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Century Communities
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Attention: Jason Hancock

Subject: 2025 Annual Monitoring Report for Groundwater and Surface Water at the Go East Corp Closed Landfill
File No. 26410-001-03

GeoEngineers, Inc. (GeoEngineers) is pleased to provide this 2025 annual monitoring report for the Go East Corp Closed Landfill (the Facility). The Facility is located near 4330 108th Street SE in Everett, Washington (47.897830, -122.171860). The general Facility location is shown in Figure 1. The landfill and pertinent features are shown in Figure 2.

This annual monitoring report summarizes the groundwater and surface water sampling results collected through March 2025 as required in Solid Waste Facility Permit No. PT0004938 (SW-026) (Permit) for Go East Landfill. This report does not include the landfill gas monitoring results. The annual monitoring reports for groundwater, surface water and landfill gas should be submitted to Snohomish County Health Department and the Washington State Department of Ecology (Ecology) by April 1 of each year in accordance with Sections III.E.2 and III.F.6 of the Permit.

Facility Background

The Go East Landfill operated from 1972 to 1983 and contains wood waste and construction debris. The landfill was consolidated and closed in 2022 in accordance with Washington Administrative Code (WAC) 173-350-400. Landfill materials were excavated from a wedge area on the periphery of the landfill and consolidated into the current landfill boundary. The former wedge and final landfill extent are shown in Figure 2.

A residential development is being developed around the closed landfill. The Snohomish County Planning and Development Services approved a plat map for the development in 2023. The Alpine Estates Owners Association is the current owner of the landfill, and Century Communities of Washington, LLC (Century Communities) currently governs the Alpine Estates Owners Association. Snohomish County Health Department issues a limited purpose landfill permit to the Alpine Estates Owners Association for the post-closure care of the landfill in accordance with WAC 173-350-400.

The Washington State Department of Ecology (Ecology) determined that the former owners of the landfill, P&GE, LLC (P&GE) and Century Communities of Washington, LLC, are potentially liable persons (PLPs) under the state's cleanup law, the Model Toxics Control Act (MTCA). P&GE and Century Communities entered into an Agreed Order (No. DE 18121) with Ecology in January 2021 and January 2023, respectively. The Agreed Order required P&GE and Century Communities to implement an interim action work plan during the permitted land disturbing activity and to complete a Remedial Investigation and Feasibility Study and prepare a Draft Cleanup Action Plan. The Cleanup Action Plan was finalized in May 2024. The Cleanup Action Plan consists of the completed landfill closure, the monitored natural attenuation of contamination in groundwater and surface water and the natural recovery of sediment. The Compliance Monitoring Plan (May 22, 2024) describes the groundwater and surface water sampling requirements for the Cleanup Action Plan and for landfill post-closure care in WAC 173-350-400. Ecology determined that the PLPs satisfied the Agreed Order in June 2024 and that the Compliance Monitoring Plan would be implemented under the permitting authority of Snohomish County Health Department.

The Facility is currently in the compliance monitoring phase following closure of the landfill. Groundwater, surface water and methane are being monitored. A Compliance Monitoring Plan for groundwater and surface water monitoring was prepared by GeoEngineers in accordance with WAC 173-340-410(3) and includes a Sampling and Analysis Plan (SAP) and Quality Assurance Project Plan (QAPP) that meets the requirements of WAC 173-340-820 and WAC 173-350-500(4) (GeoEngineers 2024a).

The Compliance Monitoring Plans defines priority and contingent sampling locations.

- Priority sampling locations (MW-6, MW-7, MW-8, MW-10 and SWS-1) shall be monitored for the natural attenuation of the chemicals of concern (COCs) semi-annually until the concentrations of the COCs comply with the cleanup levels defined in the Cleanup Action Plan at that location in accordance with WAC 173-340-720(9). The COCs are iron, manganese, arsenic, lead, nickel and carcinogenic polycyclic aromatic hydrocarbons (cPAHs).
- Contingent sampling locations MW-2 and MW-3, along with MW-6, MW-7 and MW-8 shall be monitored annually for geochemical indicator parameters as long as methane concentrations exceed 5 percent in any of the 12 soil gas probes at the landfill boundary during the preceding 12 months. The geochemical indicators are manganese, iron and alkalinity.

The priority and contingency groundwater and surface water sampling locations are shown in Figure 2 and listed in Table 1. Wells MW-2 and MW-3 are completed in the advance outwash sand formation upgradient of the current and former landfill materials. Wells MW-6, MW-7 and MW-8 are completed in the advance outwash sand formation upgradient of the current landfill and beneath areas where landfill material was excavated. Well MW-10 and surface water sampling location SWS-1 are at the toe of a steep slope downgradient of the landfill, where glacial lacustrine soil is present beyond the limits of the advance outwash formation. SWS-1 is a concrete weir box where groundwater seeps from beneath the landfill and Well MW-10 is a nearby shallow well screened in stream deposits within the glacial lacustrine silt deposits.

Herrera Environmental Consultants monitors methane at the landfill in accordance with the Landfill Gas Monitoring and Contingency Plan (Herrera 2024a). There are 12 gas probes around the landfill as shown in the figure in Appendix A. Methane exceeded 5 percent in multiple gas probes in the past 12 months. A soil vapor extraction unit (blower) was activated in August 2024 to reduce methane concentrations. Methane has been below 5 percent in all probes except GP-6, GP-10, GP-11 and GP-12 since activation of the blower.

This annual monitoring report includes the data collected under the Compliance Monitoring Plan for groundwater and surface water through March 2025. The report also references the methane data collected through December 2024 (Herrera 2024b).

Groundwater and Surface Water Monitoring Activities

Groundwater and surface water samples were collected in September 2024 and March 2025 and submitted to an Ecology-accredited laboratory and analyzed for the parameters listed in Table 2.

Groundwater and Surface Water Data Summary

Groundwater and surface water field parameters from 2021 through 2025 are summarized in Table 3 and analytical results are summarized in Table 4. Table 3 lists the depths-to-groundwater and groundwater elevations, and Figure 2 depicts the inferred groundwater flow direction as described in the Remedial Investigation/Feasibility Study (GeoEngineers 2024b). Analytical results are compared to cleanup levels established in the Cleanup Action Plan (GeoEngineers 2024c). Data validation was performed on laboratory data, and all data were found acceptable for use, with some data qualified as estimated. The laboratory deliverables and data validation reports are included in Appendix B.

Monitored Natural Attenuation Evaluation

The primary sampling locations are monitored to confirm and evaluate the natural attenuation of the COCs at these locations.

The groundwater quality in wedge area wells MW-6, MW-7 and MW-8 is anticipated to improve since the waste material was removed, allowing the recharge within non-impacted oxygenated groundwater and rainwater.

The impact of the landfill is most evident in MW-6 and MW-8, where the depth of waste was greatest. Groundwater in MW-6 and MW-8 is relatively anaerobic with elevated alkalinity. MW-7 does not have the same geochemical signature because the depth of waste was relatively shallow.

Manganese and iron are mobilized under anaerobic reducing conditions. The concentrations of manganese continued to decrease in MW-6 and MW-8 as the aerobic conditions improved in the aquifer, while the concentrations of iron were below the cleanup levels during the last two semi-annual sampling events. The concentrations of manganese and iron comply with the cleanup levels in MW-7.

The concentrations of arsenic in MW-6 and MW-7 slightly exceed the site-specific background concentration of 7.3 µg/L but are consistent with the 8.0 µg/L regional background concentration for the Puget Sound Basin (Ecology 2022).

The concentrations of nickel and lead in MW-7 were below their cleanup levels during the last two semi-annual sampling events. The concentrations of cPAHs in MW-6 and MW-7 have been below their detection limit for the last five semi-annual sampling events.

The concentrations of manganese and iron exceed the cleanup levels at the toe of the landfill due to their mobilization under anaerobic reducing conditions. The surface water at SWS-1 becomes aerobic as the groundwater discharges to surface water and impacts shallow groundwater. The concentrations of manganese and iron are generally stable in SWS-1 and MW-10. The concentrations of lead were below the 2.5 µg/L cleanup level based on surface water protection in SWS-1.

The concentrations of lead exceeded the detection limit in two of the last nine sampling events in MW-10. These concentrations exceeded the 2.5 µg/L cleanup level but were below the 15 µg/L maximum contaminant level for drinking water. The detection of lead appears to be related to elevated turbidity in those samples. Turbidity was measured at 177 and 180 nephelometric turbidity units (NTUs) in the two sampling events when lead was detected, whereas lead was not detected during the other sampling events when turbidity was measured at less than approximately 50 NTU.

Detection Monitoring Evaluation

The geomembrane cover for the landfill restricts the diffusion of methane through the landfill cover. Methane has recently been elevated, especially in landfill gas probes GP-10, GP-11 and GP-12, despite initiation of the blower.[1] The probes are located along the northwestern side of the landfill (Herrera 2024b). See Appendix A for Landfill Gas Monitoring Locations.

Manganese, iron and alkalinity[2] are monitored to evaluate whether persistent methane concentrations potentially impact groundwater in wells MW-2, MW-3, MW-6, MW-7 and MW-8 beyond the landfill boundary. Methane and carbon dioxide associated with landfill gas can increase the concentrations of manganese, iron and alkalinity in groundwater due to pressure gradients and impacts to infiltrating water. Appendix C contains Mann Kendall trend analysis and graphs of dissolved manganese, dissolved iron and alkalinity in MW-2, MW-3, MW-6, MW-7 and MW-8. As shown in Appendix C, the concentrations of manganese, iron and alkalinity are stable or decreasing in MW-2, MW-3, MW-7 and MW-8. In MW-6, dissolved manganese is decreasing, and alkalinity and dissolved iron are increasing (though concentrations of alkalinity and dissolved iron do not exceed cleanup levels in MW-6). The groundwater data generally indicate no apparent impacts from landfill gas.

Compliance Evaluation and Recommendations

Data from MW-6, MW-7, MW-8, MW-10 and SWS-1 were analyzed for statistical compliance under WAC 173-340-720(9). The upper one-sided 95 percent confidence limit on the true mean groundwater concentration was calculated for the COCs for each monitoring point. Concentrations are compared to cleanup levels established in the CAP. The results are summarized in Table 5, and include:

[1] Methane in GP-6 has also been measured slightly above and below 5 percent. GP-10, GP-11, and GP-12 are higher, consistently 8 percent to 23 percent methane.

[2] Review of Table 4 indicates that alkalinity in site groundwater is 100 percent bicarbonate in every sample.

- **MW-6**: The well is in compliance for arsenic and iron, and out of compliance for manganese and cPAHs. We recommend continued sampling for total and dissolved manganese and cPAHs. Although the concentrations of arsenic comply with the cleanup level, additional sampling is warranted because of the increasing concentration trend. Although the concentrations of iron comply with the cleanup levels, contingent sampling of iron should be performed annually to continue to monitor whether landfill gas impacts groundwater. **We recommend sampling for total and dissolved iron in MW-6 annually only when the concentration of methane exceeds 5 percent in any of the 12 soil gas probes along the landfill perimeter during the preceding 12 months.**
- **MW-7**: The well is in compliance for dissolved iron and manganese, and out of compliance for the other parameters listed in Table 2. **We recommend sampling for dissolved iron in MW-7 annually only when the concentration of methane exceeds 5 percent in any of the 12 soil gas probes along the landfill perimeter during the preceding 12 months.**
- **MW-8**: The well is out of compliance for iron and manganese. We recommend continued sampling at this well for these COCs.
- **MW-10**: The well is in compliance for lead, and out of compliance for iron and manganese. We recommend continued sampling for total and dissolved iron and manganese. **We recommend discontinuing sampling for lead in MW-10.**
- **SWS-1**: The sampling location SWS-1 is in compliance for lead, and out of compliance for total iron and manganese. We recommend continued sampling for total iron and manganese in SWS-1. **We recommend discontinuing sampling for lead in SWS-1.**

Groundwater and surface water will continue to be sampled in accordance with the Compliance Monitoring Plan in the coming year. GeoEngineers recommends that Table 2 be amended to remove the analysis of lead from MW-10 and SWS-1 and to change the sampling of iron in MW-6 and MW-7 to be contingent upon methane monitoring as described above. These changes should be implemented by the next sampling event in the fall of 2025.

References

Ecology, 2022, Natural Background Groundwater Arsenic Concentrations in Washington State, Ecology Publication No. 14-09-044, January 2022.

GeoEngineers 2024a. Compliance Monitoring Plan. Go East Corp. Landfill Site, Everett, Washington. May 22, 2024

GeoEngineers 2024b. Remedial Investigation / Feasibility Study. Go East Corp Landfill Site, Everett, Washington. May 17, 2024.

GeoEngineers 2024c. Cleanup Action Plan. Go East Corp Landfill Site, Everett, Washington. May 17, 2024.

Herrera 2024a. Landfill Gas Monitoring and Contingency Plan. Go East Landfill/Alpine Estates Development. January 17, 2024.

Herrera 2024b. Go East Landfill/Alpine Estates Landfill Gas Monitoring Data Update. December 20, 2024.

Note: all reference documents are available on Ecology's Go East Corp Landfill Website (https://apps.ecology.wa.gov/cleanupsearch/site/4294)

Sincerely,
GeoEngineers, Inc.

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GRL:TRM:atk

Attachments
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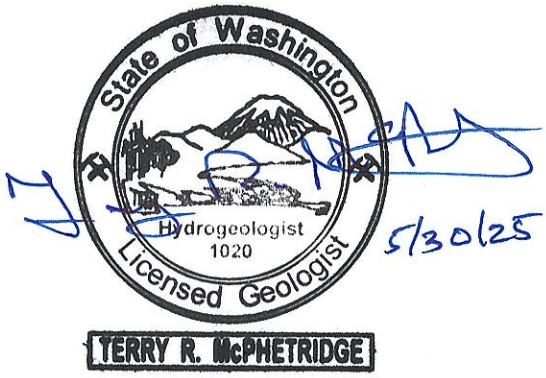

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Tables

Table 1

Monitoring Well and Surface Water Location Summary

Go East Corp Landfill Site

Everett, Washington

Location Identification	Well Monument	Depth to Base of Well (feet bgs)[1]	Well Screen Interval Depth (feet bgs)[1]	Status/Sampling Priority
MW-1	Flush	75	65 to 75	Decommissioned
MW-2	Stickup	60	50 to 60	Contingent sampling location[2]
MW-3	Stickup	83	73 to 83	Contingent sampling location[2]
MW-4	NA	NA	NA	Decommissioned
MW-5	Flush	80	70 to 80	Decommissioned
MW-6	Stickup	55	45 to 55	Priority/contingent sampling location
MW-7	Stickup	60	45 to 60	Priority/contingent sampling location
MW-8	Stickup	55.5	45.5 to 55.5	Priority/contingent sampling location
MW-9	Stickup	10	5 to 10	Decommissioned
MW-10	Stickup	10	5 to 10	Priority sampling location
SWS-1	NA	NA	NA	Priority sampling location

Notes:

[1] Depths and elevations rounded to the nearest foot.

[2] Well sampled in March 2025 for geochemical indicators due to methane exceeding 5% in perimeter probes; see report text.

bgs = below ground surface

NA = Not applicable

Table 2

Analytical Program

Go East Corp Landfill Site

Everett, Washington

Location Identification	Analyte List								
	Field Parameters[1]	Iron	Manganese	Arsenic	Lead	Nickel	Ammonia	Alkalinity and Bicarbonate	cPAHs
MW-2 (Contingent[2])	Yes	Yes (T/D)	Yes (T/D)	--	--	--	--	Yes	--
MW-3 (Contingent[2])	Yes	Yes (T/D)	Yes (T/D)	--	--	--	--	Yes	--
MW-6	Yes	Yes (T/D)	Yes (T/D)	Yes (T)	--	--	Yes	Yes	Yes
MW-7	Yes	Yes (T/D)	Yes (T/D)	Yes (T)	Yes (T)	Yes (T)	Yes	Yes	Yes
MW-8	Yes	Yes (T/D)	Yes (T/D)	--	--	--	Yes	Yes	--
MW-10	Yes	Yes (T/D)	Yes (T/D)	--	Yes (T)	--	Yes	Yes	--
SWS-1	Yes	Yes (T)	Yes (T)	--	Yes (T)	--	Yes	Yes	--

Notes:

[1] Field parameters included pH, specific conductivity, temperature, dissolved oxygen and oxidation-reduction potential.

[2] Well sampled in March 2025 for geochemical indicators based on methane results; see report text.

cPAHs = carcinogenic polycyclic aromatic hydrocarbons listed in Table 708-2 of the Model Toxics Control Act (MTCA), to calculate Total cPAH TEQ

T/D = Total and dissolved metals

T = Total metals

Table 3

Groundwater and Surface Water Field Parameters

Go East Corp Landfill Site

Everett, Washington

Location Identification	Sample Identification	Sample Date	Depth to Water (ft bTOC)	Water Elevation (NAVD88)	Temperature (°C)	Dissolved Oxygen (mg/L)	Specific Conductance (uS/cm)	pH	Oxidation-Reduction Potential (mV)	Turbidity (NTU)
MW2	MW2-210406	4/6/2021	50.41	184.10	10.02	0.88	158	6.65	-139.8	16.1
	MW2-211208	12/8/2021	50.42	184.09	9.8	0.32	273.6	8.18	-280.2	9.95
	MW2-20220318	3/18/2022	50.75	183.76	49.2	4.60	190.2	8.26	18.5	32.0
	MW-2-220505	5/5/2022	50.75	183.76	9.4	10.44	183	8.18	128	21
	MW-2-20220628	6/28/2022	51.19	183.32	12.5	3.45	243.3	8.06	-296	38.2
	MW-2-20220922	9/22/2022	51.58	182.93	12.57	1.7	218	8.29	-122.5	7.96
	MW-2-20230407	4/7/2023	50.71	183.80	11.05	2.11	200	7.19	-68.1	8.12
	Well casing height adjusted by a licensed driller to match modified ground surface elevation on May 10, 2023.									
	MW-2-20231004	10/4/2023	46.44	183.42	12.05	8.96	152	8.33	-59.2	48.6
	20250306-MW-2	3/6/2025	45.92	183.94	11.0	0.3	270.8	7.93	22.4	4.9
MW3	MW3-210406	4/6/2021	39.34	201.76	10.22	3.72	174	6.81	-113.0	41.9
	Well extended by licensed driller by 22.83 feet in 2021.									
	MW3-211206	12/6/2021	60.95	208.98	10.00	0.08	264.4	8.24	-309.0	2.97
	MW-3-30922	3/9/2022	59.79	210.14	10.50	4.15	191.0	8.32	-173.0	88.7
	MW-3-20220427	4/27/2022	59.99	209.94	11.55	6.78	219.6	8.12	52.9	87.4
	MW-3-20220621	6/21/2022	60.10	209.83	11.6	6.78	219.6	8.12	52.7	87.4
	MW-3-20220920	9/20/2022	58.58	211.35	15.73	0.69	241	8.22	132.8	11.1
	MW-3-20230403	4/3/2023	58.50	211.43	10.60	7.7	623	NR	-147	119
	Well casing height adjusted by a licensed driller to match modified ground surface elevation on May 10, 2023.									
	MW-3-20231004	10/4/2023	56.94	210.30	11.87	12.17	63	8.09	-42.3	23.8
	20250306-MW-3	3/6/2025	56.98	210.26	11.20	0.64	266.4	7.73	44.3	12.8
MW6	MW6-211209	12/9/2021	47.57	212.35	14.3	1.52	451.0	6.69	-177.7	9.82
	MW-6-31122	3/11/2022	47.61	212.31	13.4	0.74	362.6	6.69	15.8	6.28
	MW-6-220503	5/3/2022	47.60	212.32	14.2	5.10	461.5	6.56	138.4	27.7
	MW-6-20220620	6/20/2022	47.34	212.58	15.8	2.01	405.5	6.61	-104.9	0.77
	MW-6-20220921	9/21/2022	47.32	212.60	16.82	0.12	387	6.78	-64.1	2.6
	MW-6-20230405	4/5/2023	47.67	212.25	12.78	1.06	382	6.57	-9.4	4.1
	Well casing height adjusted by a licensed driller to match modified ground surface elevation on May 10, 2023.									
	MW-6-20231006	10/6/2023	43.24	212.57	14.45	7.78	382	6.73	-0.4	12.4
	MW-6-20240826	8/26/2024	43.33	212.25	12.70	0.90	325	6.60	20.8	7.00
	20250306-MW-6	3/6/2025	43.66	212.15	10.8	1.63	541	6.28	60.4	26.9
MW7	MW7-211209	12/9/2021	48.15	194.84	10.5	4.22	237.8	7.99	-136.5	9.81
	MW7-20220314	3/14/2022	48.30	194.69	9.4	10.25	162.3	8.07	253.4	26.1
	MW-7-20220506	5/6/2022	48.56	194.43	9.8	11.54	192.8	8.10	201.8	64.0
	MW-7-20220620	6/20/2022	49.70	193.29	12.2	2.38	209	7.73	-102.7	20.0
	MW-7-20220921	9/21/2022	48.46	194.53	14.68	1.25	213	7.98	-69.4	13.2
	MW-7-20230405	4/5/2023	48.40	194.59	10.46	2.56	200	7.87	58.4	0.13
	Well casing height adjusted by a licensed driller to match modified ground surface elevation on May 10, 2023.									
	MW-7-20231005	10/5/2023	47.01	194.86	12.06	5.76	154	7.88	132.3	14.1
	MW-7-20240822	8/22/2024	48.24	193.63	13.19	11.20	142	8.09	42.3	13.4
	20250304-MW-7	3/4/2025	47.18	194.69	10.3	1.36	234.7	7.53	189.4	15.3
MW8	MW8-211213	12/13/2021	49.88	180.90	12.0	0.47	592.8	6.67	-191.6	9.63
	MW8-20220322	3/22/2022	50.21	180.57	13.2	4.70	469.5	6.78	171.2	137
	MW8-05022022	5/2/2022	50.30	180.48	11.50	7.32	347.1	6.75	159.1	43.1
	MW-8-20220622	6/22/2022	51.20	179.58	14.1	0.35	465.8	6.63	-176.2	9.59
	MW-8-20220920	9/20/2022	51.51	179.27	19.84	2.08	447	6.60	29.9	8.9
	MW-8-20230331	3/31/2023	50.79	179.99	18.03	2.13	439	6.80	28.5	18.5
	MW-8-20231003	10/3/2023	48.64	182.14	14.54	5.09	277	6.64	110.8	20.7
	MW-8-20240822	8/22/2024	48.96	181.82	13.27	3.97	270	6.54	80.8	19.5
	20250305-MW-8	3/5/2025	48.60	182.18	11.90	0.93	422.8	6.15	86.7	19.5
MW10	MW-10-20220404	4/4/2022	4.63	94.31	9.3	6.51	310.1	7.14	148.9	177
	MW-10-20220519	5/19/2022	NR	NR	10.3	0.78	424.1	6.84	-82.2	10.3
	MW-10-20220623	6/23/2022	4.69	94.25	15.5	0.29	323.3	6.73	-400.2	32
	MW-10-220921	9/21/2022	5.25	93.69	12.25	0.28	520	6.42	53.5	3.6
	MW-10-20230411	4/11/2023	4.00	94.94	9.9	0.14	948	7.42	-61	52
	MW-10-20231002	10/2/2023	4.34	94.60	12.94	0.00	597	6.40	-48.6	2.92
	MW-10-20240826	8/26/2024	4.89	94.05	15.57	1.21	453	6.52	-18.5	43.5
	20250310-MW-10	3/10/2025	4.60	94.34	10.74	1.17	530	6.52	-90.6	180
SWS-1	SP1-210402	4/2/2021	--	--	11.96	8.05	602	6.79	-49.3	6.68
	SWS-1-20211101	11/1/2021	--	--	NR	NR	NR	NR	NR	NR
	SWS-1-211208	12/8/2021	--	--	12.9	8.40	824	6.89	-103.7	NR
	SWS-1-20220321	3/21/2022	--	--	NR	NR	NR	NR	NR	NR
	SWS-1-220503	5/3/2022	--	--	13.4	5.44	773	6.61	38.8	NR
	SWS-1-20220621	6/21/2022	--	--	17.9	5.83	809	7.18	-44.9	20.3
	SWS-1-220920	9/20/2022	--	--	11.9	6.2	531	6.24	157.2	9.66
	SWS-1-20231012	10/12/2023	--	--	13.09	3.3	840	6.63	-30.7	13.4
	SWS-20240826	8/26/2024	--	--	15.72	7.38	495	6.80	106.6	>500
	20250310-SWS-1	3/10/2025	--	--	12.4	9.59	586.2	6.95	62.0	8.68

Notes:

ft bTOC = feet below top of casing

mg/L = milligram per liter

uS/cm = microsiemen per centimeter

mV = millivolt

NTU = nephelometric turbidity unit

°C = degree Celsius

NR = not recorded due to equipment malfunction.

Table 4

Groundwater and Surface Water Data

Go East Landfill

Everett, Washington

			Location ID	MW2	MW2	MW2	MW2	MW2	MW2	MW2	MW2	MW2
			Sample ID	MW2-210406	MW2-211208	MW2-20220318	MW-2-220505	MW-2-20220628	MW-2-20220922	MW-2-20230407	20231004-MW-2	20250306-MW-2
			Sample Date	4/6/2021	12/8/2021	3/18/2022	5/5/2022	6/28/2022	9/22/2022	4/7/2023	10/4/2023	3/6/2025
Analyte	Cleanup Level	Units										
Alkalinity as CaCO3	NE	mg/L	**110**	**120**	**120**	**110**	**110**	**110**	**120**	**110**	**120**
Bicarbonate as CaCO3	NE	mg/L	**110**	**120**	**120**	**110**	**110**	**110**	**120**	**110**	**120**
Ammonia (Total as N)	NE	mg/L	--	**0.097**	**0.11**	**0.14**	**0.094**	**0.10**	**0.1**	**0.057**	
Total Arsenic	7.3	ug/L	**4.7**	**4.8**	**5.3**	**11**	**5.3**	**4.5**	**5.8**	**7.4**	--
Dissolved Arsenic	7.3	ug/L	**4.5**	**4.2**	**4.6**	**13**	**4.3**	**4.2**	**4**	**5.9**	
Total Iron	3,010	ug/L	**1200**	**370**	**1600**	**6200**	**690**	**1100**	**2600**	**5400**	**430**
Dissolved Iron	3,010	ug/L	**48**	56 U	56 U	56 U	56 U	56 U	**76**	**100**	56 U
Total Lead	2.5	ug/L	--	1.1 U	1.1 U	**2.0**	--	--		**1.7**	
Total Manganese	354	ug/L	**230**	**300**	**310**	**350**	**250**	**230**	**300**	**330**	**240**
Dissolved Manganese	354	ug/L	**210**	**270**	**250**	**200**	**220**	**210**	**250**	**230**	**210**
Total Nickel	26.3	ug/L	--	22 U	22 U	22 U	22 U	--	--	22 U	--
Benzo(a)anthracene	NE	ug/L	--	0.0095 U	0.0095 U	0.0099 U	--	--	--	--	--
Benzo(a)pyrene	NE	ug/L	--	0.0095 U	0.0095 U	0.0099 U	--	--	--	--	--
Benzo(b)fluoranthene	NE	ug/L	--	0.0095 U	0.0095 U	0.0099 U	--	--	--	--	--
Benzo(j,k)fluoranthene	NE	ug/L	--	0.0095 U	0.0095 U	0.0099 U	--	--	--	--	--
Chrysene	NE	ug/L	--	0.0095 U	0.0095 U	0.0099 U	--	--	--	--	--
Dibenz(a,h)anthracene	NE	ug/L	--	0.0095 U	0.0095 U	0.0099 U	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	NE	ug/L	--	0.0095 U	0.0095 U	0.0099 U	--	--	--	--	--
Total cPAH TEQ (ND=0.5RL)	0.0095	ug/L	--	0.00717 U	0.00717 U	0.00747 U	--	--	--	--	--

			Location ID	MW3	MW3	MW3	MW3	MW3	MW3	MW3	MW3	MW3
			Sample ID	MW3-210406	MW3-211206	MW-3-30922	MW-3-20220427	MW-3-20220621	MW-3-20220920	MW-3-20230403	20231004-MW-3	20250306-MW-3
			Sample Date	4/6/2021	12/6/2021	3/9/2022	4/27/2022	6/21/2022	9/20/2022	4/3/2023	10/4/2023	3/6/2025
Analyte	Cleanup Level	Units										
Alkalinity as CaCO3	NE	mg/L	**110**	**110**	**110**	**100**	**110**	**110**	**110**	**110**	**110**
Bicarbonate as CaCO3	NE	mg/L	**110**	**110**	**110**	**100**	**110**	**110**	**110**	**110**	**110**
Ammonia (Total as N)	NE	mg/L	--	**0.059**	**0.061**	**0.060**	0.050 U	**0.050**	**0.13**	0.050 U	--
Total Arsenic	7.3	ug/L	**4.4**	**3.6**	**5.0**	**3.6**	**4.6**	3.3 U	**13**	**4.9**	--
Dissolved Arsenic	7.3	ug/L	**3.2**	**3.4**	**3.4**	**3.1**	**4.1**	**3.4**	**12**	**4.3**	
Total Iron	3,010	ug/L	**4100**	**110**	**2500**	**3800**	**1400**	**610**	**4000**	**1500**	**390**
Dissolved Iron	3,010	ug/L	**32**	56 U	56 U	56 U	56 U	56 U	**56**	56 U	56 U
Total Lead	2.5	ug/L	--	1.1 U	**1.2**	**1.1**	1.1 U	--			
Total Manganese	354	ug/L	**260**	**190**	**240**	**220**	**190**	**160**	**220**	**190**	**190**
Dissolved Manganese	354	ug/L	**140**	**170**	**180**	**150**	**140**	**140**	**150**	**140**	**130**
Total Nickel	26.3	ug/L	--	22 U	22 U	22 U	22 U	--	--	22 U	--
Benzo(a)anthracene	NE	ug/L	--	0.0095 U	0.0097 U	0.010 U	--	--	--	--	--
Benzo(a)pyrene	NE	ug/L	--	0.0095 U	0.0097 U	0.010 U	--	--	--	--	--
Benzo(b)fluoranthene	NE	ug/L	--	0.0095 U	0.0097 U	0.010 U	--	--	--	--	--
Benzo(j,k)fluoranthene	NE	ug/L	--	0.0095 U	0.0097 U	0.010 U	--	--	--	--	--
Chrysene	NE	ug/L	--	0.0095 U	0.0097 U	0.010 U	--	--	--	--	--
Dibenz(a,h)anthracene	NE	ug/L	--	0.0095 U	0.0097 U	0.010 U	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	NE	ug/L	--	0.0095 U	0.0097 U	0.010 U	--	--	--	--	--
Total cPAH TEQ (ND=0.5RL)	0.0095	ug/L	--	0.00717 U	0.00732 U	0.00755 U	--	--	--	--	--

			Location ID	MW6	MW6	MW6	MW6	MW6	MW6	MW6	MW6	MW6
			Sample ID	MW6-211209	MW-6-31122	MW-6-220503	MW-6-20220620	MW-6-20220921	MW-6-20230405	20231006-MW-6	MW-6-20240826	20250306-MW-6
			Sample Date	12/9/2021	3/11/2022	5/3/2022	6/20/2022	9/21/2022	4/5/2023	10/6/2023	8/26/2024	3/6/2025
Analyte	Cleanup Level	Units										
Alkalinity as CaCO3	NE	mg/L	**190**	**200**	**230**	**220**	**190**	**220**	**230**	**230**	**260**
Bicarbonate as CaCO3	NE	mg/L	**190**	**200**	**230**	**220**	**190**	**220**	**230**	**230**	**250**
Ammonia (Total as N)	NE	mg/L	**0.10**	**0.096**	**0.10**	**0.068**	**0.10**	**0.081**	0.050 U	**0.078**	**0.11**
Total Arsenic	7.3	ug/L	**3.5**	**4.2**	**5.8**	**5.2**	**5.7**	**6.6**	**7.0**	**7.8**	**7.9**
Dissolved Arsenic	7.3	ug/L	**3.0**	**3.9**	**4.2**	**4.4**	**5.6**	**7.1**	**7.4**		
Total Iron	3,010	ug/L	**420**	**1100**	**2000**	**1200**	**510**	**840**	**1800**	**1100**	**2700**
Dissolved Iron	3,010	ug/L	**62**	**74**	**67**	**310**	**330**	**580**	**700**	**800**	**900**
Total Lead	2.5	ug/L	1.1 U	1.1 U	1.1 U	--	--				
Total Manganese	354	ug/L	**1800**	**2100**	**2100**	**2400**	**1700**	**1400**	**1100**	**710**	**850**
Dissolved Manganese	354	ug/L	**1800**	**2000**	**2000**	**2400**	**1700**	**1500**	**1200**	**640**	**750**
Total Nickel	26.3	ug/L	22 U	22 U	22 U	22 U	--	--	22 U	--	--
Benzo(a)anthracene	NE	ug/L	0.0098 U	0.010 U	**0.27**	0.0095 U	0.0095 U	0.0095 U	0.0096 U	0.0095 U	0.0095 U
Benzo(a)pyrene	NE	ug/L	0.0098 U	0.010 U	**0.17**	0.0095 U	0.0095 U	0.0095 U	0.0096 U	0.0095 U	0.0095 U
Benzo(b)fluoranthene	NE	ug/L	0.0098 U	0.010 U	**0.12**	0.028 U	0.0095 U	0.0095 U	0.0096 U	0.0095 U	0.0095 U
Benzo(j,k)fluoranthene	NE	ug/L	**0.018**	0.010 U	**0.36**	0.0095 U	0.0095 U	0.0095 U	0.0096 U	0.0095 U	0.0095 U
Chrysene	NE	ug/L	0.0098 U	0.010 U	**0.085**	**0.010**	0.0095 U	0.0095 U	0.0096 U	0.0095 U	0.0095 U
Dibenz(a,h)anthracene	NE	ug/L	0.0098 U	0.010 U	**0.14**	0.0095 U	0.0095 U	0.0095 U	0.0096 U	0.0095 U	0.0095 U
Indeno(1,2,3-c,d)pyrene	NE	ug/L	0.0098 U	0.010 U	**0.12**	0.0095 U	0.0095 U	0.0095 U	0.0096 U	0.0095 U	0.0095 U
Total cPAH TEQ (ND=0.5RL)	0.0095	ug/L	**0.00871**	0.00755 U	**0.27185**	**0.00815**	0.00717 U	0.00717 U	0.00725 U	0.00717 U	0.00717 U

			Location ID	MW7	MW7	MW7	MW7	MW7	MW7	MW7	MW7
			Sample ID	MW7-211209	MW7-20220314	MW-7-20220506	MW-7-20220620	MW-7-20220921	MW-7-20230405	20231005-MW-7	MW-7-20240822	20250304-MW-7
			Sample Date	12/9/2021	3/14/2022	5/6/2022	6/20/2022	9/21/2022	4/5/2023	10/5/2023	8/22/2024	3/4/2025
Analyte	Cleanup Level	Units										
Alkalinity as CaCO3	NE	mg/L	**100**	**94**	**110**	**96**	**100**	**100**	**100**	**100**	**110**
Bicarbonate as CaCO3	NE	mg/L	**100**	**94**	**110**	**96**	**100**	**100**	**100**	**100**	**110**
Ammonia (Total as N)	NE	mg/L	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	**0.081**	0.050 U	0.053 U	0.053 U
Total Arsenic	7.3	ug/L	**11**	**10**	**12**	**11**	**8.8**	**8.8**	**8.7**	**8.9**	**8.1**
Dissolved Arsenic	7.3	ug/L	**8.5**	**8.8**	**9.1**	**9.1**	**9.1**	**9.1**	**9.0**	--	--
Total Iron	3,010	ug/L	**6900**	**2100**	**24000**	**550**	**3000**	**1500**	**2000**	**620**	**1200**
Dissolved Iron	3,010	ug/L	56 U	56 U	56 U	56 U	56 U	56 U	56 U	56 U	56 U
Total Lead	2.5	ug/L	**3.2**	**1.2**	**8.8**	--	--	--	--	1.1 U	1.1 U
Total Manganese	354	ug/L	**680**	**180**	**1300**	**40**	**190**	**110**	**70**	**310**	**62**
Dissolved Manganese	354	ug/L	**250**	**62**	**32**	**37**	**74**	**60**	**16**	**280**	**69**
Total Nickel	26.3	ug/L	**42**	22 U	**36**	22 U	--	--	22 U	22 U	22 U
Benzo(a)anthracene	NE	ug/L	0.010 U	0.0095 U	0.011 U	**0.011**	0.0095 U	0.0097 U	0.0097 U	0.0095 U	0.0095 U
Benzo(a)pyrene	NE	ug/L	0.010 U	0.0095 U	0.011 U	**0.015**	0.0095 U	0.0097 U	0.0097 U	0.0095 U	0.0095 U
Benzo(b)fluoranthene	NE	ug/L	0.010 U	0.0095 U	0.011 U	0.028 U	0.0095 U	0.0097 U	0.0097 U	0.0095 U	0.0095 U
Benzo(j,k)fluoranthene	NE	ug/L	**0.016**	0.0095 U	0.011 U	0.0095 U	0.0095 U	0.0097 U	0.0097 U	0.0095 U	0.0095 U
Chrysene	NE	ug/L	0.010 U	0.0095 U	0.011 U	**0.013**	0.0095 U	0.0097 U	0.0097 U	0.0095 U	0.0095 U
Dibenz(a,h)anthracene	NE	ug/L	0.010 U	0.0095 U	0.011 U	0.0095 U	0.0095 U	0.0097 U	0.0097 U	0.0095 U	0.0095 U
Indeno(1,2,3-c,d)pyrene	NE	ug/L	0.010 U	0.0095 U	0.011 U	**0.012**	0.0095 U	0.0097 U	0.0097 U	0.0095 U	0.0095 U
Total cPAH TEQ (ND=0.5RL)	0.0095	ug/L	**0.00865**	0.00717 U	0.0083 U	**0.01978**	0.00717 U	0.00732 U	0.00732 U	0.00717 U	0.00717 U

			Location ID	MW8	MW8	MW8	MW8	MW8	MW8	MW8	MW8	MW8
			Sample ID	MW8-211213	MW8-20220322	MW8-05022022	MW-8-20220622	MW-8-20220920	MW-8-20230331	20231003-MW-8	MW-8-20240822	20250305-MW-8
			Sample Date	12/13/2021	3/22/2022	5/2/2022	6/22/2022	9/20/2022	3/31/2023	10/3/2023	8/22/2024	3/5/2025
Analyte	Cleanup Level	Units										
Alkalinity as CaCO3	NE	mg/L	**230**	**220**	**200**	**210**	**180**	**190**	**160**	**180**	**170**
Bicarbonate as CaCO3	NE	mg/L	**230**	**220**	**200**	**210**	**180**	**190**	**160**	**180**	**170**
Ammonia (Total as N)	NE	mg/L	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.05 U	0.050 U	0.053 U	0.053 U
Total Arsenic	7.3	ug/L	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	**5.1**	3.3 U		
Dissolved Arsenic	7.3	ug/L	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3 U	3.0 U		
Total Iron	3,010	ug/L	**1300**	**2800**	**2100**	**1400**	**1100**	**17000**	**4800**	**300**	**680**
Dissolved Iron	3,010	ug/L	**120**	**99**	**65**	**190**	56 U	**82**	**80**	**61**	**240**
Total Lead	2.5	ug/L	1.1 U	1.1 U	1.1 U	–	–	–	–	–	–
Total Manganese	354	ug/L	**2100**	**2400**	**1600**	**1900**	**1400**	**1100**	**510**	**430**	**480**
Dissolved Manganese	354	ug/L	**1900**	**2200**	**1700**	**1800**	**1300**	**1400**	**260**	**420**	**490**
Total Nickel	26.3	ug/L	**39**	22 U	22 U	22 U	–	–	22 U	–	–
Benzo(a)anthracene	NE	ug/L	0.0099 U	0.011 U	0.010 U	–	0.0095 U	0.0097 U	–	–	–
Benzo(a)pyrene	NE	ug/L	0.0099 U	0.011 U	0.010 U	–	0.0095 U	0.0097 U	–	–	–
Benzo(b)fluoranthene	NE	ug/L	0.0099 U	0.011 U	0.010 U	–	0.0095 U	0.0097 U	–	–	–
Benzo(j,k)fluoranthene	NE	ug/L	0.0099 U	0.011 U	0.010 U	–	0.0095 U	0.0097 U	–	–	–
Chrysene	NE	ug/L	0.0099 U	0.011 U	0.010 U	–	0.0095 U	0.0097 U	–	–	–
Dibenz(a,h)anthracene	NE	ug/L	0.0099 U	0.011 U	0.010 U	–	0.0095 U	0.0097 U	–	–	–
Indeno(1,2,3-c,d)pyrene	NE	ug/L	0.0099 U	0.011 U	0.010 U	–	0.0095 U	0.0097 U	–	–	–
Total cPAH TEQ (ND=0.5RL)	0.0095	ug/L	0.00747 U	0.0083 U	0.00755 U	–	0.00717 U	0.00732 U	–	–	–

			Location ID	MW10	MW10	MW10	MW10	MW10	MW10	MW10	MW10
			Sample ID	MW-10-20220404	MW-10-20220519	MW-10-20220623	MW-10-220921	MW-10-2023040	MW-10-2023041	20231012-MW-10	MW-10-2024082	20250310-MW-10
			Sample Date	4/4/2022	5/19/2022	6/23/2022	9/21/2022	4/7/2023	4/12/2023	10/12/2023	8/26/2024	3/10/2025
Analyte	Cleanup Level	Units										
Alkalinity as CaCO3	NE	mg/L	**170**	**230**	**250**	**360**	**230**	**370**	**370**	**320**	**270**
Bicarbonate as CaCO3	NE	mg/L	**170**	**230**	**250**	**360**	**230**	**370**	**370**	**320**	**260**
Ammonia (Total as N)	NE	mg/L	0.050 U	0.22	**0.088**	**1.0**	**0.18**	**1.3**	**1.7**	**0.87**	**0.55**
Total Arsenic	7.3	ug/L	**4.3**	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.0 U	--	--
Dissolved Arsenic	7.3	ug/L	3.0 U	3.0 U	3.0 U	3.0 U	3 U	3 U		--	--
Total Iron	3,010	ug/L	**6800**	**1400**	**1300**	**6400**	**580**	**9700**	**8100**	**12000**	**15000**
Dissolved Iron	3,010	ug/L	**100**	**1000**	**930**	**6000**	**390**	**9500**	56 U	**13000**	56 U
Total Lead	2.5	ug/L	**4.5**	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.0 U	1.1 U	**7.5**
Total Manganese	354	ug/L	**320**	**460**	**450**	**1600**	**750**	**1500**	**1700**	**1200**	**1200**
Dissolved Manganese	354	ug/L	**200**	**440**	**450**	**1600**	**760**	**1600**	**1400**	**1400**	**900**
Total Nickel	26.3	ug/L	22 U	22 U	22 U	22 U	22 U	22 U	20 U	--	--
Benzo(a)anthracene	NE	ug/L	0.010 U	0.0095 U	0.010 U	0.0094 U	0.0095 U	0.0095 U	0.0096 U	--	--
Benzo(a)pyrene	NE	ug/L	0.010 U	0.0095 U	0.010 U	0.0094 U	0.0095 U	0.0095 U	0.0096 U	--	--
Benzo(b)fluoranthene	NE	ug/L	0.010 U	0.0095 U	0.010 U	0.0094 U	0.0095 U	0.0095 U	0.0096 U	--	--
Benzo(j,k)fluoranthene	NE	ug/L	0.010 U	**0.011**	**0.016**	0.0094 U	0.0095 U	0.0095 U	0.0096 U	--	--
Chrysene	NE	ug/L	0.010 U	0.0095 U	0.010 U	0.0094 U	0.0095 U	0.0095 U	0.0096 U	--	--
Dibenz(a,h)anthracene	NE	ug/L	0.010 U	0.0095 U	0.010 U	0.0094 U	0.0095 U	0.0095 U	0.0096 U	--	--
Indeno(1,2,3-c,d)pyrene	NE	ug/L	0.010 U	0.0095 U	0.010 U	0.0094 U	0.0095 U	0.0095 U	0.0096 U	--	--
Total cPAH TEQ (ND=0.5RL)	0.0095	ug/L	0.00755 U	**0.0078**	**0.00865**	0.0071 U	0.00717 U	0.00717 U	0.00725 U	--	--

			Location ID	SWS-1	SWS-1	SWS-1	SWS-1	SWS-1	SWS-1	SWS-1	SWS-1	SWS-1	SWS-1
			Sample ID	SWS-1-20211101	SWS-1-211208	SWS-1-20220321	SWS-1-220503	SWS-1-20220621	SWS-1-220920	SWS-1-2023033	20231012-SWS-1	SWS1-20240826	20250310-SWS-1
			Sample Date	11/1/2021	12/8/2021	3/21/2022	5/3/2022	6/21/2022	9/20/2022	3/30/2023	10/12/2023	8/26/2024	3/10/2025
Analyte	Cleanup Level	Units											
Alkalinity as CaCO3	NE	mg/L	--	--	--	--	**430**	**390**	**420**	**420**	**400**	**430**
Bicarbonate as CaCO3	NE	mg/L	--	--	--	--	**430**	**390**	**420**	**420**	**400**	**430**
Ammonia (Total as N)	NE	mg/L	--	**2.5**	**2.3**	**2.0**	**2.3**	**1.7**	**1.9**	**1.3**	**1.3**	**1.5**
Total Arsenic	7.3	ug/L	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.0 U		
Dissolved Arsenic	7.3	ug/L	3 U	--	--	--	3.0 U	--			--	--
Total Iron	3,010	ug/L	**11000**	**8000**	**12000**	**6400**	**5000**	**7300**	**9500**	**14000**	**21000**	**14000**
Dissolved Iron	3,010	ug/L	**2400**	--	--	--	56 U	--	--	--	--	--
Total Lead	2.5	ug/L	1.1 U	1.1 U	**6.2**	1.1 U	1.1 U	--	--	1.0 U	**1.5**	1.1 U
Total Manganese	354	ug/L	**1500**	**1800**	**2000**	**1600**	**1500**	**1600**	**1900**	**1900**	**1800**	**2100**
Dissolved Manganese	354	ug/L	**1300**	--	--	--	**1600**	--	--	**1600**	--	--
Total Nickel	26.3	ug/L	22 U	22 U	22 U	22 U	22 U	--	--	20 U	--	--
Benzo(a)anthracene	NE	ug/L	0.01 U	0.010 U	0.010 U	0.0097 U	0.0097 U	0.0098 U	0.0099 U	0.011 U	--	--
Benzo(a)pyrene	NE	ug/L	0.01 U	0.010 U	0.010 U	0.0097 U	0.0097 U	0.0098 U	0.0099 U	0.011 U	--	--
Benzo(b)fluoranthene	NE	ug/L	0.01 U	0.010 U	0.010 U	0.0097 U	0.0097 U	0.0098 U	0.0099 U	0.011 U	--	--
Benzo(j,k)fluoranthene	NE	ug/L	0.01 U	0.010 U	0.010 U	0.0097 U	0.0097 U	0.0098 U	0.0099 U	0.011 U	--	--
Chrysene	NE	ug/L	0.01 U	0.010 U	0.010 U	0.0097 U	0.0097 U	0.0098 U	0.0099 U	0.011 U	--	--
Dibenz(a,h)anthracene	NE	ug/L	0.01 U	0.010 U	0.010 U	0.0097 U	0.0097 U	0.0098 U	0.0099 U	0.011 U	--	--
Indeno(1,2,3-c,d)pyrene	NE	ug/L	0.01 U	0.010 U	0.010 U	0.0097 U	0.0097 U	0.0098 U	0.0099 U	0.011 U	--	--
Total cPAH TEQ (ND=0.5RL)	0.0095	ug/L	0.00755 U	0.00755 U	0.00755 U	0.00732 U	0.00732 U	0.0074 U	0.00747 U	0.0083 U	--	--

Table 5

Groundwater and Surface Water Compliance Evaluation

Go East Landfill

Everett, Washington

			Location ID	MW6	MW6	MW6	MW6	MW6	MW6	MW6	MW6	MW6	Upper 95%	In Compliance?
			Sample Date	12/9/2021	3/11/2022	5/3/2022	6/20/2022	9/21/2022	4/5/2023	10/6/2023	8/26/2024	3/6/2025		
Contaminant of Concern	CUL	Units												
Total Arsenic	7.3	ug/L		**3.5**	**4.2**	**5.8**	**5.2**	**5.7**	**6.6**	**7**	**7.8**	**7.9**	6.9	Yes
Total Iron	3,010	ug/L		**420**	**1100**	**2000**	**1200**	**510**	**840**	**1800**	**1100**	**2700**	1622	Yes
Dissolved Iron	3,010	ug/L		**62**	**74**	**67**	**310**	**330**	**580**	**700**	**800**	**900**	550	Yes
Total Manganese	354	ug/L		**1800**	**2100**	**2100**	**2400**	**1700**	**1400**	**1100**	**710**	**850**	1905	No
Dissolved Manganese	354	ug/L		**1800**	**2000**	**2000**	**2400**	**1700**	**1500**	**1200**	**640**	**750**	1902	No
Total cPAH TEQ (ND=0.5RL)	0.0095	ug/L		**0.00871**	0.00755	**0.27185**	**0.00815**	0.00717	0.00717	0.00725	0.00717	0.00717	0.024	No

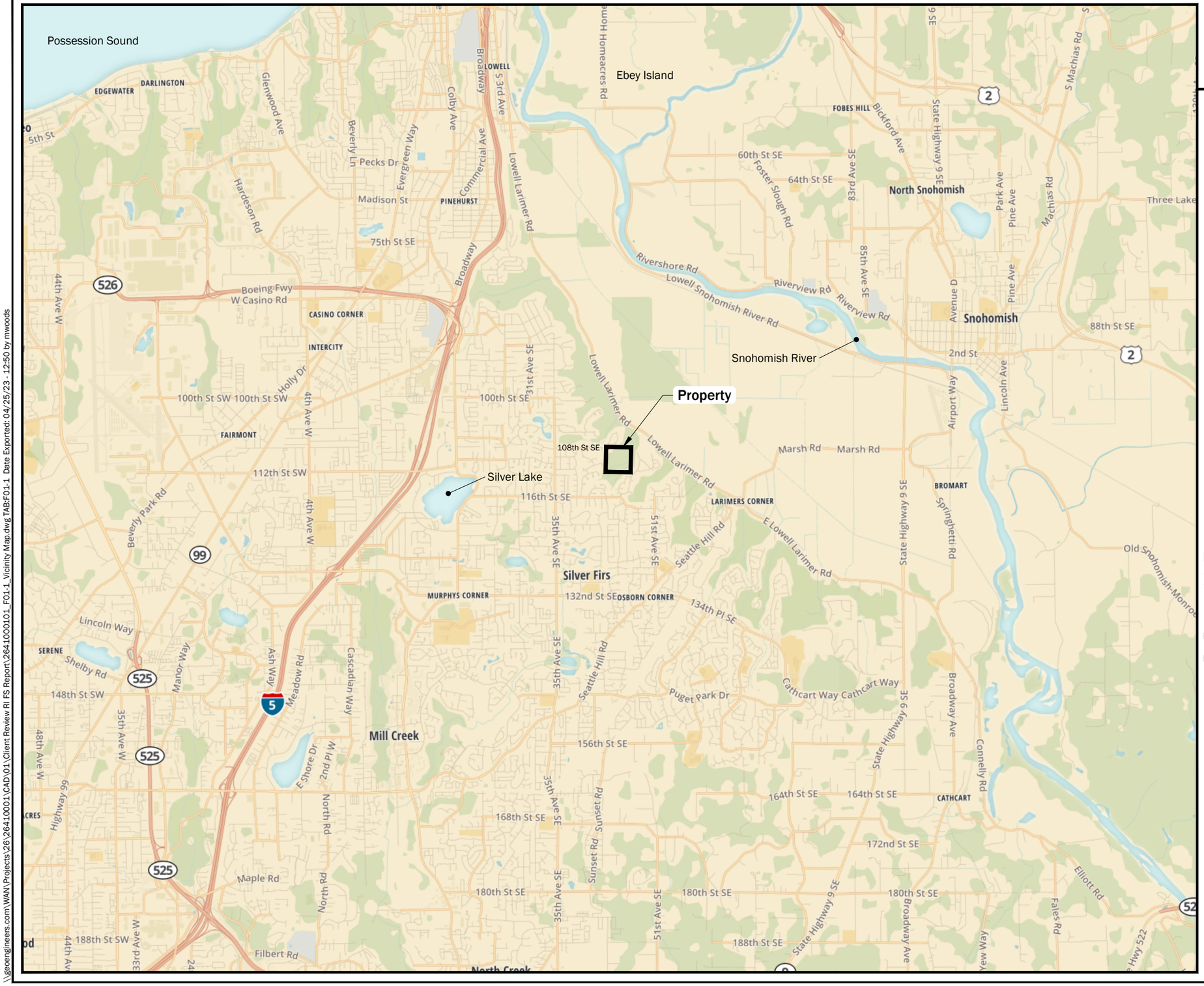
			Location ID	MW7	MW7	MW7	MW7	MW7	MW7	MW7	MW7	MW7	Upper 95%	In Compliance?
			Sample Date	12/9/2021	3/14/2022	5/6/2022	6/20/2022	9/21/2022	4/5/2023	10/5/2023	8/22/2024	3/4/2025		
Contaminant of Concern	CUL	Units												
Total Arsenic	7.3	ug/L		**11**	**10**	**12**	**11**	**8.8**	**8.8**	**8.7**	**8.9**	**8.1**	10.5	No
Total Iron	3,010	ug/L		**6900**	**2100**	**24000**	**550**	**3000**	**1500**	**2000**	**620**	**1200**	4605	No
Dissolved Iron	3,010	ug/L		56	56	56	56	56	56	56	56	56	56	Yes
Total Lead	2.5	ug/L		**3.2**	**1.2**	**8.8**	1.1	1.1	5.05				5.1	No
Total Manganese	354	ug/L		**680**	**180**	**1300**	**40**	**190**	**110**	**70**	**310**	**62**	362	No
Dissolved Manganese	354	ug/L		**250**	**62**	**32**	**37**	**74**	**60**	**16**	**280**	**69**	117	Yes
Total Nickel	26.3	ug/L		**42**	22	**36**	22	22	22	22			32	No
Total cPAH TEQ (ND=0.5RL)	0.0095	ug/L		**0.00865**	0.00717	0.0083	**0.01978**	0.00717	0.00732	0.00732	0.00717	0.00717	0.0103	No

			Location ID	MW8	MW8	MW8	MW8	MW8	MW8	MW8	MW8	MW8	Upper 95%	In Compliance?
			Sample Date	12/13/2021	3/22/2022	5/2/2022	6/22/2022	9/20/2022	3/31/2023	10/3/2023	8/22/2024	3/5/2025		
Contaminant of Concern	CUL	Units												
Total Iron	3,010	ug/L		**1300**	**2800**	**2100**	**1400**	**1100**	**17000**	**4800**	**300**	**680**	3693	No
Dissolved Iron	3,010	ug/L		**120**	**99**	**65**	**190**	56	**82**	**80**	**61**	**240**	133	No
Total Manganese	354	ug/L		**2100**	**2400**	**1600**	**1900**	**1400**	**1100**	**510**	**430**	**480**	1685	No
Dissolved Manganese	354	ug/L		**1900**	**2200**	**1700**	**1800**	**1300**	**1400**	**260**	**420**	**490**	1666	No

			Location ID	MW10	MW10	MW10	MW10	MW10	MW10	MW10	MW10	MW10	Upper 95%	In Compliance?
			Sample Date	4/4/2022	5/19/2022	6/23/2022	9/21/2022	4/7/2023	4/12/2023	10/12/2023	8/26/2024	3/10/2025		
Contaminant of Concern	CUL	Units												
Total Iron	3,010	ug/L		**6800**	**1400**	**1300**	**6400**	**580**	**9700**	**8100**	**12000**	**15000**	9074	No
Dissolved Iron	3,010	ug/L		**100**	**1000**	**930**	**6000**	**390**	**9500**	56	**13000**	56	2881	No
Total Lead	2.5	ug/L		**4.5**	1.1	1.1	1.1	1.1	1.1	1	1.1	**7.5**	2.5	Yes
Total Manganese	354	ug/L		**320**	**460**	**450**	**1600**	**750**	**1500**	**1700**	**1200**	**1200**	1290	No
Dissolved Manganese	354	ug/L		**200**	**440**	**450**	**1600**	**760**	**1600**	**1400**	**1400**	**900**	1256	No

			Location ID	SWS-1	SWS-1	SWS-1	SWS-1	SWS-1	SWS-1	SWS-1	SWS-1	SWS-1	Upper 95%	In Compliance?
			Sample Date	12/8/2021	3/21/2022	5/3/2022	6/21/2022	9/20/2022	3/30/2023	10/12/2023	8/26/2024	3/10/2025		
Contaminant of Concern	CUL	Units												
Total Iron	3,010	ug/L		**8000**	**12000**	**6400**	**5000**	**7300**	**9500**	**14000**	**21000**	**14000**	13047	No
Total Lead	2.5	ug/L		1.1	**6.2**	1.1	1.1	1	**1.5**	1.1	2.35		2.3	Yes
Total Manganese	354	ug/L		**1800**	**2000**	**1600**	**1500**	**1600**	**1900**	**1900**	**1800**	**2100**	1919	No

Figures



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 10N

N
W E
S

1 0 1
Mile

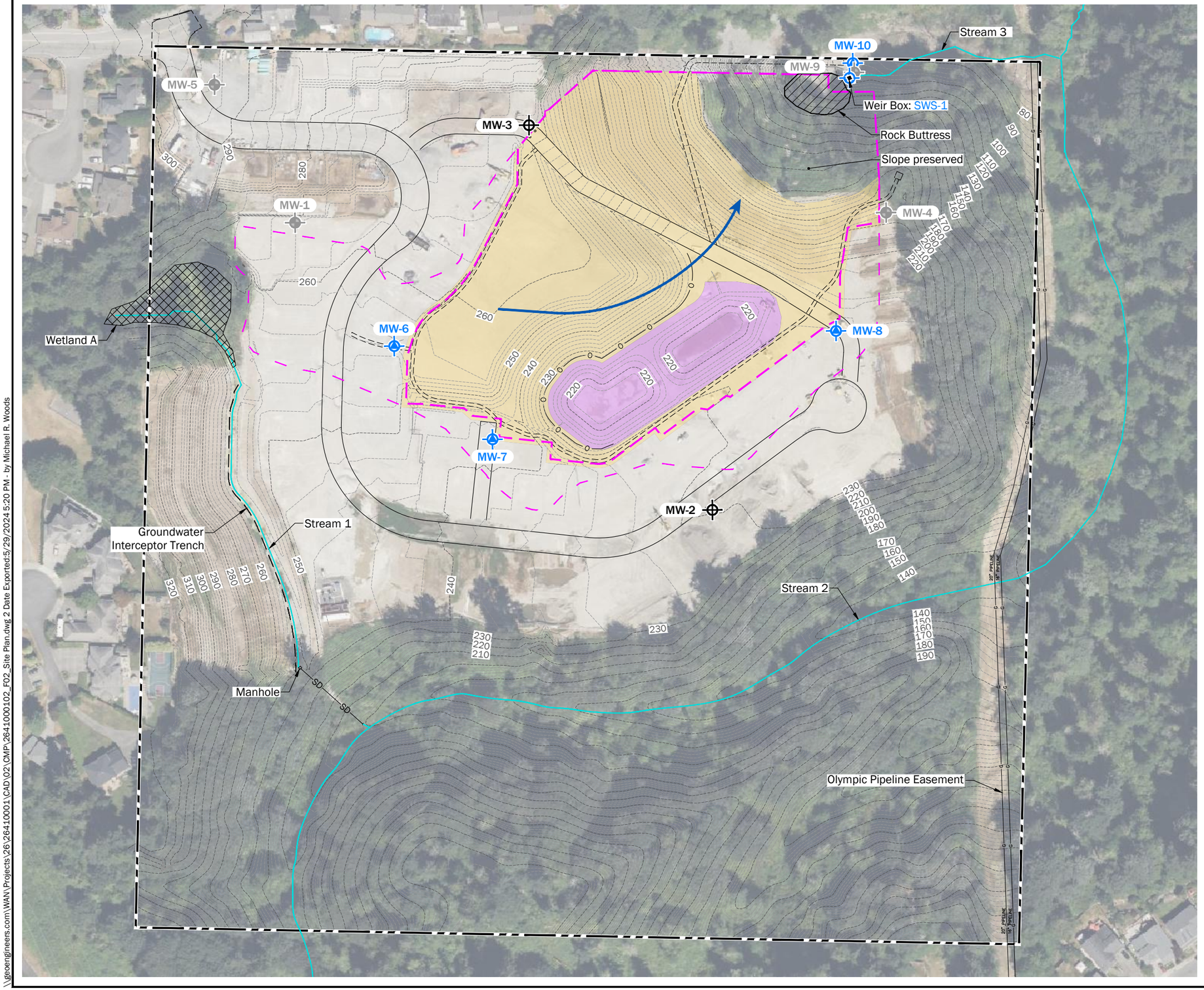
Vicinity Map

Go East Corp Landfill Site
Everett, Washington

GeoEngineers

Figure 1

\\geoengineers.com\WAN\Projects\26\26410001\CAD\01\Client Review RI FS Report\26410000101_F01-1_Vicinity Map.dwg TAB:F01-1 Date Exported: 04/25/23 - 12:50 by mwoods



Legend

- Property Boundary
- Final Landfill Limit
- Former Extent of Wedge Area
- Engineered Cap
- Double-lined stormwater pond
- Topographic Contour (NAVD88)
- Priority Sampling Location
- Monitoring Well Contingent Sampling Location
- Monitoring Well Decommissioned
- Storm Drain
- Inferred Groundwater Flow Direction

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: Background CAD files from MG Land Surveyors downloaded 2/17/2023.
Aerial from Microsoft Bing Images.

Projection: WA State Plane, North Zone, NAD83, US Foot

N
W E
S

150 0 150
Feet

Site Plan

Go East Corp Landfill Site
Everett, Washington

GeoEngineers

Figure 2

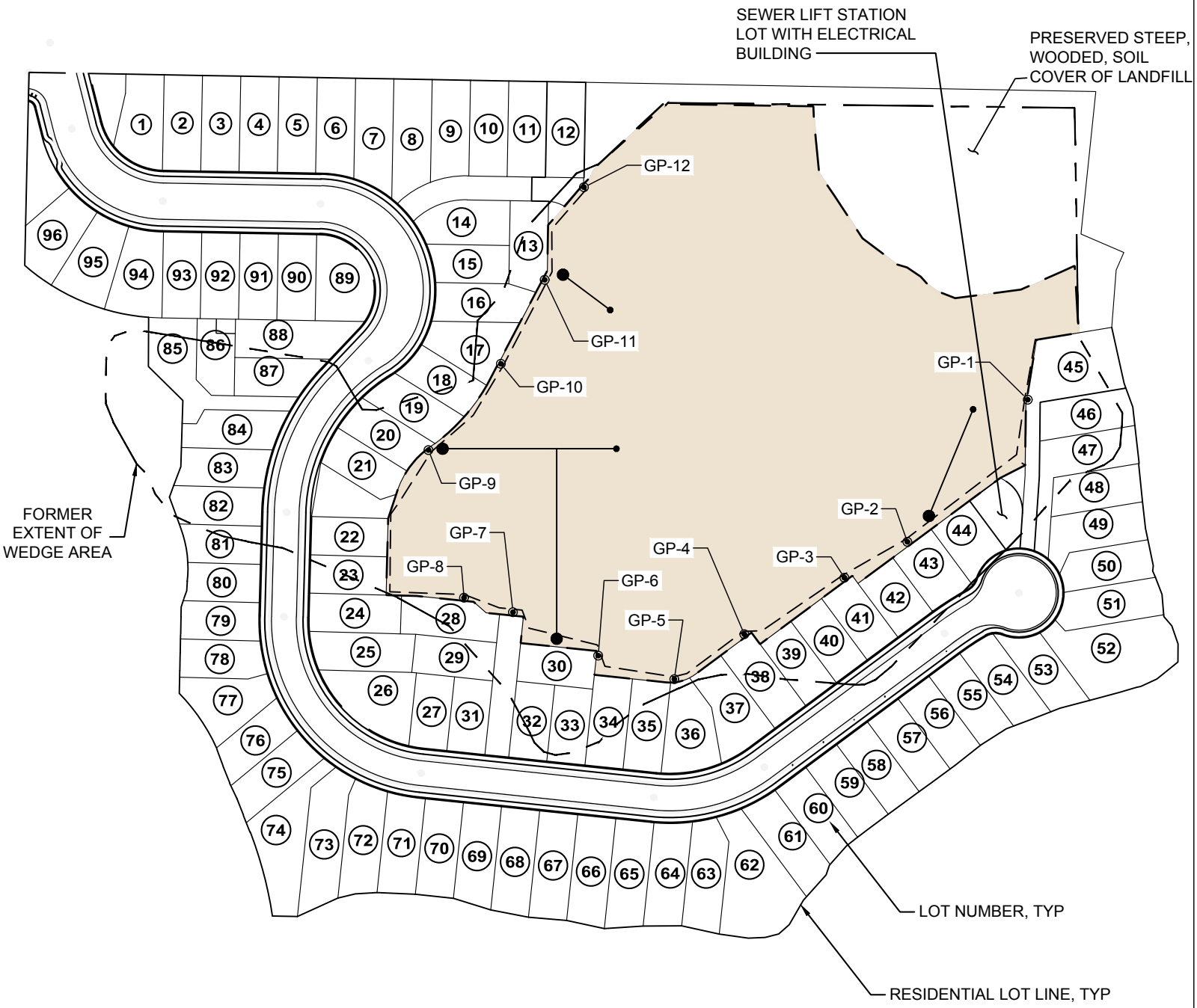
\\geoengineers.com\WAN\Projects\26\26410001\CAD\02\CMP\26410000102_F02_Site Plan.dwg 2 Date Exported:5/29/2024 5:20 PM - by Michael R. Woods

Appendices

Appendix A
Landfill Gas Monitoring Locations

HERRERA
Science + Planning + Design

Figure 1.
Landfill Gas Monitoring Locations.



LEGEND

◉ GP-#	LANDFILL PERIMETER SOIL GAS PROBE	— — — —	GRAVEL TRENCH WITH 2 IN PERF PIPE
●	LANDFILL GAS SUMP	———	GRAVEL TRENCH WITH 2 IN PIPE
•	LANDFILL GAS VENT	▭	CAPPED AND CLOSED LANDFILL AREA

Appendix B
Laboratory Results and Data Validation Reports

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

September 6, 2024

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

Re: Analytical Data for Project 6694-002-05
Laboratory Reference No. 2408-343

Dear Garrett:

Enclosed are the analytical results and associated quality control data for samples submitted on August 27, 2024.

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

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

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: September 6, 2024
Samples Submitted: August 27, 2024
Laboratory Reference: 2408-343
Project: 6694-002-05

Case Narrative

Samples were collected on August 22 and 26, 2024 and received by the laboratory on August 27, 2024. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below. However the soil results for the QA/QC samples are reported on a wet-weight basis.

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

Date of Report: September 6, 2024
Samples Submitted: August 27, 2024
Laboratory Reference: 2408-343
Project: 6694-002-05

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
MW-6-20240826	08-343-01	Water	8-26-24	8-27-24	
MW-7-20240822	08-343-02	Water	8-22-24	8-27-24	
MW-8-20240822	08-343-03	Water	8-22-24	8-27-24	
MW-10-20240826	08-343-04	Water	8-26-24	8-27-24	
SWS1-20240826	08-343-05	Water	8-26-24	8-27-24	

Date of Report: September 6, 2024
Samples Submitted: August 27, 2024
Laboratory Reference: 2408-343
Project: 6694-002-05

AMMONIA (as Nitrogen)
SM 4500-NH_3 D

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6-20240826**					
Laboratory ID:	08-343-01					
Ammonia	**0.078**	0.053	SM 4500-NH3 D	8-28-24	8-28-24	
Client ID:	**MW-7-20240822**					
Laboratory ID:	08-343-02					
Ammonia	**ND**	0.053	SM 4500-NH3 D	8-28-24	8-28-24	
Client ID:	**MW-8-20240822**					
Laboratory ID:	08-343-03					
Ammonia	**ND**	0.053	SM 4500-NH3 D	8-28-24	8-28-24	
Client ID:	**MW-10-20240826**					
Laboratory ID:	08-343-04					
Ammonia	**0.87**	0.053	SM 4500-NH3 D	8-28-24	8-28-24	
Client ID:	**SWS1-20240826**					
Laboratory ID:	08-343-05					
Ammonia	**1.3**	0.053	SM 4500-NH3 D	8-28-24	8-28-24	

Date of Report: September 6, 2024
Samples Submitted: August 27, 2024
Laboratory Reference: 2408-343
Project: 6694-002-05

TOTAL ALKALINITY
SM 2320B

Matrix: Water
Units: mg CaCO3/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6-20240826**					
Laboratory ID:	08-343-01					
Total Alkalinity	**230**	2.0	SM 2320B	8-29-24	8-29-24	
Client ID:	**MW-7-20240822**					
Laboratory ID:	08-343-02					
Total Alkalinity	**100**	2.0	SM 2320B	8-29-24	8-29-24	
Client ID:	**MW-8-20240822**					
Laboratory ID:	08-343-03					
Total Alkalinity	**180**	2.0	SM 2320B	8-29-24	8-29-24	
Client ID:	**MW-10-20240826**					
Laboratory ID:	08-343-04					
Total Alkalinity	**320**	2.0	SM 2320B	8-29-24	8-29-24	
Client ID:	**SWS1-20240826**					
Laboratory ID:	08-343-05					
Total Alkalinity	**400**	2.0	SM 2320B	8-29-24	8-29-24	

Date of Report: September 6, 2024
Samples Submitted: August 27, 2024
Laboratory Reference: 2408-343
Project: 6694-002-05

TOTAL BICARBONATE
SM 2320B

Matrix: Water
Units: mg CaCO3/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6-20240826**					
Laboratory ID:	08-343-01					
Bicarbonate	**230**	2.0	SM 2320B	8-29-24	8-29-24	
Client ID:	**MW-7-20240822**					
Laboratory ID:	08-343-02					
Bicarbonate	**100**	2.0	SM 2320B	8-29-24	8-29-24	
Client ID:	**MW-8-20240822**					
Laboratory ID:	08-343-03					
Bicarbonate	**180**	2.0	SM 2320B	8-29-24	8-29-24	
Client ID:	**MW-10-20240826**					
Laboratory ID:	08-343-04					
Bicarbonate	**320**	2.0	SM 2320B	8-29-24	8-29-24	
Client ID:	**SWS1-20240826**					
Laboratory ID:	08-343-05					
Bicarbonate	**400**	2.0	SM 2320B	8-29-24	8-29-24	

Date of Report: September 6, 2024
Samples Submitted: August 27, 2024
Laboratory Reference: 2408-343
Project: 6694-002-05

PAHs EPA 8270E/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6-20240826**					
Laboratory ID:	08-343-01					
Benzo[a]anthracene	**ND**	0.0095	EPA 8270E/SIM	8-29-24	8-29-24	
Chrysene	**ND**	0.0095	EPA 8270E/SIM	8-29-24	8-29-24	
Benzo[b]fluoranthene	**ND**	0.0095	EPA 8270E/SIM	8-29-24	8-29-24	
Benzo(j,k)fluoranthene	**ND**	0.0095	EPA 8270E/SIM	8-29-24	8-29-24	
Benzo[a]pyrene	**ND**	0.0095	EPA 8270E/SIM	8-29-24	8-29-24	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0095	EPA 8270E/SIM	8-29-24	8-29-24	
Dibenz[a,h]anthracene	**ND**	0.0095	EPA 8270E/SIM	8-29-24	8-29-24	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*51*	*27-106*				
Pyrene-d10	*82*	*37-125*				
Terphenyl-d14	*80*	*37-110*				
Client ID:	**MW-7-20240822**					
Laboratory ID:	08-343-02					
Benzo[a]anthracene	**ND**	0.0095	EPA 8270E/SIM	8-29-24	8-29-24	
Chrysene	**ND**	0.0095	EPA 8270E/SIM	8-29-24	8-29-24	
Benzo[b]fluoranthene	**ND**	0.0095	EPA 8270E/SIM	8-29-24	8-29-24	
Benzo(j,k)fluoranthene	**ND**	0.0095	EPA 8270E/SIM	8-29-24	8-29-24	
Benzo[a]pyrene	**ND**	0.0095	EPA 8270E/SIM	8-29-24	8-29-24	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0095	EPA 8270E/SIM	8-29-24	8-29-24	
Dibenz[a,h]anthracene	**ND**	0.0095	EPA 8270E/SIM	8-29-24	8-29-24	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*62*	*27-106*				
Pyrene-d10	*96*	*37-125*				
Terphenyl-d14	*96*	*37-110*				

Date of Report: September 6, 2024
Samples Submitted: August 27, 2024
Laboratory Reference: 2408-343
Project: 6694-002-05

TOTAL METALS
EPA 200.8/200.7

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6-20240826**					
Laboratory ID:	08-343-01					
Arsenic	**7.8**	3.3	EPA 200.8	8-30-24	8-30-24	
Iron	**1100**	50	EPA 200.7	9-3-24	9-3-24	
Manganese	**710**	10	EPA 200.7	9-3-24	9-3-24	
Client ID:	**MW-7-20240822**					
Laboratory ID:	08-343-02					
Arsenic	**8.9**	3.3	EPA 200.8	8-30-24	8-30-24	
Iron	**620**	50	EPA 200.7	9-3-24	9-3-24	
Lead	**ND**	1.1	EPA 200.8	8-30-24	8-30-24	
Manganese	**310**	10	EPA 200.7	9-3-24	9-3-24	
Nickel	**ND**	22	EPA 200.8	8-30-24	8-30-24	
Client ID:	**MW-8-20240822**					
Laboratory ID:	08-343-03					
Iron	**300**	50	EPA 200.7	9-3-24	9-3-24	
Manganese	**430**	10	EPA 200.7	9-3-24	9-3-24	
Client ID:	**MW-10-20240826**					
Laboratory ID:	08-343-04					
Iron	**12000**	50	EPA 200.7	9-3-24	9-3-24	
Lead	**ND**	1.1	EPA 200.8	8-30-24	8-30-24	
Manganese	**1200**	10	EPA 200.7	9-3-24	9-3-24	
Client ID:	**SWS1-20240826**					
Laboratory ID:	08-343-05					
Iron	**21000**	50	EPA 200.7	9-3-24	9-3-24	
Lead	**1.5**	1.1	EPA 200.8	8-30-24	8-30-24	
Manganese	**1800**	10	EPA 200.7	9-3-24	9-3-24	

Date of Report: September 6, 2024
Samples Submitted: August 27, 2024
Laboratory Reference: 2408-343
Project: 6694-002-05

DISSOLVED METALS
EPA 200.7

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6-20240826**					
Laboratory ID:	08-343-01					
Iron	**800**	56	EPA 200.7		9-3-24	
Manganese	**640**	11	EPA 200.7		9-3-24	
Client ID:	**MW-7-20240822**					
Laboratory ID:	08-343-02					
Iron	**ND**	56	EPA 200.7		9-3-24	
Manganese	**280**	11	EPA 200.7		9-3-24	
Client ID:	**MW-8-20240822**					
Laboratory ID:	08-343-03					
Iron	**61**	56	EPA 200.7		9-3-24	
Manganese	**420**	11	EPA 200.7		9-3-24	
Client ID:	**MW-10-20240826**					
Laboratory ID:	08-343-04					
Iron	**13000**	56	EPA 200.7		9-3-24	
Manganese	**1400**	11	EPA 200.7		9-3-24	

Date of Report: September 6, 2024
Samples Submitted: August 27, 2024
Laboratory Reference: 2408-343
Project: 6694-002-05

AMMONIA (as Nitrogen)
SM 4500-NH_3 D
QUALITY CONTROL

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0828W1					
Ammonia	**ND**	0.053	SM 4500-NH3 D	8-28-24	8-28-24	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	08-274-05							
	ORIG DUP							
Ammonia	**ND** **ND**	NA	NA	NA	NA	NA	15	
MATRIX SPIKE								
Laboratory ID:	08-274-05							
	MS	MS		MS				
Ammonia	**5.12**	5.00	ND	102	75-111	NA	NA	
SPIKE BLANK								
Laboratory ID:	SB0828W1							
	SB	SB		SB				
Ammonia	**4.92**	5.00	NA	98	81-110	NA	NA	

Date of Report: September 6, 2024
Samples Submitted: August 27, 2024
Laboratory Reference: 2408-343
Project: 6694-002-05

TOTAL ALKALINITY
SM 2320B
QUALITY CONTROL

Matrix: Water
Units: mg CaCO3/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0829W1					
Total Alkalinity	**ND**	2.0	SM 2320B	8-29-24	8-29-24	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	08-369-01								
	ORIG	DUP							
Total Alkalinity	**100**	**100**	NA	NA	NA	NA	0	10	
SPIKE BLANK									
Laboratory ID:	SB0829W1								
	SB		SB		SB				
Total Alkalinity	**96.0**		100	NA	96	82-101	NA	NA	

Date of Report: September 6, 2024
Samples Submitted: August 27, 2024
Laboratory Reference: 2408-343
Project: 6694-002-05

TOTAL BICARBONATE
SM 2320B
QUALITY CONTROL

Matrix: Water
Units: mg CaCO3/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0829W1					
Bicarbonate	**ND**	2.0	SM 2320B	8-29-24	8-29-24	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	08-369-01								
	ORIG	DUP							
Bicarbonate	**100**	**100**	NA	NA	NA	NA	0	10	
SPIKE BLANK									
Laboratory ID:	SB0829W1								
	SB		SB		SB				
Bicarbonate	**96.0**		100	NA	96	82-101	NA	NA	

Date of Report: September 6, 2024
Samples Submitted: August 27, 2024
Laboratory Reference: 2408-343
Project: 6694-002-05

PAHs EPA 8270E/SIM
QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0829W1					
Benzo[a]anthracene	**ND**	0.010	EPA 8270E/SIM	8-29-24	8-29-24	
Chrysene	**ND**	0.010	EPA 8270E/SIM	8-29-24	8-29-24	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270E/SIM	8-29-24	8-29-24	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270E/SIM	8-29-24	8-29-24	
Benzo[a]pyrene	**ND**	0.010	EPA 8270E/SIM	8-29-24	8-29-24	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270E/SIM	8-29-24	8-29-24	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270E/SIM	8-29-24	8-29-24	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*53*	*27-106*				
Pyrene-d10	*78*	*37-125*				
Terphenyl-d14	*76*	*37-110*				

Date of Report: September 6, 2024
Samples Submitted: August 27, 2024
Laboratory Reference: 2408-343
Project: 6694-002-05

PAHs EPA 8270E/SIM
QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0829W1									
	SB	SBD	SB	SBD	SB	SBD				
Benzo[a]anthracene	**0.498**	**0.545**	0.500	0.500	100	109	55-116	9	22	
Chrysene	**0.427**	**0.475**	0.500	0.500	85	95	59-111	11	23	
Benzo[b]fluoranthene	**0.406**	**0.461**	0.500	0.500	81	92	62-115	13	27	
Benzo(j,k)fluoranthene	**0.448**	**0.481**	0.500	0.500	90	96	59-117	7	23	
Benzo[a]pyrene	**0.442**	**0.478**	0.500	0.500	88	96	64-109	8	24	
Indeno(1,2,3-c,d)pyrene	**0.402**	**0.459**	0.500	0.500	80	92	58-114	13	22	
Dibenz[a,h]anthracene	**0.421**	**0.461**	0.500	0.500	84	92	63-114	9	24	
Surrogate:										
2-Fluorobiphenyl					*64*	*56*	*27-106*			
Pyrene-d10					*80*	*80*	*37-125*			
Terphenyl-d14					*76*	*87*	*37-110*			

Date of Report: September 6, 2024
Samples Submitted: August 27, 2024
Laboratory Reference: 2408-343
Project: 6694-002-05

TOTAL METALS
EPA 200.8/200.7
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0829WH1					
Iron	**ND**	50	EPA 200.7	9-3-24	9-3-24	
Manganese	**ND**	10	EPA 200.7	9-3-24	9-3-24	
Laboratory ID:	MB0830WM1					
Arsenic	**ND**	3.3	EPA 200.8	8-30-24	8-30-24	
Lead	**ND**	1.1	EPA 200.8	8-30-24	8-30-24	
Nickel	**ND**	22	EPA 200.8	8-30-24	8-30-24	

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	08-140-06										
	ORIG	DUP									
Iron	**5560**	**5380**	NA	NA		NA		NA	3	20	
Manganese	**1370**	**1320**	NA	NA		NA		NA	4	20	
Laboratory ID:	08-322-01										
Arsenic	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Lead	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Nickel	**ND**	**ND**	NA	NA		NA		NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	08-140-06										
	MS	MSD	MS	MSD		MS	MSD				
Iron	**24400**	**24900**	20000	20000	5560	**94**	**97**	75-125	2	20	
Manganese	**1790**	**1780**	500	500	1370	**84**	**82**	75-125	1	20	
Laboratory ID:	08-322-01										
Arsenic	**117**	**111**	111	111	ND	**105**	**100**	75-125	5	20	
Lead	**109**	**107**	111	111	ND	**98**	**96**	75-125	2	20	
Nickel	**109**	**104**	111	111	ND	**99**	**94**	75-125	5	20	

Date of Report: September 6, 2024
Samples Submitted: August 27, 2024
Laboratory Reference: 2408-343
Project: 6694-002-05

DISSOLVED METALS
EPA 200.7
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0903D1					
Iron	**ND**	56	EPA 200.7		9-3-24	
Manganese	**ND**	11	EPA 200.7		9-3-24	

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	08-289-07										
	ORIG	DUP									
Iron	**17600**	**17600**	NA	NA		NA		NA	0	20	
Manganese	**1020**	**1010**	NA	NA		NA		NA	0	20	
MATRIX SPIKES											
Laboratory ID:	08-289-07										
	MS	MSD	MS	MSD		MS	MSD				
Iron	**103000**	**110000**	100000	100000	17600	**85**	**93**	75-125	7	20	
Manganese	**1480**	**1470**	556	556	1020	**84**	**81**	75-125	1	20	

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

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

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

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

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

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

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

I - Compound recovery is outside of the control limits.

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

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

L - The RPD is outside of the control limits.

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

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

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

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

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

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

Q - Surrogate recovery is outside of the control limits.

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

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

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

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

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

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

X - Sample extract treated with a mercury cleanup procedure.

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

X2 - Sample extract treated with a silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.

Z -

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

Chain of Custody

Page 1 of 1

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

Company: GEI
Project Number: 6694-002-05
Project Name: Go East
Project Manager: GL
Sampled by: JDE

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

Laboratory Number: 08-343

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	~~NWTPH-Gx~~	NWTPH-Gx/BTEX (8021☐ 8260☐)	~~NWTPH-Dx~~	NWTPH-Dx (SG Clean-up ☐)	~~Volatiles 8260~~	Halogenated Volatiles 8260	EDB EPA 8011 (Waters Only)	Semivolatiles 8270/SIM (with low-level PAHs)	PAHs 8270/SIM (low-level)	PCBs 8082	Organochlorine Pesticides 8081	Organophosphorus Pesticides 8270/SIM	Chlorinated Acid Herbicides 8151	Total ~~RCRA~~ Metals	Total ~~MTCA~~ Metals	TCLP Metals	HEM (oil and grease) 1664	total Fe, Mn	Diss. Fe, Mn	As total	Pb total	~~% Moisture~~ NO3 total
						NH3		Alk+Bicarb		CPAHs																	
1	MW-6-20240826	8/26/24	1315	W	6	X		X		X													X	X	X		
2	MW-7-20240822	8/22/24	1445		6					X													X	X	X	X	X
3	MW-8-20240822	8/22/24	1640		4																		X	X			
4	MW-10-20240826	8/26/24	1530		4																		X	X		X	
5	~~SW5~~-20240826 SW51 DP 8/27/24	8/26/24	1545		3																		X			X	

	Signature	Company	Date	Time
Relinquished		GEI	8/27/24	1530
Received		COSE	8/27/24	1530
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
Call Garret w/questions
F F = Field Filtered

Data Package: Standard ☐ Level III ☐ Level IV ☐
Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

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

March 25, 2025

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

Re: Analytical Data for Project 6694-002-05
Laboratory Reference No. 2503-127

Dear Garrett:

Enclosed are the analytical results and associated quality control data for samples submitted on March 10, 2025.

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

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

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: March 25, 2025
Samples Submitted: March 10, 2025
Laboratory Reference: 2503-127
Project: 6694-002-05

Case Narrative

Samples were collected on March 4, 5, 6 and 10, 2025 and received by the laboratory on March 10, 2025. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below. However the soil results for the QA/QC samples are reported on a wet-weight basis.

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

Date of Report: March 25, 2025
Samples Submitted: March 10, 2025
Laboratory Reference: 2503-127
Project: 6694-002-05

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
20250304-MW-7	03-127-01	Water	3-4-25	3-10-25	
20250305-MW-8	03-127-02	Water	3-5-25	3-10-25	
20250306-MW-3	03-127-03	Water	3-6-25	3-10-25	
20250306-MW-2	03-127-04	Water	3-6-25	3-10-25	
20250306-MW-6	03-127-05	Water	3-6-25	3-10-25	
20250310-MW-10	03-127-06	Water	3-10-25	3-10-25	
20250310-SWS-1	03-127-07	Water	3-10-25	3-10-25	

Date of Report: March 25, 2025
Samples Submitted: March 10, 2025
Laboratory Reference: 2503-127
Project: 6694-002-05

PAHs EPA 8270E/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**20250304-MW-7**					
Laboratory ID:	03-127-01					
Benzo[a]anthracene	**ND**	0.0095	EPA 8270E/SIM	3-11-25	3-11-25	
Chrysene	**ND**	0.0095	EPA 8270E/SIM	3-11-25	3-11-25	
Benzo[b]fluoranthene	**ND**	0.0095	EPA 8270E/SIM	3-11-25	3-11-25	
Benzo(j,k)fluoranthene	**ND**	0.0095	EPA 8270E/SIM	3-11-25	3-11-25	
Benzo[a]pyrene	**ND**	0.0095	EPA 8270E/SIM	3-11-25	3-11-25	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0095	EPA 8270E/SIM	3-11-25	3-11-25	
Dibenz[a,h]anthracene	**ND**	0.0095	EPA 8270E/SIM	3-11-25	3-11-25	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*68*	*27-106*				
Pyrene-d10	*77*	*37-125*				
Terphenyl-d14	*94*	*37-110*				
Client ID:	**20250306-MW-6**					
Laboratory ID:	03-127-05					
Benzo[a]anthracene	**ND**	0.0095	EPA 8270E/SIM	3-11-25	3-11-25	
Chrysene	**ND**	0.0095	EPA 8270E/SIM	3-11-25	3-11-25	
Benzo[b]fluoranthene	**ND**	0.0095	EPA 8270E/SIM	3-11-25	3-11-25	
Benzo(j,k)fluoranthene	**ND**	0.0095	EPA 8270E/SIM	3-11-25	3-11-25	
Benzo[a]pyrene	**ND**	0.0095	EPA 8270E/SIM	3-11-25	3-11-25	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0095	EPA 8270E/SIM	3-11-25	3-11-25	
Dibenz[a,h]anthracene	**ND**	0.0095	EPA 8270E/SIM	3-11-25	3-11-25	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*68*	*27-106*				
Pyrene-d10	*84*	*37-125*				
Terphenyl-d14	*90*	*37-110*				

Date of Report: March 25, 2025
Samples Submitted: March 10, 2025
Laboratory Reference: 2503-127
Project: 6694-002-05

pH
SM 4500-H B

Matrix: Water
Units: pH (@ 25ºC)

Analyte	Result	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**20250310-MW-10**				
Laboratory ID:	03-127-06				
pH	**6.8**	SM 4500-H B	3-12-25	3-12-25	
Client ID:	**20250310-SWS-1**				
Laboratory ID:	03-127-07				
pH	**7.4**	SM 4500-H B	3-12-25	3-12-25	

Date of Report: March 25, 2025
Samples Submitted: March 10, 2025
Laboratory Reference: 2503-127
Project: 6694-002-05

TOTAL DISSOLVED SOLIDS
SM 2540C

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**20250310-MW-10**					
Laboratory ID:	03-127-06					
Total Dissolved Solids	**330**	13	SM 2540C	3-13-25	0313-25	
Client ID:	**20250310-SWS-1**					
Laboratory ID:	03-127-07					
Total Dissolved Solids	**450**	13	SM 2540C	3-13-25	0313-25	

Date of Report: March 25, 2025
Samples Submitted: March 10, 2025
Laboratory Reference: 2503-127
Project: 6694-002-05

TURBIDITY
EPA 180.1

Matrix: Water
Units: NTU

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**20250310-MW-10**					
Laboratory ID:	03-127-06					
Turbidity	**310**	1.0	EPA 180.1	3-12-25	3-12-25	
Client ID:	**20250310-SWS-1**					
Laboratory ID:	03-127-07					
Turbidity	**88**	0.40	EPA 180.1	3-12-25	3-12-25	

Date of Report: March 25, 2025
Samples Submitted: March 10, 2025
Laboratory Reference: 2503-127
Project: 6694-002-05

TOTAL METALS
EPA 200.7/200.8

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**20250304-MW-7**					
Laboratory ID:	03-127-01					
Arsenic	**8.1**	3.3	EPA 200.8	3-14-25	3-14-25	
Iron	**1200**	50	EPA 200.7	3-14-25	3-14-25	
Lead	**ND**	1.1	EPA 200.8	3-14-25	3-14-25	
Manganese	**62**	10	EPA 200.7	3-14-25	3-14-25	
Nickel	**ND**	22	EPA 200.8	3-14-25	3-14-25	
Client ID:	**20250305-MW-8**					
Laboratory ID:	03-127-02					
Iron	**680**	50	EPA 200.7	3-14-25	3-14-25	
Manganese	**480**	10	EPA 200.7	3-14-25	3-14-25	
Client ID:	**20250306-MW-3**					
Laboratory ID:	03-127-03					
Iron	**390**	50	EPA 200.7	3-14-25	3-14-25	
Manganese	**190**	10	EPA 200.7	3-14-25	3-14-25	
Client ID:	**20250306-MW-2**					
Laboratory ID:	03-127-04					
Iron	**430**	50	EPA 200.7	3-14-25	3-14-25	
Manganese	**240**	10	EPA 200.7	3-14-25	3-14-25	
Client ID:	**20250306-MW-6**					
Laboratory ID:	03-127-05					
Arsenic	**7.9**	3.3	EPA 200.8	3-14-25	3-14-25	
Iron	**2700**	50	EPA 200.7	3-14-25	3-14-25	
Manganese	**850**	10	EPA 200.7	3-14-25	3-14-25	
Client ID:	**20250310-MW-10**					
Laboratory ID:	03-127-06					
Iron	**15000**	50	EPA 200.7	3-14-25	3-14-25	
Lead	**7.5**	1.1	EPA 200.8	3-14-25	3-14-25	
Manganese	**1200**	10	EPA 200.7	3-14-25	3-14-25	

Date of Report: March 25, 2025
Samples Submitted: March 10, 2025
Laboratory Reference: 2503-127
Project: 6694-002-05

TOTAL METALS
EPA 200.7/200.8

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**20250310-SWS-1**					
Laboratory ID:	03-127-07					
Iron	**14000**	50	EPA 200.7	3-14-25	3-14-25	
Lead	**ND**	1.1	EPA 200.8	3-14-25	3-14-25	
Manganese	**2100**	10	EPA 200.7	3-14-25	3-14-25	

Date of Report: March 25, 2025
Samples Submitted: March 10, 2025
Laboratory Reference: 2503-127
Project: 6694-002-05

TOTAL ALKALINITY
SM 2320B

Matrix: Water
Units: mg CaCO3/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**20250304-MW-7**					
Laboratory ID:	03-127-01					
Total Alkalinity	**110**	2.0	SM 2320B	3-15-25	3-15-25	
Client ID:	**20250305-MW-8**					
Laboratory ID:	03-127-02					
Total Alkalinity	**170**	2.0	SM 2320B	3-15-25	3-15-25	
Client ID:	**20250306-MW-3**					
Laboratory ID:	03-127-03					
Total Alkalinity	**110**	2.0	SM 2320B	3-15-25	3-15-25	
Client ID:	**20250306-MW-2**					
Laboratory ID:	03-127-04					
Total Alkalinity	**120**	2.0	SM 2320B	3-15-25	3-15-25	
Client ID:	**20250306-MW-6**					
Laboratory ID:	03-127-05					
Total Alkalinity	**260**	2.0	SM 2320B	3-15-25	3-15-25	
Client ID:	**20250310-MW-10**					
Laboratory ID:	03-127-06					
Total Alkalinity	**270**	2.0	SM 2320B	3-15-25	3-15-25	
Client ID:	**20250310-SWS-1**					
Laboratory ID:	03-127-07					
Total Alkalinity	**430**	2.0	SM 2320B	3-15-25	3-15-25	

Date of Report: March 25, 2025
Samples Submitted: March 10, 2025
Laboratory Reference: 2503-127
Project: 6694-002-05

TOTAL BICARBONATE
SM 2320B

Matrix: Water
Units: mg CaCO3/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**20250304-MW-7**					
Laboratory ID:	03-127-01					
Bicarbonate	**110**	2.0	SM 2320B	3-15-25	3-15-25	
Client ID:	**20250305-MW-8**					
Laboratory ID:	03-127-02					
Bicarbonate	**170**	2.0	SM 2320B	3-15-25	3-15-25	
Client ID:	**20250306-MW-3**					
Laboratory ID:	03-127-03					
Bicarbonate	**110**	2.0	SM 2320B	3-15-25	3-15-25	
Client ID:	**20250306-MW-2**					
Laboratory ID:	03-127-04					
Bicarbonate	**120**	2.0	SM 2320B	3-15-25	3-15-25	
Client ID:	**20250306-MW-6**					
Laboratory ID:	03-127-05					
Bicarbonate	**250**	2.0	SM 2320B	3-15-25	3-15-25	
Client ID:	**20250310-MW-10**					
Laboratory ID:	03-127-06					
Bicarbonate	**260**	2.0	SM 2320B	3-15-25	3-15-25	
Client ID:	**20250310-SWS-1**					
Laboratory ID:	03-127-07					
Bicarbonate	**430**	2.0	SM 2320B	3-15-25	3-15-25	

Date of Report: March 25, 2025
Samples Submitted: March 10, 2025
Laboratory Reference: 2503-127
Project: 6694-002-05

AMMONIA (as Nitrogen)
SM 4500-NH_3 D

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**20250304-MW-7**					
Laboratory ID:	03-127-01					
Ammonia	**ND**	0.053	SM 4500-NH3 D	3-25-25	3-25-25	
Client ID:	**20250305-MW-8**					
Laboratory ID:	03-127-02					
Ammonia	**ND**	0.053	SM 4500-NH3 D	3-25-25	3-25-25	
Client ID:	**20250306-MW-6**					
Laboratory ID:	03-127-05					
Ammonia	**0.11**	0.053	SM 4500-NH3 D	3-25-25	3-25-25	
Client ID:	**20250310-MW-10**					
Laboratory ID:	03-127-06					
Ammonia	**0.55**	0.053	SM 4500-NH3 D	3-25-25	3-25-25	
Client ID:	**20250310-SWS-1**					
Laboratory ID:	03-127-07					
Ammonia	**1.5**	0.053	SM 4500-NH3 D	3-25-25	3-25-25	

Date of Report: March 25, 2025
Samples Submitted: March 10, 2025
Laboratory Reference: 2503-127
Project: 6694-002-05

DISSOLVED METALS
EPA 200.7

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**20250304-MW-7**					
Laboratory ID:	03-127-01					
Iron	**ND**	56	EPA 200.7		3-14-25	
Manganese	**69**	11	EPA 200.7		3-14-25	
Client ID:	**20250305-MW-8**					
Laboratory ID:	03-127-02					
Iron	**240**	56	EPA 200.7		3-14-25	
Manganese	**490**	11	EPA 200.7		3-14-25	
Client ID:	**20250306-MW-3**					
Laboratory ID:	03-127-03					
Iron	**ND**	56	EPA 200.7		3-14-25	
Manganese	**130**	11	EPA 200.7		3-14-25	
Client ID:	**20250306-MW-2**					
Laboratory ID:	03-127-04					
Iron	**ND**	56	EPA 200.7		3-14-25	
Manganese	**210**	11	EPA 200.7		3-14-25	
Client ID:	**20250306-MW-6**					
Laboratory ID:	03-127-05					
Iron	**900**	56	EPA 200.7		3-14-25	
Manganese	**750**	11	EPA 200.7		3-14-25	
Client ID:	**20250310-MW-10**					
Laboratory ID:	03-127-06					
Iron	**ND**	56	EPA 200.7	3-13-25	3-14-25	
Manganese	**900**	11	EPA 200.7	3-13-25	3-14-25	

Date of Report: March 25, 2025
Samples Submitted: March 10, 2025
Laboratory Reference: 2503-127
Project: 6694-002-05

PAHs EPA 8270E/SIM
QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0311W1					
Benzo[a]anthracene	**ND**	0.010	EPA 8270E/SIM	3-11-25	3-11-25	
Chrysene	**ND**	0.010	EPA 8270E/SIM	3-11-25	3-11-25	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270E/SIM	3-11-25	3-11-25	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270E/SIM	3-11-25	3-11-25	
Benzo[a]pyrene	**ND**	0.010	EPA 8270E/SIM	3-11-25	3-11-25	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270E/SIM	3-11-25	3-11-25	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270E/SIM	3-11-25	3-11-25	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*74*	*27-106*				
Pyrene-d10	*86*	*37-125*				
Terphenyl-d14	*100*	*37-110*				

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0311W1									
	SB	SBD	SB	SBD	SB	SBD				
Benzo[a]anthracene	**0.415**	**0.397**	0.500	0.500	83	79	55-116	4	22	
Chrysene	**0.461**	**0.442**	0.500	0.500	92	88	59-111	4	23	
Benzo[b]fluoranthene	**0.447**	**0.418**	0.500	0.500	89	84	62-115	7	27	
Benzo(j,k)fluoranthene	**0.464**	**0.472**	0.500	0.500	93	94	59-117	2	23	
Benzo[a]pyrene	**0.447**	**0.420**	0.500	0.500	89	84	64-109	6	24	
Indeno(1,2,3-c,d)pyrene	**0.433**	**0.423**	0.500	0.500	87	85	58-114	2	22	
Dibenz[a,h]anthracene	**0.449**	**0.433**	0.500	0.500	90	87	63-114	4	24	
Surrogate:										
2-Fluorobiphenyl					*58*	*58*	*27-106*			
Pyrene-d10					*84*	*81*	*37-125*			
Terphenyl-d14					*88*	*89*	*37-110*			

Date of Report: March 25, 2025
Samples Submitted: March 10, 2025
Laboratory Reference: 2503-127
Project: 6694-002-05

TOTAL DISSOLVED SOLIDS
SM 2540C
QUALITY CONTROL

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0313W1					
Total Dissolved Solids	**ND**	13	SM 2540C	3-13-25	0313-25	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	03-150-01								
	ORIG	DUP							
Total Dissolved Solids	**120**	**132**	NA	NA	NA	NA	10	29	
SPIKE BLANK									
Laboratory ID:	SB0313-W1								
	SB		SB		SB				
Total Dissolved Solids	**481**		500	NA	96	76-120	NA	NA	

Date of Report: March 25, 2025
Samples Submitted: March 10, 2025
Laboratory Reference: 2503-127
Project: 6694-002-05

TURBIDITY
EPA 180.1
QUALITY CONTROL

Matrix: Water
Units: NTU

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0312W1					
Turbidity	**ND**	0.10	EPA 180.1	3-12-25	3-12-25	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	03-127-06								
	ORIG	DUP							
Turbidity	**310**	**310**	NA	NA	NA	NA	0	19	

Date of Report: March 25, 2025
Samples Submitted: March 10, 2025
Laboratory Reference: 2503-127
Project: 6694-002-05

TOTAL METALS
EPA 200.7/200.8
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0314WH2					
Iron	**ND**	50	EPA 200.7	3-14-25	3-14-25	
Manganese	**ND**	10	EPA 200.7	3-14-25	3-14-25	
Laboratory ID:	MB0314WM1					
Arsenic	**ND**	3.3	EPA 200.8	3-14-25	3-14-25	
Lead	**ND**	1.1	EPA 200.8	3-14-25	3-14-25	
Nickel	**ND**	22	EPA 200.8	3-14-25	3-14-25	

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	03-127-01										
	ORIG	DUP									
Iron	**1160**	**1180**	NA	NA		NA		NA	2	20	
Manganese	**61.6**	**62.4**	NA	NA		NA		NA	1	20	
Laboratory ID:	02-309-10										
Arsenic	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Lead	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Nickel	**ND**	**ND**	NA	NA		NA		NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	03-127-01										
	MS	MSD	MS	MSD		MS	MSD				
Iron	**22600**	**22600**	20000	20000	1160	**107**	**107**	75-125	0	20	
Manganese	**595**	**580**	500	500	61.6	**107**	**104**	75-125	3	20	
Laboratory ID:	02-309-10										
Arsenic	**97.3**	**96.9**	111	111	ND	**88**	**87**	75-125	0	20	
Lead	**102**	**98.5**	111	111	ND	**92**	**89**	75-125	3	20	
Nickel	**105**	**102**	111	111	ND	**94**	**92**	75-125	2	20	

Date of Report: March 25, 2025
Samples Submitted: March 10, 2025
Laboratory Reference: 2503-127
Project: 6694-002-05

TOTAL ALKALINITY
SM 2320B
QUALITY CONTROL

Matrix: Water
Units: mg CaCO3/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0315W1					
Total Alkalinity	**1.0**	2.0	SM 2320B	3-15-25	3-15-25	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	03-127-01								
	ORIG	DUP							
Total Alkalinity	**106**	**104**	NA	NA	NA	NA	2	10	
SPIKE BLANK									
Laboratory ID:	SB0315W1								
	SB		SB		SB				
Total Alkalinity	**98.0**		100	NA	98	82-101	NA	NA	

Date of Report: March 25, 2025
Samples Submitted: March 10, 2025
Laboratory Reference: 2503-127
Project: 6694-002-05

TOTAL BICARBONATE
SM 2320B
QUALITY CONTROL

Matrix: Water
Units: mg CaCO3/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0315W1					
Bicarbonate	**1.0**	2.0	SM 2320B	3-15-25	3-15-25	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	03-127-01								
	ORIG	DUP							
Bicarbonate	**106**	**104**	NA	NA	NA	NA	2	10	
SPIKE BLANK									
Laboratory ID:	SB0315W1								
	SB		SB		SB				
Bicarbonate	**98.0**		100	NA	98	82-101	NA	NA	

Date of Report: March 25, 2025
Samples Submitted: March 10, 2025
Laboratory Reference: 2503-127
Project: 6694-002-05

AMMONIA (as Nitrogen)
SM 4500-NH_3 D
QUALITY CONTROL

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0325W1					
Ammonia	**ND**	0.053	SM 4500-NH3 D	3-25-25	3-25-25	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	03-127-01							
	ORIG DUP							
Ammonia	**ND** **ND**	NA	NA	NA	NA	NA	15	
MATRIX SPIKE								
Laboratory ID:	03-127-01							
	MS	MS		MS				
Ammonia	**4.50**	5.00	ND	90	75-111	NA	NA	
SPIKE BLANK								
Laboratory ID:	SB0325W1							
	SB	SB		SB				
Ammonia	**5.18**	5.00	NA	104	81-110	NA	NA	

Date of Report: March 25, 2025
Samples Submitted: March 10, 2025
Laboratory Reference: 2503-127
Project: 6694-002-05

DISSOLVED METALS
EPA 200.7
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0313F1					
Iron	**ND**	56	EPA 200.7	3-13-25	3-14-25	
Manganese	**ND**	11	EPA 200.7	3-13-25	3-14-25	

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	03-127-01										
	ORIG	DUP									
Iron	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Manganese	**69.3**	**71.9**	NA	NA		NA		NA	4	20	
MATRIX SPIKES											
Laboratory ID:	03-127-01										
	MS	MSD	MS	MSD		MS	MSD				
Iron	**24700**	**25000**	22200	22200	ND	**111**	**113**	75-125	1	20	
Manganese	**641**	**645**	556	556	69.3	**103**	**104**	75-125	1	20	

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

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

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

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

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

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

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

I - Compound recovery is outside of the control limits.

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

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

L - The RPD is outside of the control limits.

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

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

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

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

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

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

Q - Surrogate recovery is outside of the control limits.

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

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

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

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

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

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

X - Sample extract treated with a mercury cleanup procedure.

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

X2 - Sample extract treated with a silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.

Z -

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

Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
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Phone: (425) 883-3881 • www.onsite-env.com

Page 1 of 1

Company: GEI
Project Number: 0694-002-05
Project Name: Go Fast
Project Manager: GL
Sampled by: JDE

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

Laboratory Number: 03-127

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers
1	20250304-mw-7	3/4	1200	W	6
2	20250305-mw-8	3/5	1200		4
3	20250306-mw-3	3/6	1200		3
4	20250306-mw-2		1400		3
5	20250306-mw-6		1600		6
6	20250310-mw-10	3/10	1300		4
7	20250310-SWS-1		1430		3

Analysis	1	2	3	4	5	6	7
NWTPH-HCID							
NWTPH-Gx/BTEX (8021☐ 8260☐)							
NWTPH-Gx							
NWTPH-Dx (SG Clean-up☐)							
Volatiles 8260							
Halogenated Volatiles 8260							
EDB EPA 8011 (Waters Only)							
Semivolatiles 8270/SIM (with low-level PAHs)							
PAHs 8270/SIM (low-level)							
~~PCBs 8082~~ cPAHs	X				X		
Organochlorine Pesticides 8081							
Organophosphorus Pesticides 8270/SIM							
Chlorinated Acid Herbicides 8151							
~~Total RCRA Metals~~ Field Params						X	X
~~Total~~ TCLP Metals Fe, Mn, As, Pb	X						
~~Total Metals~~ Fe, Mn, Pb (tot)						X	X
HEM (oil and grease) 1664							
Alk + Bicarb	X	X	X	X	X	X	X
NH_3	X	X			X	X	X
Fe, Mn (TCLP)	X	X	X	X	X	X	X
Fe, Mn, As (tot)					X	X	X
~~Total Metals~~ Fe, Mn (tot)		X	X	X			

	Signature	Company	Date	Time
Relinquished		GEI	3/10	1815
Received		GEL	3/10/25	1815
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
~~Field~~ Parameters: pH, TDS, ~~EC~~, ~~SPC~~, Turbidity, ~~Salinity~~ ~~ORP~~, ~~temp~~ DO
(whatever you can do in-house)
Please lab filter 20250310-mw-10

Data Package: Standard ☐ Level III ☐ Level IV ☐

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

Appendix C
Trend Analysis

	MW2		
Date	Alk	Diss Fe	Diss Mn
12/9/2021	110	48	210
3/11/2022	120	28	270
5/3/2022	120	28	250
6/20/2022	110	28	200
9/21/2022	110	28	220
4/5/2023	110	28	210
10/6/2023	120	76	250
8/26/2024	110	100	230
3/6/2025	120	28	210
S	**2**	**5**	**-4**
Var S	**67**	**64**	**87**
Z	**0.12**	**0.50**	**-0.32**
p	**0.90**	**0.62**	**0.75**

	MW3		
Date	Alk	Diss Fe	Diss Mn
12/9/2021	110	32	140
3/11/2022	110	28	170
5/3/2022	110	28	180
6/20/2022	100	28	150
9/21/2022	110	28	140
4/5/2023	110	28	140
10/6/2023	110	56	150
8/26/2024	110	28	140
3/6/2025	110	28	130
S	**2**	**-3**	**-15**
Var S	**27**	**48**	**82**
Z	**0.19**	**-0.29**	**-1.54**
p	**0.85**	**0.77**	**0.12**

	MW6		
Date	Alk	Diss Fe	Diss Mn
12/9/2021	190	62	1800
3/11/2022	200	74	2000
5/3/2022	230	67	2000
6/20/2022	220	310	2400
9/21/2022	190	330	1700
4/5/2023	220	580	1500
10/6/2023	230	700	1200
8/26/2024	230	800	640
3/6/2025	260	900	750
S	**21**	**34**	**-23**
Var S	**86**	**92**	**91**
Z	**2.15**	**3.44**	**-2.31**
p	**0.03**	**0.001**	**0.02**

	MW7		
Date	Alk	Diss Fe	Diss Mn
12/9/2021	100	28	250
3/11/2022	94	28	62
5/3/2022	110	28	32
6/20/2022	96	28	37
9/21/2022	100	28	74
4/5/2023	100	28	60
10/6/2023	100	28	16
8/26/2024	100	28	280
3/6/2025	110	28	69
S	**11**	**0**	**0**
Var S	**74**	**0**	**92**
Z	**1.16**	**0.00**	**0.00**
p	**0.25**	**1.00**	**1.00**

	MW8		
Date	Alk	Diss Fe	Diss Mn
12/9/2021	230	120	1900
3/11/2022	220	99	2200
5/3/2022	200	65	1700
6/20/2022	210	190	1800
9/21/2022	180	28	1300
4/5/2023	190	82	1400
10/6/2023	160	80	260
8/26/2024	180	61	420
3/6/2025	170	240	490
S	**-27**	**-4**	**-24**
Var S	**91**	**92**	**92**
Z	**-2.73**	**-0.31**	**-2.40**
p	**0.01**	**0.75**	**0.02**

Notes:
Yellow highlighting indicates trend is significant at 5% level.