Orr	Phone:	E-Mail: Randee.Arrington@et.eurofinsus.com	State of Origin:	Page: Page 11 of 11
Company: GeoEngineers Inc	PWSID:			Job #:
Address: 523 East Second Ave	Due Date Requested:			
City: Spokane	TAT Requested (days):			
State, Zip: WA, 99202	Compliance Project: Δ Yes Δ No			
Phone:	PO #: Purchase Order not required			
Email: jorr@geoengineers.com	WO #: 0504-058-07			
Project Name: Kwik Stop/0504-05-07	Project #: 59002658			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A	HCL	M	Hexane
B	NaOH	N	None
C	Zn Acetate	O	AsNaO2
D	Nitric Acid	P	Na2O4S
E	NaHSO4	Q	Na2SO3
F	MeOH	R	Na2S2O3
G	Amchlor	S	H2SO4
H	Ascorbic Acid	T	TSP Dodecahydrate
I	Ice	U	Acetone
J	DI Water	V	MCAA
K	EDTA	W	pH 4-5
L	EDA	Y	Trizma
		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)	8260D, NWTPH_Gx_MS	9060A Standard Soil TOC	Moisture Local Method	8260D, NWTPH_Gx_MS	200.8_CWA Total Iron & Manganese	200.8_CWA Diss Iron & Manganese	2320B, 300_ORGFM_28D, 300_ORGFMS	5310C Total Organic Carbon	RSK_175 Methane	Total Number of containers	Special Instructions/Note:
			Preservation Code:				F	N	N	A	D	N	N	S	A		
~~B-9 (30-32.5)~~	9/13/23	1505	G	Water												X	
~~B-9 (32.5-35)~~		1510		Water												Y	
~~B-9 (35-36.5)~~		1515		Water												X	
B-9 (37.5-39)		1520		Water												4	
B-9 (40-41.5)		1550		Water												4	
				Water													
				Water													
				Water													
				Water													
				Water													

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
1		9/18/23 0930	GET		9/18/23 9:23	ET SPO
2	Bryce Hansen	Date/Time:	Company	Received by:	Date/Time:	Company
3	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: 2.1, 2.4 cor +5.7, 6.0 cor IR006

Ver: 06/08/2021

Eurofins Spokane

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

Chain of Custody Record

eurofins | Environment Testing

Client Information			
Client Contact: Justin Orr	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):
Company: GeoEngineers Inc	Phone:	E-Mail: Randee.Arrington@et.eurofinsus.com	State of Origin:
Address: 523 East Second Ave	PWSID:	COC No: 590-8951-2569.9	Page: Page 9 of 11
City: Spokane	Due Date Requested:	Job #:	
State, Zip: WA, 99202	TAT Requested (days):		
Phone:	Compliance Project: Δ Yes Δ No		
Email: jorr@geoengineers.com	PO #: Purchase Order not required		
Project Name: Kwik Stop/0504-05-07	WO #: 0504-058-07		
Site:	Project #: 59002658		
	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, Y - Trizma, 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)	8260D, NWTPH_Gx_MS / BTEXN	9060A - Standard Soil TOC	Moisture - Local Method	8260D, NWTPH_Gx_MS	200.8_CWA - Total Iron & Manganese	200.8_CWA - Diss Iron & Manganese	2320B, 300_ORGFM_28D, 300_ORGFMS	5310C - Total Organic Carbon	RSK_175 - Methane	Total Number of containers	Special Instructions/Note:
				Preservation Code:	X	X	F	N	N	A	D	N	N	B	A	X	
B-8 (2-5-4)	09/13/23	1200	G	Solid													
B-8 (5-6-5)		1220		Solid													
B-8 (7-5-9)		1235		Solid													
B-8 (10-11-5)		1235		Solid													
B-8 (12-5-14)		1240		Solid			*										
B-8 (15-16-5)		1250		Solid													
B-8 (17-5-19)		1255		Solid													
B-8 (20-21-5)		1300		Solid													
B-8 (22-5-24)		1310		Solid													
B-8 (25-26-5)		1320		Solid			X										
B-8 (27-5-29)		1325		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: Bryce Hanson [signature]	Date/Time: 9/18/23 0920	Company: GEI	Received by: [signature]	Date/Time: 9/18/23 9:23	Company: ETC [illegible]
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: 2.1/2.1/corr 1Recd 5.7/6.0 1Recd

Ver: 06/08/2021

10/6/2023

Eurofins Spokane

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

Chain of Custody Record

eurofins | Environment Testing

Client Information			
Client Contact: Justin Orr	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):
Company: GeoEngineers Inc	Phone:	E-Mail: Randee.Arrington@et.eurofinsus.com	State of Origin:
Address: 523 East Second Ave	PWSID:		COC No: 590-8951-2569.10
City: Spokane	Due Date Requested:		Page: Page 10 of 11
State, Zip: WA, 99202	TAT Requested (days):		Job #:
Phone:	Compliance Project: Δ Yes Δ No		
Email: jorr@geoengineers.com	PO #: Purchase Order not required		
Project Name: Kwik Stop/0504-05-07	WO #: 0504-058-07		
Site:	Project #: 59002658		
	SSOW#:		

Analysis Requested

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)	8260D, NWTPH_Gx_MS / BTEXN	9060A - Standard Soil TOC	Moisture - Local Method	8260D, NWTPH_Gx_MS	200.8_CWA - Total Iron & Manganese	200.8_CWA - Diss Iron & Manganese	2320B, 300_ORGFM_28D, 300_ORGFMS	5310C - Total Organic Carbon	RSK_175 - Methane	Total Metals	Total Number of containers	Special Instructions/Note:
				Preservation Code:	X		N	N	A	D	N	N	B	A			X	
B-8 (20-31.5)	09/13/23	1330	G	Solid														
B-8 (32.5-34)		1335		Solid														
B-8 (35-36.5)		1340		Solid														
B-8 (37.5-39)		1345		Solid			X											
B-8 (40-41.5)		1400		Solid			X							X		X		
				Solid														
				Solid														
				Solid														
				Water														
				Water														
				Water														

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, Y - Trizma, Z - other (specify)
Other:

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: Total metals = Fe, Ca, Mn, Mg, Na, K

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

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Bryce Hanson [signature]	9/18/23 0900	GEI	[signature]	9/18/23 9:23	EETSPO
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: 2.1, 2.4 corr + 5.7, 6.0 corr IR2006

10/6/2023

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

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-8951-2569.3
Client Contact: Justin Orr	Phone:	E-Mail: Randee.Arrington@et.eurofinsus.com	State of Origin:	Page: Page 3 of 11
Company: GeoEngineers Inc	PWSID:			Job #:
Address: 523 East Second Ave	Due Date Requested:	Analysis Requested		
City: Spokane	TAT Requested (days):			Preservation Codes:
State, Zip: WA, 99202	Compliance Project: Δ Yes Δ No			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; Y - Trizma; Z - other (specify); Other:
Phone:	PO #: Purchase Order not required			
Email: jorr@geoengineers.com	WO #: 0504-058-07			
Project Name: Kwik Stop/0504-05-07	Project #: 59002658			
Site:	SSOW#:			

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)	8260D, NWTPH_Gx_MS / BTEX	9060A - Standard Soil TOC	Moisture - Local Method	8260D, NWTPH_Gx_MS	200.8_CWA - Total Iron & Manganese	200.8_CWA - Diss Iron & Manganese	2320B, 300_ORGFM_28D, 300_ORGFMS	5310C - Total Organic Carbon	RSK_175 - Methane	Total Number of containers	Special Instructions/Note:
			Preservation Code:			X									X	
~~B-9 (2.5-5)~~	09/13/23	1405	G	Solid												
B-9 (5-6.5)		1415		Solid												
B-9 (7.5-9)		1420		Solid												
~~B-9 (10-11.5)~~		1425		Solid												
B-9 (12.5-14)		1440		Solid		X										
B-9 (15-16.5)		1445		Solid												
B-9 (17.5-19)		1450		Solid												
~~B-9 (20-21.5)~~		1455		Solid												
B-9 (22.5-24)		1458		Solid												
~~B-9 (25-26.5)~~		1500		Solid												
B-9 (27.5-29)		1500		Solid		X										

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

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

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

Special Instructions/QC Requirements:

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

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Bryce Hansen	9/18/23 0920	GET		9/18/23 9:23	GET SPS
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: 2.1, 2.4 cor + 5.7, 6.0 corr IR#6

Ver: 06/08/2021

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

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-8951-2569.11
Client Contact: Justin Orr	Phone:	E-Mail: Randee.Arrington@et.eurofinsus.com	State of Origin:	Page: Page 11 of 11
Company: GeoEngineers Inc	PWSID:			Job #:
Address: 523 East Second Ave	Due Date Requested:	Analysis Requested		
City: Spokane	TAT Requested (days):			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, Y - Trizma, Z - other (specify), Other:
State, Zip: WA, 99202	Compliance Project: Δ Yes Δ No			
Phone:	PO #: Purchase Order not required			
Email: jorr@geoengineers.com	WO #: 0504-058-07			
Project Name: Kwik Stop/0504-05-07	Project #: 59002658			
Site:	SSOW#:			

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)	8260D, NWTPH_Gx_MS	9060A - Standard Soil TOC	Moisture - Local Method	8260D, NWTPH_Gx_MS	200.8_CWA - Total Iron & Manganese	200.8_CWA - Diss Iron & Manganese	2320B, 300_ORGFM_28D, 300_ORGFMS	5310C - Total Organic Carbon	RSK_175 - Methane	Total metals	Total Number of containers	Special Instructions/Note:
			Preservation Code:			F	N	N	A	P	N	N	B	A			
~~B-9 (30 - 31.5)~~	09/13/23	1505	G	Water													
~~B-9 (32.5 - 34)~~	"	1510	"	Water													
~~B-9 (35 - 36.5)~~	"	1515	"	Water													
~~B-9 (37.5 - 39)~~	"	1520	"	Water		X											
B-9 (40 - 41.5)	"	1550	"	Water		X							X	X			
				Water													
				Water													
				Water													
				Water													
				Water													
				Water													

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

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

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

Special Instructions/QC Requirements: total metals = Fe, Ca, Mn, Mg, Na, K

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by:	Date/Time: 9/18/23 0930	Company GET	Received by:	Date/Time: 9/18/23 9:23	Company EET SPO
Relinquished by: Bryce Hansen	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: 2.1, 2.4 cor + 5.7, 6.0 cor IR006

Ver: 06/08/2021

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

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-8951-2569.8
Client Contact: Justin Orr	Phone:	E-Mail: Randee.Arrington@et.eurofinsus.com	State of Origin:	Page: Page 8 of 11
Company: GeoEngineers Inc	PWSID:			Job #:
Address: 523 East Second Ave	Due Date Requested:	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, Y - Trizma, Z - other (specify), Other:
City: Spokane	TAT Requested (days):			
State, Zip: WA, 99202	Compliance Project: Δ Yes Δ No			
Phone:	PO #: Purchase Order not required			
Email: jorr@geoengineers.com	WO #: 0504-058-07			
Project Name: Kwik Stop/0504-05-07	Project #: 59002658			
Site:	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Total Filtered Samples (Yes or No)	8260D, NWTPH_Gx_MS	9060A - Standard Soil TOC	Moisture - Local Method	8260D, NWTPH_Gx_MS	200.8_CWA - Total Iron & Manganese	200.8_CWA - Diss Iron & Manganese	23209_300_ORGFM_28D, 300_ORGFMS	9310C - Total Organic Carbon	RSK_175 - Methane	Total Number of containers	Special Instructions/Note:
			Preservation Code:			P	N	N	A	P	N	N	G	A		
B-10(5-6-5)	09/14/23	0822	G	Solid												
B-10(10-11-5)		0826		Solid		X										
B-10(15-16-5)		0833		Solid												
B-10(20-21-5)		0837		Solid												
B-10(22.5-24-5)		0841		Solid												
B-10(25-26-5)		0844		Solid		X										
B-10(27.5-29)		0850		Solid												
B-10(30-31.5)		0855		Solid												
B-10(32.5-34)		0900		Solid		X										
B-10(37.5-39)		0920		Solid												
B-10(40-41.5)		0925		Solid		X										
B-10(35-36.5)		0910		Solid												

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

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): Δ Return To Client Δ Disposal By Lab Δ 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: [redacted]	Date/Time: 9/18/23 0920	Company: GE	Received by:	Date/Time: 9/18/23 9:23	Company: BET 8Pd
Relinquished by: Bryce Hanson	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: 2.1, 2.4 corr +5.7, 6.0 corr IR GUN

Ver: 06/08/2021

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

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-8951-2569.6
Client Contact: Justin Orr	Phone:	E-Mail: Randee.Arrington@et.eurofinsus.com	State of Origin:	Page: Page 6 of 11
Company: GeoEngineers Inc	PWSID:			Job #:
Address: 523 East Second Ave	Due Date Requested:	Analysis Requested		
City: Spokane	TAT Requested (days):			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, Y - Trizma, Z - other (specify), Other:
State, Zip: WA, 99202	Compliance Project: Δ Yes Δ No			
Phone:	PO #: Purchase Order not required			
Email: jorr@geoengineers.com	WO #: 0504-058-07			
Project Name: Kwik Stop/0504-05-07	Project #: 59002658			
Site:	SSOW#:			

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)	8260D, NWTPH_Gx_MS	9060A - Standard Soil TOC	Moisture - Local Method	8260D, NWTPH_Gx_MS	200.8_CWA - Total Iron & Manganese	200.8_CWA - Diss Iron & Manganese	2320B, 300_ORGFM_28D, 300_ORGFMS	6310C - Total Organic Carbon	RSK_175 - Methane	Total metals	Perform MS/MSD (Yes or No)	Special Instructions/Note:
			Preservation Code:			F	N	N	D	D	N	N	B	A			
B-11 (2-5-4)	09/14/23	1340	G	Solid													
B-11 (5-6.5)		1345		Solid		X											
B-11 (7.5-9)		1350		Solid									X	X			
B-11 (10-11.5)		1355		Solid													
B-11 (12.5-14)		1400		Solid													
B-11 (15-16.5)		1405		Solid													
B-11 (17.5-19)		1410		Solid													
B-11 (20-21.5)		1415		Solid		X											
B-11 (22.5-24)		1420		Solid													
B-11 (25-26.5)		1430		Solid													
B-11 (27.5-29)		1440		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: Total metals = Fe, Ca, Mn, Mg, Na, K

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

Relinquished by:	Date/Time: 9/18/23 0920	Company: GEI	Received by:	Date/Time: 9/18/23 9:23	Company: EET SRS
Relinquished by: Bryce Hansen	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: 2.1, 2.4 corr + 5.7, 6.0 corr IR Gun

Ver: 06/08/2021

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

Chain of Custody Record

eurofins | Environment Testing

Client Information			
Client Contact: Justin Orr	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):
Company: GeoEngineers Inc	Phone:	E-Mail: Randee.Arrington@et.eurofinsus.com	State of Origin:
Address: 523 East Second Ave	PWSID:		COC No: 590-8951-2569.7
City: Spokane	Due Date Requested:		Page: Page 7 of 11
State, Zip: WA, 99202	TAT Requested (days):		Job #:
Phone:	Compliance Project: Δ Yes Δ No		
Email: jorr@geoengineers.com	PO #: Purchase Order not required		
Project Name: Kwik Stop/0504-05-07	WO #: 0504-058-07		
Site:	Project #: 59002658		
	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, Y - Trizma, 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)	8260D, NWTPH_Gx_MS / BTEXN	8060A - Standard Soil TOC	Moisture - Local Method	8260D, NWTPH_Gx_MS	200.8_CWA - Total Iron & Manganese	200.8_CWA - Diss Iron & Manganese	2320B, 300_ORGFM_28D, 300_ORGFMS	5310C - Total Organic Carbon	RSK_175 - Methane	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	F	N	N	A	D	N	N	B	A	X	
B-11 (30-31.5)	09/14/23	1455	G	Solid												
B-11 (32.5-34)		1500		Solid		X										
B-11 (35-36.5)		1510		Solid												
B-11 (37.5-39)		1515		Solid												
B-11 (40-41.5)		1535		Solid		X										
				Solid												
				Solid												
				Solid												
				Solid												
				Solid												
				Solid												

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

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

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

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:		Time:	Method of Shipment:	
Relinquished by: Bryn Amsen	Date/Time: 9/18/23 0920	Company: GEI	Received by: [signature]	Date/Time: 9/18/23 9:23	Company: EET 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: 2.1, 2.4 cor + 5.7, 6.0 cor IR006

Ver: 06/08/2021

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

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-8951-2569.1
Client Contact: Justin Orr	Phone:	E-Mail: Randee.Arrington@et.eurofinsus.com	State of Origin:	Page: Page 1 of 11
Company: GeoEngineers Inc	PWSID:			Job #:
Address: 523 East Second Ave	Due Date Requested:			
City: Spokane	TAT Requested (days):			
State, Zip: WA, 99202	Compliance Project: Δ Yes Δ No			
Phone:	PO #: Purchase Order not required			
Email: jorr@geoengineers.com	WO #: 0504-058-07			
Project Name: Kwik Stop/0504-05-07	Project #: 59002658			
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, Y - Trizma, Z - other (specify), Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix	Field Filtered Sample (Yes or No)	8260D, NWTPH_Gx_MS / BTEX	8000A - Standard Soil TOC	Moisture - Local Method	8260D, NWTPH_Gx_MS	200.8_CWA - Total Iron & Manganese	200.8_CWA - Diss Iron & Manganese	2320B, 300_ORGFM_28D, 300_ORGFMS	5310C - Total Organic Carbon	RSK_175 - Methane	Total Metals	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	F	N	N	A	D	N	N	D	A		X	
B-12 (2-5-4)	09/14/23	1030	G	Solid													
B-12 (5-6-5)		1035		Solid		X							X		X		
B-12 (7-5-9)		1041		Solid													
B-12 (10-11-5)		045		Solid													
B-12 (12-5-14)		1050		Solid													
B-12 (15-10-5)		1055		Solid													
B-12 (17-5-19)		1110		Solid		X											
B-12 (20-21-5)		1115		Solid													
B-12 (22-5-24)		1130		Solid													
B-12 (25-26-5)		1140		Solid													
B-12 (27-5-29)		1145		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: Total Metals = Fe, Ca, Mn, Mg, Na, K

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by: [redacted]	Date/Time: 9/18/23 0928	Company: GEI	Received by:	Date/Time: 9/18/23 9123	Company: EET SPK
Relinquished by: Bryce Hansen	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: 2.1, 2.4 cor + 5.7, 6.0 cor IR Gun

Ver: 06/08/2021

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

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-8951-2569.2
Client Contact: Justin Orr	Phone:	E-Mail: Randee.Arrington@et.eurofinsus.com	State of Origin:	Page: Page 2 of 11
Company: GeoEngineers Inc	PWSID:			Job #:
Address: 523 East Second Ave	Due Date Requested:			
City: Spokane	TAT Requested (days):			
State, Zip: WA, 99202	Compliance Project: ∆ Yes ∆ No			
Phone:	PO #: Purchase Order not required			
Email: jorr@geoengineers.com	WO #: 0504-058-07			
Project Name: Kwik Stop/0504-05-07	Project #: 59002658			
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, Y - Trizma, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Wastewater, Sediment, Solid, Oil, Tissue, Air)	Field Filtered Sample (Yes or No)	8260D, NWTPH_Gx_MS	9060A - Standard Soil TOC	Moisture - Local Method	8260D, NWTPH_Gx_MS	200.8_CWA - Total Iron & Manganese	200.8_CWA - Diss Iron & Manganese	2320B, 300_ORGFM_28D, 300_ORGFMS	5310C - Total Organic Carbon	RSK_175 - Methane	Perform MS/MSD (Yes or No)	Special Instructions/Note:
			Preservation Code:			F	N	N	A	D	N	N	B	A		
B-12 (30-31.5)	09/14/23	1155	G	Solid												
B-12 (32.5-34)		1205		Solid												
B-12 (35-36.5)		1220		Solid												
B-12 (37.5-39)		1230		Solid		X										
B-12 (40-41.5)		1240		Solid		X										
				Solid												
				Solid												
				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: Brice Hansen	Date/Time: 9/18/23 0920	Company: GEI	Received by:	Date/Time: 9/18/23 9123	Company: EET SAC
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

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

Cooler Temperature(s) °C and Other Remarks: 2.1, 2.9 corr + 5.7, 6.0 corr 1R0006

Ver: 06/08/2021

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

Chain of Custody Record

eurofins | Environment Testing

Client Information			
Client Contact: Justin Orr	Sampler: Iola Orozco	Lab PM: Arrington, Randee E	Carrier Tracking No(s):
Company: GeoEngineers Inc	Phone:	E-Mail: Randee.Arrington@et.eurofinsus.com	State of Origin:
Address: 523 East Second Ave	PWSID:		COC No: 590-8951-2569.4
City: Spokane	Due Date Requested:		Page: Page 4 of 11
State, Zip: WA, 99202	TAT Requested (days): STD		Job #:
Phone:	Compliance Project: Δ Yes Δ No		
Email: jorr@geoengineers.com	PO #: Purchase Order not required		
Project Name: Kwik Stop/0504-05-07	WO #: 0504-058-07		
Site:	Project #: 59002658		
	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, Y - Trizma, 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)	8260D, NWTPH_Gx_MS /BTEXN	9060A - Standard Soil TOC	Moisture - Local Method	8260D, NWTPH_Gx_MS	200.8_CWA - Total Iron & Manganese	200.8_CWA - Diss Iron & Manganese	~~9056B, 900_ORGFM_28D, 300_ORGFMS~~	6310C - Total Organic Carbon	RSK_175 - Methane	Nitrate & Sulfate EPA 300	Alkalinity SM 2320B	Total Number of containers	Special Instructions/Note:
	09/15/23																		
				Preservation Code:	X	X	R	N	N	A	D	N	N	B	A			X	
MW-3: 091523	09/15/23	0855	G	Water			X				X	X		X	X	X	X		
MW-9: 091523		1002		Water			X				X	X		X	X	X	X		
MW-10: 091523		1223		Water			X												
MW-11: 091523		1139		Water			X												
MW-15: 091523		1315		Water			X												
MW-18: 091523		1057		Water			X				X	X		X	X	X	X		
				Solid															
				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
Eric Harrison [signature]	9/18/23 0930	GEI	[signature]	9/18/23 9:23	EECSPo
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: 2.1 2.1

10/6/2023

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

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-8261.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Randee.Arrington@et.eurofinsus.com	State of Origin: Washington	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Washington		Job #: 590-21723-1
Address: 4955 Yarrow Street, ,	Due Date Requested: 10/2/2023			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: Kwik Stop/0504-05-07	Project #: 59002658			
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
Y - Trizma
Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	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)	RSK_175/ (MOD) Methane	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-3:091523 (590-21723-24)	9/15/23	08:55 Pacific		Water			X	3	
MW-9:091523 (590-21723-25)	9/15/23	10:02 Pacific		Water			X	3	
MW-18:091523 (590-21723-29)	9/15/23	10:57 Pacific		Water			X	3	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Northwest, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing Northwest, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing Northwest, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing Northwest, LLC.

Possible Hazard Identification *Unconfirmed*	***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) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

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

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	9/19/23 1455	EET 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:

Ver: 06/08/2021

10/6/2023

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

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-8256.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Randee.Arrington@et.eurofinsus.com	State of Origin: Washington	Page: Page 1 of 1
Company: Eurofins Environment Testing Northwest,		Accreditations Required (See note): State Program - Washington		Job #: 590-21723-1
Address: 5755 8th Street East, ,	Due Date Requested: 10/2/2023			
City: Tacoma	TAT Requested (days):			
State, Zip: WA, 98424				
Phone: 253-922-2310(Tel)	PO #:			
Email:	WO #:			
Project Name: Kwik Stop/0504-05-07	Project #: 59002658			
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, Y - Trizma, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	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)	200.8_CWA/200.8_P_TOT (MOD)Total Iron & Manganese	200.8_CWA/FILTRATION (MOD) Diss Iron & Manganese	5310C/ Total Organic Carbon	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
MW-3:091523 (590-21723-24)	9/15/23	08:55 Pacific		Water			X	X	X	3	
MW-9:091523 (590-21723-25)	9/15/23	10:02 Pacific		Water			X	X	X	3	
MW-18:091523 (590-21723-29)	9/15/23	10:57 Pacific		Water			X	X	X	3	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Northwest, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing Northwest, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing Northwest, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing Northwest, LLC.

Possible Hazard Identification: Unconfirmed	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) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

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

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	9/18/23 14:31	EET SPO	[signature]	9/19/23 0925	EET N
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 1B9 0.0/0.3

Ver: 06/08/2021

10/6/2023

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

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-8256.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Randee.Arrington@et.eurofinsus.com	State of Origin: Washington	Page: Page 1 of 1
Company: Eurofins Environment Testing Northwest,		Accreditations Required (See note): State Program - Washington		Job #: 590-21723-1
Address: 5755 8th Street East, ,	Due Date Requested: 10/2/2023			
City: Tacoma	TAT Requested (days):			
State, Zip: WA, 98424				
Phone: 253-922-2310(Tel)	PO #:			
Email:	WO #:			
Project Name: Kwik Stop/0504-05-07	Project #: 59002658			
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, Y - Trizma, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	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)	200.8_CWA/200.8_P_TOT (MOD)Total Iron & Manganese	200.8_CWA/FILTRATION (MOD) Diss Iron & Manganese	5310C/ Total Organic Carbon	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X				X	
MW-3:091523 (590-21723-24)	9/15/23	08:55 Pacific		Water			X	X	X	3	
MW-9:091523 (590-21723-25)	9/15/23	10:02 Pacific		Water			X	X	X	3	
MW-18:091523 (590-21723-29)	9/15/23	10:57 Pacific		Water			X	X	X	3	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Northwest, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing Northwest, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing Northwest, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing Northwest, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

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

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	9/18/23 14:31	EETSPO		9/19/23 0925	EETN
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: IR9 0.0/0.3

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

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-8262.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Randee.Arrington@et.eurofinsus.com	State of Origin: Washington	Page: Page 1 of 1
Company: Eurofins Environment Testing Northwest,		Accreditations Required (See note): State Program - Washington		Job #: 590-21723-1
Address: 5755 8th Street East, ,	Due Date Requested: 10/2/2023			
City: Tacoma	TAT Requested (days):			
State, Zip: WA, 98424				
Phone: 253-922-2310(Tel)	PO #:			
Email:	WO #:			
Project Name: Kwik Stop/0504-05-07	Project #: 59002658			
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, Y - Trizma, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Preservation Code	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9060A/ Standard Soil TOC	Total Number of containers	Special Instructions/Note:
B-12 (5-6.5) (590-21723-2)	9/14/23	10:35 Pacific		Solid				X	1	
B-11 (5-6.5) (590-21723-31)	9/14/23	13:45 Pacific		Solid				X	1	
B-8 (40-41.5) (590-21723-73)	9/13/23	14:00 Pacific		Solid				X	1	
B-9 (40-41.5) (590-21723-75)	9/13/23	15:50 Pacific		Solid				X	1	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Northwest, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing Northwest, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing Northwest, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing Northwest, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

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

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		9/19/23 15:10	EET SD		9/20/23 0815	EETN
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: IR9 20/23

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-21723-1

Login Number: 21723
List Number: 1
Creator: Morris, Mackenzie 1

List Source: Eurofins 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	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-21723-1

Login Number: 21723
List Number: 3
Creator: Little, Matthew L

List Source: Eurofins Denver
List Creation: 09/20/23 01:31 PM

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.	True	
Sample custody seals, if present, are intact.	True	
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	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-21723-1

Login Number: 21723
List Number: 2
Creator: Groves, Elizabeth

List Source: Eurofins Seattle
List Creation: 09/19/23 03:18 PM

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.	True	
Sample custody seals, if present, are intact.	True	
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	IR9 0.0c
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?	N/A	Received project as a subcontract.
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.	True	
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	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-21723-1

Login Number: 21723
List Number: 4
Creator: Groves, Elizabeth

List Source: Eurofins Seattle
List Creation: 09/20/23 01:15 PM

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.	True	
Sample custody seals, if present, are intact.	True	
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	IR9 2.0c
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?	N/A	Received project as a subcontract.
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.	True	
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

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

ANALYTICAL REPORT

PREPARED FOR

Attn: Justin Orr
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Generated 12/16/2023 1:28:40 PM Revision 1

JOB DESCRIPTION

Ione Airport Kwik Stop/0504-058-07

JOB NUMBER

590-22374-1

Eurofins Spokane
11922 East 1st Ave
Spokane WA 99206

See page two for job notes and contact information.

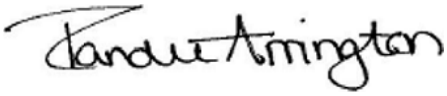
myEOL

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northwest, LLC Project Manager.

Authorization



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Revision 1

Authorized for release by
Randee Arrington, Business Unit Manager
Randee.Arrington@et.eurofinsus.com
(509)924-9200

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Job ID: 590-22374-1

Laboratory: Eurofins Spokane

Narrative

Job Narrative
590-22374-1

REVISION

The report being provided is a revision of the original report sent on 12/14/2023. The report (revision 1) is being revised due to the following: the project description was revised per the client's request.

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 11/30/2023 3:14 PM. 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 time was 4.8°C

GC/MS VOA
Method 8260D: The continuing calibration verification (CCV) associated with batch 590-45001 recovered above the upper control limit for 2,2-Dichloropropane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8260D: The laboratory control sample (LCS) for analytical batch 590-45001 recovered outside control limits for the following analytes: 2,2-Dichloropropane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

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

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

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

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

General Chemistry
Method 2320B: The method blank for analytical batch 590-45031 contained Alkalinity and Bicarbonate Alkalinity as CaCO3 above the method detection limit (MDL). Associated sample(s) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

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

Sample Summary

Client: GeoEngineers Inc
Job ID: 590-22374-1
Project/Site: Ione Airport Kwik Stop/0504-058-07

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-22374-1	MW-3: 113023	Water	11/30/23 10:45	11/30/23 15:14
590-22374-2	MW-8: 113023	Water	11/30/23 12:15	11/30/23 15:14
590-22374-3	MW-9: 113023	Water	11/30/23 09:10	11/30/23 15:14
590-22374-4	MW-10: 112923	Water	11/29/23 13:50	11/30/23 15:14
590-22374-5	MW-11: 112923	Water	11/29/23 12:50	11/30/23 15:14
590-22374-6	MW-15: 112923	Water	11/29/23 11:20	11/30/23 15:14
590-22374-7	MW-18: 112923	Water	11/29/23 14:50	11/30/23 15:14
590-22374-8	DUP 1: 113023	Water	11/30/23 09:00	11/30/23 15:14

Definitions/Glossary

Client: GeoEngineers Inc
Job ID: 590-22374-1
Project/Site: Ione Airport Kwik Stop/0504-058-07

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.

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

General Chemistry

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: GeoEngineers Inc
Job ID: 590-22374-1
Project/Site: Ione Airport Kwik Stop/0504-058-07

Client Sample ID: MW-3: 113023
Lab Sample ID: 590-22374-1
Date Collected: 11/30/23 10:45
Matrix: Water
Date Received: 11/30/23 15:14

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			12/08/23 15:13	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			12/08/23 15:13	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.32	ug/L			12/08/23 15:13	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			12/08/23 15:13	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			12/08/23 15:13	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			12/08/23 15:13	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/08/23 15:13	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			12/08/23 15:13	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			12/08/23 15:13	1
1,2,4-Trichlorobenzene	ND		1.0	0.50	ug/L			12/08/23 15:13	1
1,2,4-Trimethylbenzene	**5.0**		1.0	0.31	ug/L			12/08/23 15:13	1
1,2-Dibromo-3-Chloropropane	**2.6**	**J**	10	1.5	ug/L			12/08/23 15:13	1
1,2-Dibromoethane (EDB)	ND		1.0	0.20	ug/L			12/08/23 15:13	1
1,2-Dichlorobenzene	ND		1.0	0.23	ug/L			12/08/23 15:13	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			12/08/23 15:13	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			12/08/23 15:13	1
1,3,5-Trimethylbenzene	**41**		1.0	0.32	ug/L			12/08/23 15:13	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/08/23 15:13	1
1,3-Dichloropropane	ND		2.0	0.21	ug/L			12/08/23 15:13	1
1,4-Dichlorobenzene	ND		1.0	0.28	ug/L			12/08/23 15:13	1
2,2-Dichloropropane	ND	*+	2.0	0.66	ug/L			12/08/23 15:13	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			12/08/23 15:13	1
4-Chlorotoluene	ND		1.0	0.26	ug/L			12/08/23 15:13	1
Benzene	ND		0.40	0.093	ug/L			12/08/23 15:13	1
Bromobenzene	ND		1.0	0.28	ug/L			12/08/23 15:13	1
Bromochloromethane	ND		2.0	0.44	ug/L			12/08/23 15:13	1
Bromodichloromethane	ND		1.0	0.29	ug/L			12/08/23 15:13	1
Bromoform	ND		5.0	0.66	ug/L			12/08/23 15:13	1
Bromomethane	ND		5.0	0.76	ug/L			12/08/23 15:13	1
Carbon tetrachloride	ND		1.0	0.40	ug/L			12/08/23 15:13	1
Chlorobenzene	ND		1.0	0.32	ug/L			12/08/23 15:13	1
Chloroethane	**1.5**	**J**	2.0	0.40	ug/L			12/08/23 15:13	1
Chloroform	ND		1.0	0.24	ug/L			12/08/23 15:13	1
Chloromethane	**0.57**	**J**	3.0	0.50	ug/L			12/08/23 15:13	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			12/08/23 15:13	1
cis-1,3-Dichloropropene	ND		1.0	0.25	ug/L			12/08/23 15:13	1
Dibromochloromethane	ND		2.0	0.33	ug/L			12/08/23 15:13	1
Dibromomethane	ND		2.0	0.50	ug/L			12/08/23 15:13	1
Dichlorodifluoromethane	ND		2.0	0.64	ug/L			12/08/23 15:13	1
Ethylbenzene	**1.9**		1.0	0.20	ug/L			12/08/23 15:13	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			12/08/23 15:13	1
Isopropylbenzene	**3.1**		1.0	0.24	ug/L			12/08/23 15:13	1
m,p-Xylene	**5.1**		2.0	0.28	ug/L			12/08/23 15:13	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			12/08/23 15:13	1
Methylene Chloride	ND		5.0	2.2	ug/L			12/08/23 15:13	1
Naphthalene	**3.6**		2.0	0.63	ug/L			12/08/23 15:13	1
n-Butylbenzene	**5.7**		1.0	0.20	ug/L			12/08/23 15:13	1
N-Propylbenzene	**5.6**		1.0	0.25	ug/L			12/08/23 15:13	1
o-Xylene	ND		1.0	0.16	ug/L			12/08/23 15:13	1

Client Sample ID: MW-3: 113023
Lab Sample ID: 590-22374-1

Date Collected: 11/30/23 10:45
Matrix: Water

Date Received: 11/30/23 15:14

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
p-Isopropyltoluene	**1.9**		1.0	0.27	ug/L			12/08/23 15:13	1
sec-Butylbenzene	**2.7**		1.0	0.22	ug/L			12/08/23 15:13	1
Styrene	ND		1.0	0.24	ug/L			12/08/23 15:13	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/08/23 15:13	1
Tetrachloroethene	ND		1.0	0.22	ug/L			12/08/23 15:13	1
Toluene	ND		1.0	0.31	ug/L			12/08/23 15:13	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			12/08/23 15:13	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/08/23 15:13	1
Trichloroethene	ND		1.0	0.20	ug/L			12/08/23 15:13	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			12/08/23 15:13	1
Vinyl chloride	ND		0.40	0.13	ug/L			12/08/23 15:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*80 - 120*		*12/08/23 15:13*	*1*
4-Bromofluorobenzene (Surr)	*101*		*76 - 120*		*12/08/23 15:13*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 123*		*12/08/23 15:13*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*		*12/08/23 15:13*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**540**		150	54	ug/L			12/08/23 15:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*68.7 - 141*		*12/08/23 15:13*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	ND		5.0	0.63	ug/L			12/02/23 22:04	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**64**		0.80	0.42	mg/L			12/01/23 13:55	1
Nitrate as N	**0.32**		0.20	0.057	mg/L			12/01/23 13:55	1
Nitrite as N	ND		0.20	0.069	mg/L			12/01/23 13:55	1
Sulfate	**14**		0.50	0.13	mg/L			12/01/23 13:55	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.018**		0.0050	0.0010	mg/L		12/06/23 16:38	12/08/23 09:24	5
Cadmium	**0.00031**	**J**	0.0020	0.00019	mg/L		12/06/23 16:38	12/08/23 09:24	5
Iron	**9.7**		0.50	0.067	mg/L		12/06/23 16:38	12/08/23 09:24	5
Lead	**0.0014**	**J**	0.0020	0.00020	mg/L		12/06/23 16:38	12/08/23 09:24	5
Manganese	**0.69**		0.010	0.0023	mg/L		12/06/23 16:38	12/08/23 09:24	5
Zinc	**0.019**	**J**	0.035	0.0046	mg/L		12/06/23 16:38	12/08/23 09:24	5

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0011**	**J**	0.0050	0.0010	mg/L		12/08/23 15:08	12/11/23 16:29	5
Cadmium	ND		0.0020	0.00019	mg/L		12/08/23 15:08	12/11/23 16:29	5
Iron	**0.085**	**J**	0.50	0.067	mg/L		12/08/23 15:08	12/11/23 16:29	5
Lead	ND		0.0020	0.00020	mg/L		12/08/23 15:08	12/11/23 16:29	5

Client Sample ID: MW-3: 113023
Lab Sample ID: 590-22374-1
Date Collected: 11/30/23 10:45
Matrix: Water
Date Received: 11/30/23 15:14

Method: SW846 6020B - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**0.70**		0.010	0.0023	mg/L		12/08/23 15:08	12/11/23 16:29	5
Zinc	ND		0.035	0.0046	mg/L		12/08/23 15:08	12/11/23 16:29	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity (SM 2320B)	**290**	**B**	20	5.0	mg/L			12/11/23 11:29	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	**290**	**B**	20	5.0	mg/L			12/11/23 11:29	1
Total Dissolved Solids (SM 2540C)	**470**		25	13	mg/L			12/04/23 09:53	1
Total Organic Carbon - Duplicates (SM 5310B)	**2.7**		1.0	0.35	mg/L			12/09/23 06:59	1

Client Sample ID: MW-8: 113023
Lab Sample ID: 590-22374-2
Date Collected: 11/30/23 12:15
Matrix: Water
Date Received: 11/30/23 15:14

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			12/08/23 15:56	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			12/08/23 15:56	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.32	ug/L			12/08/23 15:56	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			12/08/23 15:56	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			12/08/23 15:56	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			12/08/23 15:56	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/08/23 15:56	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			12/08/23 15:56	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			12/08/23 15:56	1
1,2,4-Trichlorobenzene	ND		1.0	0.50	ug/L			12/08/23 15:56	1
1,2,4-Trimethylbenzene	**19**		1.0	0.31	ug/L			12/08/23 15:56	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			12/08/23 15:56	1
1,2-Dibromoethane (EDB)	ND		1.0	0.20	ug/L			12/08/23 15:56	1
1,2-Dichlorobenzene	ND		1.0	0.23	ug/L			12/08/23 15:56	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			12/08/23 15:56	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			12/08/23 15:56	1
1,3,5-Trimethylbenzene	**16**		1.0	0.32	ug/L			12/08/23 15:56	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/08/23 15:56	1
1,3-Dichloropropane	ND		2.0	0.21	ug/L			12/08/23 15:56	1
1,4-Dichlorobenzene	ND		1.0	0.28	ug/L			12/08/23 15:56	1
2,2-Dichloropropane	ND	*+	2.0	0.66	ug/L			12/08/23 15:56	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			12/08/23 15:56	1
4-Chlorotoluene	ND		1.0	0.26	ug/L			12/08/23 15:56	1
Benzene	**0.67**		0.40	0.093	ug/L			12/08/23 15:56	1
Bromobenzene	ND		1.0	0.28	ug/L			12/08/23 15:56	1
Bromochloromethane	ND		2.0	0.44	ug/L			12/08/23 15:56	1
Bromodichloromethane	**0.29**	**J**	1.0	0.29	ug/L			12/08/23 15:56	1
Bromoform	ND		5.0	0.66	ug/L			12/08/23 15:56	1
Bromomethane	ND		5.0	0.76	ug/L			12/08/23 15:56	1
Carbon tetrachloride	ND		1.0	0.40	ug/L			12/08/23 15:56	1
Chlorobenzene	ND		1.0	0.32	ug/L			12/08/23 15:56	1
Chloroethane	ND		2.0	0.40	ug/L			12/08/23 15:56	1
Chloroform	ND		1.0	0.24	ug/L			12/08/23 15:56	1

Client: GeoEngineers Inc
Job ID: 590-22374-1
Project/Site: Ione Airport Kwik Stop/0504-058-07

Client Sample ID: MW-8: 113023
Lab Sample ID: 590-22374-2
Date Collected: 11/30/23 12:15
Matrix: Water
Date Received: 11/30/23 15:14

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		3.0	0.50	ug/L			12/08/23 15:56	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			12/08/23 15:56	1
cis-1,3-Dichloropropene	ND		1.0	0.25	ug/L			12/08/23 15:56	1
Dibromochloromethane	ND		2.0	0.33	ug/L			12/08/23 15:56	1
Dibromomethane	ND		2.0	0.50	ug/L			12/08/23 15:56	1
Dichlorodifluoromethane	ND		2.0	0.64	ug/L			12/08/23 15:56	1
Ethylbenzene	**0.48**	**J**	1.0	0.20	ug/L			12/08/23 15:56	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			12/08/23 15:56	1
Isopropylbenzene	**0.69**	**J**	1.0	0.24	ug/L			12/08/23 15:56	1
m,p-Xylene	**1.8**	**J**	2.0	0.28	ug/L			12/08/23 15:56	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			12/08/23 15:56	1
Methylene Chloride	ND		5.0	2.2	ug/L			12/08/23 15:56	1
Naphthalene	**0.82**	**J**	2.0	0.63	ug/L			12/08/23 15:56	1
n-Butylbenzene	**0.83**	**J**	1.0	0.20	ug/L			12/08/23 15:56	1
N-Propylbenzene	**2.4**		1.0	0.25	ug/L			12/08/23 15:56	1
o-Xylene	ND		1.0	0.16	ug/L			12/08/23 15:56	1
p-Isopropyltoluene	**0.70**	**J**	1.0	0.27	ug/L			12/08/23 15:56	1
sec-Butylbenzene	**0.83**	**J**	1.0	0.22	ug/L			12/08/23 15:56	1
Styrene	ND		1.0	0.24	ug/L			12/08/23 15:56	1
tert-Butylbenzene	**2.8**		1.0	0.12	ug/L			12/08/23 15:56	1
Tetrachloroethene	ND		1.0	0.22	ug/L			12/08/23 15:56	1
Toluene	ND		1.0	0.31	ug/L			12/08/23 15:56	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			12/08/23 15:56	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/08/23 15:56	1
Trichloroethene	ND		1.0	0.20	ug/L			12/08/23 15:56	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			12/08/23 15:56	1
Vinyl chloride	ND		0.40	0.13	ug/L			12/08/23 15:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*80 - 120*		*12/08/23 15:56*	*1*
4-Bromofluorobenzene (Surr)	*99*		*76 - 120*		*12/08/23 15:56*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 123*		*12/08/23 15:56*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*12/08/23 15:56*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**380**		150	54	ug/L			12/08/23 15:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*68.7 - 141*		*12/08/23 15:56*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	**3.1**	**J**	5.0	0.63	ug/L			12/02/23 22:17	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**16**		0.80	0.42	mg/L			12/01/23 14:05	1
Nitrate as N	**1.7**		0.20	0.057	mg/L			12/01/23 14:05	1
Nitrite as N	**1.2**		0.20	0.069	mg/L			12/01/23 14:05	1
Sulfate	**430**		5.0	1.3	mg/L			12/05/23 15:07	10

Client Sample ID: MW-8: 113023
Lab Sample ID: 590-22374-2
Date Collected: 11/30/23 12:15
Matrix: Water
Date Received: 11/30/23 15:14

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0060		0.0050	0.0010	mg/L		12/06/23 16:38	12/08/23 09:27	5
Cadmium	0.00019	J	0.0020	0.00019	mg/L		12/06/23 16:38	12/08/23 09:27	5
Iron	1.8		0.50	0.067	mg/L		12/06/23 16:38	12/08/23 09:27	5
Lead	0.00067	J	0.0020	0.00020	mg/L		12/06/23 16:38	12/08/23 09:27	5
Manganese	1.2		0.010	0.0023	mg/L		12/06/23 16:38	12/08/23 09:27	5
Zinc	0.0055	J	0.035	0.0046	mg/L		12/06/23 16:38	12/08/23 09:27	5

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0014	J	0.0050	0.0010	mg/L		12/08/23 15:08	12/11/23 16:32	5
Cadmium	ND		0.0020	0.00019	mg/L		12/08/23 15:08	12/11/23 16:32	5
Iron	0.085	J	0.50	0.067	mg/L		12/08/23 15:08	12/11/23 16:32	5
Lead	ND		0.0020	0.00020	mg/L		12/08/23 15:08	12/11/23 16:32	5
Manganese	1.6		0.010	0.0023	mg/L		12/08/23 15:08	12/11/23 16:32	5
Zinc	0.0055	J	0.035	0.0046	mg/L		12/08/23 15:08	12/11/23 16:32	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity (SM 2320B)	420	B	20	5.0	mg/L			12/11/23 11:29	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	420	B	20	5.0	mg/L			12/11/23 11:29	1
Total Dissolved Solids (SM 2540C)	800		25	13	mg/L			12/04/23 09:53	1
Total Organic Carbon - Duplicates (SM 5310B)	3.4		1.0	0.35	mg/L			12/08/23 23:03	1

Client Sample ID: MW-9: 113023
Lab Sample ID: 590-22374-3
Date Collected: 11/30/23 09:10
Matrix: Water
Date Received: 11/30/23 15:14

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			12/08/23 16:39	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			12/08/23 16:39	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.32	ug/L			12/08/23 16:39	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			12/08/23 16:39	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			12/08/23 16:39	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			12/08/23 16:39	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/08/23 16:39	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			12/08/23 16:39	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			12/08/23 16:39	1
1,2,4-Trichlorobenzene	ND		1.0	0.50	ug/L			12/08/23 16:39	1
1,2,4-Trimethylbenzene	ND		1.0	0.31	ug/L			12/08/23 16:39	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			12/08/23 16:39	1
1,2-Dibromoethane (EDB)	ND		1.0	0.20	ug/L			12/08/23 16:39	1
1,2-Dichlorobenzene	ND		1.0	0.23	ug/L			12/08/23 16:39	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			12/08/23 16:39	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			12/08/23 16:39	1
1,3,5-Trimethylbenzene	ND		1.0	0.32	ug/L			12/08/23 16:39	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/08/23 16:39	1
1,3-Dichloropropane	ND		2.0	0.21	ug/L			12/08/23 16:39	1
1,4-Dichlorobenzene	ND		1.0	0.28	ug/L			12/08/23 16:39	1

Client: GeoEngineers Inc
Job ID: 590-22374-1
Project/Site: Ione Airport Kwik Stop/0504-058-07

Client Sample ID: MW-9: 113023
Lab Sample ID: 590-22374-3
Date Collected: 11/30/23 09:10
Matrix: Water
Date Received: 11/30/23 15:14

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,2-Dichloropropane	ND	*+	2.0	0.66	ug/L			12/08/23 16:39	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			12/08/23 16:39	1
4-Chlorotoluene	ND		1.0	0.26	ug/L			12/08/23 16:39	1
Benzene	ND		0.40	0.093	ug/L			12/08/23 16:39	1
Bromobenzene	ND		1.0	0.28	ug/L			12/08/23 16:39	1
Bromochloromethane	ND		2.0	0.44	ug/L			12/08/23 16:39	1
Bromodichloromethane	ND		1.0	0.29	ug/L			12/08/23 16:39	1
Bromoform	ND		5.0	0.66	ug/L			12/08/23 16:39	1
Bromomethane	ND		5.0	0.76	ug/L			12/08/23 16:39	1
Carbon tetrachloride	ND		1.0	0.40	ug/L			12/08/23 16:39	1
Chlorobenzene	ND		1.0	0.32	ug/L			12/08/23 16:39	1
Chloroethane	ND		2.0	0.40	ug/L			12/08/23 16:39	1
Chloroform	ND		1.0	0.24	ug/L			12/08/23 16:39	1
Chloromethane	ND		3.0	0.50	ug/L			12/08/23 16:39	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			12/08/23 16:39	1
cis-1,3-Dichloropropene	ND		1.0	0.25	ug/L			12/08/23 16:39	1
Dibromochloromethane	ND		2.0	0.33	ug/L			12/08/23 16:39	1
Dibromomethane	ND		2.0	0.50	ug/L			12/08/23 16:39	1
Dichlorodifluoromethane	ND		2.0	0.64	ug/L			12/08/23 16:39	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/08/23 16:39	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			12/08/23 16:39	1
Isopropylbenzene	ND		1.0	0.24	ug/L			12/08/23 16:39	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/08/23 16:39	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			12/08/23 16:39	1
Methylene Chloride	ND		5.0	2.2	ug/L			12/08/23 16:39	1
Naphthalene	ND		2.0	0.63	ug/L			12/08/23 16:39	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/08/23 16:39	1
N-Propylbenzene	ND		1.0	0.25	ug/L			12/08/23 16:39	1
o-Xylene	ND		1.0	0.16	ug/L			12/08/23 16:39	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			12/08/23 16:39	1
sec-Butylbenzene	ND		1.0	0.22	ug/L			12/08/23 16:39	1
Styrene	ND		1.0	0.24	ug/L			12/08/23 16:39	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/08/23 16:39	1
Tetrachloroethene	ND		1.0	0.22	ug/L			12/08/23 16:39	1
Toluene	ND		1.0	0.31	ug/L			12/08/23 16:39	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			12/08/23 16:39	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/08/23 16:39	1
Trichloroethene	ND		1.0	0.20	ug/L			12/08/23 16:39	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			12/08/23 16:39	1
Vinyl chloride	ND		0.40	0.13	ug/L			12/08/23 16:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*80 - 120*		*12/08/23 16:39*	*1*
4-Bromofluorobenzene (Surr)	*102*		*76 - 120*		*12/08/23 16:39*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 123*		*12/08/23 16:39*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*		*12/08/23 16:39*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150	54	ug/L			12/08/23 16:39	1

Client Sample ID: MW-9: 113023
Lab Sample ID: 590-22374-3
Date Collected: 11/30/23 09:10
Matrix: Water
Date Received: 11/30/23 15:14

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*68.7 - 141*		*12/08/23 16:39*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	ND		5.0	0.63	ug/L			12/02/23 22:31	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**20**		0.80	0.42	mg/L			12/01/23 14:15	1
Nitrate as N	**4.1**		0.20	0.057	mg/L			12/01/23 14:15	1
Nitrite as N	ND		0.20	0.069	mg/L			12/01/23 14:15	1
Sulfate	**14**		0.50	0.13	mg/L			12/01/23 14:15	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0050	0.0010	mg/L		12/06/23 16:38	12/08/23 09:22	5
Cadmium	ND		0.0020	0.00019	mg/L		12/06/23 16:38	12/08/23 09:22	5
Iron	**0.11**	**J**	0.50	0.067	mg/L		12/06/23 16:38	12/08/23 09:22	5
Lead	ND		0.0020	0.00020	mg/L		12/06/23 16:38	12/08/23 09:22	5
Manganese	**0.080**		0.010	0.0023	mg/L		12/06/23 16:38	12/08/23 09:22	5
Zinc	ND		0.035	0.0046	mg/L		12/06/23 16:38	12/08/23 09:22	5

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0050	0.0010	mg/L		12/08/23 15:08	12/11/23 16:21	5
Cadmium	ND		0.0020	0.00019	mg/L		12/08/23 15:08	12/11/23 16:21	5
Iron	ND		0.50	0.067	mg/L		12/08/23 15:08	12/11/23 16:21	5
Lead	ND		0.0020	0.00020	mg/L		12/08/23 15:08	12/11/23 16:21	5
Manganese	ND		0.010	0.0023	mg/L		12/08/23 15:08	12/11/23 16:21	5
Zinc	ND		0.035	0.0046	mg/L		12/08/23 15:08	12/11/23 16:21	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity (SM 2320B)	**210**	**B**	20	5.0	mg/L			12/11/23 11:29	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	**210**	**B**	20	5.0	mg/L			12/11/23 11:29	1
Total Dissolved Solids (SM 2540C)	**330**		25	13	mg/L			12/04/23 09:53	1
Total Organic Carbon - Duplicates (SM 5310B)	ND		1.0	0.35	mg/L			12/08/23 23:30	1

Client Sample ID: MW-10: 112923
Lab Sample ID: 590-22374-4
Date Collected: 11/29/23 13:50
Matrix: Water
Date Received: 11/30/23 15:14

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			12/08/23 17:01	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			12/08/23 17:01	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.32	ug/L			12/08/23 17:01	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			12/08/23 17:01	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			12/08/23 17:01	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			12/08/23 17:01	1

Client: GeoEngineers Inc
Job ID: 590-22374-1
Project/Site: Ione Airport Kwik Stop/0504-058-07

Client Sample ID: MW-10: 112923
Lab Sample ID: 590-22374-4
Date Collected: 11/29/23 13:50
Matrix: Water
Date Received: 11/30/23 15:14

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/08/23 17:01	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			12/08/23 17:01	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			12/08/23 17:01	1
1,2,4-Trichlorobenzene	ND		1.0	0.50	ug/L			12/08/23 17:01	1
1,2,4-Trimethylbenzene	ND		1.0	0.31	ug/L			12/08/23 17:01	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			12/08/23 17:01	1
1,2-Dibromoethane (EDB)	ND		1.0	0.20	ug/L			12/08/23 17:01	1
1,2-Dichlorobenzene	ND		1.0	0.23	ug/L			12/08/23 17:01	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			12/08/23 17:01	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			12/08/23 17:01	1
1,3,5-Trimethylbenzene	ND		1.0	0.32	ug/L			12/08/23 17:01	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/08/23 17:01	1
1,3-Dichloropropane	ND		2.0	0.21	ug/L			12/08/23 17:01	1
1,4-Dichlorobenzene	ND		1.0	0.28	ug/L			12/08/23 17:01	1
2,2-Dichloropropane	ND	*+	2.0	0.66	ug/L			12/08/23 17:01	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			12/08/23 17:01	1
4-Chlorotoluene	ND		1.0	0.26	ug/L			12/08/23 17:01	1
Benzene	ND		0.40	0.093	ug/L			12/08/23 17:01	1
Bromobenzene	ND		1.0	0.28	ug/L			12/08/23 17:01	1
Bromochloromethane	ND		2.0	0.44	ug/L			12/08/23 17:01	1
Bromodichloromethane	ND		1.0	0.29	ug/L			12/08/23 17:01	1
Bromoform	ND		5.0	0.66	ug/L			12/08/23 17:01	1
Bromomethane	ND		5.0	0.76	ug/L			12/08/23 17:01	1
Carbon tetrachloride	ND		1.0	0.40	ug/L			12/08/23 17:01	1
Chlorobenzene	ND		1.0	0.32	ug/L			12/08/23 17:01	1
Chloroethane	ND		2.0	0.40	ug/L			12/08/23 17:01	1
Chloroform	ND		1.0	0.24	ug/L			12/08/23 17:01	1
Chloromethane	ND		3.0	0.50	ug/L			12/08/23 17:01	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			12/08/23 17:01	1
cis-1,3-Dichloropropene	ND		1.0	0.25	ug/L			12/08/23 17:01	1
Dibromochloromethane	ND		2.0	0.33	ug/L			12/08/23 17:01	1
Dibromomethane	ND		2.0	0.50	ug/L			12/08/23 17:01	1
Dichlorodifluoromethane	ND		2.0	0.64	ug/L			12/08/23 17:01	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/08/23 17:01	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			12/08/23 17:01	1
Isopropylbenzene	ND		1.0	0.24	ug/L			12/08/23 17:01	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/08/23 17:01	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			12/08/23 17:01	1
Methylene Chloride	ND		5.0	2.2	ug/L			12/08/23 17:01	1
Naphthalene	ND		2.0	0.63	ug/L			12/08/23 17:01	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/08/23 17:01	1
N-Propylbenzene	ND		1.0	0.25	ug/L			12/08/23 17:01	1
o-Xylene	ND		1.0	0.16	ug/L			12/08/23 17:01	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			12/08/23 17:01	1
sec-Butylbenzene	ND		1.0	0.22	ug/L			12/08/23 17:01	1
Styrene	ND		1.0	0.24	ug/L			12/08/23 17:01	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/08/23 17:01	1
Tetrachloroethene	ND		1.0	0.22	ug/L			12/08/23 17:01	1
Toluene	ND		1.0	0.31	ug/L			12/08/23 17:01	1

Client Sample ID: MW-10: 112923
Lab Sample ID: 590-22374-4

Date Collected: 11/29/23 13:50
Matrix: Water
Date Received: 11/30/23 15:14

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			12/08/23 17:01	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/08/23 17:01	1
Trichloroethene	ND		1.0	0.20	ug/L			12/08/23 17:01	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			12/08/23 17:01	1
Vinyl chloride	ND		0.40	0.13	ug/L			12/08/23 17:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*80 - 120*		*12/08/23 17:01*	*1*
4-Bromofluorobenzene (Surr)	*102*		*76 - 120*		*12/08/23 17:01*	*1*
Dibromofluoromethane (Surr)	*108*		*80 - 123*		*12/08/23 17:01*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*12/08/23 17:01*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150	54	ug/L			12/08/23 17:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*68.7 - 141*		*12/08/23 17:01*	*1*

Client Sample ID: MW-11: 112923
Lab Sample ID: 590-22374-5

Date Collected: 11/29/23 12:50
Matrix: Water
Date Received: 11/30/23 15:14

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			12/08/23 17:22	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			12/08/23 17:22	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.32	ug/L			12/08/23 17:22	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			12/08/23 17:22	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			12/08/23 17:22	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			12/08/23 17:22	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/08/23 17:22	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			12/08/23 17:22	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			12/08/23 17:22	1
1,2,4-Trichlorobenzene	ND		1.0	0.50	ug/L			12/08/23 17:22	1
1,2,4-Trimethylbenzene	ND		1.0	0.31	ug/L			12/08/23 17:22	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			12/08/23 17:22	1
1,2-Dibromoethane (EDB)	ND		1.0	0.20	ug/L			12/08/23 17:22	1
1,2-Dichlorobenzene	ND		1.0	0.23	ug/L			12/08/23 17:22	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			12/08/23 17:22	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			12/08/23 17:22	1
1,3,5-Trimethylbenzene	ND		1.0	0.32	ug/L			12/08/23 17:22	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/08/23 17:22	1
1,3-Dichloropropane	ND		2.0	0.21	ug/L			12/08/23 17:22	1
1,4-Dichlorobenzene	ND		1.0	0.28	ug/L			12/08/23 17:22	1
2,2-Dichloropropane	ND	*+	2.0	0.66	ug/L			12/08/23 17:22	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			12/08/23 17:22	1
4-Chlorotoluene	ND		1.0	0.26	ug/L			12/08/23 17:22	1
Benzene	**0.16**	**J**	0.40	0.093	ug/L			12/08/23 17:22	1
Bromobenzene	ND		1.0	0.28	ug/L			12/08/23 17:22	1
Bromochloromethane	ND		2.0	0.44	ug/L			12/08/23 17:22	1

Client: GeoEngineers Inc
Job ID: 590-22374-1
Project/Site: Ione Airport Kwik Stop/0504-058-07

Client Sample ID: MW-11: 112923
Lab Sample ID: 590-22374-5
Date Collected: 11/29/23 12:50
Matrix: Water
Date Received: 11/30/23 15:14

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromodichloromethane	ND		1.0	0.29	ug/L			12/08/23 17:22	1
Bromoform	ND		5.0	0.66	ug/L			12/08/23 17:22	1
Bromomethane	ND		5.0	0.76	ug/L			12/08/23 17:22	1
Carbon tetrachloride	ND		1.0	0.40	ug/L			12/08/23 17:22	1
Chlorobenzene	ND		1.0	0.32	ug/L			12/08/23 17:22	1
Chloroethane	ND		2.0	0.40	ug/L			12/08/23 17:22	1
Chloroform	ND		1.0	0.24	ug/L			12/08/23 17:22	1
Chloromethane	ND		3.0	0.50	ug/L			12/08/23 17:22	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			12/08/23 17:22	1
cis-1,3-Dichloropropene	ND		1.0	0.25	ug/L			12/08/23 17:22	1
Dibromochloromethane	ND		2.0	0.33	ug/L			12/08/23 17:22	1
Dibromomethane	ND		2.0	0.50	ug/L			12/08/23 17:22	1
Dichlorodifluoromethane	ND		2.0	0.64	ug/L			12/08/23 17:22	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/08/23 17:22	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			12/08/23 17:22	1
Isopropylbenzene	ND		1.0	0.24	ug/L			12/08/23 17:22	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/08/23 17:22	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			12/08/23 17:22	1
Methylene Chloride	ND		5.0	2.2	ug/L			12/08/23 17:22	1
Naphthalene	ND		2.0	0.63	ug/L			12/08/23 17:22	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/08/23 17:22	1
N-Propylbenzene	ND		1.0	0.25	ug/L			12/08/23 17:22	1
o-Xylene	ND		1.0	0.16	ug/L			12/08/23 17:22	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			12/08/23 17:22	1
sec-Butylbenzene	ND		1.0	0.22	ug/L			12/08/23 17:22	1
Styrene	ND		1.0	0.24	ug/L			12/08/23 17:22	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/08/23 17:22	1
Tetrachloroethene	ND		1.0	0.22	ug/L			12/08/23 17:22	1
Toluene	ND		1.0	0.31	ug/L			12/08/23 17:22	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			12/08/23 17:22	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/08/23 17:22	1
Trichloroethene	ND		1.0	0.20	ug/L			12/08/23 17:22	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			12/08/23 17:22	1
Vinyl chloride	ND		0.40	0.13	ug/L			12/08/23 17:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*80 - 120*		*12/08/23 17:22*	*1*
4-Bromofluorobenzene (Surr)	*101*		*76 - 120*		*12/08/23 17:22*	*1*
Dibromofluoromethane (Surr)	*108*		*80 - 123*		*12/08/23 17:22*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*12/08/23 17:22*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150	54	ug/L			12/08/23 17:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*68.7 - 141*		*12/08/23 17:22*	*1*

Client: GeoEngineers Inc
Job ID: 590-22374-1
Project/Site: Ione Airport Kwik Stop/0504-058-07

Client Sample ID: MW-15: 112923
Lab Sample ID: 590-22374-6
Date Collected: 11/29/23 11:20
Matrix: Water
Date Received: 11/30/23 15:14

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			12/08/23 17:44	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			12/08/23 17:44	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.32	ug/L			12/08/23 17:44	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			12/08/23 17:44	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			12/08/23 17:44	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			12/08/23 17:44	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/08/23 17:44	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			12/08/23 17:44	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			12/08/23 17:44	1
1,2,4-Trichlorobenzene	ND		1.0	0.50	ug/L			12/08/23 17:44	1
1,2,4-Trimethylbenzene	ND		1.0	0.31	ug/L			12/08/23 17:44	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			12/08/23 17:44	1
1,2-Dibromoethane (EDB)	ND		1.0	0.20	ug/L			12/08/23 17:44	1
1,2-Dichlorobenzene	ND		1.0	0.23	ug/L			12/08/23 17:44	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			12/08/23 17:44	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			12/08/23 17:44	1
1,3,5-Trimethylbenzene	ND		1.0	0.32	ug/L			12/08/23 17:44	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/08/23 17:44	1
1,3-Dichloropropane	ND		2.0	0.21	ug/L			12/08/23 17:44	1
1,4-Dichlorobenzene	ND		1.0	0.28	ug/L			12/08/23 17:44	1
2,2-Dichloropropane	ND	*+	2.0	0.66	ug/L			12/08/23 17:44	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			12/08/23 17:44	1
4-Chlorotoluene	ND		1.0	0.26	ug/L			12/08/23 17:44	1
Benzene	ND		0.40	0.093	ug/L			12/08/23 17:44	1
Bromobenzene	ND		1.0	0.28	ug/L			12/08/23 17:44	1
Bromochloromethane	ND		2.0	0.44	ug/L			12/08/23 17:44	1
Bromodichloromethane	ND		1.0	0.29	ug/L			12/08/23 17:44	1
Bromoform	ND		5.0	0.66	ug/L			12/08/23 17:44	1
Bromomethane	ND		5.0	0.76	ug/L			12/08/23 17:44	1
Carbon tetrachloride	ND		1.0	0.40	ug/L			12/08/23 17:44	1
Chlorobenzene	ND		1.0	0.32	ug/L			12/08/23 17:44	1
Chloroethane	ND		2.0	0.40	ug/L			12/08/23 17:44	1
Chloroform	ND		1.0	0.24	ug/L			12/08/23 17:44	1
Chloromethane	ND		3.0	0.50	ug/L			12/08/23 17:44	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			12/08/23 17:44	1
cis-1,3-Dichloropropene	ND		1.0	0.25	ug/L			12/08/23 17:44	1
Dibromochloromethane	ND		2.0	0.33	ug/L			12/08/23 17:44	1
Dibromomethane	ND		2.0	0.50	ug/L			12/08/23 17:44	1
Dichlorodifluoromethane	ND		2.0	0.64	ug/L			12/08/23 17:44	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/08/23 17:44	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			12/08/23 17:44	1
Isopropylbenzene	ND		1.0	0.24	ug/L			12/08/23 17:44	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/08/23 17:44	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			12/08/23 17:44	1
Methylene Chloride	ND		5.0	2.2	ug/L			12/08/23 17:44	1
Naphthalene	ND		2.0	0.63	ug/L			12/08/23 17:44	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/08/23 17:44	1
N-Propylbenzene	ND		1.0	0.25	ug/L			12/08/23 17:44	1
o-Xylene	ND		1.0	0.16	ug/L			12/08/23 17:44	1

Client: GeoEngineers Inc
Job ID: 590-22374-1
Project/Site: Ione Airport Kwik Stop/0504-058-07

Client Sample ID: MW-15: 112923
Lab Sample ID: 590-22374-6
Date Collected: 11/29/23 11:20
Matrix: Water
Date Received: 11/30/23 15:14

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
p-Isopropyltoluene	ND		1.0	0.27	ug/L			12/08/23 17:44	1
sec-Butylbenzene	ND		1.0	0.22	ug/L			12/08/23 17:44	1
Styrene	ND		1.0	0.24	ug/L			12/08/23 17:44	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/08/23 17:44	1
Tetrachloroethene	ND		1.0	0.22	ug/L			12/08/23 17:44	1
Toluene	ND		1.0	0.31	ug/L			12/08/23 17:44	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			12/08/23 17:44	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/08/23 17:44	1
Trichloroethene	ND		1.0	0.20	ug/L			12/08/23 17:44	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			12/08/23 17:44	1
Vinyl chloride	ND		0.40	0.13	ug/L			12/08/23 17:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*80 - 120*		*12/08/23 17:44*	*1*
4-Bromofluorobenzene (Surr)	*99*		*76 - 120*		*12/08/23 17:44*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 123*		*12/08/23 17:44*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*12/08/23 17:44*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150	54	ug/L			12/08/23 17:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*68.7 - 141*		*12/08/23 17:44*	*1*

Client Sample ID: MW-18: 112923
Lab Sample ID: 590-22374-7
Date Collected: 11/29/23 14:50
Matrix: Water
Date Received: 11/30/23 15:14

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			12/08/23 18:05	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			12/08/23 18:05	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.32	ug/L			12/08/23 18:05	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			12/08/23 18:05	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			12/08/23 18:05	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			12/08/23 18:05	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/08/23 18:05	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			12/08/23 18:05	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			12/08/23 18:05	1
1,2,4-Trichlorobenzene	ND		1.0	0.50	ug/L			12/08/23 18:05	1
1,2,4-Trimethylbenzene	ND		1.0	0.31	ug/L			12/08/23 18:05	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			12/08/23 18:05	1
1,2-Dibromoethane (EDB)	ND		1.0	0.20	ug/L			12/08/23 18:05	1
1,2-Dichlorobenzene	ND		1.0	0.23	ug/L			12/08/23 18:05	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			12/08/23 18:05	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			12/08/23 18:05	1
1,3,5-Trimethylbenzene	ND		1.0	0.32	ug/L			12/08/23 18:05	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/08/23 18:05	1
1,3-Dichloropropane	ND		2.0	0.21	ug/L			12/08/23 18:05	1
1,4-Dichlorobenzene	ND		1.0	0.28	ug/L			12/08/23 18:05	1

Client: GeoEngineers Inc
Job ID: 590-22374-1
Project/Site: Ione Airport Kwik Stop/0504-058-07

Client Sample ID: MW-18: 112923
Lab Sample ID: 590-22374-7
Date Collected: 11/29/23 14:50
Matrix: Water
Date Received: 11/30/23 15:14

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,2-Dichloropropane	ND	*+	2.0	0.66	ug/L			12/08/23 18:05	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			12/08/23 18:05	1
4-Chlorotoluene	ND		1.0	0.26	ug/L			12/08/23 18:05	1
Benzene	ND		0.40	0.093	ug/L			12/08/23 18:05	1
Bromobenzene	ND		1.0	0.28	ug/L			12/08/23 18:05	1
Bromochloromethane	ND		2.0	0.44	ug/L			12/08/23 18:05	1
Bromodichloromethane	ND		1.0	0.29	ug/L			12/08/23 18:05	1
Bromoform	ND		5.0	0.66	ug/L			12/08/23 18:05	1
Bromomethane	ND		5.0	0.76	ug/L			12/08/23 18:05	1
Carbon tetrachloride	ND		1.0	0.40	ug/L			12/08/23 18:05	1
Chlorobenzene	ND		1.0	0.32	ug/L			12/08/23 18:05	1
Chloroethane	ND		2.0	0.40	ug/L			12/08/23 18:05	1
Chloroform	ND		1.0	0.24	ug/L			12/08/23 18:05	1
Chloromethane	ND		3.0	0.50	ug/L			12/08/23 18:05	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			12/08/23 18:05	1
cis-1,3-Dichloropropene	ND		1.0	0.25	ug/L			12/08/23 18:05	1
Dibromochloromethane	ND		2.0	0.33	ug/L			12/08/23 18:05	1
Dibromomethane	ND		2.0	0.50	ug/L			12/08/23 18:05	1
Dichlorodifluoromethane	ND		2.0	0.64	ug/L			12/08/23 18:05	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/08/23 18:05	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			12/08/23 18:05	1
Isopropylbenzene	ND		1.0	0.24	ug/L			12/08/23 18:05	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/08/23 18:05	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			12/08/23 18:05	1
Methylene Chloride	ND		5.0	2.2	ug/L			12/08/23 18:05	1
Naphthalene	ND		2.0	0.63	ug/L			12/08/23 18:05	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/08/23 18:05	1
N-Propylbenzene	ND		1.0	0.25	ug/L			12/08/23 18:05	1
o-Xylene	ND		1.0	0.16	ug/L			12/08/23 18:05	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			12/08/23 18:05	1
sec-Butylbenzene	ND		1.0	0.22	ug/L			12/08/23 18:05	1
Styrene	ND		1.0	0.24	ug/L			12/08/23 18:05	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/08/23 18:05	1
Tetrachloroethene	ND		1.0	0.22	ug/L			12/08/23 18:05	1
Toluene	ND		1.0	0.31	ug/L			12/08/23 18:05	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			12/08/23 18:05	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/08/23 18:05	1
Trichloroethene	ND		1.0	0.20	ug/L			12/08/23 18:05	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			12/08/23 18:05	1
Vinyl chloride	ND		0.40	0.13	ug/L			12/08/23 18:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*80 - 120*		*12/08/23 18:05*	*1*
4-Bromofluorobenzene (Surr)	*100*		*76 - 120*		*12/08/23 18:05*	*1*
Dibromofluoromethane (Surr)	*107*		*80 - 123*		*12/08/23 18:05*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*12/08/23 18:05*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150	54	ug/L			12/08/23 18:05	1

Client: GeoEngineers Inc
Job ID: 590-22374-1
Project/Site: Ione Airport Kwik Stop/0504-058-07

Client Sample ID: MW-18: 112923
Lab Sample ID: 590-22374-7
Date Collected: 11/29/23 14:50
Matrix: Water
Date Received: 11/30/23 15:14

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		68.7 - 141		12/08/23 18:05	1

Client Sample ID: DUP 1: 113023
Lab Sample ID: 590-22374-8
Date Collected: 11/30/23 09:00
Matrix: Water
Date Received: 11/30/23 15:14

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			12/08/23 18:27	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			12/08/23 18:27	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.32	ug/L			12/08/23 18:27	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			12/08/23 18:27	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			12/08/23 18:27	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			12/08/23 18:27	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/08/23 18:27	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			12/08/23 18:27	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			12/08/23 18:27	1
1,2,4-Trichlorobenzene	ND		1.0	0.50	ug/L			12/08/23 18:27	1
1,2,4-Trimethylbenzene	**72**		1.0	0.31	ug/L			12/08/23 18:27	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			12/08/23 18:27	1
1,2-Dibromoethane (EDB)	ND		1.0	0.20	ug/L			12/08/23 18:27	1
1,2-Dichlorobenzene	ND		1.0	0.23	ug/L			12/08/23 18:27	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			12/08/23 18:27	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			12/08/23 18:27	1
1,3,5-Trimethylbenzene	**65**		1.0	0.32	ug/L			12/08/23 18:27	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/08/23 18:27	1
1,3-Dichloropropane	ND		2.0	0.21	ug/L			12/08/23 18:27	1
1,4-Dichlorobenzene	ND		1.0	0.28	ug/L			12/08/23 18:27	1
2,2-Dichloropropane	ND	*+	2.0	0.66	ug/L			12/08/23 18:27	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			12/08/23 18:27	1
4-Chlorotoluene	ND		1.0	0.26	ug/L			12/08/23 18:27	1
Benzene	ND		0.40	0.093	ug/L			12/08/23 18:27	1
Bromobenzene	ND		1.0	0.28	ug/L			12/08/23 18:27	1
Bromochloromethane	ND		2.0	0.44	ug/L			12/08/23 18:27	1
Bromodichloromethane	**0.45**	**J**	1.0	0.29	ug/L			12/08/23 18:27	1
Bromoform	ND		5.0	0.66	ug/L			12/08/23 18:27	1
Bromomethane	ND		5.0	0.76	ug/L			12/08/23 18:27	1
Carbon tetrachloride	ND		1.0	0.40	ug/L			12/08/23 18:27	1
Chlorobenzene	ND		1.0	0.32	ug/L			12/08/23 18:27	1
Chloroethane	ND		2.0	0.40	ug/L			12/08/23 18:27	1
Chloroform	**0.52**	**J**	1.0	0.24	ug/L			12/08/23 18:27	1
Chloromethane	ND		3.0	0.50	ug/L			12/08/23 18:27	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			12/08/23 18:27	1
cis-1,3-Dichloropropene	ND		1.0	0.25	ug/L			12/08/23 18:27	1
Dibromochloromethane	ND		2.0	0.33	ug/L			12/08/23 18:27	1
Dibromomethane	ND		2.0	0.50	ug/L			12/08/23 18:27	1
Dichlorodifluoromethane	ND		2.0	0.64	ug/L			12/08/23 18:27	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/08/23 18:27	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			12/08/23 18:27	1
Isopropylbenzene	**1.2**		1.0	0.24	ug/L			12/08/23 18:27	1

Client: GeoEngineers Inc
Job ID: 590-22374-1
Project/Site: Ione Airport Kwik Stop/0504-058-07

Client Sample ID: DUP 1: 113023
Lab Sample ID: 590-22374-8
Date Collected: 11/30/23 09:00
Matrix: Water
Date Received: 11/30/23 15:14

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m,p-Xylene	**0.30**	**J**	2.0	0.28	ug/L			12/08/23 18:27	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			12/08/23 18:27	1
Methylene Chloride	ND		5.0	2.2	ug/L			12/08/23 18:27	1
Naphthalene	ND		2.0	0.63	ug/L			12/08/23 18:27	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/08/23 18:27	1
N-Propylbenzene	**4.5**		1.0	0.25	ug/L			12/08/23 18:27	1
o-Xylene	ND		1.0	0.16	ug/L			12/08/23 18:27	1
p-Isopropyltoluene	**1.2**		1.0	0.27	ug/L			12/08/23 18:27	1
sec-Butylbenzene	**1.3**		1.0	0.22	ug/L			12/08/23 18:27	1
Styrene	ND		1.0	0.24	ug/L			12/08/23 18:27	1
tert-Butylbenzene	**9.3**		1.0	0.12	ug/L			12/08/23 18:27	1
Tetrachloroethene	ND		1.0	0.22	ug/L			12/08/23 18:27	1
Toluene	ND		1.0	0.31	ug/L			12/08/23 18:27	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			12/08/23 18:27	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/08/23 18:27	1
Trichloroethene	ND		1.0	0.20	ug/L			12/08/23 18:27	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			12/08/23 18:27	1
Vinyl chloride	ND		0.40	0.13	ug/L			12/08/23 18:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*80 - 120*		*12/08/23 18:27*	*1*
4-Bromofluorobenzene (Surr)	*101*		*76 - 120*		*12/08/23 18:27*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 123*		*12/08/23 18:27*	*1*
Toluene-d8 (Surr)	*94*		*80 - 120*		*12/08/23 18:27*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**1100**		150	54	ug/L			12/08/23 18:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*68.7 - 141*		*12/08/23 18:27*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	ND		5.0	0.63	ug/L			12/07/23 23:36	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**14**		0.80	0.42	mg/L			12/01/23 14:25	1
Nitrate as N	**2.5**		0.20	0.057	mg/L			12/01/23 14:25	1
Nitrite as N	**1.3**		0.20	0.069	mg/L			12/01/23 14:25	1
Sulfate	**220**		5.0	1.3	mg/L			12/05/23 15:17	10

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0052**		0.0050	0.0010	mg/L		12/06/23 16:38	12/08/23 09:19	5
Cadmium	ND		0.0020	0.00019	mg/L		12/06/23 16:38	12/08/23 09:19	5
Iron	**0.98**		0.50	0.067	mg/L		12/06/23 16:38	12/08/23 09:19	5
Lead	ND		0.0020	0.00020	mg/L		12/06/23 16:38	12/08/23 09:19	5
Manganese	**0.67**		0.010	0.0023	mg/L		12/06/23 16:38	12/08/23 09:19	5
Zinc	**0.0050**	**J**	0.035	0.0046	mg/L		12/06/23 16:38	12/08/23 09:19	5

Client Sample Results

Client: GeoEngineers Inc
Job ID: 590-22374-1
Project/Site: Ione Airport Kwik Stop/0504-058-07

Client Sample ID: DUP 1: 113023
Lab Sample ID: 590-22374-8
Date Collected: 11/30/23 09:00
Matrix: Water
Date Received: 11/30/23 15:14

Method: SW846 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0013**	**J**	0.0050	0.0010	mg/L		12/08/23 15:08	12/11/23 15:08	5
Cadmium	ND		0.0020	0.00019	mg/L		12/08/23 15:08	12/11/23 15:08	5
Iron	**0.085**	**J**	0.50	0.067	mg/L		12/08/23 15:08	12/11/23 15:08	5
Lead	ND		0.0020	0.00020	mg/L		12/08/23 15:08	12/11/23 15:08	5
Manganese	**0.71**		0.010	0.0023	mg/L		12/08/23 15:08	12/11/23 15:08	5
Zinc	ND		0.035	0.0046	mg/L		12/08/23 15:08	12/11/23 15:08	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity (SM 2320B)	**330**	**B**	20	5.0	mg/L			12/11/23 11:29	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	**330**	**B**	20	5.0	mg/L			12/11/23 11:29	1
Total Dissolved Solids (SM 2540C)	**520**		25	13	mg/L			12/04/23 09:53	1
Total Organic Carbon - Duplicates (SM 5310B)	**3.4**		1.0	0.35	mg/L			12/08/23 23:47	1

Client: GeoEngineers Inc
Job ID: 590-22374-1
Project/Site: Ione Airport Kwik Stop/0504-058-07

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

Lab Sample ID: MB 590-45001/7
Matrix: Water
Analysis Batch: 45001

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.48	ug/L			12/08/23 12:39	1
1,1,1-Trichloroethane	ND		1.0	0.17	ug/L			12/08/23 12:39	1
1,1,2,2-Tetrachloroethane	ND		2.0	0.32	ug/L			12/08/23 12:39	1
1,1,2-Trichloroethane	ND		2.0	0.43	ug/L			12/08/23 12:39	1
1,1-Dichloroethane	ND		1.0	0.29	ug/L			12/08/23 12:39	1
1,1-Dichloroethene	ND		1.0	0.20	ug/L			12/08/23 12:39	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			12/08/23 12:39	1
1,2,3-Trichlorobenzene	ND		1.0	0.33	ug/L			12/08/23 12:39	1
1,2,3-Trichloropropane	ND		2.0	0.50	ug/L			12/08/23 12:39	1
1,2,4-Trichlorobenzene	ND		1.0	0.50	ug/L			12/08/23 12:39	1
1,2,4-Trimethylbenzene	ND		1.0	0.31	ug/L			12/08/23 12:39	1
1,2-Dibromo-3-Chloropropane	ND		10	1.5	ug/L			12/08/23 12:39	1
1,2-Dibromoethane (EDB)	ND		1.0	0.20	ug/L			12/08/23 12:39	1
1,2-Dichlorobenzene	ND		1.0	0.23	ug/L			12/08/23 12:39	1
1,2-Dichloroethane	ND		1.0	0.31	ug/L			12/08/23 12:39	1
1,2-Dichloropropane	ND		1.0	0.23	ug/L			12/08/23 12:39	1
1,3,5-Trimethylbenzene	ND		1.0	0.32	ug/L			12/08/23 12:39	1
1,3-Dichlorobenzene	ND		1.0	0.14	ug/L			12/08/23 12:39	1
1,3-Dichloropropane	ND		2.0	0.21	ug/L			12/08/23 12:39	1
1,4-Dichlorobenzene	ND		1.0	0.28	ug/L			12/08/23 12:39	1
2,2-Dichloropropane	ND		2.0	0.66	ug/L			12/08/23 12:39	1
2-Chlorotoluene	ND		1.0	0.36	ug/L			12/08/23 12:39	1
4-Chlorotoluene	ND		1.0	0.26	ug/L			12/08/23 12:39	1
Benzene	ND		0.40	0.093	ug/L			12/08/23 12:39	1
Bromobenzene	ND		1.0	0.28	ug/L			12/08/23 12:39	1
Bromochloromethane	ND		2.0	0.44	ug/L			12/08/23 12:39	1
Bromodichloromethane	ND		1.0	0.29	ug/L			12/08/23 12:39	1
Bromoform	ND		5.0	0.66	ug/L			12/08/23 12:39	1
Bromomethane	ND		5.0	0.76	ug/L			12/08/23 12:39	1
Carbon tetrachloride	ND		1.0	0.40	ug/L			12/08/23 12:39	1
Chlorobenzene	ND		1.0	0.32	ug/L			12/08/23 12:39	1
Chloroethane	ND		2.0	0.40	ug/L			12/08/23 12:39	1
Chloroform	ND		1.0	0.24	ug/L			12/08/23 12:39	1
Chloromethane	ND		3.0	0.50	ug/L			12/08/23 12:39	1
cis-1,2-Dichloroethene	ND		1.0	0.23	ug/L			12/08/23 12:39	1
cis-1,3-Dichloropropene	ND		1.0	0.25	ug/L			12/08/23 12:39	1
Dibromochloromethane	ND		2.0	0.33	ug/L			12/08/23 12:39	1
Dibromomethane	ND		2.0	0.50	ug/L			12/08/23 12:39	1
Dichlorodifluoromethane	ND		2.0	0.64	ug/L			12/08/23 12:39	1
Ethylbenzene	ND		1.0	0.20	ug/L			12/08/23 12:39	1
Hexachlorobutadiene	ND		2.0	0.21	ug/L			12/08/23 12:39	1
Isopropylbenzene	ND		1.0	0.24	ug/L			12/08/23 12:39	1
m,p-Xylene	ND		2.0	0.28	ug/L			12/08/23 12:39	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			12/08/23 12:39	1
Methylene Chloride	ND		5.0	2.2	ug/L			12/08/23 12:39	1
Naphthalene	ND		2.0	0.63	ug/L			12/08/23 12:39	1
n-Butylbenzene	ND		1.0	0.20	ug/L			12/08/23 12:39	1
N-Propylbenzene	ND		1.0	0.25	ug/L			12/08/23 12:39	1

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

Lab Sample ID: MB 590-45001/7
Matrix: Water
Analysis Batch: 45001

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		1.0	0.16	ug/L			12/08/23 12:39	1
p-Isopropyltoluene	ND		1.0	0.27	ug/L			12/08/23 12:39	1
sec-Butylbenzene	ND		1.0	0.22	ug/L			12/08/23 12:39	1
Styrene	ND		1.0	0.24	ug/L			12/08/23 12:39	1
tert-Butylbenzene	ND		1.0	0.12	ug/L			12/08/23 12:39	1
Tetrachloroethene	ND		1.0	0.22	ug/L			12/08/23 12:39	1
Toluene	ND		1.0	0.31	ug/L			12/08/23 12:39	1
trans-1,2-Dichloroethene	ND		1.0	0.20	ug/L			12/08/23 12:39	1
trans-1,3-Dichloropropene	ND		1.0	0.45	ug/L			12/08/23 12:39	1
Trichloroethene	ND		1.0	0.20	ug/L			12/08/23 12:39	1
Trichlorofluoromethane	ND		1.0	0.20	ug/L			12/08/23 12:39	1
Vinyl chloride	ND		0.40	0.13	ug/L			12/08/23 12:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*80 - 120*		*12/08/23 12:39*	*1*
4-Bromofluorobenzene (Surr)	*100*		*76 - 120*		*12/08/23 12:39*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 123*		*12/08/23 12:39*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*		*12/08/23 12:39*	*1*

Lab Sample ID: LCS 590-45001/1004
Matrix: Water
Analysis Batch: 45001

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	10.0	10.9		ug/L		109	80 - 131
1,1,1-Trichloroethane	10.0	11.5		ug/L		115	71 - 138
1,1,2,2-Tetrachloroethane	10.0	10.0		ug/L		100	60 - 150
1,1,2-Trichloroethane	10.0	10.8		ug/L		108	80 - 128
1,1-Dichloroethane	10.0	10.7		ug/L		107	80 - 125
1,1-Dichloroethene	10.0	11.0		ug/L		110	65 - 141
1,1-Dichloropropene	10.0	10.4		ug/L		104	82 - 123
1,2,3-Trichlorobenzene	10.0	9.87		ug/L		99	70 - 137
1,2,3-Trichloropropane	10.0	9.85		ug/L		99	65 - 142
1,2,4-Trichlorobenzene	10.0	9.44		ug/L		94	76 - 131
1,2,4-Trimethylbenzene	10.0	9.10		ug/L		91	78 - 131
1,2-Dibromo-3-Chloropropane	10.0	10.8		ug/L		108	53 - 142
1,2-Dibromoethane (EDB)	10.0	10.9		ug/L		109	80 - 124
1,2-Dichlorobenzene	10.0	10.4		ug/L		104	80 - 120
1,2-Dichloroethane	10.0	10.3		ug/L		103	80 - 120
1,2-Dichloropropane	10.0	9.97		ug/L		100	79 - 122
1,3,5-Trimethylbenzene	10.0	8.83		ug/L		88	76 - 129
1,3-Dichlorobenzene	10.0	10.1		ug/L		101	80 - 122
1,3-Dichloropropane	10.0	10.3		ug/L		103	78 - 129
1,4-Dichlorobenzene	10.0	9.95		ug/L		99	80 - 120
2,2-Dichloropropane	10.0	14.4	*+	ug/L		144	73 - 140
2-Chlorotoluene	10.0	10.6		ug/L		106	74 - 129
4-Chlorotoluene	10.0	9.86		ug/L		99	79 - 125
Benzene	10.0	10.3		ug/L		103	80 - 120

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

Lab Sample ID: LCS 590-45001/1004
Matrix: Water
Analysis Batch: 45001

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromobenzene	10.0	9.56		ug/L		96	73 - 125
Bromochloromethane	10.0	10.3		ug/L		103	71 - 136
Bromodichloromethane	10.0	10.4		ug/L		104	80 - 120
Bromoform	10.0	11.4		ug/L		114	73 - 139
Bromomethane	10.0	9.87		ug/L		99	66 - 149
Carbon tetrachloride	10.0	11.4		ug/L		114	72 - 138
Chlorobenzene	10.0	10.2		ug/L		102	80 - 124
Chloroethane	10.0	10.3		ug/L		103	64 - 134
Chloroform	10.0	10.9		ug/L		109	80 - 123
Chloromethane	10.0	9.61		ug/L		96	19 - 150
cis-1,2-Dichloroethene	10.0	10.4		ug/L		104	80 - 122
cis-1,3-Dichloropropene	10.0	9.89		ug/L		99	80 - 121
Dibromochloromethane	10.0	10.6		ug/L		106	80 - 130
Dibromomethane	10.0	10.2		ug/L		102	80 - 122
Dichlorodifluoromethane	10.0	10.0		ug/L		100	30 - 150
Ethylbenzene	10.0	10.6		ug/L		106	80 - 122
Hexachlorobutadiene	10.0	10.2		ug/L		102	77 - 132
Isopropylbenzene	10.0	11.2		ug/L		112	80 - 122
m,p-Xylene	10.0	10.8		ug/L		108	80 - 125
Methyl tert-butyl ether	10.0	11.9		ug/L		119	68 - 134
Methylene Chloride	10.0	10.2		ug/L		102	30 - 150
Naphthalene	10.0	10.1		ug/L		101	61 - 140
n-Butylbenzene	10.0	10.2		ug/L		102	75 - 121
N-Propylbenzene	10.0	10.0		ug/L		100	73 - 136
o-Xylene	10.0	10.9		ug/L		109	80 - 130
p-Isopropyltoluene	10.0	10.2		ug/L		102	78 - 128
sec-Butylbenzene	10.0	8.90		ug/L		89	73 - 138
Styrene	10.0	10.0		ug/L		100	79 - 134
tert-Butylbenzene	10.0	8.73		ug/L		87	76 - 131
Tetrachloroethene	10.0	11.6		ug/L		116	80 - 139
Toluene	10.0	9.84		ug/L		98	80 - 129
trans-1,2-Dichloroethene	10.0	9.76		ug/L		98	73 - 137
trans-1,3-Dichloropropene	10.0	10.9		ug/L		109	73 - 138
Trichloroethene	10.0	10.4		ug/L		104	80 - 123
Trichlorofluoromethane	10.0	9.87		ug/L		99	71 - 147
Vinyl chloride	10.0	9.39		ug/L		94	50 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*101*		*80 - 120*
4-Bromofluorobenzene (Surr)	*100*		*76 - 120*
Dibromofluoromethane (Surr)	*103*		*80 - 123*
Toluene-d8 (Surr)	*99*		*80 - 120*

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

Lab Sample ID: LCSD 590-45001/5
Matrix: Water
Analysis Batch: 45001

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane			10.0	10.5		ug/L		105	80 - 131	3	17
1,1,1-Trichloroethane			10.0	11.4		ug/L		114	71 - 138	1	17
1,1,2,2-Tetrachloroethane			10.0	9.87		ug/L		99	60 - 150	2	17
1,1,2-Trichloroethane			10.0	10.6		ug/L		106	80 - 128	2	15
1,1-Dichloroethane			10.0	9.87		ug/L		99	80 - 125	8	20
1,1-Dichloroethene			10.0	10.1		ug/L		101	65 - 141	8	19
1,1-Dichloropropene			10.0	9.72		ug/L		97	82 - 123	7	20
1,2,3-Trichlorobenzene			10.0	10.2		ug/L		102	70 - 137	3	30
1,2,3-Trichloropropane			10.0	9.99		ug/L		100	65 - 142	1	34
1,2,4-Trichlorobenzene			10.0	9.68		ug/L		97	76 - 131	2	24
1,2,4-Trimethylbenzene			10.0	8.54		ug/L		85	78 - 131	6	16
1,2-Dibromo-3-Chloropropane			10.0	9.93	J	ug/L		99	53 - 142	9	29
1,2-Dibromoethane (EDB)			10.0	11.1		ug/L		111	80 - 124	2	14
1,2-Dichlorobenzene			10.0	9.74		ug/L		97	80 - 120	6	14
1,2-Dichloroethane			10.0	10.1		ug/L		101	80 - 120	2	14
1,2-Dichloropropane			10.0	9.74		ug/L		97	79 - 122	2	15
1,3,5-Trimethylbenzene			10.0	8.42		ug/L		84	76 - 129	5	17
1,3-Dichlorobenzene			10.0	9.61		ug/L		96	80 - 122	5	15
1,3-Dichloropropane			10.0	10.3		ug/L		103	78 - 129	0	17
1,4-Dichlorobenzene			10.0	9.58		ug/L		96	80 - 120	4	14
2,2-Dichloropropane			10.0	12.9		ug/L		129	73 - 140	11	18
2-Chlorotoluene			10.0	9.34		ug/L		93	74 - 129	12	19
4-Chlorotoluene			10.0	9.45		ug/L		94	79 - 125	4	16
Benzene			10.0	9.96		ug/L		100	80 - 120	4	15
Bromobenzene			10.0	9.10		ug/L		91	73 - 125	5	16
Bromochloromethane			10.0	10.0		ug/L		100	71 - 136	3	21
Bromodichloromethane			10.0	9.87		ug/L		99	80 - 120	5	16
Bromoform			10.0	11.4		ug/L		114	73 - 139	0	17
Bromomethane			10.0	9.46		ug/L		95	66 - 149	4	24
Carbon tetrachloride			10.0	11.0		ug/L		110	72 - 138	3	28
Chlorobenzene			10.0	9.75		ug/L		97	80 - 124	4	14
Chloroethane			10.0	9.51		ug/L		95	64 - 134	8	24
Chloroform			10.0	10.2		ug/L		102	80 - 123	7	18
Chloromethane			10.0	9.10		ug/L		91	19 - 150	5	35
cis-1,2-Dichloroethene			10.0	9.91		ug/L		99	80 - 122	5	17
cis-1,3-Dichloropropene			10.0	9.99		ug/L		100	80 - 121	1	16
Dibromochloromethane			10.0	10.4		ug/L		104	80 - 130	2	15
Dibromomethane			10.0	9.23		ug/L		92	80 - 122	10	16
Dichlorodifluoromethane			10.0	9.92		ug/L		99	30 - 150	1	22
Ethylbenzene			10.0	10.2		ug/L		102	80 - 122	4	35
Hexachlorobutadiene			10.0	10.5		ug/L		105	77 - 132	3	25
Isopropylbenzene			10.0	10.7		ug/L		107	80 - 122	4	16
m,p-Xylene			10.0	10.4		ug/L		104	80 - 125	4	35
Methyl tert-butyl ether			10.0	11.9		ug/L		119	68 - 134	1	18
Methylene Chloride			10.0	9.20		ug/L		92	30 - 150	10	25
Naphthalene			10.0	10.5		ug/L		105	61 - 140	4	25
n-Butylbenzene			10.0	9.79		ug/L		98	75 - 121	5	16
N-Propylbenzene			10.0	9.54		ug/L		95	73 - 136	5	18

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

Lab Sample ID: LCSD 590-45001/5
Matrix: Water
Analysis Batch: 45001

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
o-Xylene			10.0	10.5		ug/L		105	80 - 130	4	35
p-Isopropyltoluene			10.0	9.85		ug/L		98	78 - 128	4	17
sec-Butylbenzene			10.0	8.49		ug/L		85	73 - 138	5	17
Styrene			10.0	9.99		ug/L		100	79 - 134	0	17
tert-Butylbenzene			10.0	8.29		ug/L		83	76 - 131	5	18
Tetrachloroethene			10.0	10.7		ug/L		107	80 - 139	8	20
Toluene			10.0	9.33		ug/L		93	80 - 129	5	35
trans-1,2-Dichloroethene			10.0	9.91		ug/L		99	73 - 137	2	18
trans-1,3-Dichloropropene			10.0	10.7		ug/L		107	73 - 138	1	17
Trichloroethene			10.0	9.40		ug/L		94	80 - 123	11	14
Trichlorofluoromethane			10.0	8.94		ug/L		89	71 - 147	10	24
Vinyl chloride			10.0	9.52		ug/L		95	50 - 150	1	26

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*80 - 120*
4-Bromofluorobenzene (Surr)	*98*		*76 - 120*
Dibromofluoromethane (Surr)	*101*		*80 - 123*
Toluene-d8 (Surr)	*98*		*80 - 120*

Lab Sample ID: 590-22374-1 DU
Matrix: Water
Analysis Batch: 45001

Client Sample ID: MW-3: 113023
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
1,1,1,2-Tetrachloroethane	ND			ND		ug/L				NC	17
1,1,1-Trichloroethane	ND			ND		ug/L				NC	17
1,1,2,2-Tetrachloroethane	ND			ND		ug/L				NC	17
1,1,2-Trichloroethane	ND			ND		ug/L				NC	15
1,1-Dichloroethane	ND			ND		ug/L				NC	20
1,1-Dichloroethene	ND			ND		ug/L				NC	19
1,1-Dichloropropene	ND			ND		ug/L				NC	20
1,2,3-Trichlorobenzene	ND			ND		ug/L				NC	30
1,2,3-Trichloropropane	ND			ND		ug/L				NC	34
1,2,4-Trichlorobenzene	ND			ND		ug/L				NC	24
1,2,4-Trimethylbenzene	5.0			5.33		ug/L				6	16
1,2-Dibromo-3-Chloropropane	2.6	J		2.41	J	ug/L				6	29
1,2-Dibromoethane (EDB)	ND			ND		ug/L				NC	14
1,2-Dichlorobenzene	ND			ND		ug/L				NC	14
1,2-Dichloroethane	ND			ND		ug/L				NC	14
1,2-Dichloropropane	ND			ND		ug/L				NC	15
1,3,5-Trimethylbenzene	41			41.2		ug/L				1	17
1,3-Dichlorobenzene	ND			ND		ug/L				NC	15
1,3-Dichloropropane	ND			ND		ug/L				NC	17
1,4-Dichlorobenzene	ND			ND		ug/L				NC	14
2,2-Dichloropropane	ND	*+		ND	*+	ug/L				NC	18
2-Chlorotoluene	ND			ND		ug/L				NC	19
4-Chlorotoluene	ND			ND		ug/L				NC	16
Benzene	ND			ND		ug/L				NC	15

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

Lab Sample ID: 590-22374-1 DU
Matrix: Water
Analysis Batch: 45001

Client Sample ID: MW-3: 113023
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Bromobenzene	ND			ND		ug/L				NC	16
Bromochloromethane	ND			ND		ug/L				NC	21
Bromodichloromethane	ND			ND		ug/L				NC	16
Bromoform	ND			ND		ug/L				NC	17
Bromomethane	ND			ND		ug/L				NC	24
Carbon tetrachloride	ND			ND		ug/L				NC	28
Chlorobenzene	ND			ND		ug/L				NC	14
Chloroethane	1.5	J		ND		ug/L				NC	24
Chloroform	ND			ND		ug/L				NC	18
Chloromethane	0.57	J		0.705	J	ug/L				21	35
cis-1,2-Dichloroethene	ND			ND		ug/L				NC	17
cis-1,3-Dichloropropene	ND			ND		ug/L				NC	16
Dibromochloromethane	ND			ND		ug/L				NC	15
Dibromomethane	ND			ND		ug/L				NC	16
Dichlorodifluoromethane	ND			ND		ug/L				NC	22
Ethylbenzene	1.9			1.97		ug/L				1	35
Hexachlorobutadiene	ND			ND		ug/L				NC	25
Isopropylbenzene	3.1			3.17		ug/L				4	16
m,p-Xylene	5.1			5.54		ug/L				9	35
Methyl tert-butyl ether	ND			ND		ug/L				NC	18
Methylene Chloride	ND			ND		ug/L				NC	25
Naphthalene	3.6			3.81		ug/L				7	25
n-Butylbenzene	5.7			5.82		ug/L				2	16
N-Propylbenzene	5.6			5.52		ug/L				2	18
o-Xylene	ND			ND		ug/L				NC	35
p-Isopropyltoluene	1.9			1.91		ug/L				0.7	17
sec-Butylbenzene	2.7			2.80		ug/L				2	17
Styrene	ND			ND		ug/L				NC	17
tert-Butylbenzene	ND			ND		ug/L				NC	18
Tetrachloroethene	ND			ND		ug/L				NC	20
Toluene	ND			ND		ug/L				NC	35
trans-1,2-Dichloroethene	ND			ND		ug/L				NC	18
trans-1,3-Dichloropropene	ND			ND		ug/L				NC	17
Trichloroethene	ND			ND		ug/L				NC	14
Trichlorofluoromethane	ND			ND		ug/L				NC	24
Vinyl chloride	ND			ND		ug/L				NC	26

Surrogate	*DU %Recovery*	*DU Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*80 - 120*
4-Bromofluorobenzene (Surr)	*97*		*76 - 120*
Dibromofluoromethane (Surr)	*101*		*80 - 123*
Toluene-d8 (Surr)	*95*		*80 - 120*

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

Lab Sample ID: MB 590-45002/7
Matrix: Water
Analysis Batch: 45002

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150	54	ug/L			12/08/23 12:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*68.7 - 141*		*12/08/23 12:39*	*1*

Lab Sample ID: LCS 590-45002/1006
Matrix: Water
Analysis Batch: 45002

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline			1000	884		ug/L		88	80 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*68.7 - 141*

Lab Sample ID: LCSD 590-45002/1017
Matrix: Water
Analysis Batch: 45002

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline			1000	913		ug/L		91	80 - 120	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*68.7 - 141*

Lab Sample ID: 590-22374-1 DU
Matrix: Water
Analysis Batch: 45002

Client Sample ID: MW-3: 113023
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Gasoline	540			609		ug/L				13	35

Surrogate	*DU %Recovery*	*DU Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*68.7 - 141*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 280-635886/5
Matrix: Water
Analysis Batch: 635886

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	ND		5.0	0.63	ug/L			12/02/23 17:19	1

Method: RSK-175 - Dissolved Gases (GC) (Continued)

Lab Sample ID: LCS 280-635886/3
Matrix: Water
Analysis Batch: 635886

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methane	65.7	62.7		ug/L		95	75 - 125

Lab Sample ID: LCSD 280-635886/4
Matrix: Water
Analysis Batch: 635886

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methane	65.7	65.2		ug/L		99	75 - 125	4	20

Lab Sample ID: MB 280-636538/5
Matrix: Water
Analysis Batch: 636538

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	ND		5.0	0.63	ug/L			12/07/23 19:05	1

Lab Sample ID: LCS 280-636538/3
Matrix: Water
Analysis Batch: 636538

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methane	65.7	65.6		ug/L		100	75 - 125

Lab Sample ID: LCSD 280-636538/4
Matrix: Water
Analysis Batch: 636538

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methane	65.7	63.7		ug/L		97	75 - 125	3	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 590-44902/1003
Matrix: Water
Analysis Batch: 44902

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.80	0.42	mg/L			12/01/23 11:18	1
Sulfate	ND		0.50	0.13	mg/L			12/01/23 11:18	1

Lab Sample ID: LCS 590-44902/1004
Matrix: Water
Analysis Batch: 44902

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	12.5	12.5		mg/L		100	90 - 110
Sulfate	12.5	12.3		mg/L		98	90 - 110

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 590-44903/1003
Matrix: Water
Analysis Batch: 44903

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.20	0.057	mg/L			12/01/23 11:18	1
Nitrite as N	ND		0.20	0.069	mg/L			12/01/23 11:18	1

Lab Sample ID: LCS 590-44903/1004
Matrix: Water
Analysis Batch: 44903

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	5.00	4.98		mg/L		100	90 - 110
Nitrite as N	5.00	4.95		mg/L		99	90 - 110

Lab Sample ID: MB 590-44937/1003
Matrix: Water
Analysis Batch: 44937

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.80	0.42	mg/L			12/05/23 13:48	1
Sulfate	ND		0.50	0.13	mg/L			12/05/23 13:48	1

Lab Sample ID: LCS 590-44937/1004
Matrix: Water
Analysis Batch: 44937

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	12.5	12.1		mg/L		97	90 - 110
Sulfate	12.5	12.3		mg/L		99	90 - 110

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 580-445619/18-A
Matrix: Water
Analysis Batch: 445775

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 445619

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0050	0.0010	mg/L		12/06/23 16:38	12/08/23 08:01	5
Cadmium	ND		0.0020	0.00019	mg/L		12/06/23 16:38	12/08/23 08:01	5
Iron	ND		0.50	0.067	mg/L		12/06/23 16:38	12/08/23 08:01	5
Lead	ND		0.0020	0.00020	mg/L		12/06/23 16:38	12/08/23 08:01	5
Manganese	ND		0.010	0.0023	mg/L		12/06/23 16:38	12/08/23 08:01	5
Zinc	ND		0.035	0.0046	mg/L		12/06/23 16:38	12/08/23 08:01	5

Lab Sample ID: LCS 580-445619/19-A
Matrix: Water
Analysis Batch: 445775

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 445619

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	1.00	0.953		mg/L		95	80 - 120
Cadmium	1.00	0.977		mg/L		98	80 - 120
Iron	20.0	20.0		mg/L		100	80 - 120
Lead	1.00	0.960		mg/L		96	80 - 120

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

Lab Sample ID: LCS 580-445619/19-A
Matrix: Water
Analysis Batch: 445775

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 445619

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Manganese	1.00	0.991		mg/L		99	80 - 120
Zinc	1.00	0.968		mg/L		97	80 - 120

Lab Sample ID: LCSD 580-445619/20-A
Matrix: Water
Analysis Batch: 445775

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 445619

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	1.00	0.957		mg/L		96	80 - 120	0	20
Cadmium	1.00	0.962		mg/L		96	80 - 120	2	20
Iron	20.0	19.9		mg/L		100	80 - 120	1	20
Lead	1.00	0.950		mg/L		95	80 - 120	1	20
Manganese	1.00	0.980		mg/L		98	80 - 120	1	20
Zinc	1.00	0.979		mg/L		98	80 - 120	1	20

Lab Sample ID: MB 580-445715/15-B
Matrix: Water
Analysis Batch: 445927

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 445810

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00020	mg/L		12/08/23 15:08	12/11/23 14:57	1
Cadmium	ND		0.00040	0.000037	mg/L		12/08/23 15:08	12/11/23 14:57	1
Iron	ND		0.10	0.013	mg/L		12/08/23 15:08	12/11/23 14:57	1
Lead	ND		0.00040	0.000040	mg/L		12/08/23 15:08	12/11/23 14:57	1
Manganese	ND		0.0020	0.00046	mg/L		12/08/23 15:08	12/11/23 14:57	1
Zinc	ND		0.0070	0.00093	mg/L		12/08/23 15:08	12/11/23 14:57	1

Lab Sample ID: LCS 580-445715/16-B
Matrix: Water
Analysis Batch: 445927

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 445810

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	1.00	1.02		mg/L		102	80 - 120
Cadmium	1.00	1.00		mg/L		100	80 - 120
Iron	20.0	21.2		mg/L		106	80 - 120
Lead	1.00	0.988		mg/L		99	80 - 120
Manganese	1.00	1.05		mg/L		105	80 - 120
Zinc	1.00	1.04		mg/L		104	80 - 120

Lab Sample ID: LCSD 580-445715/17-B
Matrix: Water
Analysis Batch: 445927

Client Sample ID: Lab Control Sample Dup
Prep Type: Dissolved
Prep Batch: 445810

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	1.00	1.03		mg/L		103	80 - 120	1	20
Cadmium	1.00	1.03		mg/L		103	80 - 120	2	20
Iron	20.0	21.3		mg/L		106	80 - 120	1	20
Lead	1.00	1.00		mg/L		100	80 - 120	2	20
Manganese	1.00	1.04		mg/L		104	80 - 120	0	20
Zinc	1.00	1.03		mg/L		103	80 - 120	0	20

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: 590-22374-3 MS
Matrix: Water
Analysis Batch: 446003

Client Sample ID: MW-9: 113023
Prep Type: Dissolved
Prep Batch: 445810

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	ND		1.00	1.01		mg/L		101	80 - 120
Cadmium	ND		1.00	0.989		mg/L		99	80 - 120
Iron	ND		20.0	20.8		mg/L		104	80 - 120
Lead	ND		1.00	0.972		mg/L		97	80 - 120
Manganese	ND		1.00	1.02		mg/L		102	80 - 120
Zinc	ND		1.00	1.02		mg/L		102	80 - 120

Lab Sample ID: 590-22374-3 MSD
Matrix: Water
Analysis Batch: 446003

Client Sample ID: MW-9: 113023
Prep Type: Dissolved
Prep Batch: 445810

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	ND		1.00	1.01		mg/L		101	80 - 120	0	20
Cadmium	ND		1.00	0.999		mg/L		100	80 - 120	1	20
Iron	ND		20.0	20.5		mg/L		103	80 - 120	1	20
Lead	ND		1.00	0.990		mg/L		99	80 - 120	2	20
Manganese	ND		1.00	1.02		mg/L		102	80 - 120	0	20
Zinc	ND		1.00	1.01		mg/L		101	80 - 120	1	20

Lab Sample ID: 590-22374-8 MS
Matrix: Water
Analysis Batch: 445927

Client Sample ID: DUP 1: 113023
Prep Type: Dissolved
Prep Batch: 445810

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	0.0013	J	1.00	1.03		mg/L		102	80 - 120
Cadmium	ND		1.00	1.03		mg/L		103	80 - 120
Iron	0.085	J	20.0	20.9		mg/L		104	80 - 120
Lead	ND		1.00	0.993		mg/L		99	80 - 120
Manganese	0.71		1.00	1.72		mg/L		102	80 - 120
Zinc	ND		1.00	1.03		mg/L		103	80 - 120

Lab Sample ID: 590-22374-8 MSD
Matrix: Water
Analysis Batch: 445927

Client Sample ID: DUP 1: 113023
Prep Type: Dissolved
Prep Batch: 445810

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	0.0013	J	1.00	1.05		mg/L		105	80 - 120	2	20
Cadmium	ND		1.00	1.03		mg/L		103	80 - 120	0	20
Iron	0.085	J	20.0	20.7		mg/L		103	80 - 120	1	20
Lead	ND		1.00	1.00		mg/L		100	80 - 120	1	20
Manganese	0.71		1.00	1.73		mg/L		102	80 - 120	0	20
Zinc	ND		1.00	1.04		mg/L		104	80 - 120	2	20

Lab Sample ID: 590-22374-8 DU
Matrix: Water
Analysis Batch: 445927

Client Sample ID: DUP 1: 113023
Prep Type: Dissolved
Prep Batch: 445810

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	0.0013	J	0.00152	J	mg/L		15	20

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

Lab Sample ID: 590-22374-8 DU
Matrix: Water
Analysis Batch: 445927

Client Sample ID: DUP 1: 113023
Prep Type: Dissolved
Prep Batch: 445810

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Cadmium	ND		ND		mg/L		NC	20
Iron	0.085	J	0.0803	J	mg/L		6	20
Lead	ND		ND		mg/L		NC	20
Manganese	0.71		0.693		mg/L		2	20
Zinc	ND		ND		mg/L		NC	20

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 590-45031/1
Matrix: Water
Analysis Batch: 45031

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	5.00	J	20	5.0	mg/L			12/11/23 11:29	1
Bicarbonate Alkalinity as CaCO3	5.00	J	20	5.0	mg/L			12/11/23 11:29	1

Lab Sample ID: LCS 590-45031/2
Matrix: Water
Analysis Batch: 45031

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	501	500		mg/L		100	90 - 110

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 590-44911/1
Matrix: Water
Analysis Batch: 44911

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		25	13	mg/L			12/04/23 09:53	1

Lab Sample ID: LCS 590-44911/2
Matrix: Water
Analysis Batch: 44911

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	503	493		mg/L		98	80 - 120

Method: SM 5310B - Organic Carbon, Total (TOC)

Lab Sample ID: MB 280-636746/21
Matrix: Water
Analysis Batch: 636746

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	ND		1.0	0.35	mg/L			12/09/23 03:08	1

Method: SM 5310B - Organic Carbon, Total (TOC) (Continued)

Lab Sample ID: MB 280-636746/4
Matrix: Water
Analysis Batch: 636746

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Duplicates	ND		1.0	0.35	mg/L			12/08/23 20:40	1

Lab Sample ID: LCS 280-636746/20
Matrix: Water
Analysis Batch: 636746

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon - Duplicates	25.0	24.2		mg/L		97	88 - 112

Lab Sample ID: LCS 280-636746/3
Matrix: Water
Analysis Batch: 636746

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon - Duplicates	25.0	24.3		mg/L		97	88 - 112

Lab Chronicle

Client: GeoEngineers Inc
Job ID: 590-22374-1
Project/Site: Ione Airport Kwik Stop/0504-058-07

Client Sample ID: MW-3: 113023
Lab Sample ID: 590-22374-1
Date Collected: 11/30/23 10:45
Matrix: Water
Date Received: 11/30/23 15:14

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	45001	12/08/23 15:13	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	45002	12/08/23 15:13	JSP	EET SPK
Total/NA	Analysis	RSK-175		1	20 mL	20 mL	635886	12/02/23 22:04	SJD	EET DEN
Total/NA	Analysis	300.0		1	5 mL	5 mL	44902	12/01/23 13:55	NMI	EET SPK
Total/NA	Analysis	300.0		1	5 mL	5 mL	44903	12/01/23 13:55	NMI	EET SPK
Dissolved	Filtration	FILTRATION			250 mL	250 mL	445715	12/07/23 15:14	AUA	EET SEA
Dissolved	Prep	3005A			50 mL	50 mL	445810	12/08/23 15:08	TMH	EET SEA
Dissolved	Analysis	6020B		5	50 mL	50 mL	446003	12/11/23 16:29	TMH	EET SEA
Total Recoverable	Prep	3005A			50 mL	50 mL	445619	12/06/23 16:38	TMH	EET SEA
Total Recoverable	Analysis	6020B		5	50 mL	50 mL	445775	12/08/23 09:24	FCW	EET SEA
Total/NA	Analysis	SM 2320B		1	100 mL	100 mL	45031	12/11/23 11:29	AMB	EET SPK
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	44911	12/04/23 09:53	AMB	EET SPK
Total/NA	Analysis	SM 5310B		1	20 mL	20 mL	636746	12/09/23 06:59	ABW	EET DEN

Client Sample ID: MW-8: 113023
Lab Sample ID: 590-22374-2
Date Collected: 11/30/23 12:15
Matrix: Water
Date Received: 11/30/23 15:14

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	45001	12/08/23 15:56	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	45002	12/08/23 15:56	JSP	EET SPK
Total/NA	Analysis	RSK-175		1	20 mL	20 mL	635886	12/02/23 22:17	SJD	EET DEN
Total/NA	Analysis	300.0		1	5 mL	5 mL	44902	12/01/23 14:05	NMI	EET SPK
Total/NA	Analysis	300.0		1	5 mL	5 mL	44903	12/01/23 14:05	NMI	EET SPK
Total/NA	Analysis	300.0		10	5 mL	5 mL	44937	12/05/23 15:07	NMI	EET SPK
Dissolved	Filtration	FILTRATION			250 mL	250 mL	445715	12/07/23 15:14	AUA	EET SEA
Dissolved	Prep	3005A			50 mL	50 mL	445810	12/08/23 15:08	TMH	EET SEA
Dissolved	Analysis	6020B		5	50 mL	50 mL	446003	12/11/23 16:32	TMH	EET SEA
Total Recoverable	Prep	3005A			50 mL	50 mL	445619	12/06/23 16:38	TMH	EET SEA
Total Recoverable	Analysis	6020B		5	50 mL	50 mL	445775	12/08/23 09:27	FCW	EET SEA
Total/NA	Analysis	SM 2320B		1	100 mL	100 mL	45031	12/11/23 11:29	AMB	EET SPK
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	44911	12/04/23 09:53	AMB	EET SPK
Total/NA	Analysis	SM 5310B		1	20 mL	20 mL	636746	12/08/23 23:03	ABW	EET DEN

Client Sample ID: MW-9: 113023
Lab Sample ID: 590-22374-3
Date Collected: 11/30/23 09:10
Matrix: Water
Date Received: 11/30/23 15:14

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	45001	12/08/23 16:39	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	45002	12/08/23 16:39	JSP	EET SPK
Total/NA	Analysis	RSK-175		1	20 mL	20 mL	635886	12/02/23 22:31	SJD	EET DEN
Total/NA	Analysis	300.0		1	5 mL	5 mL	44902	12/01/23 14:15	NMI	EET SPK

Lab Chronicle

Client: GeoEngineers Inc
Job ID: 590-22374-1
Project/Site: Ione Airport Kwik Stop/0504-058-07

Client Sample ID: MW-9: 113023
Lab Sample ID: 590-22374-3
Date Collected: 11/30/23 09:10
Matrix: Water
Date Received: 11/30/23 15:14

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	5 mL	5 mL	44903	12/01/23 14:15	NMI	EET SPK
Dissolved	Filtration	FILTRATION			250 mL	250 mL	445715	12/07/23 15:14	AUA	EET SEA
Dissolved	Prep	3005A			50 mL	50 mL	445810	12/08/23 15:08	TMH	EET SEA
Dissolved	Analysis	6020B		5	50 mL	50 mL	446003	12/11/23 16:21	TMH	EET SEA
Total Recoverable	Prep	3005A			50 mL	50 mL	445619	12/06/23 16:38	TMH	EET SEA
Total Recoverable	Analysis	6020B		5	50 mL	50 mL	445775	12/08/23 09:22	FCW	EET SEA
Total/NA	Analysis	SM 2320B		1	100 mL	100 mL	45031	12/11/23 11:29	AMB	EET SPK
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	44911	12/04/23 09:53	AMB	EET SPK
Total/NA	Analysis	SM 5310B		1	20 mL	20 mL	636746	12/08/23 23:30	ABW	EET DEN

Client Sample ID: MW-10: 112923
Lab Sample ID: 590-22374-4
Date Collected: 11/29/23 13:50
Matrix: Water
Date Received: 11/30/23 15:14

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	45001	12/08/23 17:01	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	45002	12/08/23 17:01	JSP	EET SPK

Client Sample ID: MW-11: 112923
Lab Sample ID: 590-22374-5
Date Collected: 11/29/23 12:50
Matrix: Water
Date Received: 11/30/23 15:14

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	45001	12/08/23 17:22	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	45002	12/08/23 17:22	JSP	EET SPK

Client Sample ID: MW-15: 112923
Lab Sample ID: 590-22374-6
Date Collected: 11/29/23 11:20
Matrix: Water
Date Received: 11/30/23 15:14

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	45001	12/08/23 17:44	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	45002	12/08/23 17:44	JSP	EET SPK

Client Sample ID: MW-18: 112923
Lab Sample ID: 590-22374-7
Date Collected: 11/29/23 14:50
Matrix: Water
Date Received: 11/30/23 15:14

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	45001	12/08/23 18:05	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	45002	12/08/23 18:05	JSP	EET SPK

Lab Chronicle

Client: GeoEngineers Inc
Job ID: 590-22374-1
Project/Site: Ione Airport Kwik Stop/0504-058-07

Client Sample ID: DUP 1: 113023
Lab Sample ID: 590-22374-8

Date Collected: 11/30/23 09:00
Matrix: Water

Date Received: 11/30/23 15:14

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	43 mL	43 mL	45001	12/08/23 18:27	JSP	EET SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	45002	12/08/23 18:27	JSP	EET SPK
Total/NA	Analysis	RSK-175		1	20 mL	20 mL	636538	12/07/23 23:36	SJD	EET DEN
Total/NA	Analysis	300.0		1	5 mL	5 mL	44902	12/01/23 14:25	NMI	EET SPK
Total/NA	Analysis	300.0		1	5 mL	5 mL	44903	12/01/23 14:25	NMI	EET SPK
Total/NA	Analysis	300.0		10	5 mL	5 mL	44937	12/05/23 15:17	NMI	EET SPK
Dissolved	Filtration	FILTRATION			250 mL	250 mL	445715	12/07/23 15:14	AUA	EET SEA
Dissolved	Prep	3005A			50 mL	50 mL	445810	12/08/23 15:08	TMH	EET SEA
Dissolved	Analysis	6020B		5	50 mL	50 mL	445927	12/11/23 15:08	FCW	EET SEA
Total Recoverable	Prep	3005A			50 mL	50 mL	445619	12/06/23 16:38	TMH	EET SEA
Total Recoverable	Analysis	6020B		5	50 mL	50 mL	445775	12/08/23 09:19	FCW	EET SEA
Total/NA	Analysis	SM 2320B		1	100 mL	100 mL	45031	12/11/23 11:29	AMB	EET SPK
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	44911	12/04/23 09:53	AMB	EET SPK
Total/NA	Analysis	SM 5310B		1	20 mL	20 mL	636746	12/08/23 23:47	ABW	EET DEN

Laboratory References:

EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
EET SEA = Eurofins Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310
EET SPK = Eurofins Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Accreditation/Certification Summary

Client: GeoEngineers Inc
Job ID: 590-22374-1
Project/Site: Ione Airport Kwik Stop/0504-058-07

Laboratory: Eurofins 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	01-07-24

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
SM 2320B		Water	Bicarbonate Alkalinity as CaCO3

Laboratory: Eurofins Denver

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

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-24
A2LA	ISO/IEC 17025	2907.01	10-31-25
Alabama	State Program	40730	09-30-12 *
Alaska (UST)	State	18-001	02-10-24
Arizona	State	AZ0713	12-20-23
Arkansas DEQ	State	19-047-0	05-31-23 *
California	State	2513	01-09-24
Connecticut	State	PH-0686	09-30-24
Florida	NELAP	E87667-57	06-30-24
Georgia	State	4025-011	01-08-24
Illinois	NELAP	2000172019-1	04-30-24
Iowa	State	370	12-01-24
Kansas	NELAP	E-10166	04-30-24
Kentucky (WW)	State	KY98047	12-31-23
Louisiana	NELAP	30785	06-30-14 *
Louisiana	NELAP	30785	06-30-23 *
Louisiana (All)	NELAP	30785	06-30-24
Minnesota	NELAP	1788752	12-31-23
Nevada	State	CO000262020-1	07-31-24
New Hampshire	NELAP	2053	04-28-24
New Jersey	NELAP	230001	06-30-24
New York	NELAP	59923	03-31-24
North Carolina (WW/SW)	State	358	12-31-23
North Dakota	State	R-034	01-08-24
Oklahoma	NELAP	8614	08-31-24
Oregon	NELAP	4025-019	01-08-24
Pennsylvania	NELAP	013	07-31-24
South Carolina	State	72002001	01-08-24
Texas	NELAP	TX104704183-08-TX	09-30-09 *
Texas	NELAP	T104704183-21-19	09-30-24
USDA	US Federal Programs	P330-20-00065	12-19-25
Utah	NELAP	QUAN5	06-30-13 *
Utah	NELAP	CO000262019-11	07-31-24
Virginia	NELAP	460232	06-14-24
Washington	State	C583	08-03-24
West Virginia DEP	State	354	11-30-24
Wisconsin	State	999615430	08-31-24
Wyoming (UST)	A2LA	2907.01	10-31-25

Laboratory: Eurofins Seattle

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: GeoEngineers Inc
Job ID: 590-22374-1
Project/Site: Ione Airport Kwik Stop/0504-058-07

Laboratory: Eurofins Seattle (Continued)

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

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-004	02-19-25
ANAB	Dept. of Defense ELAP	L2236	01-19-25
ANAB	Dept. of Energy	L2236	01-19-25
ANAB	ISO/IEC 17025	L2236	01-19-25
California	State	2954	07-07-24
Florida	NELAP	E87575	06-30-24
Louisiana (All)	NELAP	03073	07-01-24
Maine	State	WA01273	05-02-24
Montana (UST)	State	NA	04-14-27
New Jersey	NELAP	WA014	06-30-24
New York	NELAP	11662	03-31-24
Oregon	NELAP	4167	07-07-24
US Fish & Wildlife	US Federal Programs	A20571	06-30-24
USDA	US Federal Programs	525-23-4-22573	01-04-26
Washington	State	C788	07-13-24
Wisconsin	State	399133460	08-31-24

Method Summary

Client: GeoEngineers Inc
Job ID: 590-22374-1
Project/Site: Ione Airport Kwik Stop/0504-058-07

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET SPK
NWTPH-Gx	Northwest - Volatile Petroleum Products (GC/MS)	NWTPH	EET SPK
RSK-175	Dissolved Gases (GC)	RSK	EET DEN
300.0	Anions, Ion Chromatography	EPA	EET SPK
6020B	Metals (ICP/MS)	SW846	EET SEA
SM 2320B	Alkalinity	SM	EET SPK
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET SPK
SM 5310B	Organic Carbon, Total (TOC)	SM	EET DEN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET SEA
5030C	Purge and Trap	SW846	EET SPK
FILTRATION	Sample Filtration	None	EET SEA

Protocol References:

EPA = US Environmental Protection Agency

None = None

NWTPH = Northwest Total Petroleum Hydrocarbon

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique, RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab

SM = "Standard Methods For The Examination Of Water And Wastewater"

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

Laboratory References:

EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

EET SEA = Eurofins Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

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

Eurofins Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Phone (509) 924-9290

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: lola O.	Lab PM: Arrington Randee E	Carrier Tracking No(s):	COC No: 590-9177-2634 1
Client Contact: Justin Orr	Phone:	E-Mail: Randee.Arrington@et.eurofinsus.com	State of Origin:	Page: Page 1 of 1
Company: GeoEngineers Inc	PWSID:			Job #:
Address: 523 East Second Ave	Due Date Requested:			
City: Spokane	TAT Requested (days): STD			
State, Zip: WA, 99202	Compliance Project: Δ Yes Δ No			
Phone:	PO #: Purchase Order not required			
Email: jorr@geoengineers.com	WO #:			
Project Name: Marshall Landfill	Project #: 59002669			
Site:	SSOW#:			

Analysis Requested

Preservation Codes

A	HCL	M	Hexane
B	NaOH	N	None
C	Zn Acetate	O	AsNaO2
D	Nitric Acid	P	Na2O4S
E	NaHSO4	Q	Na2SO3
F	MeOH	R	Na2S2O3
G	Amchlor	S	H2SO4
H	Ascorbic Acid	T	TSP Dodecahydrate
I	Ice	U	Acetone
J	DI Water	V	MCAA
K	EDTA	W	pH 4-5
L	EDA	Y	Trizma
		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)	2320B Alk/Bicarb, 2540C TDS, 300-Cl, NO3, NO2 & SO4	6020B Total As, Cd, Fe, Mn, Pb & Zn	6020B Diss As, Cd, Fe, Mn, Pb & Zn	6010D Total K, Mg & Na, 7470A Total Hg	6010D Dissolved Ca & Mg, 7470 Dissolved Hg	8021B Methanol	SM5310B TOC	4500_CN_I_NP Cyanide, Weak Acid Dissociable	8260D Standard Analyte List / BTEX	8270E Semivolatiles, standard list	8260C Routine Halocarbons List (Standard Spike) Nitrates & Sulfate	1633 EPA 1633	UWTPH-Gx	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	D	N	D	N	S	S	B	A	N	N	N			
MW-3 : 113023	11/30/23	1045	G	Water			X	X	X			X	X		X		X		X	10	
MW-8 : 113023		1215		Water			X	X	X			X	X		X		X		X	10	
MW-9 : 113023		0910		Water			X	X	X			X	X		X		X		X	10	
MW-10 : 112923	11/29/23	1350		Water											X				X	3	
MW-11 : 112923		1250		Water											X				X	3	
MW-15 : 112923		1120		Water											X				X	3	
MW-18 : 112923		1450		Water											X				X	3	
DUP 1 : 113023	11/30/23	0900		Water			X	X	X			X	X		X		X		X	10	
TRIP Blank																					

590-22374 Chain of Custody

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

Sample Disposal (A fee may be assessed if sa
☐ Return To Client ☐ Disposal By Le

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
lola O	11/30/23 / 1530			11/30/23 1514	EEC3PO
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: 4.7, 4.8 corr IR005

Ver: 01/16/2019

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

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-8452.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Randee.Arrington@et.eurofinsus.com	State of Origin: Washington	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - Washington		Job #: 590-22374-1
Address: 4955 Yarrow Street, ,	Due Date Requested: 12/13/2023			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: Marshall Landfill	Project #: 59002669			
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, Y - Trizma, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	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)	SM5310B/ (MOD) TOC	RSK_175/ (MOD) Methane	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
MW-3: 113023 (590-22374-1)	11/30/23	10:45 Pacific		Water			X	X	4	
MW-8: 113023 (590-22374-2)	11/30/23	12:15 Pacific		Water			X	X	4	
MW-9: 113023 (590-22374-3)	11/30/23	09:10 Pacific		Water			X	X	4	
DUP 1: 113023 (590-22374-8)	11/30/23	09:00 Pacific		Water			X	X	4	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Northwest, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing Northwest, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing Northwest, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing Northwest, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

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

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	12/1/23 15:00	EET SPO	[signature]	12/2/23 9:15	EET DEN
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: 2.0 GR IRPA CF 0.2

Ver: 06/08/2021

12/16/2023 (Rev. 1)

ICOC No:
590-8452

Containers

Count	Container Type	Preservative
4	Amber Glass 250ml - Sulfuric Acid	Sulfuric Acid
12	Voa Vial 40ml - Hydrochloric Acid	Hydrochloric Acid

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

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-8456.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Randee.Arrington@et.eurofinsus.com	State of Origin: Washington	Page: Page 1 of 1
Company: Eurofins Environment Testing Northwest,		Accreditations Required (See note): State Program - Washington		Job #: 590-22374-1
Address: 5755 8th Street East, ,	Due Date Requested: 12/13/2023			
City: Tacoma	TAT Requested (days):			
State, Zip: WA, 98424				
Phone: 253-922-2310(Tel)	PO #:			
Email:	WO #:			
Project Name: Marshall Landfill	Project #: 59002669			
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, Y - Trizma, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	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)	6020B/3005A (MOD) Total As, Cd, Fe, Mn, Pb & Zn	6020B/FILTRATION (MOD) Diss As, Cd, Fe, Mn, Pb & Zn	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
MW-3: 113023 (590-22374-1)	11/30/23	10:45 Pacific		Water			X	X	2	
MW-8: 113023 (590-22374-2)	11/30/23	12:15 Pacific		Water			X	X	2	
MW-9: 113023 (590-22374-3)	11/30/23	09:10 Pacific		Water			X	X	2	
DUP 1: 113023 (590-22374-8)	11/30/23	09:00 Pacific		Water			X	X	2	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Northwest, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing Northwest, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing Northwest, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing Northwest, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

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

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		12/4/23 14:35	EET SPK		12/5/23 0808	EETN
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: IR11 108/11.0

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-22374-1

Login Number: 22374
List Number: 1
Creator: Morris, Mackenzie 1

List Source: Eurofins 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.	True	
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	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-22374-1

Login Number: 22374
List Number: 2
Creator: Little, Matthew L

List Source: Eurofins Denver
List Creation: 12/02/23 10:54 AM

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.	True	
Sample custody seals, if present, are intact.	True	
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?	N/A	
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	

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-22374-1

Login Number: 22374
List Number: 3
Creator: Prigge, Madison

List Source: Eurofins Seattle
List Creation: 12/05/23 06:20 PM

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.	True	
Sample custody seals, if present, are intact.	True	
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	IR11 10.8/11.0
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?	N/A	Received project as a subcontract.
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.	True	
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.

Environmental Services Are Performed for Specific Purposes, Persons and Projects

This report has been prepared for the exclusive use of the Washington State Department of Ecology (Ecology). This report is not intended for use by others, and the information contained herein is not applicable to other sites.

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

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

This report has been prepared for the Airport Kwik Stop site located in Ione, Washington. GeoEngineers considered a number of unique, project-specific factors when establishing the scope of services for this project and report. Unless GeoEngineers specifically indicates otherwise, do not rely on this report if it was:

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

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

Reliance Conditions for Third Parties

Our report was prepared for the exclusive use of Ecology. No other party may rely on the product of our services unless we agree in advance to such reliance in writing. This is to provide our firm and Ecology with reasonable protection against open-ended liability claims by third parties with whom there would otherwise be no contractual limits to their actions. Within the limitations of scope, schedule and budget, our services have been executed in accordance with our Agreement with Ecology and generally accepted environmental practices in this area at the time this report was prepared.

Environmental Regulations are Always Evolving

Some substances may be present in the site vicinity in quantities or under conditions that may have led, or may lead, to contamination of the subject site, but are not included in current local, state or federal

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

regulatory definitions of hazardous substances or do not otherwise present current potential liability. GeoEngineers cannot be responsible if the standards for appropriate inquiry, or regulatory definitions of hazardous substance, change or if more stringent environmental standards are developed in the future.

Uncertainty May Remain Even After This Phase II ESA is Completed

No Environmental Site Assessment (ESA) can wholly eliminate uncertainty regarding the potential for contamination in connection with a property. Our interpretation of subsurface conditions in this study is based on field observations and chemical analytical data from widely spaced sampling locations. It is always possible that contamination exists in areas that were not explored, sampled or analyzed.

Subsurface Conditions Can Change

This environmental 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 manmade events such as construction on or adjacent to the site, by new releases of hazardous substances, or by natural events such as floods, earthquakes, slope instability or groundwater fluctuations. Always contact GeoEngineers before applying this report to determine if it is still applicable.

Most Environmental Findings are Professional Opinions

Our interpretations of subsurface conditions are based on field observations and chemical analytical data from widely spaced sampling locations at the site. Site exploration identifies subsurface conditions only at those points where subsurface tests are conducted, or samples are taken. GeoEngineers reviewed field and laboratory data and then applied our professional judgment to render an opinion about subsurface conditions throughout the site. Actual subsurface conditions may differ – sometimes significantly – from those indicated in this report. Our report, conclusions and interpretations should not be construed as a warranty of the subsurface conditions.

Do Not Redraw the Exploration Logs

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

Read These Provisions Closely

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

Geotechnical, Geologic and Geoenvironmental Reports Should Not be Interchanged

The equipment, techniques and personnel used to perform an environmental study differ significantly from those used to perform a geotechnical or geologic study and vice versa. For that reason, a geotechnical engineering or geologic report does not usually relate any environmental findings, conclusions or

recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. Similarly, environmental reports are not used to address geotechnical or geologic concerns regarding a specific project.

Biological Pollutants

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

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

GeoEngineers