GeoEngineers

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Memorandum

To:	Alan Noell, PhD, PE
From:	Garrett Leque, LG; Terry McPhetridge, LG, LHG
Date:	June 25, 2024
File:	26410-001-02
Subject:	Post-RI Groundwater and Surface Water Sampling

This memorandum transmits groundwater and surface water sampling data collected at the Go East Landfill (the Site) located in Snohomish County, Washington. The Site location is shown in Figure 1. The groundwater and surface water sampling data attached to this memorandum includes data previously presented in the Remedial Investigation/Feasibility Study (RI/FS) Report for the Site (GeoEngineers 2024), as well as two post-RI/FS sampling events performed in March-April 2023 and October 2023. The two post-RI/FS sampling events were performed in accordance with the landfill permit.

Table 1 presents a summary of the data collected from 2021 through 2023 for the primary landfill contaminants of concern and selected additional analytes. Sampling locations are shown in Figure 2. Laboratory data reports and data validation reports for the two post-RI/FS sampling events are provided in Attachment A.

These data will be uploaded to Ecology's Electronic Information Management (EIM) system.

References

GeoEngineers 2024. Remedial Investigation/Feasibility Study. Go East Corp Landfill Site. For Washington State Department of Ecology. May 17, 2024.

We hope this meets your needs. Feel free to contact Garrett Leque at 360.647.1510 if you have any questions.

GRL:TRM:cdb

Attachments:

Table 1. Groundwater and Surface Water Data 2021-2023

Figure 1. Vicinity Map

Figure 2. Site Plan

Attachment A. Laboratory Data and Data Validation

Table 1

Groundwater and Surface Water Data 2021-2023

Go East Corp Landfill Site

Everett, Washington

			Location ID	MW1						MW2			
			Sample Date	4/6/2021	3/30/2022	5/4/2022	6/28/2022	9/22/2022	3/31/2023	10/5/2023	4/6/2021	12/8/2021	3/18/2022	5/5/2022
Method	Analyte	Groundwater and Surface Water Cleanup Level	Units											
Conventionals	Total Organic Carbon	NE	mg/L	**0.77**	--	--	1 U	1 U	**1.3**	1 U	**0.56**	--	--	--
	Alkalinity as CaCO3	NE	mg/L	**87**	**86**	**86**	**92**	**80**	**100**	**78**	**110**	**120**	**120**	**110**
	Bicarbonate Ion (HCO3)	NE	mg/L	**87**	**86**	**86**	**92**	**80**	**100**	**78**	**110**	**120**	**120**	**110**
	Ammonia (Total as N)	NE	mg/L	--	**0.21**	**0.13**	**0.18**	**0.16**	0.05 U	0.05 U	--	**0.097**	**0.11**	**0.14**
	Total Dissolved Solids	NE	mg/L	**120**	**100**	**120**	**130**	**130**	**43**	**68**	**160**	**150**	**160**	**170**
	Chloride	NE	mg/L	**3.6**	**3.9**	**2.3**	**3**	**2.3**	2 U	**3.5**	**4.6**	**5.7**	**5.1**	**3.4**
	Nitrate	NE	mg/L	0.15 U	0.05 U	0.05 UJ	0.05 U	0.05 U	**0.16 J**	**0.11**	0.15 U	0.05 U	**0.079 J**	0.05 UJ
	Sulfate	NE	mg/L	**1.2**	5 U	5 U	5 U	**5.2**	5 U	**5.2**	**8.1**	**12**	**10**	**7.7**
Total Metals	Arsenic	7.3	ug/L	**5.1**	**5.8**	**5.3**	**5.7**	**5.3**	3.3 U	**7.9**	**4.7**	**4.8**	**5.3**	**11**
	Iron	3,010	ug/L	**860**	**1900**	**2200**	**580**	**960**	**14000**	**1900**	**1200**	**370**	**1600**	**6200**
	Lead	2.5	ug/L	--	1.1 U	1.1 U	1.1 U	--		**2.2**	--	1.1 U	1.1 U	**2**
	Magnesium	NE	ug/L	**8900**	**10000**	**9900**	**8600**	**8300**	**4400**	**7300**	**14000**	**18000**	**17000**	**15000**
	Manganese	354	ug/L	**270**	**390**	**360**	**290**	**260**	**340**	**230**	**230**	**300**	**310**	**350**
	Nickel	26.3	ug/L	--	**86**	22 U	22 U	--		22 U	--	22 U	22 U	22 U
Dissolved Metals	Arsenic	7.3	ug/L	**4.9**	**5**	**4.9**	**5.4**	**3.9**	3 U	**7.1**	**4.5**	**4.2**	**4.6**	**13**
	Calcium	NE	ug/L	**16000**	**18000**	**17000**	**21000**	**17000**	**6800**	**18000**	**20000**	**22000**	**23000**	**22000**
	Iron	3,010	ug/L	**74**	**330**	**440**	**220**	**160**	56 U	56 U	**48**	56 U	56 U	56 U
	Lead	2.5	ug/L	--	1 U	1 U	1 U	--		1 U	--	1 U	1 U	1 U
	Magnesium	NE	ug/L	**8500**	**9200**	**8800**	**9900**	**9200**	**1200**	**7000**	**13000**	**16000**	**15000**	**13000**
	Manganese	354	ug/L	**240**	**350**	**310**	**330**	**240**	11 U	**190**	**210**	**270**	**250**	**200**
	Nickel	26.3	ug/L	--	20 U	20 U	20 U	--		20 U	--	20 U	20 U	20 U
	Potassium	NE	ug/L	**2700**	**2500**	**2100**	**2800**	**2100**	1100 U	**1800**	**3000**	**2000**	**2700**	**2700**
	Sodium	NE	ug/L	**4900**	**5700**	**5400**	**6100**	**5100**	1100 U	**3900**	**6000**	**7000**	**6600**	**6400**
Pesticides	cis-Chlordane	0.005	ug/L	--	0.0049 U	0.0048 U	0.0048 U	--	--	--	--	0.0047 U	0.0048 U	0.0049 U
	Heptachlor	0.005	ug/L	--	0.0049 U	0.0048 U	0.0048 U	--	--	--	--	0.0047 U	0.0048 U	0.0049 U
PAHs	cPAH TEQ	0.0095	ug/L	--	0.00732 U	0.00755 U	0.00717 U	--	--	--	--	0.00717 U	0.00717 U	0.00747 U

Table 1

Groundwater and Surface Water Data 2021-2023

Go East Corp Landfill Site

Everett, Washington

			Location ID	MW2				MW3							
			Sample Date	6/28/2022	9/22/2022	4/7/2023	10/4/2023	4/6/2021	12/6/2021	3/9/2022	4/27/2022	6/21/2022	9/20/2022	4/3/2023	10/4/2023
Method	Analyte	Groundwater and Surface Water Cleanup Level	Units												
Conventionals	Total Organic Carbon	NE	mg/L	1 U	1 U	1 U	1 U	0.5 U	--	--	--	1 U	1 U	1 U	1 U
	Alkalinity as CaCO3	NE	mg/L	**110**	**110**	**120**	**110**	**110**	**110**	**110**	**100**	**110**	**110**	**110**	**110**
	Bicarbonate Ion (HCO3)	NE	mg/L	**110**	**110**	**120**	**110**	**110**	**110**	**110**	**100**	**110**	**110**	**110**	**110**
	Ammonia (Total as N)	NE	mg/L	**0.094**	**0.1**	**0.1**	**0.057**	--	**0.059**	**0.061**	**0.06**	0.05 U	**0.05**	**0.13**	0.05 U
	Total Dissolved Solids	NE	mg/L	**150**	**160**	**130**	**150 J**	**170**	**140 J**	**170**	**170**	**170**	**160**	**170**	**150**
	Chloride	NE	mg/L	**4**	**3**	**4.7**	**5**	**6.5**	**6.3**	**6.6**	**6.4**	**11**	**6**	**5**	**7.4**
	Nitrate	NE	mg/L	0.05 U	0.05 U	**0.066**	0.05 U	**0.25**	0.05 UJ	**0.09**	0.05 U	0.05 UJ	0.05 U	0.05 U	**0.067**
	Sulfate	NE	mg/L	**12**	**8.8**	**11**	**7**	**14**	**14**	**9.7**	**13**	**15**	**13**	**13**	**13**
Total Metals	Arsenic	7.3	ug/L	**5.3**	**4.5**	**5.8**	**7.4**	**4.4**	**3.6**	**5**	**3.6**	**4.6**	3.3 U	**13**	**4.9**
	Iron	3,010	ug/L	**690**	**1100**	**2600**	**5400**	**4100**	**110**	**2500**	**3800**	**1400**	**610**	**4000**	**1500**
	Lead	2.5	ug/L	--	--		**1.7**	--	1.1 U	**1.2**	**1.1**	1.1 U	--		
	Magnesium	NE	ug/L	**16000**	**14000**	**15000**	**14000**	**14000**	**15000**	**14000**	**14000**	**14000**	**13000**	**14000**	**13000**
	Manganese	354	ug/L	**250**	**230**	**300**	**330**	**260**	**190**	**240**	**220**	**190**	**160**	**220**	**190**
	Nickel	26.3	ug/L	22 U	--		22 U	--	22 U	22 U	22 U	22 U	--		22 U
Dissolved Metals	Arsenic	7.3	ug/L	**4.3**	**4.2**	**4**	**5.9**	**3.2**	**3.4**	**3.4**	**3.1**	**4.1**	**3.4**	**12**	**4.3**
	Calcium	NE	ug/L	**24000**	**21000**	**24000**	**22000**	**22000**	**23000**	**24000**	**23000**	**24000**	**23000**	**26000**	**24000**
	Iron	3,010	ug/L	56 U	56 U	**76**	**100**	**32**	56 U	56 U	56 U	56 U	56 U	**56**	56 U
	Lead	2.5	ug/L	--	--		1 U	--	1 U	1 U	1 U	1 U	--		
	Magnesium	NE	ug/L	**15000**	**15000**	**15000**	**13000**	**12000**	**14000**	**13000**	**13000**	**13000**	**14000**	**14000**	**14000**
	Manganese	354	ug/L	**220**	**210**	**250**	**230**	**140**	**170**	**180**	**150**	**140**	**140**	**150**	**140**
	Nickel	26.3	ug/L	20 U	--		20 U	--	20 U	20 U	20 U	20 U	--		20 U
	Potassium	NE	ug/L	**2500**	**2300**	**2900**	**2700**	**2800**	**1900**	**1900**	**2400**	**2300**	**2200**	**3000**	**2400**
	Sodium	NE	ug/L	**6800**	**6300**	**6700**	**5000**	**7200**	**8200**	**7000**	**7000**	**8000**	**7400**	**7200**	**8400**
Pesticides	cis-Chlordane	0.005	ug/L	--	--	--	--	--	0.0047 U	0.005 U	0.005 U	--	--	--	--
	Heptachlor	0.005	ug/L	--	--	--	--	--	0.0047 U	0.005 U	0.005 U	--	--	--	--
PAHs	cPAH TEQ	0.0095	ug/L	--	--	--	--	--	0.00717 U	0.00732 U	0.00755 U	--	--	--	--

Table 1

Groundwater and Surface Water Data 2021-2023

Go East Corp Landfill Site

Everett, Washington

			Location ID	MW5									
			Sample Date	12/7/2021	2/3/2022	3/7/2022	4/7/2022	5/18/2022	6/10/2022	6/24/2022	8/3/2022	9/22/2022	4/14/2023	10/3/2023
Method	Analyte	Groundwater and Surface Water Cleanup Level	Units											
Conventionals	Total Organic Carbon	NE	mg/L	--	--	--	--	--	--	1 U	1 U	1 U	1 U	1 U
	Alkalinity as CaCO3	NE	mg/L	--	--	120	120	120 J	120	120	120	120	130	130
	Bicarbonate Ion (HCO3)	NE	mg/L	--	--	120	120	120 J	120	120	120	120	130	130
	Ammonia (Total as N)	NE	mg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.061	0.05 U	0.05 U
	Total Dissolved Solids	NE	mg/L	160	160	150	160	200	170	170	190	170	180	200
	Chloride	NE	mg/L	7.3	7.1	6.2	6.7	6.9	7.1	6.4	2 U	5.9	6.9	12
	Nitrate	NE	mg/L	0.21 J	0.063	0.05 U	0.05 U	0.05 UJ	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
	Sulfate	NE	mg/L	14	15	14	14	14	19	14	14	13	15	16
Total Metals	Arsenic	7.3	ug/L	5.1	5.8	6.6	6.6	7.8	5.7	6.5	6	4.8	6.7	4.8
	Iron	3,010	ug/L	360	1000	130 J	200	600	470	220	240	380	1700	240
	Lead	2.5	ug/L	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	--		1.1 U
	Magnesium	NE	ug/L	17000	15000	13000	15000	14000	15000	140000	13000	15000	16000	16000
	Manganese	354	ug/L	390	290	270	230	290	260	290	150	170	300	190
	Nickel	26.3	ug/L	22 U	22 U	22 U	22 U	22 U	22 U	22 U	22 U	--		22 U
Dissolved Metals	Arsenic	7.3	ug/L	4.2	4.7	5.7	4.9	5.7	5.7	6	5.2	5.4	5.6	5
	Calcium	NE	ug/L	27000	26000	28000	24000	27000	28000	29000	27000	27000	31000	30000
	Iron	3,010	ug/L	56 U	56 U	65	56 U	56 U	56 U	56 U	56 U	56 U	56 U	57
	Lead	2.5	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--		1 U
	Magnesium	NE	ug/L	15000	14000	14000	12000	16000	14000	14000	14000	16000	16000	17000
	Manganese	354	ug/L	330	260	280	190	300	250	260	110	120	160	160
	Nickel	26.3	ug/L	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	--		20 U
	Potassium	NE	ug/L	2000	3600	2000	2400	2500	2700	2300	2500	2500	2900	2800
	Sodium	NE	ug/L	7400	6600	6500	6700	7200	7200	7700	6700	7000	7000	6500
Pesticides	cis-Chlordane	0.005	ug/L	0.0048 U	0.0048 U	0.0048 U	0.0048 U	0.0048 U	0.0048 U	--	--	--	--	--
	Heptachlor	0.005	ug/L	0.0048 U	0.0048 U	0.0048 U	0.0048 U	0.0048 U	0.0048 U	--	--	--	--	--
PAHs	cPAH TEQ	0.0095	ug/L	0.00717 U	0.00747 U	0.00755 U	0.00725 U	0.00725 U	0.00882 U	--	--	--	--	--

Table 1

Groundwater and Surface Water Data 2021-2023

Go East Corp Landfill Site

Everett, Washington

			Location ID	MW6						MW7						
			Sample Date	12/9/2021	3/11/2022	5/3/2022	6/20/2022	9/21/2022	4/5/2023	10/6/2023	12/9/2021	3/14/2022	5/6/2022	6/20/2022	9/21/2022	4/5/2023	10/5/2023
Method	Analyte	Groundwater and Surface Water Cleanup Level	Units														
Conventionals	Total Organic Carbon	NE	mg/L	--	--	--	**4.6**	**3.7**	**2.8**	**3**	--	--	--	1 U	1 U	1 U	1 U
	Alkalinity as CaCO3	NE	mg/L	**190**	**200**	**230**	**220**	**190**	**220**	**230**	**100**	**94**	**110**	**96**	**100**	**100**	**100**
	Bicarbonate Ion (HCO3)	NE	mg/L	**190**	**200**	**230**	**220**	**190**	**220**	**230**	**100**	**94**	**110**	**96**	**100**	**100**	**100**
	Ammonia (Total as N)	NE	mg/L	**0.1**	**0.096**	**0.1**	**0.068**	**0.1**	**0.081**	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	**0.081**	0.05 U
	Total Dissolved Solids	NE	mg/L	**250**	**270**	**290**	**300**	**230**	**280**	**270**	**120**	**140**	**150**	**140**	**140**	**150**	**150**
	Chloride	NE	mg/L	**5.3**	**5.7**	**3.9**	**5.5**	**5.3**	**5.2**	**6**	**9**	**5.3**	**2.5**	**5.6**	**5.2**	**6.5**	**6.2**
	Nitrate	NE	mg/L	**0.62**	**0.12 J**	**0.12 J**	0.05 UJ	**0.074**	0.05 U	0.05 U	**0.22**	**0.12 J**	0.05 UJ	0.05 UJ	**0.5**	**0.069**	**0.12 J**
	Sulfate	NE	mg/L	**26**	**25**	**26**	**28**	**18**	**19**	**30**	**8.5**	**5.9**	5 U	**5.7**	**6.9**	**9.4**	5 U
Total Metals	Arsenic	7.3	ug/L	**3.5**	**4.2**	**5.8**	**5.2**	**5.7**	**6.6**	**7**	**11**	**10**	**12**	**11**	**8.8**	**8.8**	**8.7**
	Iron	3,010	ug/L	**420**	**1100**	2000	**1200**	**510**	**840**	**1800**	**6900**	**2100**	**24000**	**550**	**3000**	**1500**	**2000**
	Lead	2.5	ug/L	1.1 U	1.1 U	1.1 U	--	--	--	--	**3.2**	**1.2**	**8.8**	--	--	--	--
	Magnesium	NE	ug/L	**23000**	**24000**	**24000**	**24000**	**21000**	**26000**	**28000**	**18000**	**13000**	**24000**	**11000**	**14000**	**14000**	**13000**
	Manganese	354	ug/L	**1800**	**2100**	**2100**	**2400**	**1700**	**1400**	**1100**	**680**	**180**	**1300**	**40**	**190**	**110**	**70**
	Nickel	26.3	ug/L	22 U	22 U	22 U	22 U	--	--	22 U	**42**	22 U	**36**	22 U	--	--	22 U
Dissolved Metals	Arsenic	7.3	ug/L	**3**	**3.9**	**4.2**	**4.4**	**5.6**	**7.1**	**7.4**	**8.5**	**8.8**	**9.1**	**9.1**	**9.1**	**9.1**	**9**
	Calcium	NE	ug/L	**41000**	**44000**	**44000**	**49000**	**37000**	**45000**	**45000**	**20000**	**18000**	**20000**	**20000**	**20000**	**22000**	**18000**
	Iron	3,010	ug/L	**62**	**74**	**67**	**310**	**330**	**580**	**700**	56 U	56 U	56 U	56 U	56 U	56 U	56 U
	Lead	2.5	ug/L	1 U	1 U	1 U	--	--	--	--	1 U	1 U	1 U	--	--	--	--
	Magnesium	NE	ug/L	**22000**	**21000**	**23000**	**24000**	**23000**	**27000**	**30000**	**14000**	**12000**	**13000**	**12000**	**14000**	**14000**	**13000**
	Manganese	354	ug/L	**1800**	**2000**	**2000**	**2400**	**1700**	**1500**	**1200**	**250**	**62**	**32**	**37**	**74**	**60**	**16**
	Nickel	26.3	ug/L	20 U	20 U	20 U	20 U	--	--	20 U	20 U	20 U	20 U	20 U	--	--	20 U
	Potassium	NE	ug/L	**2400**	**2500**	**2500**	**3100**	**2600**	**3600**	**3100**	**1900**	**2200**	**2100**	**2300**	**2200**	**2600**	**2100**
	Sodium	NE	ug/L	**18000**	**19000**	**16000**	**17000**	**13000**	**14000**	**13000**	**7600**	**6000**	**6600**	**6300**	**6200**	**6400**	**4900**
Pesticides	cis-Chlordane	0.005	ug/L	0.0048 U	0.0051 U	0.005 U	--	--	--	--	0.0047 U	0.0053 U	0.0058 U	--	--	--	--
	Heptachlor	0.005	ug/L	0.0048 U	0.0051 U	0.005 U	--	--	--	--	0.0047 U	0.0053 U	0.0058 U	--	--	--	--
PAHs	cPAH TEQ	0.0095	ug/L	**0.00871**	0.00755 U	**0.27185**	**0.00815**	0.00717 U	0.00717 U	0.00725 U	**0.00865**	0.00717 U	0.0083 U	**0.01978**	0.00717 U	0.00732 U	0.00732 U

Table 1

Groundwater and Surface Water Data 2021-2023

Go East Corp Landfill Site

Everett, Washington

			Location ID	MW8						MW10						
			Sample Date	12/13/2021	3/22/2022	5/2/2022	6/22/2022	9/20/2022	3/31/2023	10/3/2023	4/4/2022	5/19/2022	6/23/2022	9/21/2022	4/7/2023	4/12/2023	10/12/2023
Method	Analyte	Groundwater and Surface Water Cleanup Level	Units														
Conventionals	Total Organic Carbon	NE	mg/L	--	--	--	1.6	1.6	2.2	1 U	--	--	7.4	8.4	6.3	8	6.3
	Alkalinity as CaCO3	NE	mg/L	230	220	200	210	180	190	160	170	230	250	360	230	370	370
	Bicarbonate Ion (HCO3)	NE	mg/L	230	220	200	210	180	190	160	170	230	250	360	230	370	370
	Ammonia (Total as N)	NE	mg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.22	0.088	1	0.18	1.3	1.7
	Total Dissolved Solids	NE	mg/L	320	320	280	290	270	320	220	270	300	330	390	300	410	400
	Chloride	NE	mg/L	4.5	4.6	2.5	3	4.1	2.4	5.4	6.1	4.5	3.7	6.2	9.9	5.7	7.3
	Nitrate	NE	mg/L	0.1 J	2.9	0.05 U	0.05 U	0.05 U	0.079	0.067	0.18	0.11 J	0.074 J	0.05 U	0.22	0.05 U	0.13
	Sulfate	NE	mg/L	73	69	49	57	60	87	35	48	33	35	7.4	31	8.8	6.4
Total Metals	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	4.3	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3 U
	Iron	3,010	ug/L	1300	2800	2100	1400	1100	17000	4800	6800	1400	1300	6400	580	9700	8100
	Lead	2.5	ug/L	1.1 U	1.1 U	1.1 U	--	--	--	--	4.5	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1 U
	Magnesium	NE	ug/L	50000	47000	33000	35000	34000	47000	33000	23000	21000	21000	26000	20000	25000	29000
	Manganese	354	ug/L	2100	2400	1600	1900	1400	1100	510	320	460	450	1600	750	1500	1700
	Nickel	26.3	ug/L	39	22 U	22 U	22 U	--	--	22 U	22 U	22 U	22 U	22 U	22 U	22 U	20 U
Dissolved Metals	Arsenic	7.3	ug/L	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	--
	Calcium	NE	ug/L	37000	40000	33000	34000	32000	40000	25000	48000	65000	78000	91000	66000	95000	--
	Iron	3,010	ug/L	120	99	65	190	56 U	82	80	100	1000	930	6000	390	9500	--
	Lead	2.5	ug/L	1 U	1 U	1 U	--	--	--	--	1 U	1 U	1 U	1 U	1 U	1 U	--
	Magnesium	NE	ug/L	41000	40000	36000	35000	39000	43000	31000	18000	23000	22000	28000	20000	25000	25000
	Manganese	354	ug/L	1900	2200	1700	1800	1300	1400	260	200	440	450	1600	760	1600	1400
	Nickel	26.3	ug/L	20 U	20 U	20 U	20 U	--	--	20 U	20 U	20 U	20 U	20 U	20 U	20 U	--
	Potassium	NE	ug/L	4100	4500	3700	4100	3800	4800	3500	4300	3400	3300	5700	4000	5900	5100
	Sodium	NE	ug/L	11000	9800	9200	9200	8700	9100	7200	8200	9400	9900	12000	9300	11000	11000
Pesticides	cis-Chlordane	0.005	ug/L	0.0049 U	0.0052 U	0.0049 U	--	--	--	--	0.0054 U	0.0048 U	0.0049 U	0.0048 U	0.0047 U	0.0047 U	0.0049 U
	Heptachlor	0.005	ug/L	0.0049 U	0.0052 U	0.0049 U	--	--	--	--	0.0054 U	0.0048 U	0.0049 U	0.0048 U	0.0047 U	0.0047 U	0.0049 U
PAHs	cPAH TEQ	0.0095	ug/L	0.00747 U	0.0083 U	0.00755 U	--	0.00717 U	0.00732 U	--	0.00755 U	0.0078	0.00865	0.0071 U	0.00717 U	0.00717 U	0.00725 U

Table 1

Groundwater and Surface Water Data 2021-2023

Go East Corp Landfill Site

Everett, Washington

			Location ID	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
Method	Analyte	Groundwater and Surface Water Cleanup Level	Units								
Conventionals	Total Organic Carbon	NE	mg/L	**11**	**11**	**13**	**11**	**10**	**8.7**	**9.4**	**8.3**
	Alkalinity as CaCO3	NE	mg/L	--	--	--	--	**430**	**390**	**420**	**420**
	Bicarbonate Ion (HCO3)	NE	mg/L	--	--	--	--	**430**	**390**	**420**	**420**
	Ammonia (Total as N)	NE	mg/L	--	**2.5**	**2.3**	**2**	**2.3**	**1.7**	**1.9**	**1.3**
	Total Dissolved Solids	NE	mg/L	--	**490**	**530**	**470**	**500**	**430**	**450**	**450**
	Chloride	NE	mg/L	--	--	--	--	**6.3**	**6.6**	**5.1**	**7.7**
	Nitrate	NE	mg/L	--	--	--	--	**0.088 J**	0.05 U	0.05 U	**0.11**
	Sulfate	NE	mg/L	--	--	--	--	**6.3**	5 U	5 U	**8.5**
Total Metals	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 U
	Iron	3,010	ug/L	**11000**	**8000**	**12000**	**6400**	**5000**	**7300**	**9500**	**14000**
	Lead	2.5	ug/L	1.1 U	1.1 U	**6.2**	1.1 U	1.1 U	--	--	1 U
	Magnesium	NE	ug/L	--	--	--	**27000**	**26000**	**27000**	**31000**	**30000**
	Manganese	354	ug/L	**1500**	**1800**	**2000**	**1600**	**1500**	**1600**	**1900**	**1900**
	Nickel	26.3	ug/L	22 U	22 U	22 U	22 U	22 U	--	--	20 U
Dissolved Metals	Arsenic	7.3	ug/L	3 U	--	--	--	3 U	--	--	--
	Calcium	NE	ug/L	--	--	--	--	**100000**	--	--	--
	Iron	3,010	ug/L	**2400**	--	--	--	56 U	--	--	--
	Lead	2.5	ug/L	1 U	--	--	--	1 U	--	--	--
	Magnesium	NE	ug/L	--	--	--	--	**28000**	--	--	**26000**
	Manganese	354	ug/L	**1300**	--	--	--	**1600**	--	--	**1600**
	Nickel	26.3	ug/L	20 U	--	--	--	20 U	--	--	--
	Potassium	NE	ug/L	--	--	--	--	**7500**	--	--	**5800**
	Sodium	NE	ug/L	--	--	--	--	**15000**	--	--	**11000**
Pesticides	cis-Chlordane	0.005	ug/L	0.0051 U	0.0052 U	0.0052 U	0.0049 U	--	--	--	--
	Heptachlor	0.005	ug/L	0.0051 U	0.0052 U	0.0052 U	0.0049 U	--	--	--	--
PAHs	cPAH TEQ	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

Notes:

Sample dates in **bold font** are presented in the RIFS; sample dates in normal font are post-RI data

Groundwater/surface water cleanup levels are from the CAP

NE = Not established

mg/L = milligrams per liter

ug/L = micrograms per liter

U = Not detected at the reporting level

J = Estimated

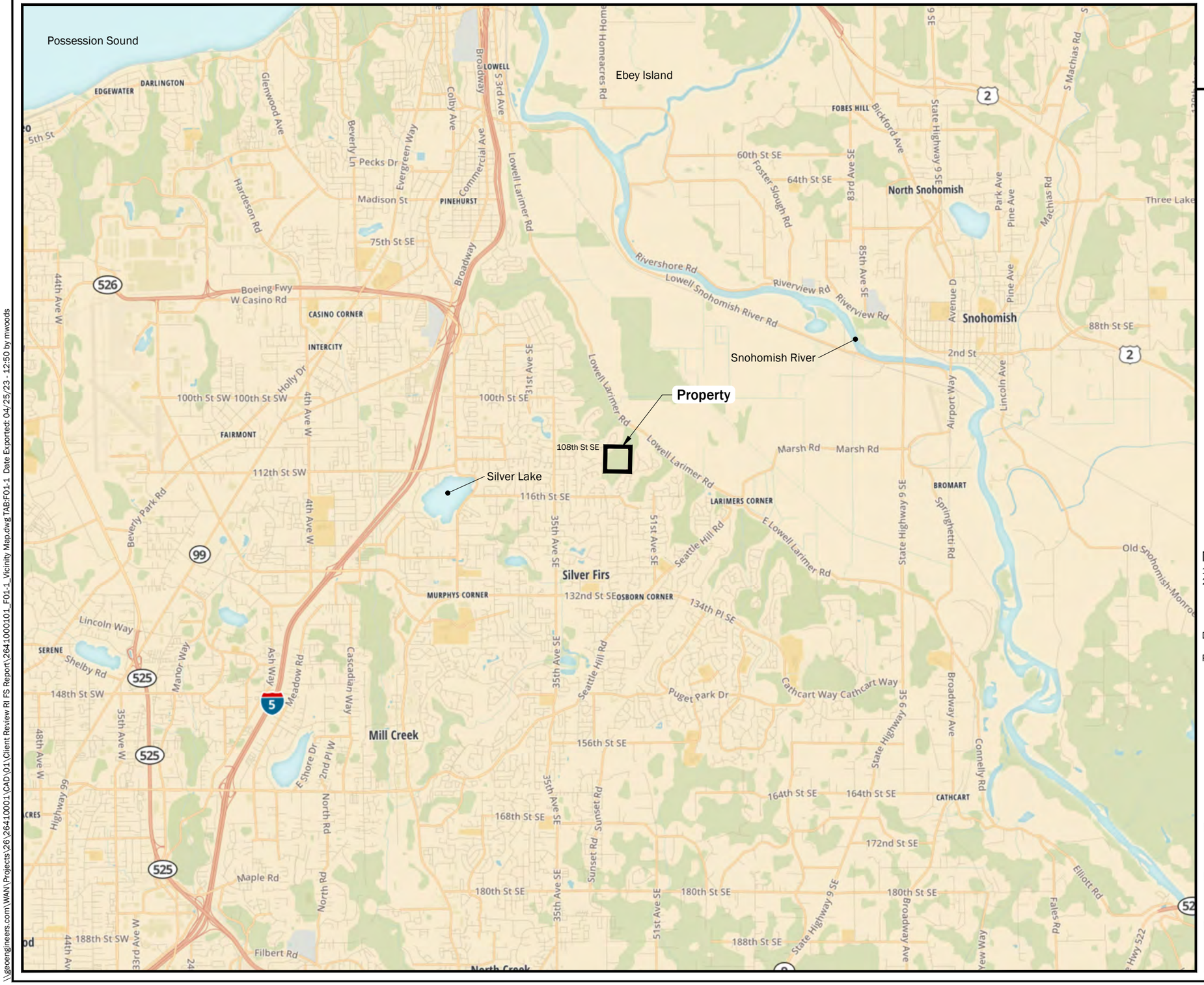
-- = Analysis not performed

Bold font indicates a detection

Gray-shading indicates a detected exceedance of the cleanup level

Blue shading indicates a non detected exceedance of the cleanup level

cPAH TEQ = Total toxic equivalent concentration of carcinogenic polycyclic aromatic hydrocarbons calculated per WAC 173-340-708(8)(e)(3), treating non-detects at half the reporting limit



Not To Scale

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

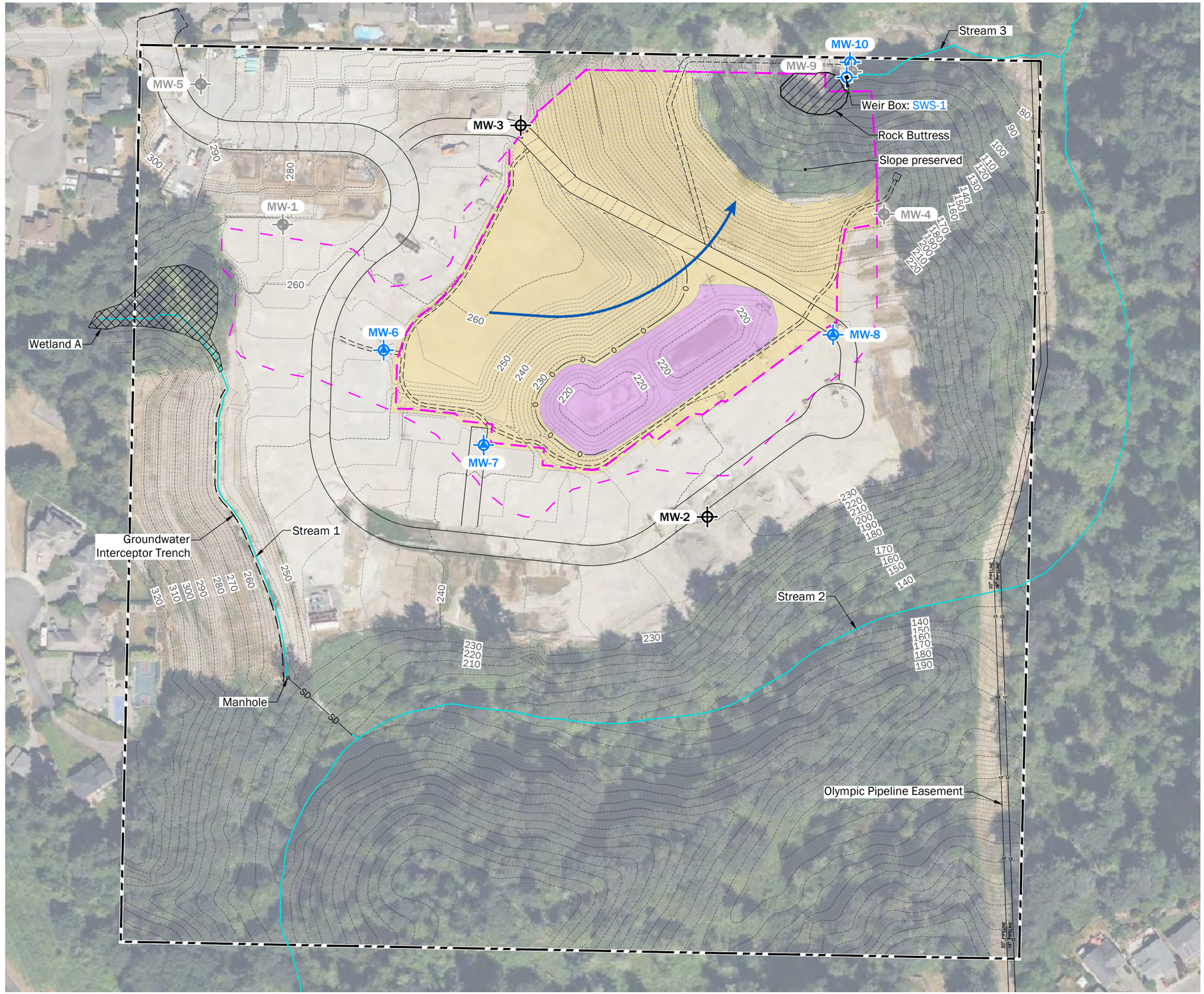
Vicinity Map

Go East Corp Landfill Site
Everett, Washington

GeoEngineers

Figure 1

\\geoengineers.com\WAN\Projects\26\26410001\CAD\01\Client Review RI FS Report\26410001_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
- 280 Topographic Contour (NAVD88)
- Priority Sampling Location
- Monitoring Well Contingent Sampling Location
- Monitoring Well Decommissioned/ To be Decommissioned
- SD SD 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

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

April 12, 2023

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

Re: Analytical Data for Project 26410-001-01
Laboratory Reference No. 2303-347

Dear Garrett:

Enclosed are the analytical results and associated quality control data for samples submitted on March 30, 2023.

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: April 12, 2023
Samples Submitted: March 30, 2023
Laboratory Reference: 2303-347
Project: 26410-001-01

Case Narrative

Samples were collected on March 30, 2023 and received by the laboratory on March 30, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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

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

Date of Report: April 12, 2023
Samples Submitted: March 30, 2023
Laboratory Reference: 2303-347
Project: 26410-001-01

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
Seep-1-20230330	03-347-01	Water	3-30-23	3-30-23	
SWS-1-20230330	03-347-02	Water	3-30-23	3-30-23	

Date of Report: April 12, 2023
Samples Submitted: March 30, 2023
Laboratory Reference: 2303-347
Project: 26410-001-01

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SWS-1-20230330**					
Laboratory ID:	03-347-02					
Diesel Range Organics	**0.24**	0.20	NWTPH-Dx	3-31-23	4-1-23	
Lube Oil Range Organics	**0.32**	0.20	NWTPH-Dx	3-31-23	4-1-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*116*	*50-150*				

Date of Report: April 12, 2023
Samples Submitted: March 30, 2023
Laboratory Reference: 2303-347
Project: 26410-001-01

PAHs EPA 8270E/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SWS-1-20230330**					
Laboratory ID:	03-347-02					
Naphthalene	**ND**	0.099	EPA 8270E/SIM	4-3-23	4-4-23	
2-Methylnaphthalene	**ND**	0.099	EPA 8270E/SIM	4-3-23	4-4-23	
1-Methylnaphthalene	**ND**	0.099	EPA 8270E/SIM	4-3-23	4-4-23	
Acenaphthylene	**ND**	0.099	EPA 8270E/SIM	4-3-23	4-4-23	
Acenaphthene	**0.49**	0.099	EPA 8270E/SIM	4-3-23	4-4-23	
Fluorene	**0.15**	0.099	EPA 8270E/SIM	4-3-23	4-4-23	
Phenanthrene	**ND**	0.099	EPA 8270E/SIM	4-3-23	4-4-23	
Anthracene	**ND**	0.099	EPA 8270E/SIM	4-3-23	4-4-23	
Fluoranthene	**ND**	0.099	EPA 8270E/SIM	4-3-23	4-4-23	
Pyrene	**ND**	0.099	EPA 8270E/SIM	4-3-23	4-4-23	
Benzo[a]anthracene	**ND**	0.0099	EPA 8270E/SIM	4-3-23	4-4-23	
Chrysene	**ND**	0.0099	EPA 8270E/SIM	4-3-23	4-4-23	
Benzo[b]fluoranthene	**ND**	0.0099	EPA 8270E/SIM	4-3-23	4-4-23	
Benzo(j,k)fluoranthene	**ND**	0.0099	EPA 8270E/SIM	4-3-23	4-4-23	
Benzo[a]pyrene	**ND**	0.0099	EPA 8270E/SIM	4-3-23	4-4-23	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0099	EPA 8270E/SIM	4-3-23	4-4-23	
Dibenz[a,h]anthracene	**ND**	0.0099	EPA 8270E/SIM	4-3-23	4-4-23	
Benzo[g,h,i]perylene	**ND**	0.0099	EPA 8270E/SIM	4-3-23	4-4-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*63*	*20 - 106*				
Pyrene-d10	*77*	*19 - 104*				
Terphenyl-d14	*92*	*41 - 127*				

Date of Report: April 12, 2023
Samples Submitted: March 30, 2023
Laboratory Reference: 2303-347
Project: 26410-001-01

TOTAL ORGANIC CARBON
SM 5310B

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Seep-1-20230330**					
Laboratory ID:	03-347-01					
Total Organic Carbon	**3.2**	1.0	SM 5310B	4-6-23	4-7-23	
Client ID:	**SWS-1-20230330**					
Laboratory ID:	03-347-02					
Total Organic Carbon	**9.4**	1.0	SM 5310B	4-6-23	4-7-23	

Date of Report: April 12, 2023
Samples Submitted: March 30, 2023
Laboratory Reference: 2303-347
Project: 26410-001-01

TOTAL ALKALINITY
SM 2320B

Matrix: Water
Units: mg CaCO3/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SWS-1-20230330**					
Laboratory ID:	03-347-02					
Total Alkalinity	**420**	2.0	SM 2320B	4-4-23	4-4-23	

Date of Report: April 12, 2023
Samples Submitted: March 30, 2023
Laboratory Reference: 2303-347
Project: 26410-001-01

BICARBONATE
SM 2320B

Matrix: Water
Units: mg CaCO3/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SWS-1-20230330**					
Laboratory ID:	03-347-02					
Bicarbonate	**420**	2.0	SM 2320B	4-4-23	4-4-23	

Date of Report: April 12, 2023
Samples Submitted: March 30, 2023
Laboratory Reference: 2303-347
Project: 26410-001-01

CHLORIDE
SM 4500-Cl E

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SWS-1-20230330**					
Laboratory ID:	03-347-02					
Chloride	**5.1**	2.0	SM 4500-Cl E	4-5-23	4-5-23	

Date of Report: April 12, 2023
Samples Submitted: March 30, 2023
Laboratory Reference: 2303-347
Project: 26410-001-01

NITRATE (as Nitrogen)
EPA 353.2

Matrix: Water
Units: mg/L-N

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SWS-1-20230330**					
Laboratory ID:	03-347-02					
Nitrate	**ND**	0.050	EPA 353.2	3-31-23	3-31-23	

Date of Report: April 12, 2023
Samples Submitted: March 30, 2023
Laboratory Reference: 2303-347
Project: 26410-001-01

SULFATE
ASTM D516-11

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SWS-1-20230330**					
Laboratory ID:	03-347-02					
Sulfate	**ND**	5.0	ASTM D516-11	3-9-23	4-5-23	

Date of Report: April 12, 2023
Samples Submitted: March 30, 2023
Laboratory Reference: 2303-347
Project: 26410-001-01

TOTAL DISSOLVED SOLIDS
SM 2540C

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Seep-1-20230330**					
Laboratory ID:	03-347-01					
Total Dissolved Solids	**140**	13	SM 2540C	4-4-23	4-7-23	
Client ID:	**SWS-1-20230330**					
Laboratory ID:	03-347-02					
Total Dissolved Solids	**450**	13	SM 2540C	4-4-23	4-7-23	

Date of Report: April 12, 2023
Samples Submitted: March 30, 2023
Laboratory Reference: 2303-347
Project: 26410-001-01

AMMONIA (as Nitrogen)
SM 4500-NH_3 D

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Seep-1-20230330**					
Laboratory ID:	03-347-01					
Ammonia	**ND**	0.050	SM 4500-NH3 D	4-3-23	4-3-23	
Client ID:	**SWS-1-20230330**					
Laboratory ID:	03-347-02					
Ammonia	**1.9**	0.050	SM 4500-NH3 D	4-3-23	4-3-23	

Date of Report: April 12, 2023
Samples Submitted: March 30, 2023
Laboratory Reference: 2303-347
Project: 26410-001-01

TOTAL METALS
EPA 200.8/200.7

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Seep-1-20230330**					
Laboratory ID:	03-347-01					
Arsenic	**ND**	3.3	EPA 200.8	3-31-23	3-31-23	
Iron	**280**	50	EPA 200.7	3-31-23	3-31-23	
Lead	**ND**	1.1	EPA 200.8	3-31-23	3-31-23	
Manganese	**ND**	10	EPA 200.7	3-31-23	3-31-23	
Client ID:	**SWS-1-20230330**					
Laboratory ID:	03-347-02					
Arsenic	**ND**	3.3	EPA 200.8	3-31-23	3-31-23	
Iron	**9500**	50	EPA 200.7	3-31-23	3-31-23	
Magnesium	**31000**	1000	EPA 200.7	3-31-23	3-31-23	
Manganese	**1900**	10	EPA 200.7	3-31-23	3-31-23	

Date of Report: April 12, 2023
Samples Submitted: March 30, 2023
Laboratory Reference: 2303-347
Project: 26410-001-01

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx
QUALITY CONTROL

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0331W1					
Diesel Range Organics	**ND**	0.16	NWTPH-Dx	3-31-23	3-31-23	
Lube Oil Range Organics	**ND**	0.16	NWTPH-Dx	3-31-23	3-31-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*96*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	03-310-04										
	ORIG	DUP									
Diesel Range Organics	**0.311**	**0.266**	NA	NA		NA		NA	16	NA	
Lube Oil Range Organics	**0.443**	**0.363**	NA	NA		NA		NA	20	NA	
Surrogate:											
o-Terphenyl						*109*	*92*	*50-150*			

Date of Report: April 12, 2023
Samples Submitted: March 30, 2023
Laboratory Reference: 2303-347
Project: 26410-001-01

PAHs EPA 8270E/SIM
QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0403W1					
Naphthalene	**ND**	0.10	EPA 8270E/SIM	4-3-23	4-3-23	
2-Methylnaphthalene	**ND**	0.10	EPA 8270E/SIM	4-3-23	4-3-23	
1-Methylnaphthalene	**ND**	0.10	EPA 8270E/SIM	4-3-23	4-3-23	
Acenaphthylene	**ND**	0.10	EPA 8270E/SIM	4-3-23	4-3-23	
Acenaphthene	**ND**	0.10	EPA 8270E/SIM	4-3-23	4-3-23	
Fluorene	**ND**	0.10	EPA 8270E/SIM	4-3-23	4-3-23	
Phenanthrene	**ND**	0.10	EPA 8270E/SIM	4-3-23	4-3-23	
Anthracene	**ND**	0.10	EPA 8270E/SIM	4-3-23	4-3-23	
Fluoranthene	**ND**	0.10	EPA 8270E/SIM	4-3-23	4-3-23	
Pyrene	**ND**	0.10	EPA 8270E/SIM	4-3-23	4-3-23	
Benzo[a]anthracene	**ND**	0.010	EPA 8270E/SIM	4-3-23	4-3-23	
Chrysene	**ND**	0.010	EPA 8270E/SIM	4-3-23	4-3-23	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270E/SIM	4-3-23	4-3-23	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270E/SIM	4-3-23	4-3-23	
Benzo[a]pyrene	**ND**	0.010	EPA 8270E/SIM	4-3-23	4-3-23	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270E/SIM	4-3-23	4-3-23	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270E/SIM	4-3-23	4-3-23	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270E/SIM	4-3-23	4-3-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*68*	*20 - 106*				
Pyrene-d10	*90*	*19 - 104*				
Terphenyl-d14	*103*	*41 - 127*				

Date of Report: April 12, 2023
Samples Submitted: March 30, 2023
Laboratory Reference: 2303-347
Project: 26410-001-01

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:	SB0403W1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	**0.329**	**0.390**	0.500	0.500	66	78	25 - 82	17	39	
Acenaphthylene	**0.381**	**0.438**	0.500	0.500	76	88	35 - 107	14	26	
Acenaphthene	**0.353**	**0.407**	0.500	0.500	71	81	33 - 99	14	26	
Fluorene	**0.372**	**0.437**	0.500	0.500	74	87	43 - 95	16	24	
Phenanthrene	**0.392**	**0.441**	0.500	0.500	78	88	49 - 100	12	20	
Anthracene	**0.378**	**0.425**	0.500	0.500	76	85	47 - 101	12	21	
Fluoranthene	**0.413**	**0.456**	0.500	0.500	83	91	51 - 115	10	23	
Pyrene	**0.395**	**0.449**	0.500	0.500	79	90	53 - 117	13	24	
Benzo[a]anthracene	**0.361**	**0.416**	0.500	0.500	72	83	57 - 114	14	21	
Chrysene	**0.409**	**0.467**	0.500	0.500	82	93	55 - 119	13	21	
Benzo[b]fluoranthene	**0.401**	**0.465**	0.500	0.500	80	93	56 - 125	15	26	
Benzo(j,k)fluoranthene	**0.406**	**0.450**	0.500	0.500	81	90	53 - 124	10	22	
Benzo[a]pyrene	**0.403**	**0.457**	0.500	0.500	81	91	54 - 119	13	22	
Indeno(1,2,3-c,d)pyrene	**0.434**	**0.475**	0.500	0.500	87	95	55 - 118	9	23	
Dibenz[a,h]anthracene	**0.423**	**0.483**	0.500	0.500	85	97	56 - 118	13	23	
Benzo[g,h,i]perylene	**0.414**	**0.473**	0.500	0.500	83	95	55 - 117	13	22	
Surrogate:										
2-Fluorobiphenyl					*54*	*63*	*20 - 106*			
Pyrene-d10					*74*	*85*	*19 - 104*			
Terphenyl-d14					*84*	*95*	*41 - 127*			

Date of Report: April 12, 2023
Samples Submitted: March 30, 2023
Laboratory Reference: 2303-347
Project: 26410-001-01

TOTAL ORGANIC CARBON
SM 5310B
QUALITY CONTROL

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0406W1					
Total Organic Carbon	**ND**	1.0	SM 5310B	4-6-23	4-7-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	03-347-01								
	ORIG	DUP							
Total Organic Carbon	**3.23**	**3.21**	NA	NA	NA	NA	1	12	
MATRIX SPIKE									
Laboratory ID:	03-347-01								
	MS		MS		MS				
Total Organic Carbon	**13.4**		10.0	3.23	102	80-120	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB0406W1								
	SB		SB		SB				
Total Organic Carbon	**11.6**		10.0	NA	116	80-118	NA	NA	

Date of Report: April 12, 2023
Samples Submitted: March 30, 2023
Laboratory Reference: 2303-347
Project: 26410-001-01

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:	MB0404W1					
Total Alkalinity	**ND**	2.0	SM 2320B	4-4-23	4-4-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	03-347-02								
	ORIG	DUP							
Total Alkalinity	**422**	**432**	NA	NA	NA	NA	2	10	
SPIKE BLANK									
Laboratory ID:	SB0404W1								
	SB		SB		SB				
Total Alkalinity	**94.0**		100	NA	94	89-110	NA	NA	

Date of Report: April 12, 2023
Samples Submitted: March 30, 2023
Laboratory Reference: 2303-347
Project: 26410-001-01

BICARBONATE
SM 2320B
QUALITY CONTROL

Matrix: Water
Units: mg CaCO3/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0404W1					
Bicarbonate	**ND**	2.0	SM 2320B	4-4-23	4-4-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	03-347-02								
	ORIG	DUP							
Bicarbonate	**422**	**432**	NA	NA	NA	NA	2	10	
SPIKE BLANK									
Laboratory ID:	SB0404W1								
	SB		SB		SB				
Bicarbonate	**94.0**		100	NA	94	89-110	NA	NA	

Date of Report: April 12, 2023
Samples Submitted: March 30, 2023
Laboratory Reference: 2303-347
Project: 26410-001-01

CHLORIDE
SM 4500-Cl E
QUALITY CONTROL

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0404W1					
Chloride	**ND**	2.0	SM 4500-Cl E	4-5-23	4-5-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	03-330-02								
	ORIG	DUP							
Chloride	**45.7**	**50.8**	NA	NA	NA	NA	11	11	
MATRIX SPIKE									
Laboratory ID:	03-330-02								
	MS		MS		MS				
Chloride	**91.1**		50.0	45.7	91	85-121	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB0404W1								
	SB		SB		SB				
Chloride	**45.7**		50.0	NA	91	90-119	NA	NA	

Date of Report: April 12, 2023
Samples Submitted: March 30, 2023
Laboratory Reference: 2303-347
Project: 26410-001-01

NITRATE (as Nitrogen)
EPA 353.2
QUALITY CONTROL

Matrix: Water
Units: mg/L-N

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0330W2					
Nitrate	**ND**	0.050	EPA 353.2	3-31-23	3-31-23	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	03-347-02							
	ORIG DUP							
Nitrate	**ND** **ND**	NA	NA	NA	NA	NA	10	
MATRIX SPIKE								
Laboratory ID:	03-347-02							
	MS	MS		MS				
Nitrate	**2.20**	2.00	ND	110	88-125	NA	NA	
SPIKE BLANK								
Laboratory ID:	SB0330W2							
	SB	SB		SB				
Nitrate	**2.18**	2.00	NA	109	90-120	NA	NA	

Date of Report: April 12, 2023
Samples Submitted: March 30, 2023
Laboratory Reference: 2303-347
Project: 26410-001-01

SULFATE
ASTM D516-11
QUALITY CONTROL

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0405W1					
Sulfate	**ND**	5.0	ASTM D516-11	3-9-23	4-5-23	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	03-330-01							
	ORIG DUP							
Sulfate	**5.53** **5.75**	NA	NA	NA	NA	4	10	
MATRIX SPIKE								
Laboratory ID:	03-330-01							
	MS	MS		MS				
Sulfate	**16.1**	10.0	5.53	106	72-128	NA	NA	
SPIKE BLANK								
Laboratory ID:	SB0405W1							
	SB	SB		SB				
Sulfate	**9.54**	10.0	NA	95	85-114	NA	NA	

Date of Report: April 12, 2023
Samples Submitted: March 30, 2023
Laboratory Reference: 2303-347
Project: 26410-001-01

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:	MB0404W1					
Total Dissolved Solids	**ND**	13	SM 2540C	4-4-23	4-7-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	03-347-01								
	ORIG	DUP							
Total Dissolved Solids	**143**	**164**	NA	NA	NA	NA	14	23	
SPIKE BLANK									
Laboratory ID:	SB0404W1								
	SB		SB		SB				
Total Dissolved Solids	**479**		500	NA	96	89-120	NA	NA	

Date of Report: April 12, 2023
Samples Submitted: March 30, 2023
Laboratory Reference: 2303-347
Project: 26410-001-01

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:	MB0403W2					
Ammonia	**ND**	0.050	SM 4500-NH3 D	4-3-23	4-3-23	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	03-277-01							
	ORIG DUP							
Ammonia	**ND** **ND**	NA	NA	NA	NA	NA	15	
MATRIX SPIKE								
Laboratory ID:	03-277-01							
	MS	MS		MS				
Ammonia	**5.01**	5.00	ND	100	87-110	NA	NA	
SPIKE BLANK								
Laboratory ID:	SB0403W2							
	SB	SB		SB				
Ammonia	**5.50**	5.00	NA	110	88-110	NA	NA	

Date of Report: April 12, 2023
Samples Submitted: March 30, 2023
Laboratory Reference: 2303-347
Project: 26410-001-01

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:	MB0331WH1					
Iron	**ND**	50	EPA 200.7	3-31-23	3-31-23	
Magnesium	**ND**	1000	EPA 200.7	3-31-23	3-31-23	
Manganese	**ND**	10	EPA 200.7	3-31-23	3-31-23	
Laboratory ID:	MB0331WM1					
Arsenic	**ND**	3.3	EPA 200.8	3-31-23	3-31-23	
Lead	**ND**	1.1	EPA 200.8	3-31-23	3-31-23	

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	03-347-01										
	ORIG	DUP									
Iron	**278**	**251**	NA	NA		NA		NA	10	20	
Magnesium	**21400**	**21800**	NA	NA		NA		NA	2	20	
Manganese	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Laboratory ID:	03-295-07										
Arsenic	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Lead	**ND**	**ND**	NA	NA		NA		NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	03-347-01										
	MS	MSD	MS	MSD		MS	MSD				
Iron	**21000**	**21400**	20000	20000	278	**104**	**106**	75-125	2	20	
Magnesium	**42100**	**42100**	20000	20000	21400	**104**	**104**	75-125	0	20	
Manganese	**521**	**530**	500	500	ND	**104**	**106**	75-125	2	20	
Laboratory ID:	03-295-07										
Arsenic	**107**	**110**	111	111	ND	**96**	**99**	75-125	3	20	
Lead	**99.3**	**102**	111	111	ND	**90**	**92**	75-125	3	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.
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Laboratory Number: 03-347

Company: GeoEngineers

Project Number: ~~6694-002-05~~ 26410-001-01

Project Name: Go East

Project Manager: Garrett Leque

Sampled by: JDE

Turnaround Request (in working days)

(Check One)

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

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-Gx	NWTPH-Dx	Volatiles 8260B	PAHs 8270D/SIM (low-level)	Organochlorine Pesticides 8081A	TOC, alk+bicarb, Cl, NO3, SO4, TDS, NH3)	TOC, TDS, NH3	T/D metals	T/D metals	T/D metals	~~total~~ metals ~~total~~	total Metals ~~total~~	% Moisture
1	SeeP-1-20230330	3/30/23	1350	W	4							X				X		
2	SWS-1-20230330	3/30/23	1315	W	9		X		X		X						X	
1	~~Aliphatics~~																	

	Signature	Company	Date	Time
Relinquished		GEI	3/30/23	1445
Received		alpha 11	3:20	3:00
Relinquished			3-30	4:25
Received		OBE	3/30/23	1625
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

* As, Fe, Pb, Mn
# As, Fe, Mg, Mn

Chromatograms with final report ☐

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

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

April 12, 2023

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

Re: Analytical Data for Project 26410-001-01
Laboratory Reference No. 2303-361

Dear Garrett:

Enclosed are the analytical results and associated quality control data for samples submitted on March 31, 2023.

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: April 12, 2023
Samples Submitted: March 31, 2023
Laboratory Reference: 2303-361
Project: 26410-001-01

Case Narrative

Samples were collected on March 31, 2023 and received by the laboratory on March 31, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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

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

Date of Report: April 12, 2023
Samples Submitted: March 31, 2023
Laboratory Reference: 2303-361
Project: 26410-001-01

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
MW-1-20230331	03-361-01	Water	3-31-23	3-31-23	
MW-8-20230331	03-361-02	Water	3-31-23	3-31-23	

Date of Report: April 12, 2023
Samples Submitted: March 31, 2023
Laboratory Reference: 2303-361
Project: 26410-001-01

PAHs EPA 8270E/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-8-20230331**					
Laboratory ID:	03-361-02					
Naphthalene	**ND**	0.097	EPA 8270E/SIM	4-3-23	4-4-23	
2-Methylnaphthalene	**ND**	0.097	EPA 8270E/SIM	4-3-23	4-4-23	
1-Methylnaphthalene	**ND**	0.097	EPA 8270E/SIM	4-3-23	4-4-23	
Acenaphthylene	**ND**	0.097	EPA 8270E/SIM	4-3-23	4-4-23	
Acenaphthene	**ND**	0.097	EPA 8270E/SIM	4-3-23	4-4-23	
Fluorene	**ND**	0.097	EPA 8270E/SIM	4-3-23	4-4-23	
Phenanthrene	**ND**	0.097	EPA 8270E/SIM	4-3-23	4-4-23	
Anthracene	**ND**	0.097	EPA 8270E/SIM	4-3-23	4-4-23	
Fluoranthene	**ND**	0.097	EPA 8270E/SIM	4-3-23	4-4-23	
Pyrene	**ND**	0.097	EPA 8270E/SIM	4-3-23	4-4-23	
Benzo[a]anthracene	**ND**	0.0097	EPA 8270E/SIM	4-3-23	4-4-23	
Chrysene	**ND**	0.0097	EPA 8270E/SIM	4-3-23	4-4-23	
Benzo[b]fluoranthene	**ND**	0.0097	EPA 8270E/SIM	4-3-23	4-4-23	
Benzo(j,k)fluoranthene	**ND**	0.0097	EPA 8270E/SIM	4-3-23	4-4-23	
Benzo[a]pyrene	**ND**	0.0097	EPA 8270E/SIM	4-3-23	4-4-23	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0097	EPA 8270E/SIM	4-3-23	4-4-23	
Dibenz[a,h]anthracene	**ND**	0.0097	EPA 8270E/SIM	4-3-23	4-4-23	
Benzo[g,h,i]perylene	**ND**	0.0097	EPA 8270E/SIM	4-3-23	4-4-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*65*	*20 - 106*				
Pyrene-d10	*81*	*19 - 104*				
Terphenyl-d14	*96*	*41 - 127*				

Date of Report: April 12, 2023
Samples Submitted: March 31, 2023
Laboratory Reference: 2303-361
Project: 26410-001-01

TOTAL ORGANIC CARBON
SM 5310B

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1-20230331**					
Laboratory ID:	03-361-01					
Total Organic Carbon	**1.3**	1.0	SM 5310B	4-6-23	4-7-23	
Client ID:	**MW-8-20230331**					
Laboratory ID:	03-361-02					
Total Organic Carbon	**2.2**	1.0	SM 5310B	4-6-23	4-7-23	

Date of Report: April 12, 2023
Samples Submitted: March 31, 2023
Laboratory Reference: 2303-361
Project: 26410-001-01

TOTAL ALKALINITY
SM 2320B

Matrix: Water
Units: mg CaCO3/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1-20230331**					
Laboratory ID:	03-361-01					
Total Alkalinity	**100**	2.0	SM 2320B	4-4-23	4-4-23	
Client ID:	**MW-8-20230331**					
Laboratory ID:	03-361-02					
Total Alkalinity	**190**	2.0	SM 2320B	4-4-23	4-4-23	

Date of Report: April 12, 2023
Samples Submitted: March 31, 2023
Laboratory Reference: 2303-361
Project: 26410-001-01

BICARBONATE
SM 2320B

Matrix: Water
Units: mg CaCO3/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1-20230331**					
Laboratory ID:	03-361-01					
Bicarbonate	**100**	2.0	SM 2320B	4-4-23	4-4-23	
Client ID:	**MW-8-20230331**					
Laboratory ID:	03-361-02					
Bicarbonate	**190**	2.0	SM 2320B	4-4-23	4-4-23	

Date of Report: April 12, 2023
Samples Submitted: March 31, 2023
Laboratory Reference: 2303-361
Project: 26410-001-01

CHLORIDE
SM 4500-Cl E

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1-20230331**					
Laboratory ID:	03-361-01					
Chloride	**ND**	2.0	SM 4500-Cl E	4-5-23	4-5-23	
Client ID:	**MW-8-20230331**					
Laboratory ID:	03-361-02					
Chloride	**2.4**	2.0	SM 4500-Cl E	4-5-23	4-5-23	

Date of Report: April 12, 2023
Samples Submitted: March 31, 2023
Laboratory Reference: 2303-361
Project: 26410-001-01

NITRATE (as Nitrogen)
EPA 353.2

Matrix: Water
Units: mg/L-N

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1-20230331**					
Laboratory ID:	03-361-01					
Nitrate	**0.16**	0.050	EPA 353.2	3-31-23	3-31-23	
Client ID:	**MW-8-20230331**					
Laboratory ID:	03-361-02					
Nitrate	**0.079**	0.050	EPA 353.2	3-31-23	3-31-23	

Date of Report: April 12, 2023
Samples Submitted: March 31, 2023
Laboratory Reference: 2303-361
Project: 26410-001-01

SULFATE
ASTM D516-11

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1-20230331**					
Laboratory ID:	03-361-01					
Sulfate	**ND**	5.0	ASTM D516-11	3-9-23	4-5-23	
Client ID:	**MW-8-20230331**					
Laboratory ID:	03-361-02					
Sulfate	**87**	25	ASTM D516-11	3-9-23	4-5-23	

Date of Report: April 12, 2023
Samples Submitted: March 31, 2023
Laboratory Reference: 2303-361
Project: 26410-001-01

TOTAL DISSOLVED SOLIDS
SM 2540C

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1-20230331**					
Laboratory ID:	03-361-01					
Total Dissolved Solids	**43**	13	SM 2540C	4-4-23	4-7-23	
Client ID:	**MW-8-20230331**					
Laboratory ID:	03-361-02					
Total Dissolved Solids	**320**	13	SM 2540C	4-4-23	4-7-23	

Date of Report: April 12, 2023
Samples Submitted: March 31, 2023
Laboratory Reference: 2303-361
Project: 26410-001-01

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-1-20230331**					
Laboratory ID:	03-361-01					
Ammonia	**ND**	0.050	SM 4500-NH3 D	4-3-23	4-3-23	
Client ID:	**MW-8-20230331**					
Laboratory ID:	03-361-02					
Ammonia	**ND**	0.050	SM 4500-NH3 D	4-3-23	4-3-23	

Date of Report: April 12, 2023
Samples Submitted: March 31, 2023
Laboratory Reference: 2303-361
Project: 26410-001-01

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-1-20230331**					
Laboratory ID:	03-361-01					
Arsenic	**ND**	3.3	EPA 200.8	4-6-23	4-6-23	
Iron	**14000**	50	EPA 200.7	4-6-23	4-6-23	
Magnesium	**4400**	1000	EPA 200.7	4-6-23	4-6-23	
Manganese	**340**	10	EPA 200.7	4-6-23	4-6-23	
Client ID:	**MW-8-20230331**					
Laboratory ID:	03-361-02					
Arsenic	**5.1**	3.3	EPA 200.8	4-6-23	4-6-23	
Iron	**17000**	50	EPA 200.7	4-6-23	4-6-23	
Magnesium	**47000**	1000	EPA 200.7	4-6-23	4-6-23	
Manganese	**1100**	10	EPA 200.7	4-6-23	4-6-23	

Date of Report: April 12, 2023
Samples Submitted: March 31, 2023
Laboratory Reference: 2303-361
Project: 26410-001-01

DISSOLVED METALS
EPA 200.8/200.7

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1-20230331**					
Laboratory ID:	03-361-01					
Arsenic	**ND**	3.0	EPA 200.8		4-4-23	
Calcium	**6800**	1100	EPA 200.7		4-10-23	
Iron	**ND**	56	EPA 200.7		4-10-23	
Magnesium	**1200**	1100	EPA 200.7		4-10-23	
Manganese	**ND**	11	EPA 200.7		4-10-23	
Potassium	**ND**	1100	EPA 200.7		4-10-23	
Sodium	**ND**	1100	EPA 200.7		4-10-23	
Client ID:	**MW-8-20230331**					
Laboratory ID:	03-361-02					
Arsenic	**ND**	3.0	EPA 200.8		4-4-23	
Calcium	**40000**	1100	EPA 200.7		4-10-23	
Iron	**82**	56	EPA 200.7		4-10-23	
Magnesium	**43000**	1100	EPA 200.7		4-10-23	
Manganese	**1400**	11	EPA 200.7		4-10-23	
Potassium	**4800**	1100	EPA 200.7		4-10-23	
Sodium	**9100**	1100	EPA 200.7		4-10-23	

Date of Report: April 12, 2023
Samples Submitted: March 31, 2023
Laboratory Reference: 2303-361
Project: 26410-001-01

PAHs EPA 8270E/SIM
QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0403W1					
Naphthalene	**ND**	0.10	EPA 8270E/SIM	4-3-23	4-3-23	
2-Methylnaphthalene	**ND**	0.10	EPA 8270E/SIM	4-3-23	4-3-23	
1-Methylnaphthalene	**ND**	0.10	EPA 8270E/SIM	4-3-23	4-3-23	
Acenaphthylene	**ND**	0.10	EPA 8270E/SIM	4-3-23	4-3-23	
Acenaphthene	**ND**	0.10	EPA 8270E/SIM	4-3-23	4-3-23	
Fluorene	**ND**	0.10	EPA 8270E/SIM	4-3-23	4-3-23	
Phenanthrene	**ND**	0.10	EPA 8270E/SIM	4-3-23	4-3-23	
Anthracene	**ND**	0.10	EPA 8270E/SIM	4-3-23	4-3-23	
Fluoranthene	**ND**	0.10	EPA 8270E/SIM	4-3-23	4-3-23	
Pyrene	**ND**	0.10	EPA 8270E/SIM	4-3-23	4-3-23	
Benzo[a]anthracene	**ND**	0.010	EPA 8270E/SIM	4-3-23	4-3-23	
Chrysene	**ND**	0.010	EPA 8270E/SIM	4-3-23	4-3-23	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270E/SIM	4-3-23	4-3-23	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270E/SIM	4-3-23	4-3-23	
Benzo[a]pyrene	**ND**	0.010	EPA 8270E/SIM	4-3-23	4-3-23	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270E/SIM	4-3-23	4-3-23	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270E/SIM	4-3-23	4-3-23	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270E/SIM	4-3-23	4-3-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*68*	*20 - 106*				
Pyrene-d10	*90*	*19 - 104*				
Terphenyl-d14	*103*	*41 - 127*				

Date of Report: April 12, 2023
Samples Submitted: March 31, 2023
Laboratory Reference: 2303-361
Project: 26410-001-01

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:	SB0403W1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	**0.329**	**0.390**	0.500	0.500	66	78	25 - 82	17	39	
Acenaphthylene	**0.381**	**0.438**	0.500	0.500	76	88	35 - 107	14	26	
Acenaphthene	**0.353**	**0.407**	0.500	0.500	71	81	33 - 99	14	26	
Fluorene	**0.372**	**0.437**	0.500	0.500	74	87	43 - 95	16	24	
Phenanthrene	**0.392**	**0.441**	0.500	0.500	78	88	49 - 100	12	20	
Anthracene	**0.378**	**0.425**	0.500	0.500	76	85	47 - 101	12	21	
Fluoranthene	**0.413**	**0.456**	0.500	0.500	83	91	51 - 115	10	23	
Pyrene	**0.395**	**0.449**	0.500	0.500	79	90	53 - 117	13	24	
Benzo[a]anthracene	**0.361**	**0.416**	0.500	0.500	72	83	57 - 114	14	21	
Chrysene	**0.409**	**0.467**	0.500	0.500	82	93	55 - 119	13	21	
Benzo[b]fluoranthene	**0.401**	**0.465**	0.500	0.500	80	93	56 - 125	15	26	
Benzo(j,k)fluoranthene	**0.406**	**0.450**	0.500	0.500	81	90	53 - 124	10	22	
Benzo[a]pyrene	**0.403**	**0.457**	0.500	0.500	81	91	54 - 119	13	22	
Indeno(1,2,3-c,d)pyrene	**0.434**	**0.475**	0.500	0.500	87	95	55 - 118	9	23	
Dibenz[a,h]anthracene	**0.423**	**0.483**	0.500	0.500	85	97	56 - 118	13	23	
Benzo[g,h,i]perylene	**0.414**	**0.473**	0.500	0.500	83	95	55 - 117	13	22	
Surrogate:										
2-Fluorobiphenyl					*54*	*63*	*20 - 106*			
Pyrene-d10					*74*	*85*	*19 - 104*			
Terphenyl-d14					*84*	*95*	*41 - 127*			

Date of Report: April 12, 2023
Samples Submitted: March 31, 2023
Laboratory Reference: 2303-361
Project: 26410-001-01

TOTAL ORGANIC CARBON
SM 5310B
QUALITY CONTROL

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0406W1					
Total Organic Carbon	**ND**	1.0	SM 5310B	4-6-23	4-7-23	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	03-347-01							
	ORIG DUP							
Total Organic Carbon	**3.23** **3.21**	NA	NA	NA	NA	1	12	
MATRIX SPIKE								
Laboratory ID:	03-347-01							
	MS	MS		MS				
Total Organic Carbon	**13.4**	10.0	3.23	102	80-120	NA	NA	
SPIKE BLANK								
Laboratory ID:	SB0406W1							
	SB	SB		SB				
Total Organic Carbon	**11.6**	10.0	NA	116	80-118	NA	NA	

Date of Report: April 12, 2023
Samples Submitted: March 31, 2023
Laboratory Reference: 2303-361
Project: 26410-001-01

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:	MB0404W1					
Total Alkalinity	**ND**	2.0	SM 2320B	4-4-23	4-4-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	03-347-02								
	ORIG	DUP							
Total Alkalinity	**422**	**432**	NA	NA	NA	NA	2	10	
SPIKE BLANK									
Laboratory ID:	SB0404W1								
	SB		SB		SB				
Total Alkalinity	**94.0**		100	NA	94	89-110	NA	NA	

Date of Report: April 12, 2023
Samples Submitted: March 31, 2023
Laboratory Reference: 2303-361
Project: 26410-001-01

BICARBONATE
SM 2320B
QUALITY CONTROL

Matrix: Water
Units: mg CaCO3/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0404W1					
Bicarbonate	**ND**	2.0	SM 2320B	4-4-23	4-4-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	03-347-02								
	ORIG	DUP							
Bicarbonate	**422**	**432**	NA	NA	NA	NA	2	10	
SPIKE BLANK									
Laboratory ID:	SB0404W1								
	SB		SB		SB				
Bicarbonate	**94.0**		100	NA	94	89-110	NA	NA	

Date of Report: April 12, 2023
Samples Submitted: March 31, 2023
Laboratory Reference: 2303-361
Project: 26410-001-01

CHLORIDE
SM 4500-Cl E
QUALITY CONTROL

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0404W1					
Chloride	**ND**	2.0	SM 4500-Cl E	4-5-23	4-5-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	03-330-02								
	ORIG	DUP							
Chloride	**45.7**	**50.8**	NA	NA	NA	NA	11	11	
MATRIX SPIKE									
Laboratory ID:	03-330-02								
	MS		MS		MS				
Chloride	**91.1**		50.0	45.7	91	85-121	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB0404W1								
	SB		SB		SB				
Chloride	**45.7**		50.0	NA	91	90-119	NA	NA	

Date of Report: April 12, 2023
Samples Submitted: March 31, 2023
Laboratory Reference: 2303-361
Project: 26410-001-01

NITRATE (as Nitrogen)
EPA 353.2
QUALITY CONTROL

Matrix: Water
Units: mg/L-N

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0331W3					
Nitrate	**ND**	0.050	EPA 353.2	3-31-23	3-31-23	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	03-361-01							
	ORIG DUP							
Nitrate	**0.157** **0.118**	NA	NA	NA	NA	28	10	C
MATRIX SPIKE								
Laboratory ID:	03-361-01							
	MS	MS		MS				
Nitrate	**2.37**	2.00	0.157	111	88-125	NA	NA	
SPIKE BLANK								
Laboratory ID:	SB0331W3							
	SB	SB		SB				
Nitrate	**2.20**	2.00	NA	110	90-120	NA	NA	

Date of Report: April 12, 2023
Samples Submitted: March 31, 2023
Laboratory Reference: 2303-361
Project: 26410-001-01

SULFATE
ASTM D516-11
QUALITY CONTROL

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0405W1					
Sulfate	**ND**	5.0	ASTM D516-11	3-9-23	4-5-23	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	03-330-01							
	ORIG DUP							
Sulfate	**5.53** **5.75**	NA	NA	NA	NA	4	10	
MATRIX SPIKE								
Laboratory ID:	03-330-01							
	MS	MS		MS				
Sulfate	**16.1**	10.0	5.53	106	72-128	NA	NA	
SPIKE BLANK								
Laboratory ID:	SB0405W1							
	SB	SB		SB				
Sulfate	**9.54**	10.0	NA	95	85-114	NA	NA	

Date of Report: April 12, 2023
Samples Submitted: March 31, 2023
Laboratory Reference: 2303-361
Project: 26410-001-01

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:	MB0404W1					
Total Dissolved Solids	**ND**	13	SM 2540C	4-4-23	4-7-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	03-347-01								
	ORIG	DUP							
Total Dissolved Solids	**143**	**164**	NA	NA	NA	NA	14	23	
SPIKE BLANK									
Laboratory ID:	SB0404W1								
	SB		SB		SB				
Total Dissolved Solids	**479**		500	NA	96	89-120	NA	NA	

Date of Report: April 12, 2023
Samples Submitted: March 31, 2023
Laboratory Reference: 2303-361
Project: 26410-001-01

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:	MB0403W2					
Ammonia	**ND**	0.050	SM 4500-NH3 D	4-3-23	4-3-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	03-277-01								
	ORIG	DUP							
Ammonia	**ND**	**ND**	NA	NA	NA	NA	NA	15	
MATRIX SPIKE									
Laboratory ID:	03-277-01								
	MS		MS		MS				
Ammonia	**5.01**		5.00	ND	100	87-110	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB0403W2								
	SB		SB		SB				
Ammonia	**5.50**		5.00	NA	110	88-110	NA	NA	

Date of Report: April 12, 2023
Samples Submitted: March 31, 2023
Laboratory Reference: 2303-361
Project: 26410-001-01

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:	MB0406WH1					
Iron	**ND**	50	EPA 200.7	4-6-23	4-6-23	
Magnesium	**ND**	1000	EPA 200.7	4-6-23	4-6-23	
Manganese	**ND**	10	EPA 200.7	4-6-23	4-6-23	
Laboratory ID:	MB0406WM1					
Arsenic	**ND**	3.3	EPA 200.8	4-6-23	4-6-23	

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	03-283-03									
	ORIG	DUP								
Iron	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Magnesium	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Manganese	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Laboratory ID:	03-310-04									
Arsenic	**7.31**	**6.47**	NA	NA		NA	NA	12	20	
MATRIX SPIKES										
Laboratory ID:	03-283-03									
	MS	MSD	MS	MSD		MS	MSD			
Iron	**20600**	**20800**	20000	20000	ND	**103**	**104**	75-125	1	20
Magnesium	**20700**	**21200**	20000	20000	ND	**104**	**106**	75-125	2	20
Manganese	**516**	**516**	500	500	ND	**103**	**103**	75-125	0	20
Laboratory ID:	03-310-04									
Arsenic	**120**	**123**	111	111	7.31	**101**	**104**	75-125	3	20

Date of Report: April 12, 2023
Samples Submitted: March 31, 2023
Laboratory Reference: 2303-361
Project: 26410-001-01

DISSOLVED 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:	MB0410D1					
Calcium	**ND**	1100	EPA 200.7		4-10-23	
Iron	**ND**	56	EPA 200.7		4-10-23	
Magnesium	**ND**	1100	EPA 200.7		4-10-23	
Manganese	**ND**	11	EPA 200.7		4-10-23	
Potassium	**ND**	1100	EPA 200.7		4-10-23	
Sodium	**ND**	1100	EPA 200.7		4-10-23	

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	03-361-01									
	ORIG	DUP								
Calcium	**6820**	**6880**	NA	NA		NA	NA	1	20	
Iron	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Magnesium	**1150**	**1150**	NA	NA		NA	NA	0	20	
Manganese	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Potassium	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Sodium	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Laboratory ID:	04-001-03									
Arsenic	**23.0**	**24.8**	NA	NA		NA	NA	8	20	
MATRIX SPIKES										
Laboratory ID:	03-361-01									
	MS	MSD	MS	MSD		MS	MSD			
Calcium	**31300**	**31200**	22200	22200	6820	**110**	**110**	75-125	0	20
Iron	**24500**	**24300**	22200	22200	ND	**111**	**110**	75-125	1	20
Magnesium	**24800**	**24600**	22200	22200	1150	**106**	**106**	75-125	0	20
Manganese	**572**	**565**	556	556	ND	**103**	**102**	75-125	1	20
Potassium	**24300**	**24200**	22200	22200	ND	**110**	**109**	75-125	0	20
Sodium	**25300**	**25300**	22200	22200	ND	**114**	**114**	75-125	0	20
Laboratory ID:	04-001-03									
Arsenic	**111**	**113**	80.0	80.0	23.0	**110**	**113**	75-125	2	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

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Phone: (425) 883-3881 • www.onsite-env.com

Company: GeoEngineers
Project Number: ~~6594-002-05~~ 26410-001-01
Project Name: Go East
Project Manager: Garrett Leque
Sampled by:

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

Laboratory Number: 03-361

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-Gx	NWTPH-Dx	Volatiles 8260B	PAHs 8270D/SIM (low-level)	Organochlorine Pesticides 8081A	TQC, alk+bicarb, Cl, NO3, SO4, TDS, NH3)	TOC, TDS, NH3	T/D metals	T/D metals	T metals	Total metals	% Moisture
1	MW-1-20230331	3-31-23	1330	W	6						X				X	X	
2	MW-8-20230331	3-31-23	1010	W	8				X		X				X	X	
											X				X	X	

SEE COMMENTS

	Signature	Company	Date	Time
Relinquished	B. Quelena	GEI	3-31-23	1540
Received		OSE	3/31/23	1540
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

TOTAL METALS: As, Fe, Mg, Mn

DISSOLVED METALS: As, Fe, Mg, Mn, Ca, K, Na

* DISSOLVED METALS WERE FIELD FILTERED

Chromatograms with final report ☐

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

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

April 25, 2023

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

Re: Analytical Data for Project 26410-001-01
Laboratory Reference No. 2304-019

Dear Garrett:

Enclosed are the analytical results and associated quality control data for samples submitted on April 4, 2023.

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: April 25, 2023
Samples Submitted: April 4, 2023
Laboratory Reference: 2304-019
Project: 26410-001-01

Case Narrative

Samples were collected on April 3, 2023 and received by the laboratory on April 4, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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

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

Date of Report: April 25, 2023
Samples Submitted: April 4, 2023
Laboratory Reference: 2304-019
Project: 26410-001-01

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
MW-3-20230403	04-019-01	Water	4-3-23	4-4-23	

Date of Report: April 25, 2023
Samples Submitted: April 4, 2023
Laboratory Reference: 2304-019
Project: 26410-001-01

TOTAL ORGANIC CARBON
SM 5310B

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-3-20230403**					
Laboratory ID:	04-019-01					
Total Organic Carbon	**ND**	1.0	SM 5310B	4-6-23	4-7-23	

Date of Report: April 25, 2023
Samples Submitted: April 4, 2023
Laboratory Reference: 2304-019
Project: 26410-001-01

TOTAL ALKALINITY
SM 2320B

Matrix: Water
Units: mg CaCO3/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-3-20230403**					
Laboratory ID:	04-019-01					
Total Alkalinity	**110**	2.0	SM 2320B	4-10-23	4-10-23	

Date of Report: April 25, 2023
Samples Submitted: April 4, 2023
Laboratory Reference: 2304-019
Project: 26410-001-01

BICARBONATE
SM 2320B

Matrix: Water
Units: mg CaCO3/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-3-20230403**					
Laboratory ID:	04-019-01					
Bicarbonate	**110**	2.0	SM 2320B	4-10-23	4-10-23	

Date of Report: April 25, 2023
Samples Submitted: April 4, 2023
Laboratory Reference: 2304-019
Project: 26410-001-01

CHLORIDE
SM 4500-Cl E

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-3-20230403**					
Laboratory ID:	04-019-01					
Chloride	**5.0**	2.0	SM 4500-Cl E	4-5-23	4-5-23	

Date of Report: April 25, 2023
Samples Submitted: April 4, 2023
Laboratory Reference: 2304-019
Project: 26410-001-01

NITRATE (as Nitrogen)
EPA 353.2

Matrix: Water
Units: mg/L-N

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-3-20230403**					
Laboratory ID:	04-019-01					
Nitrate	**ND**	0.050	EPA 353.2	4-6-23	4-6-23	

Date of Report: April 25, 2023
Samples Submitted: April 4, 2023
Laboratory Reference: 2304-019
Project: 26410-001-01

SULFATE
ASTM D516-11

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-3-20230403**					
Laboratory ID:	04-019-01					
Sulfate	**13**	5.0	ASTM D516-11	3-9-23	4-5-23	

Date of Report: April 25, 2023
Samples Submitted: April 4, 2023
Laboratory Reference: 2304-019
Project: 26410-001-01

TOTAL DISSOLVED SOLIDS
SM 2540C

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-3-20230403**					
Laboratory ID:	04-019-01					
Total Dissolved Solids	**170**	13	SM 2540C	4-7-23	4-7-23	

Date of Report: April 25, 2023
Samples Submitted: April 4, 2023
Laboratory Reference: 2304-019
Project: 26410-001-01

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-3-20230403**					
Laboratory ID:	04-019-01					
Ammonia	**0.13**	0.050	SM 4500-NH3 D	4-6-23	4-6-23	

Date of Report: April 25, 2023
Samples Submitted: April 4, 2023
Laboratory Reference: 2304-019
Project: 26410-001-01

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-3-20230403**					
Laboratory ID:	04-019-01					
Arsenic	**13**	3.3	EPA 200.8	4-6-23	4-6-23	
Iron	**4000**	50	EPA 200.7	4-6-23	4-6-23	
Magnesium	**14000**	1000	EPA 200.7	4-6-23	4-6-23	
Manganese	**220**	10	EPA 200.7	4-6-23	4-6-23	

Date of Report: April 25, 2023
Samples Submitted: April 4, 2023
Laboratory Reference: 2304-019
Project: 26410-001-01

DISSOLVED METALS
EPA 200.8/200.7

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-3-20230403**					
Laboratory ID:	04-019-01					
Arsenic	**12**	3.0	EPA 200.8		4-7-23	
Calcium	**26000**	1100	EPA 200.7		4-10-23	
Iron	**56**	56	EPA 200.7		4-10-23	
Magnesium	**14000**	1100	EPA 200.7		4-10-23	
Manganese	**150**	11	EPA 200.7		4-10-23	
Potassium	**3000**	1100	EPA 200.7		4-10-23	
Sodium	**7200**	1100	EPA 200.7		4-10-23	

Date of Report: April 25, 2023
Samples Submitted: April 4, 2023
Laboratory Reference: 2304-019
Project: 26410-001-01

TOTAL ORGANIC CARBON
SM 5310B
QUALITY CONTROL

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0406W1					
Total Organic Carbon	**ND**	1.0	SM 5310B	4-6-23	4-7-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	03-347-01								
	ORIG	DUP							
Total Organic Carbon	**3.23**	**3.21**	NA	NA	NA	NA	1	12	
MATRIX SPIKE									
Laboratory ID:	03-347-01								
	MS		MS		MS				
Total Organic Carbon	**13.4**		10.0	3.23	102	80-120	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB0406W1								
	SB		SB		SB				
Total Organic Carbon	**11.6**		10.0	NA	116	80-118	NA	NA	

Date of Report: April 25, 2023
Samples Submitted: April 4, 2023
Laboratory Reference: 2304-019
Project: 26410-001-01

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:	MB0410W1					
Total Alkalinity	**ND**	2.0	SM 2320B	4-10-23	4-10-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	04-088-01								
	ORIG	DUP							
Total Alkalinity	**122**	**116**	NA	NA	NA	NA	5	10	
SPIKE BLANK									
Laboratory ID:	SB0410W1								
	SB		SB		SB				
Total Alkalinity	**92.0**		100	NA	92	89-110	NA	NA	

Date of Report: April 25, 2023
Samples Submitted: April 4, 2023
Laboratory Reference: 2304-019
Project: 26410-001-01

BICARBONATE
SM 2320B
QUALITY CONTROL

Matrix: Water
Units: mg CaCO3/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0410W1					
Bicarbonate	**ND**	2.0	SM 2320B	4-10-23	4-10-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	04-088-01								
	ORIG	DUP							
Bicarbonate	**122**	**116**	NA	NA	NA	NA	5	10	
SPIKE BLANK									
Laboratory ID:	SB0410W1								
	SB		SB		SB				
Bicarbonate	**92.0**		100	NA	92	89-110	NA	NA	

Date of Report: April 25, 2023
Samples Submitted: April 4, 2023
Laboratory Reference: 2304-019
Project: 26410-001-01

CHLORIDE
SM 4500-Cl E
QUALITY CONTROL

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0405W1					
Chloride	**ND**	2.0	SM 4500-Cl E	4-5-23	4-5-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	04-019-01								
	ORIG	DUP							
Chloride	**5.02**	**4.78**	NA	NA	NA	NA	5	11	
MATRIX SPIKE									
Laboratory ID:	04-019-01								
	MS		MS		MS				
Chloride	**55.0**		50.0	5.02	100	85-121	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB0405W1								
	SB		SB		SB				
Chloride	**47.2**		50.0	NA	94	90-119	NA	NA	

Date of Report: April 25, 2023
Samples Submitted: April 4, 2023
Laboratory Reference: 2304-019
Project: 26410-001-01

NITRATE (as Nitrogen)
EPA 353.2
QUALITY CONTROL

Matrix: Water
Units: mg/L-N

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0406W2					
Nitrate	**ND**	0.050	EPA 353.2	4-6-23	4-6-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	03-298-21								
	ORIG	DUP							
Nitrate	**4.64**	**4.91**	NA	NA	NA	NA	6	10	
MATRIX SPIKE									
Laboratory ID:	03-298-21								
	MS		MS		MS				
Nitrate	**9.12**		4.00	4.64	112	88-125	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB0406W2								
	SB		SB		SB				
Nitrate	**2.03**		2.00	NA	102	90-120	NA	NA	

Date of Report: April 25, 2023
Samples Submitted: April 4, 2023
Laboratory Reference: 2304-019
Project: 26410-001-01

SULFATE
ASTM D516-11
QUALITY CONTROL

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0405W1					
Sulfate	**ND**	5.0	ASTM D516-11	3-9-23	4-5-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	03-330-01								
	ORIG	DUP							
Sulfate	**5.53**	**5.75**	NA	NA	NA	NA	4	10	
MATRIX SPIKE									
Laboratory ID:	03-330-01								
	MS		MS		MS				
Sulfate	**16.1**		10.0	5.53	106	72-128	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB0405W1								
	SB		SB		SB				
Sulfate	**9.54**		10.0	NA	95	85-114	NA	NA	

Date of Report: April 25, 2023
Samples Submitted: April 4, 2023
Laboratory Reference: 2304-019
Project: 26410-001-01

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:	MB0407W1					
Total Dissolved Solids	**ND**	13	SM 2540C	4-7-23	4-7-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	04-019-01								
	ORIG	DUP							
Total Dissolved Solids	**167**	**148**	NA	NA	NA	NA	12	23	
SPIKE BLANK									
Laboratory ID:	SB0407W1								
	SB		SB		SB				
Total Dissolved Solids	**491**		500	NA	98	89-120	NA	NA	

Date of Report: April 25, 2023
Samples Submitted: April 4, 2023
Laboratory Reference: 2304-019
Project: 26410-001-01

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:	MB0406W1					
Ammonia	**ND**	0.050	SM 4500-NH3 D	4-6-23	4-6-23	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	03-299-01							
	ORIG DUP							
Ammonia	**ND** **ND**	NA	NA	NA	NA	NA	15	
MATRIX SPIKE								
Laboratory ID:	03-299-01							
	MS	MS		MS				
Ammonia	**4.58**	5.00	ND	92	87-110	NA	NA	
SPIKE BLANK								
Laboratory ID:	SB0406W1							
	SB	SB		SB				
Ammonia	**4.57**	5.00	NA	91	88-110	NA	NA	

Date of Report: April 25, 2023
Samples Submitted: April 4, 2023
Laboratory Reference: 2304-019
Project: 26410-001-01

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:	MB0406WH1					
Iron	**ND**	50	EPA 200.7	4-6-23	4-6-23	
Magnesium	**ND**	1000	EPA 200.7	4-6-23	4-6-23	
Manganese	**ND**	10	EPA 200.7	4-6-23	4-6-23	
Laboratory ID:	MB0406WM1					
Arsenic	**ND**	3.3	EPA 200.8	4-6-23	4-6-23	

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	03-283-03									
	ORIG	DUP								
Iron	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Magnesium	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Manganese	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Laboratory ID:	03-310-04									
Arsenic	**7.31**	**6.47**	NA	NA		NA	NA	12	20	
MATRIX SPIKES										
Laboratory ID:	03-283-03									
	MS	MSD	MS	MSD		MS	MSD			
Iron	**20600**	**20800**	20000	20000	ND	**103**	**104**	75-125	1	20
Magnesium	**20700**	**21200**	20000	20000	ND	**104**	**106**	75-125	2	20
Manganese	**516**	**516**	500	500	ND	**103**	**103**	75-125	0	20
Laboratory ID:	03-310-04									
Arsenic	**120**	**123**	111	111	7.31	**101**	**104**	75-125	3	20

Date of Report: April 25, 2023
Samples Submitted: April 4, 2023
Laboratory Reference: 2304-019
Project: 26410-001-01

DISSOLVED 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:	MB0410D1					
Calcium	**ND**	1100	EPA 200.7		4-10-23	
Iron	**ND**	56	EPA 200.7		4-10-23	
Magnesium	**ND**	1100	EPA 200.7		4-10-23	
Manganese	**ND**	11	EPA 200.7		4-10-23	
Potassium	**ND**	1100	EPA 200.7		4-10-23	
Sodium	**ND**	1100	EPA 200.7		4-10-23	
Laboratory ID:	MB0407D1					
Arsenic	**ND**	3.0	EPA 200.8		4-7-23	

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	03-361-01									
	ORIG	DUP								
Calcium	**6820**	**6880**	NA	NA		NA	NA	1	20	
Iron	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Magnesium	**1150**	**1150**	NA	NA		NA	NA	0	20	
Manganese	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Potassium	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Sodium	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Laboratory ID:	04--045-02									
Arsenic	**9.14**	**8.76**	NA	NA		NA	NA	4	20	
MATRIX SPIKES										
Laboratory ID:	03-361-01									
	MS	MSD	MS	MSD		MS	MSD			
Calcium	**31300**	**31200**	22200	22200	6820	**110**	**110**	75-125	0	20
Iron	**24500**	**24300**	22200	22200	ND	**111**	**110**	75-125	1	20
Magnesium	**24800**	**24600**	22200	22200	1150	**106**	**106**	75-125	0	20
Manganese	**572**	**565**	556	556	ND	**103**	**102**	75-125	1	20
Potassium	**24300**	**24200**	22200	22200	ND	**110**	**109**	75-125	0	20
Sodium	**25300**	**25300**	22200	22200	ND	**114**	**114**	75-125	0	20
Laboratory ID:	04-045-02									
Arsenic	**94.8**	**99.8**	80.0	80.0	9.14	**107**	**113**	75-125	5	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.
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: GeoEngineers

Project Number: ~~8694-002-05~~ MB 20410-001-01

Project Name: Go East

Project Manager: Garrett Leque

Sampled by: JDE

Turnaround Request (in working days)

(Check One)

☐ Same Day ☐ 1 Day

☐ 2 Days ☐ 3 Days

☒ Standard (7 Days) (TPH analysis 5 Days)

☐ _____ (other)

Laboratory Number: 04-019

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-Gx	NWTPH-Dx	Volatiles 8260B	PAHs 8270D/SIM (low-level)	Organochlorine Pesticides 8081A	TOC, alk+bicarb, Cl, NO3, SO4, TDS, NH3)	TOC, TDS, NH3	T/D metals	T/D metals	T/D metals	Total metals	% Moisture
													☆ Total	‡ Diss.			
1	MW-3-20230403	4/3/23	1430	W	6						X		X	X			

	Signature	Company	Date	Time
Relinquished		GEI	4/4/23	1200
Received		OSE	4/4/23	1200
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

☆: As, Fe, Mg, Mn

‡: As, Fe, Mg, Mn, Ca, K, Na

f = Field Filtered

Chromatograms with final report ☐

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

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

April 18, 2023

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

Re: Analytical Data for Project 26410-001-01
Laboratory Reference No. 2304-045

Dear Garrett:

Enclosed are the analytical results and associated quality control data for samples submitted on April 6, 2023.

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: April 18, 2023
Samples Submitted: April 6, 2023
Laboratory Reference: 2304-045
Project: 26410-001-01

Case Narrative

Samples were collected on April 5, 2023 and received by the laboratory on April 6, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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

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

Date of Report: April 18, 2023
Samples Submitted: April 6, 2023
Laboratory Reference: 2304-045
Project: 26410-001-01

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
MW-6-20230405	04-045-01	Water	4-5-23	4-6-23	
MW-7-20230405	04-045-02	Water	4-5-23	4-6-23	

Date of Report: April 18, 2023
Samples Submitted: April 6, 2023
Laboratory Reference: 2304-045
Project: 26410-001-01

PAHs EPA 8270E/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6-20230405**					
Laboratory ID:	04-045-01					
Naphthalene	**ND**	0.095	EPA 8270E/SIM	4-10-23	4-10-23	
2-Methylnaphthalene	**ND**	0.095	EPA 8270E/SIM	4-10-23	4-10-23	
1-Methylnaphthalene	**ND**	0.095	EPA 8270E/SIM	4-10-23	4-10-23	
Acenaphthylene	**ND**	0.095	EPA 8270E/SIM	4-10-23	4-10-23	
Acenaphthene	**ND**	0.095	EPA 8270E/SIM	4-10-23	4-10-23	
Fluorene	**ND**	0.095	EPA 8270E/SIM	4-10-23	4-10-23	
Phenanthrene	**ND**	0.095	EPA 8270E/SIM	4-10-23	4-10-23	
Anthracene	**ND**	0.095	EPA 8270E/SIM	4-10-23	4-10-23	
Fluoranthene	**ND**	0.095	EPA 8270E/SIM	4-10-23	4-10-23	
Pyrene	**ND**	0.095	EPA 8270E/SIM	4-10-23	4-10-23	
Benzo[a]anthracene	**ND**	0.0095	EPA 8270E/SIM	4-10-23	4-10-23	
Chrysene	**ND**	0.0095	EPA 8270E/SIM	4-10-23	4-10-23	
Benzo[b]fluoranthene	**ND**	0.0095	EPA 8270E/SIM	4-10-23	4-10-23	
Benzo(j,k)fluoranthene	**ND**	0.0095	EPA 8270E/SIM	4-10-23	4-10-23	
Benzo[a]pyrene	**ND**	0.0095	EPA 8270E/SIM	4-10-23	4-10-23	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0095	EPA 8270E/SIM	4-10-23	4-10-23	
Dibenz[a,h]anthracene	**ND**	0.0095	EPA 8270E/SIM	4-10-23	4-10-23	
Benzo[g,h,i]perylene	**ND**	0.0095	EPA 8270E/SIM	4-10-23	4-10-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*66*	*20 - 106*				
Pyrene-d10	*86*	*19 - 104*				
Terphenyl-d14	*75*	*41 - 127*				

Date of Report: April 18, 2023
Samples Submitted: April 6, 2023
Laboratory Reference: 2304-045
Project: 26410-001-01

PAHs EPA 8270E/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-7-20230405**					
Laboratory ID:	04-045-02					
Naphthalene	**ND**	0.097	EPA 8270E/SIM	4-10-23	4-10-23	
2-Methylnaphthalene	**ND**	0.097	EPA 8270E/SIM	4-10-23	4-10-23	
1-Methylnaphthalene	**ND**	0.097	EPA 8270E/SIM	4-10-23	4-10-23	
Acenaphthylene	**ND**	0.097	EPA 8270E/SIM	4-10-23	4-10-23	
Acenaphthene	**ND**	0.097	EPA 8270E/SIM	4-10-23	4-10-23	
Fluorene	**ND**	0.097	EPA 8270E/SIM	4-10-23	4-10-23	
Phenanthrene	**ND**	0.097	EPA 8270E/SIM	4-10-23	4-10-23	
Anthracene	**ND**	0.097	EPA 8270E/SIM	4-10-23	4-10-23	
Fluoranthene	**ND**	0.097	EPA 8270E/SIM	4-10-23	4-10-23	
Pyrene	**ND**	0.097	EPA 8270E/SIM	4-10-23	4-10-23	
Benzo[a]anthracene	**ND**	0.0097	EPA 8270E/SIM	4-10-23	4-10-23	
Chrysene	**ND**	0.0097	EPA 8270E/SIM	4-10-23	4-10-23	
Benzo[b]fluoranthene	**ND**	0.0097	EPA 8270E/SIM	4-10-23	4-10-23	
Benzo(j,k)fluoranthene	**ND**	0.0097	EPA 8270E/SIM	4-10-23	4-10-23	
Benzo[a]pyrene	**ND**	0.0097	EPA 8270E/SIM	4-10-23	4-10-23	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0097	EPA 8270E/SIM	4-10-23	4-10-23	
Dibenz[a,h]anthracene	**ND**	0.0097	EPA 8270E/SIM	4-10-23	4-10-23	
Benzo[g,h,i]perylene	**ND**	0.0097	EPA 8270E/SIM	4-10-23	4-10-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*71*	*20 - 106*				
Pyrene-d10	*95*	*19 - 104*				
Terphenyl-d14	*82*	*41 - 127*				

Date of Report: April 18, 2023
Samples Submitted: April 6, 2023
Laboratory Reference: 2304-045
Project: 26410-001-01

TOTAL ORGANIC CARBON
SM 5310B

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6-20230405**					
Laboratory ID:	04-045-01					
Total Organic Carbon	**2.8**	1.0	SM 5310B	4-13-23	4-13-23	
Client ID:	**MW-7-20230405**					
Laboratory ID:	04-045-02					
Total Organic Carbon	**ND**	1.0	SM 5310B	4-13-23	4-13-23	

Date of Report: April 18, 2023
Samples Submitted: April 6, 2023
Laboratory Reference: 2304-045
Project: 26410-001-01

TOTAL ALKALINITY
SM 2320B

Matrix: Water
Units: mg CaCO3/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6-20230405**					
Laboratory ID:	04-045-01					
Total Alkalinity	**220**	2.0	SM 2320B	4-10-23	4-10-23	
Client ID:	**MW-7-20230405**					
Laboratory ID:	04-045-02					
Total Alkalinity	**100**	2.0	SM 2320B	4-10-23	4-10-23	

Date of Report: April 18, 2023
Samples Submitted: April 6, 2023
Laboratory Reference: 2304-045
Project: 26410-001-01

BICARBONATE
SM 2320B

Matrix: Water
Units: mg CaCO3/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6-20230405**					
Laboratory ID:	04-045-01					
Bicarbonate	**220**	2.0	SM 2320B	4-10-23	4-10-23	
Client ID:	**MW-7-20230405**					
Laboratory ID:	04-045-02					
Bicarbonate	**100**	2.0	SM 2320B	4-10-23	4-10-23	

Date of Report: April 18, 2023
Samples Submitted: April 6, 2023
Laboratory Reference: 2304-045
Project: 26410-001-01

CHLORIDE
SM 4500-Cl E

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6-20230405**					
Laboratory ID:	04-045-01					
Chloride	**5.2**	2.0	SM 4500-Cl E	4-17-23	4-17-23	
Client ID:	**MW-7-20230405**					
Laboratory ID:	04-045-02					
Chloride	**6.5**	2.0	SM 4500-Cl E	4-17-23	4-17-23	

Date of Report: April 18, 2023
Samples Submitted: April 6, 2023
Laboratory Reference: 2304-045
Project: 26410-001-01

NITRATE (as Nitrogen)
EPA 353.2

Matrix: Water
Units: mg/L-N

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6-20230405**					
Laboratory ID:	04-045-01					
Nitrate	**ND**	0.050	EPA 353.2	4-7-23	4-7-23	
Client ID:	**MW-7-20230405**					
Laboratory ID:	04-045-02					
Nitrate	**0.069**	0.050	EPA 353.2	4-7-23	4-7-23	

Date of Report: April 18, 2023
Samples Submitted: April 6, 2023
Laboratory Reference: 2304-045
Project: 26410-001-01

SULFATE
ASTM D516-11

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6-20230405**					
Laboratory ID:	04-045-01					
Sulfate	**19**	5.0	ASTM D516-11	4-10-23	4-10-23	
Client ID:	**MW-7-20230405**					
Laboratory ID:	04-045-02					
Sulfate	**9.4**	5.0	ASTM D516-11	4-10-23	4-10-23	

Date of Report: April 18, 2023
Samples Submitted: April 6, 2023
Laboratory Reference: 2304-045
Project: 26410-001-01

TOTAL DISSOLVED SOLIDS
SM 2540C

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6-20230405**					
Laboratory ID:	04-045-01					
Total Dissolved Solids	**280**	13	SM 2540C	4-7-23	4-7-23	
Client ID:	**MW-7-20230405**					
Laboratory ID:	04-045-02					
Total Dissolved Solids	**150**	13	SM 2540C	4-7-23	4-7-23	

Date of Report: April 18, 2023
Samples Submitted: April 6, 2023
Laboratory Reference: 2304-045
Project: 26410-001-01

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-6-20230405**					
Laboratory ID:	04-045-01					
Ammonia	**0.081**	0.050	SM 4500-NH3 D	4-7-23	4-7-23	
Client ID:	**MW-7-20230405**					
Laboratory ID:	04-045-02					
Ammonia	**0.081**	0.050	SM 4500-NH3 D	4-7-23	4-7-23	

Date of Report: April 18, 2023
Samples Submitted: April 6, 2023
Laboratory Reference: 2304-045
Project: 26410-001-01

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-6-20230405**					
Laboratory ID:	04-045-01					
Arsenic	**6.6**	3.3	EPA 200.8	4-6-23	4-6-23	
Iron	**840**	50	EPA 200.7	4-6-23	4-6-23	
Magnesium	**26000**	1000	EPA 200.7	4-6-23	4-6-23	
Manganese	**1400**	10	EPA 200.7	4-6-23	4-6-23	
Client ID:	**MW-7-20230405**					
Laboratory ID:	04-045-02					
Arsenic	**8.8**	3.3	EPA 200.8	4-6-23	4-6-23	
Iron	**1500**	50	EPA 200.7	4-6-23	4-6-23	
Magnesium	**14000**	1000	EPA 200.7	4-6-23	4-6-23	
Manganese	**110**	10	EPA 200.7	4-6-23	4-6-23	

Date of Report: April 18, 2023
Samples Submitted: April 6, 2023
Laboratory Reference: 2304-045
Project: 26410-001-01

DISSOLVED METALS
EPA 200.8/200.7

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-6-20230405**					
Laboratory ID:	04-045-01					
Arsenic	**7.1**	3.0	EPA 200.8		4-7-23	
Calcium	**45000**	1100	EPA 200.7		4-10-23	
Iron	**580**	56	EPA 200.7		4-10-23	
Magnesium	**27000**	1100	EPA 200.7		4-10-23	
Manganese	**1500**	11	EPA 200.7		4-10-23	
Potassium	**3600**	1100	EPA 200.7		4-10-23	
Sodium	**14000**	1100	EPA 200.7		4-10-23	
Client ID:	**MW-7-20230405**					
Laboratory ID:	04-045-02					
Arsenic	**9.1**	3.0	EPA 200.8		4-7-23	
Calcium	**22000**	1100	EPA 200.7		4-10-23	
Iron	**ND**	56	EPA 200.7		4-10-23	
Magnesium	**14000**	1100	EPA 200.7		4-10-23	
Manganese	**60**	11	EPA 200.7		4-10-23	
Potassium	**2600**	1100	EPA 200.7		4-10-23	
Sodium	**6400**	1100	EPA 200.7		4-10-23	

Date of Report: April 18, 2023
Samples Submitted: April 6, 2023
Laboratory Reference: 2304-045
Project: 26410-001-01

PAHs EPA 8270E/SIM
QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0410W1					
Naphthalene	**ND**	0.10	EPA 8270E/SIM	4-10-23	4-10-23	
2-Methylnaphthalene	**ND**	0.10	EPA 8270E/SIM	4-10-23	4-10-23	
1-Methylnaphthalene	**ND**	0.10	EPA 8270E/SIM	4-10-23	4-10-23	
Acenaphthylene	**ND**	0.10	EPA 8270E/SIM	4-10-23	4-10-23	
Acenaphthene	**ND**	0.10	EPA 8270E/SIM	4-10-23	4-10-23	
Fluorene	**ND**	0.10	EPA 8270E/SIM	4-10-23	4-10-23	
Phenanthrene	**ND**	0.10	EPA 8270E/SIM	4-10-23	4-10-23	
Anthracene	**ND**	0.10	EPA 8270E/SIM	4-10-23	4-10-23	
Fluoranthene	**ND**	0.10	EPA 8270E/SIM	4-10-23	4-10-23	
Pyrene	**ND**	0.10	EPA 8270E/SIM	4-10-23	4-10-23	
Benzo[a]anthracene	**ND**	0.010	EPA 8270E/SIM	4-10-23	4-10-23	
Chrysene	**ND**	0.010	EPA 8270E/SIM	4-10-23	4-10-23	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270E/SIM	4-10-23	4-10-23	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270E/SIM	4-10-23	4-10-23	
Benzo[a]pyrene	**ND**	0.010	EPA 8270E/SIM	4-10-23	4-10-23	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270E/SIM	4-10-23	4-10-23	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270E/SIM	4-10-23	4-10-23	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270E/SIM	4-10-23	4-10-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*79*	*20 - 106*				
Pyrene-d10	*98*	*19 - 104*				
Terphenyl-d14	*84*	*41 - 127*				

Date of Report: April 18, 2023
Samples Submitted: April 6, 2023
Laboratory Reference: 2304-045
Project: 26410-001-01

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:	SB0410W1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	**0.334**	**0.291**	0.500	0.500	67	58	25 - 82	14	39	
Acenaphthylene	**0.377**	**0.335**	0.500	0.500	75	67	35 - 107	12	26	
Acenaphthene	**0.356**	**0.323**	0.500	0.500	71	65	33 - 99	10	26	
Fluorene	**0.428**	**0.401**	0.500	0.500	86	80	43 - 95	7	24	
Phenanthrene	**0.474**	**0.467**	0.500	0.500	95	93	49 - 100	1	20	
Anthracene	**0.378**	**0.373**	0.500	0.500	76	75	47 - 101	1	21	
Fluoranthene	**0.431**	**0.472**	0.500	0.500	86	94	51 - 115	9	23	
Pyrene	**0.434**	**0.453**	0.500	0.500	87	91	53 - 117	4	24	
Benzo[a]anthracene	**0.411**	**0.411**	0.500	0.500	82	82	57 - 114	0	21	
Chrysene	**0.384**	**0.380**	0.500	0.500	77	76	55 - 119	1	21	
Benzo[b]fluoranthene	**0.397**	**0.386**	0.500	0.500	79	77	56 - 125	3	26	
Benzo(j,k)fluoranthene	**0.414**	**0.422**	0.500	0.500	83	84	53 - 124	2	22	
Benzo[a]pyrene	**0.413**	**0.406**	0.500	0.500	83	81	54 - 119	2	22	
Indeno(1,2,3-c,d)pyrene	**0.459**	**0.441**	0.500	0.500	92	88	55 - 118	4	23	
Dibenz[a,h]anthracene	**0.425**	**0.422**	0.500	0.500	85	84	56 - 118	1	23	
Benzo[g,h,i]perylene	**0.402**	**0.404**	0.500	0.500	80	81	55 - 117	0	22	
Surrogate:										
2-Fluorobiphenyl					*61*	*53*	*20 - 106*			
Pyrene-d10					*84*	*82*	*19 - 104*			
Terphenyl-d14					*71*	*73*	*41 - 127*			

Date of Report: April 18, 2023
Samples Submitted: April 6, 2023
Laboratory Reference: 2304-045
Project: 26410-001-01

TOTAL ORGANIC CARBON
SM 5310B
QUALITY CONTROL

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0413W1					
Total Organic Carbon	**ND**	1.0	SM 5310B	4-13-23	4-13-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	04-045-01								
	ORIG	DUP							
Total Organic Carbon	**2.85**	**2.77**	NA	NA	NA	NA	3	12	
MATRIX SPIKE									
Laboratory ID:	04-045-01								
	MS		MS		MS				
Total Organic Carbon	**12.8**		10.0	2.85	100	80-120	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB0413W1								
	SB		SB		SB				
Total Organic Carbon	**9.99**		10.0	NA	100	80-118	NA	NA	

Date of Report: April 18, 2023
Samples Submitted: April 6, 2023
Laboratory Reference: 2304-045
Project: 26410-001-01

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:	MB0410W1					
Total Alkalinity	**ND**	2.0	SM 2320B	4-10-23	4-10-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	04-088-01								
	ORIG	DUP							
Total Alkalinity	**122**	**116**	NA	NA	NA	NA	5	10	
SPIKE BLANK									
Laboratory ID:	SB0410W1								
	SB		SB		SB				
Total Alkalinity	**92.0**		100	NA	92	89-110	NA	NA	

Date of Report: April 18, 2023
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Laboratory Reference: 2304-045
Project: 26410-001-01

BICARBONATE
SM 2320B
QUALITY CONTROL

Matrix: Water
Units: mg CaCO3/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0410W1					
Bicarbonate	**ND**	2.0	SM 2320B	4-10-23	4-10-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	04-088-01								
	ORIG	DUP							
Bicarbonate	**122**	**116**	NA	NA	NA	NA	5	10	
SPIKE BLANK									
Laboratory ID:	SB0410W1								
	SB		SB		SB				
Bicarbonate	**92.0**		100	NA	92	89-110	NA	NA	

Date of Report: April 18, 2023
Samples Submitted: April 6, 2023
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Project: 26410-001-01

CHLORIDE
SM 4500-Cl E
QUALITY CONTROL

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0417W1					
Chloride	**ND**	2.0	SM 4500-Cl E	4-17-23	4-17-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	04-045-01								
	ORIG	DUP							
Chloride	**5.20**	**4.98**	NA	NA	NA	NA	4	11	
MATRIX SPIKE									
Laboratory ID:	04-045-01								
	MS		MS		MS				
Chloride	**50.6**		50.0	5.20	91	85-121	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB0417W1								
	SB		SB		SB				
Chloride	**54.5**		50.0	NA	109	90-119	NA	NA	

Date of Report: April 18, 2023
Samples Submitted: April 6, 2023
Laboratory Reference: 2304-045
Project: 26410-001-01

NITRATE (as Nitrogen)
EPA 353.2
QUALITY CONTROL

Matrix: Water
Units: mg/L-N

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0407W1					
Nitrate	**ND**	0.050	EPA 353.2	4-7-23	4-7-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	04-079-01								
	ORIG	DUP							
Nitrate	**0.0611**	**ND**	NA	NA	NA	NA	NA	10	
MATRIX SPIKE									
Laboratory ID:	04-079-01								
	MS		MS		MS				
Nitrate	**1.95**		2.00	0.0611	94	88-125	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB0407W1								
	SB		SB		SB				
Nitrate	**1.89**		2.00	NA	95	90-120	NA	NA	

Date of Report: April 18, 2023
Samples Submitted: April 6, 2023
Laboratory Reference: 2304-045
Project: 26410-001-01

SULFATE
ASTM D516-11
QUALITY CONTROL

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0410W1					
Sulfate	**ND**	5.0	ASTM D516-11	4-10-23	4-10-23	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	04-079-03							
	ORIG DUP							
Sulfate	**ND** **ND**	NA	NA	NA	NA	NA	10	
MATRIX SPIKE								
Laboratory ID:	04-079-03							
	MS	MS		MS				
Sulfate	**9.42**	10.0	ND	94	72-128	NA	NA	
SPIKE BLANK								
Laboratory ID:	SB0410W1							
	SB	SB		SB				
Sulfate	**10.1**	10.0	NA	101	85-114	NA	NA	

Date of Report: April 18, 2023
Samples Submitted: April 6, 2023
Laboratory Reference: 2304-045
Project: 26410-001-01

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:	MB0407W1					
Total Dissolved Solids	**ND**	13	SM 2540C	4-7-23	4-7-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	04-019-01								
	ORIG	DUP							
Total Dissolved Solids	**167**	**148**	NA	NA	NA	NA	12	23	
SPIKE BLANK									
Laboratory ID:	SB0407W1								
	SB		SB		SB				
Total Dissolved Solids	**491**		500	NA	98	89-120	NA	NA	

Date of Report: April 18, 2023
Samples Submitted: April 6, 2023
Laboratory Reference: 2304-045
Project: 26410-001-01

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:	MB0407W2					
Ammonia	**ND**	0.050	SM 4500-NH3 D	4-7-23	4-7-23	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	04-011-21							
	ORIG DUP							
Ammonia	**ND** **ND**	NA	NA	NA	NA	NA	15	
MATRIX SPIKE								
Laboratory ID:	04-011-21							
	MS	MS		MS				
Ammonia	**4.56**	5.00	ND	91	87-110	NA	NA	
SPIKE BLANK								
Laboratory ID:	SB0407W2							
	SB	SB		SB				
Ammonia	**4.77**	5.00	NA	95	88-110	NA	NA	

Date of Report: April 18, 2023
Samples Submitted: April 6, 2023
Laboratory Reference: 2304-045
Project: 26410-001-01

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:	MB0406WH1					
Iron	**ND**	50	EPA 200.7	4-6-23	4-6-23	
Magnesium	**ND**	1000	EPA 200.7	4-6-23	4-6-23	
Manganese	**ND**	10	EPA 200.7	4-6-23	4-6-23	
Laboratory ID:	MB0406WM1					
Arsenic	**ND**	3.3	EPA 200.8	4-6-23	4-6-23	

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	03-283-03									
	ORIG	DUP								
Iron	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Magnesium	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Manganese	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Laboratory ID:	03-310-04									
Arsenic	**7.31**	**6.47**	NA	NA		NA	NA	12	20	
MATRIX SPIKES										
Laboratory ID:	03-283-03									
	MS	MSD	MS	MSD		MS	MSD			
Iron	**20600**	**20800**	20000	20000	ND	**103**	**104**	75-125	1	20
Magnesium	**20700**	**21200**	20000	20000	ND	**104**	**106**	75-125	2	20
Manganese	**516**	**516**	500	500	ND	**103**	**103**	75-125	0	20
Laboratory ID:	03-310-04									
Arsenic	**120**	**123**	111	111	7.31	**101**	**104**	75-125	3	20

Date of Report: April 18, 2023
Samples Submitted: April 6, 2023
Laboratory Reference: 2304-045
Project: 26410-001-01

DISSOLVED METALS
EPA 200.8
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0410D1					
Calcium	**ND**	1100	EPA 200.7		4-10-23	
Iron	**ND**	56	EPA 200.7		4-10-23	
Magnesium	**ND**	1100	EPA 200.7		4-10-23	
Manganese	**ND**	11	EPA 200.7		4-10-23	
Potassium	**ND**	1100	EPA 200.7		4-10-23	
Sodium	**ND**	1100	EPA 200.7		4-10-23	
Laboratory ID:	MB0407D1					
Arsenic	**ND**	3.0	EPA 200.8		4-7-23	

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	03-361-01									
	ORIG	DUP								
Calcium	**6820**	**6880**	NA	NA		NA	NA	1	20	
Iron	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Magnesium	**1150**	**1150**	NA	NA		NA	NA	0	20	
Manganese	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Potassium	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Sodium	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Laboratory ID:	04--045-02									
Arsenic	**9.14**	**8.76**	NA	NA		NA	NA	4	20	
MATRIX SPIKES										
Laboratory ID:	03-361-01									
	MS	MSD	MS	MSD		MS	MSD			
Calcium	**31300**	**31200**	22200	22200	6820	**110**	**110**	75-125	0	20
Iron	**24500**	**24300**	22200	22200	ND	**111**	**110**	75-125	1	20
Magnesium	**24800**	**24600**	22200	22200	1150	**106**	**106**	75-125	0	20
Manganese	**572**	**565**	556	556	ND	**103**	**102**	75-125	1	20
Potassium	**24300**	**24200**	22200	22200	ND	**110**	**109**	75-125	0	20
Sodium	**25300**	**25300**	22200	22200	ND	**114**	**114**	75-125	0	20
Laboratory ID:	04-045-02									
Arsenic	**94.8**	**99.8**	80.0	80.0	9.14	**107**	**113**	75-125	5	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.
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: GeoEngineers

Project Number: ~~0694-002-05~~ 26410-001-01

Project Name: Go East

Project Manager: Garrett Leque

Sampled by: BRIAN ANDERSON

Turnaround Request (in working days)

(Check One)

☐ Same Day ☐ 1 Day

☐ 2 Days ☐ 3 Days

☒ Standard (7 Days) (TPH analysis 5 Days)

☐ _____ (other)

Laboratory Number: 04-045

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-Gx	NWTPH-Dx	Volatiles 8260B	PAHs 8270D/SIM (low-level)	Organochlorine Pesticides 8081A	TOC, alk+bicarb, Cl, NO3, SO4, TDS, NH3	TOC, TDS, NH3	T/D metals	T/D metals	T/D metals	Total metals	% Moisture
[redacted]																	
1	MW-6-20230405	4.5.23	1348	GW	8				Y		Y				X	X	
2	MW-7-20230405	4.5.23	1110	GW	8				Y		Y				Y	Y	

	Signature	Company	Date	Time
Relinquished	B. Anderson	GEOENGINEERS	4-6-23	0922
Received	Nicolle Bohm	OSE	4/6/23	0922
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

TOTAL METALS: As, Fe, Mg, Mn

DISSOLVED METALS:

As, Fe, Mg, Mn, Ca, K, Na

X DISS - FIELD FILTERED

Chromatograms with final report ☐

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

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

April 26, 2023

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

Re: Analytical Data for Project 26410-001-01
Laboratory Reference No. 2304-088

Dear Garrett:

Enclosed are the analytical results and associated quality control data for samples submitted on April 7, 2023.

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: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-088
Project: 26410-001-01

Case Narrative

Samples were collected on April 7, 2023 and received by the laboratory on April 7, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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

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

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-088
Project: 26410-001-01

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
MW-2-20230407	04-088-01	Water	4-7-23	4-7-23	

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-088
Project: 26410-001-01

TOTAL ORGANIC CARBON
SM 5310B

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-2-20230407**					
Laboratory ID:	04-088-01					
Total Organic Carbon	**ND**	1.0	SM 5310B	4-13-23	4-13-23	

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-088
Project: 26410-001-01

TOTAL ALKALINITY
SM 2320B

Matrix: Water
Units: mg CaCO3/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-2-20230407**					
Laboratory ID:	04-088-01					
Total Alkalinity	**120**	2.0	SM 2320B	4-10-23	4-10-23	

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-088
Project: 26410-001-01

BICARBONATE
SM 2320B

Matrix: Water
Units: mg CaCO3/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-2-20230407**					
Laboratory ID:	04-088-01					
Bicarbonate	**120**	2.0	SM 2320B	4-10-23	4-10-23	

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-088
Project: 26410-001-01

CHLORIDE
SM 4500-Cl E

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-2-20230407**					
Laboratory ID:	04-088-01					
Chloride	**4.7**	2.0	SM 4500-Cl E	4-17-23	4-17-23	

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-088
Project: 26410-001-01

NITRATE (as Nitrogen)
EPA 353.2

Matrix: Water
Units: mg/L-N

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-2-20230407**					
Laboratory ID:	04-088-01					
Nitrate	**0.066**	0.050	EPA 353.2	4-7-23	4-7-23	

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-088
Project: 26410-001-01

SULFATE
ASTM D516-11

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-2-20230407**					
Laboratory ID:	04-088-01					
Sulfate	**11**	5.0	ASTM D516-11	4-10-23	4-10-23	

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-088
Project: 26410-001-01

TOTAL DISSOLVED SOLIDS
SM 2540C

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-2-20230407**					
Laboratory ID:	04-088-01					
Total Dissolved Solids	**130**	13	SM 2540C	4-14-23	4-14-23	

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-088
Project: 26410-001-01

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-2-20230407**					
Laboratory ID:	04-088-01					
Ammonia	**0.10**	0.050	SM 4500-NH3 D	4-11-23	4-11-23	

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-088
Project: 26410-001-01

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-2-20230407**					
Laboratory ID:	04-088-01					
Arsenic	**5.8**	3.3	EPA 200.8	4-13-23	4-13-23	
Iron	**2600**	50	EPA 200.7	4-10-23	4-10-23	
Magnesium	**15000**	1000	EPA 200.7	4-10-23	4-10-23	
Manganese	**300**	10	EPA 200.7	4-10-23	4-10-23	

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-088
Project: 26410-001-01

DISSOLVED METALS
EPA 200.8/200.7

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-2-20230407**					
Laboratory ID:	04-088-01					
Arsenic	**4.0**	3.0	EPA 200.8		4-13-23	
Calcium	**24000**	1100	EPA 200.7		4-10-23	
Iron	**76**	56	EPA 200.7		4-10-23	
Magnesium	**15000**	1100	EPA 200.7		4-10-23	
Manganese	**250**	11	EPA 200.7		4-10-23	
Potassium	**2900**	1100	EPA 200.7		4-10-23	
Sodium	**6700**	1100	EPA 200.7		4-10-23	

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-088
Project: 26410-001-01

TOTAL ORGANIC CARBON
SM 5310B
QUALITY CONTROL

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0413W1					
Total Organic Carbon	**ND**	1.0	SM 5310B	4-13-23	4-13-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	04-045-01								
	ORIG	DUP							
Total Organic Carbon	**2.85**	**2.77**	NA	NA	NA	NA	3	12	
MATRIX SPIKE									
Laboratory ID:	04-045-01								
	MS		MS		MS				
Total Organic Carbon	**12.8**		10.0	2.85	100	80-120	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB0413W1								
	SB		SB		SB				
Total Organic Carbon	**9.99**		10.0	NA	100	80-118	NA	NA	

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-088
Project: 26410-001-01

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:	MB0410W1					
Total Alkalinity	**ND**	2.0	SM 2320B	4-10-23	4-10-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	04-088-01								
	ORIG	DUP							
Total Alkalinity	**122**	**116**	NA	NA	NA	NA	5	10	
SPIKE BLANK									
Laboratory ID:	SB0410W1								
	SB		SB		SB				
Total Alkalinity	**92.0**		100	NA	92	89-110	NA	NA	

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-088
Project: 26410-001-01

BICARBONATE
SM 2320B
QUALITY CONTROL

Matrix: Water
Units: mg CaCO3/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0410W1					
Bicarbonate	**ND**	2.0	SM 2320B	4-10-23	4-10-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	04-088-01								
	ORIG	DUP							
Bicarbonate	**122**	**116**	NA	NA	NA	NA	5	10	
SPIKE BLANK									
Laboratory ID:	SB0410W1								
	SB		SB		SB				
Bicarbonate	**92.0**		100	NA	92	89-110	NA	NA	

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-088
Project: 26410-001-01

CHLORIDE
SM 4500-Cl E
QUALITY CONTROL

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0417W1					
Chloride	**ND**	2.0	SM 4500-Cl E	4-17-23	4-17-23	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	04-045-01							
	ORIG DUP							
Chloride	**5.20** **4.98**	NA	NA	NA	NA	4	11	
MATRIX SPIKE								
Laboratory ID:	04-045-01							
	MS	MS		MS				
Chloride	**50.6**	50.0	5.20	91	85-121	NA	NA	
SPIKE BLANK								
Laboratory ID:	SB0417W1							
	SB	SB		SB				
Chloride	**54.5**	50.0	NA	109	90-119	NA	NA	

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-088
Project: 26410-001-01

NITRATE (as Nitrogen)
EPA 353.2
QUALITY CONTROL

Matrix: Water
Units: mg/L-N

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0407W1					
Nitrate	**ND**	0.050	EPA 353.2	4-7-23	4-7-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	04-079-01								
	ORIG	DUP							
Nitrate	**0.0611**	**ND**	NA	NA	NA	NA	NA	10	
MATRIX SPIKE									
Laboratory ID:	04-079-01								
	MS		MS		MS				
Nitrate	**1.95**		2.00	0.0611	94	88-125	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB0407W1								
	SB		SB		SB				
Nitrate	**1.89**		2.00	NA	95	90-120	NA	NA	

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-088
Project: 26410-001-01

SULFATE
ASTM D516-11
QUALITY CONTROL

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0410W1					
Sulfate	**ND**	5.0	ASTM D516-11	4-10-23	4-10-23	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	04-079-03							
	ORIG DUP							
Sulfate	**ND** **ND**	NA	NA	NA	NA	NA	10	
MATRIX SPIKE								
Laboratory ID:	04-079-03							
	MS	MS		MS				
Sulfate	**9.42**	10.0	ND	94	72-128	NA	NA	
SPIKE BLANK								
Laboratory ID:	SB0410W1							
	SB	SB		SB				
Sulfate	**10.1**	10.0	NA	101	85-114	NA	NA	

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-088
Project: 26410-001-01

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:	MB0414W1					
Total Dissolved Solids	**ND**	13	SM 2540C	4-14-23	4-14-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	04-108-04								
	ORIG	DUP							
Total Dissolved Solids	**119**	**109**	NA	NA	NA	NA	9	23	
SPIKE BLANK									
Laboratory ID:	SB0414W1								
	SB		SB		SB				
Total Dissolved Solids	**495**		500	NA	99	89-120	NA	NA	

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-088
Project: 26410-001-01

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:	MB0411W1					
Ammonia	**ND**	0.050	SM 4500-NH3 D	4-11-23	4-11-23	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	03-300-01							
	ORIG DUP							
Ammonia	**ND** **ND**	NA	NA	NA	NA	NA	15	
MATRIX SPIKE								
Laboratory ID:	03-300-01							
	MS	MS		MS				
Ammonia	**4.58**	5.00	ND	92	87-110	NA	NA	
SPIKE BLANK								
Laboratory ID:	SB0411W1							
	SB	SB		SB				
Ammonia	**4.80**	5.00	NA	96	88-110	NA	NA	

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-088
Project: 26410-001-01

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:	MB0410WH1					
Iron	**ND**	50	EPA 200.7	4-10-23	4-10-23	
Magnesium	**ND**	1000	EPA 200.7	4-10-23	4-10-23	
Manganese	**ND**	10	EPA 200.7	4-10-23	4-10-23	
Laboratory ID:	MB0413WM1					
Arsenic	**ND**	3.3	EPA 200.8	4-13-23	4-13-23	

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	04-089-01									
	ORIG	DUP								
Iron	**576**	**544**	NA	NA		NA	NA	6	20	
Magnesium	**20300**	**20400**	NA	NA		NA	NA	0	20	
Manganese	**749**	**764**	NA	NA		NA	NA	2	20	
Laboratory ID:	04-150-01									
Arsenic	**ND**	**ND**	NA	NA		NA	NA	NA	20	
MATRIX SPIKES										
Laboratory ID:	04-089-01									
	MS	MSD	MS	MSD		MS	MSD			
Iron	**21600**	**21400**	20000	20000	576	**105**	**104**	75-125	1	20
Magnesium	**38700**	**40200**	20000	20000	20300	**92**	**100**	75-125	4	20
Manganese	**1230**	**1280**	500	500	749	**96**	**106**	75-125	4	20
Laboratory ID:	04-066-06									
Arsenic	**105**	**105**	111	111	ND	**95**	**95**	75-125	0	20

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-088
Project: 26410-001-01

DISSOLVED 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:	MB0410D1					
Calcium	**ND**	1100	EPA 200.7		4-10-23	
Iron	**ND**	56	EPA 200.7		4-10-23	
Magnesium	**ND**	1100	EPA 200.7		4-10-23	
Manganese	**ND**	11	EPA 200.7		4-10-23	
Potassium	**ND**	1100	EPA 200.7		4-10-23	
Sodium	**ND**	1100	EPA 200.7		4-10-23	
Laboratory ID:	MB0413D1					
Arsenic	**ND**	3.0	EPA 200.8		4-13-23	

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	03-361-01									
	ORIG	DUP								
Calcium	**6820**	**6880**	NA	NA		NA	NA	1	20	
Iron	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Magnesium	**1150**	**1150**	NA	NA		NA	NA	0	20	
Manganese	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Potassium	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Sodium	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Laboratory ID:	04-150-01									
Arsenic	**ND**	**ND**	NA	NA		NA	NA	NA	20	
MATRIX SPIKES										
Laboratory ID:	03-361-01									
	MS	MSD	MS	MSD		MS	MSD			
Calcium	**31300**	**31200**	22200	22200	6820	**110**	**110**	75-125	0	20
Iron	**24500**	**24300**	22200	22200	ND	**111**	**110**	75-125	1	20
Magnesium	**24800**	**24600**	22200	22200	1150	**106**	**106**	75-125	0	20
Manganese	**572**	**565**	556	556	ND	**103**	**102**	75-125	1	20
Potassium	**24300**	**24200**	22200	22200	ND	**110**	**109**	75-125	0	20
Sodium	**25300**	**25300**	22200	22200	ND	**114**	**114**	75-125	0	20
Laboratory ID:	04-150-01									
Arsenic	**86.2**	**90.4**	80.0	80.0	ND	**108**	**113**	75-125	5	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.
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: GeoEngineers

Project Number: ~~6694-002-05~~ NB 24410-001-01

Project Name: Go East

Project Manager: Garrett Leque

Sampled by: BJ

Turnaround Request (in working days)

(Check One)

☐ Same Day ☐ 1 Day

☐ 2 Days ☐ 3 Days

☒ Standard (7 Days) (TPH analysis 5 Days)

☐ _____ (other)

Laboratory Number: 04-088

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-Gx	NWTPH-Dx	Volatiles 8260B	PAHs 8270D/SIM (low-level)	Organochlorine Pesticides 8081A	TOC, alk+bicarb, Cl, NO3, SO4, TDS, NH3)	TOC, TDS, NH3	T/D metals	T/D metals	T/D metals	Total metals	% Moisture
1	MW-2-20230407	4/7/23	1200	W	6						X		X	X			

	Signature	Company	Date	Time
Relinquished		GEI	4/7/23	1430
Received		OSE	4/7/23	1430
Relinquished				
Received				
Relinquished				
Received				

Reviewed/Date

Reviewed/Date

Comments/Special Instructions

☆ Total metals: As, Fe, Mg, Mn

† dissolved metals: As, Fe, Mg, Mn, Ca, K, Na

Chromatograms with final report ☐

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

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

April 26, 2023

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

Re: Analytical Data for Project 26410-001-01
Laboratory Reference No. 2304-089

Dear Garrett:

Enclosed are the analytical results and associated quality control data for samples submitted on April 7, 2023.

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: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-089
Project: 26410-001-01

Case Narrative

Samples were collected on April 7, 2023 and received by the laboratory on April 7, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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

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

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-089
Project: 26410-001-01

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
MW-10-20230407	04-089-01	Water	4-7-23	4-7-23	

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-089
Project: 26410-001-01

GASOLINE RANGE ORGANICS
NWTPH-Gx

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-10-20230407**					
Laboratory ID:	04-089-01					
Gasoline	**ND**	100	NWTPH-Gx	4-10-23	4-10-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*77*	*65-122*				

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-089
Project: 26410-001-01

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-10-20230407**					
Laboratory ID:	04-089-01					
Diesel Range Organics	**ND**	0.20	NWTPH-Dx	4-10-23	4-11-23	
Lube Oil Range Organics	**ND**	0.20	NWTPH-Dx	4-10-23	4-11-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*93*	*50-150*				

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-089
Project: 26410-001-01

VOLATILE ORGANICS EPA 8260D
Page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-10-20230407**					
Laboratory ID:	04-089-01					
Dichlorodifluoromethane	ND	0.20	EPA 8260D	4-10-23	4-10-23	
Chloromethane	ND	1.0	EPA 8260D	4-10-23	4-10-23	
Vinyl Chloride	ND	0.20	EPA 8260D	4-10-23	4-10-23	
Bromomethane	ND	1.0	EPA 8260D	4-10-23	4-10-23	
Chloroethane	ND	1.0	EPA 8260D	4-10-23	4-10-23	
Trichlorofluoromethane	ND	0.20	EPA 8260D	4-10-23	4-10-23	
1,1-Dichloroethene	ND	0.20	EPA 8260D	4-10-23	4-10-23	
Acetone	ND	5.0	EPA 8260D	4-10-23	4-10-23	
Iodomethane	ND	5.0	EPA 8260D	4-10-23	4-10-23	
Carbon Disulfide	ND	0.20	EPA 8260D	4-10-23	4-10-23	
Methylene Chloride	ND	1.0	EPA 8260D	4-10-23	4-10-23	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	4-10-23	4-10-23	
Methyl t-Butyl Ether	ND	0.20	EPA 8260D	4-10-23	4-10-23	
1,1-Dichloroethane	ND	0.20	EPA 8260D	4-10-23	4-10-23	
Vinyl Acetate	ND	1.0	EPA 8260D	4-10-23	4-10-23	
2,2-Dichloropropane	ND	0.20	EPA 8260D	4-10-23	4-10-23	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	4-10-23	4-10-23	
2-Butanone	ND	5.0	EPA 8260D	4-10-23	4-10-23	
Bromochloromethane	ND	0.20	EPA 8260D	4-10-23	4-10-23	
Chloroform	ND	0.20	EPA 8260D	4-10-23	4-10-23	
1,1,1-Trichloroethane	ND	0.20	EPA 8260D	4-10-23	4-10-23	
Carbon Tetrachloride	ND	0.20	EPA 8260D	4-10-23	4-10-23	
1,1-Dichloropropene	ND	0.20	EPA 8260D	4-10-23	4-10-23	
Benzene	ND	0.20	EPA 8260D	4-10-23	4-10-23	
1,2-Dichloroethane	ND	0.20	EPA 8260D	4-10-23	4-10-23	
Trichloroethene	ND	0.20	EPA 8260D	4-10-23	4-10-23	
1,2-Dichloropropane	ND	0.20	EPA 8260D	4-10-23	4-10-23	
Dibromomethane	ND	0.20	EPA 8260D	4-10-23	4-10-23	
Bromodichloromethane	ND	0.20	EPA 8260D	4-10-23	4-10-23	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260D	4-10-23	4-10-23	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260D	4-10-23	4-10-23	
Toluene	ND	1.0	EPA 8260D	4-10-23	4-10-23	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260D	4-10-23	4-10-23	

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-089
Project: 26410-001-01

VOLATILE ORGANICS EPA 8260D
Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-10-20230407**					
Laboratory ID:	04-089-01					
1,1,2-Trichloroethane	ND	0.20	EPA 8260D	4-10-23	4-10-23	
Tetrachloroethene	ND	0.20	EPA 8260D	4-10-23	4-10-23	
1,3-Dichloropropane	ND	0.20	EPA 8260D	4-10-23	4-10-23	
2-Hexanone	ND	2.0	EPA 8260D	4-10-23	4-10-23	
Dibromochloromethane	ND	0.20	EPA 8260D	4-10-23	4-10-23	
1,2-Dibromoethane	ND	0.20	EPA 8260D	4-10-23	4-10-23	
Chlorobenzene	ND	0.20	EPA 8260D	4-10-23	4-10-23	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260D	4-10-23	4-10-23	
Ethylbenzene	ND	0.20	EPA 8260D	4-10-23	4-10-23	
m,p-Xylene	ND	0.40	EPA 8260D	4-10-23	4-10-23	
o-Xylene	ND	0.20	EPA 8260D	4-10-23	4-10-23	
Styrene	ND	0.20	EPA 8260D	4-10-23	4-10-23	
Bromoform	ND	1.0	EPA 8260D	4-10-23	4-10-23	
Isopropylbenzene	ND	0.20	EPA 8260D	4-10-23	4-10-23	
Bromobenzene	ND	0.20	EPA 8260D	4-10-23	4-10-23	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260D	4-10-23	4-10-23	
1,2,3-Trichloropropane	ND	0.20	EPA 8260D	4-10-23	4-10-23	
n-Propylbenzene	ND	0.20	EPA 8260D	4-10-23	4-10-23	
2-Chlorotoluene	ND	0.20	EPA 8260D	4-10-23	4-10-23	
4-Chlorotoluene	ND	0.20	EPA 8260D	4-10-23	4-10-23	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260D	4-10-23	4-10-23	
tert-Butylbenzene	ND	0.20	EPA 8260D	4-10-23	4-10-23	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260D	4-10-23	4-10-23	
sec-Butylbenzene	ND	0.20	EPA 8260D	4-10-23	4-10-23	
1,3-Dichlorobenzene	ND	0.20	EPA 8260D	4-10-23	4-10-23	
p-Isopropyltoluene	ND	0.20	EPA 8260D	4-10-23	4-10-23	
1,4-Dichlorobenzene	ND	0.20	EPA 8260D	4-10-23	4-10-23	
1,2-Dichlorobenzene	ND	0.20	EPA 8260D	4-10-23	4-10-23	
n-Butylbenzene	ND	0.20	EPA 8260D	4-10-23	4-10-23	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260D	4-10-23	4-10-23	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260D	4-10-23	4-10-23	
Hexachlorobutadiene	ND	1.0	EPA 8260D	4-10-23	4-10-23	
Naphthalene	ND	1.0	EPA 8260D	4-10-23	4-10-23	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260D	4-10-23	4-10-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*104*	*75-127*				
Toluene-d8	*99*	*80-127*				
4-Bromofluorobenzene	*94*	*78-125*				

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-089
Project: 26410-001-01

PAHs EPA 8270E/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-10-20230407**					
Laboratory ID:	04-089-01					
Naphthalene	**ND**	0.095	EPA 8270E/SIM	4-10-23	4-10-23	
2-Methylnaphthalene	**ND**	0.095	EPA 8270E/SIM	4-10-23	4-10-23	
1-Methylnaphthalene	**ND**	0.095	EPA 8270E/SIM	4-10-23	4-10-23	
Acenaphthylene	**ND**	0.095	EPA 8270E/SIM	4-10-23	4-10-23	
Acenaphthene	**ND**	0.095	EPA 8270E/SIM	4-10-23	4-10-23	
Fluorene	**ND**	0.095	EPA 8270E/SIM	4-10-23	4-10-23	
Phenanthrene	**ND**	0.095	EPA 8270E/SIM	4-10-23	4-10-23	
Anthracene	**ND**	0.095	EPA 8270E/SIM	4-10-23	4-10-23	
Fluoranthene	**ND**	0.095	EPA 8270E/SIM	4-10-23	4-10-23	
Pyrene	**ND**	0.095	EPA 8270E/SIM	4-10-23	4-10-23	
Benzo[a]anthracene	**ND**	0.0095	EPA 8270E/SIM	4-10-23	4-10-23	
Chrysene	**ND**	0.0095	EPA 8270E/SIM	4-10-23	4-10-23	
Benzo[b]fluoranthene	**ND**	0.0095	EPA 8270E/SIM	4-10-23	4-10-23	
Benzo(j,k)fluoranthene	**ND**	0.0095	EPA 8270E/SIM	4-10-23	4-10-23	
Benzo[a]pyrene	**ND**	0.0095	EPA 8270E/SIM	4-10-23	4-10-23	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0095	EPA 8270E/SIM	4-10-23	4-10-23	
Dibenz[a,h]anthracene	**ND**	0.0095	EPA 8270E/SIM	4-10-23	4-10-23	
Benzo[g,h,i]perylene	**ND**	0.0095	EPA 8270E/SIM	4-10-23	4-10-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*50*	*20 - 106*				
Pyrene-d10	*69*	*19 - 104*				
Terphenyl-d14	*68*	*41 - 127*				

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-089
Project: 26410-001-01

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-10-20230407**					
Laboratory ID:	04-089-01					
alpha-BHC	ND	0.0047	EPA 8081B	4-11-23	4-12-23	
gamma-BHC	ND	0.0047	EPA 8081B	4-11-23	4-12-23	
beta-BHC	ND	0.0047	EPA 8081B	4-11-23	4-12-23	
delta-BHC	ND	0.0047	EPA 8081B	4-11-23	4-12-23	
Heptachlor	ND	0.0047	EPA 8081B	4-11-23	4-12-23	
Aldrin	ND	0.0019	EPA 8081B	4-11-23	4-12-23	
Heptachlor epoxide	ND	0.0028	EPA 8081B	4-11-23	4-12-23	
gamma-Chlordane	ND	0.0047	EPA 8081B	4-11-23	4-12-23	
alpha-Chlordane	ND	0.0047	EPA 8081B	4-11-23	4-12-23	
4,4'-DDE	ND	0.0047	EPA 8081B	4-11-23	4-12-23	
Endosulfan I	ND	0.0047	EPA 8081B	4-11-23	4-12-23	
Dieldrin	ND	0.0047	EPA 8081B	4-11-23	4-12-23	
Endrin	ND	0.0047	EPA 8081B	4-11-23	4-12-23	
4,4'-DDD	ND	0.0047	EPA 8081B	4-11-23	4-12-23	
Endosulfan II	ND	0.0047	EPA 8081B	4-11-23	4-12-23	
4,4'-DDT	ND	0.0047	EPA 8081B	4-11-23	4-12-23	
Endrin aldehyde	ND	0.0047	EPA 8081B	4-11-23	4-12-23	
Methoxychlor	ND	0.0095	EPA 8081B	4-11-23	4-12-23	
Endosulfan sulfate	ND	0.0047	EPA 8081B	4-11-23	4-12-23	
Endrin ketone	ND	0.019	EPA 8081B	4-11-23	4-12-23	
Toxaphene	ND	0.047	EPA 8081B	4-11-23	4-12-23	
Tech Chlordane	ND	0.047	EPA 8081B	4-11-23	4-12-23	
Surrogate:	*Percent Recovery*	*Control limits*				
Tetrachloro-m-xylene	*79*	*21-110*				
Decachlorobiphenyl	*106*	*42-113*				

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-089
Project: 26410-001-01

TOTAL ORGANIC CARBON
SM 5310B

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-10-20230407**					
Laboratory ID:	04-089-01					
Total Organic Carbon	**6.3**	1.0	SM 5310B	4-13-23	4-13-23	

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-089
Project: 26410-001-01

TOTAL ALKALINITY
SM 2320B

Matrix: Water
Units: mg CaCO3/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-10-20230407**					
Laboratory ID:	04-089-01					
Total Alkalinity	**230**	2.0	SM 2320B	4-10-23	4-10-23	

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-089
Project: 26410-001-01

BICARBONATE
SM 2320B

Matrix: Water
Units: mg CaCO3/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-10-20230407**					
Laboratory ID:	04-089-01					
Bicarbonate	**230**	2.0	SM 2320B	4-10-23	4-10-23	

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-089
Project: 26410-001-01

CHLORIDE
SM 4500-Cl E

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-10-20230407**					
Laboratory ID:	04-089-01					
Chloride	**9.9**	2.0	SM 4500-Cl E	4-17-23	4-17-23	

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-089
Project: 26410-001-01

NITRATE (as Nitrogen)
EPA 353.2

Matrix: Water
Units: mg/L-N

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-10-20230407**					
Laboratory ID:	04-089-01					
Nitrate	**0.22**	0.050	EPA 353.2	4-7-23	4-7-23	

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-089
Project: 26410-001-01

SULFATE
ASTM D516-11

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-10-20230407**					
Laboratory ID:	04-089-01					
Sulfate	**31**	10	ASTM D516-11	4-10-23	4-10-23	

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-089
Project: 26410-001-01

TOTAL DISSOLVED SOLIDS
SM 2540C

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-10-20230407**					
Laboratory ID:	04-089-01					
Total Dissolved Solids	**300**	13	SM 2540C	4-14-23	4-14-23	

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-089
Project: 26410-001-01

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-10-20230407**					
Laboratory ID:	04-089-01					
Ammonia	**0.18**	0.050	SM 4500-NH3 D	4-11-23	4-11-23	

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-089
Project: 26410-001-01

TOTAL METALS
EPA 200.8/200.7/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-10-20230407**					
Laboratory ID:	04-089-01					
Arsenic	**ND**	3.3	EPA 200.8	4-13-23	4-13-23	
Cadmium	**ND**	4.4	EPA 200.8	4-13-23	4-13-23	
Chromium	**ND**	11	EPA 200.8	4-13-23	4-13-23	
Copper	**ND**	11	EPA 200.8	4-13-23	4-13-23	
Iron	**580**	50	EPA 200.7	4-10-23	4-10-23	
Lead	**ND**	1.1	EPA 200.8	4-13-23	4-13-23	
Magnesium	**20000**	1000	EPA 200.7	4-10-23	4-10-23	
Manganese	**750**	10	EPA 200.7	4-10-23	4-10-23	
Mercury	**ND**	0.025	EPA 7470A	4-12-23	4-12-23	
Nickel	**ND**	22	EPA 200.8	4-13-23	4-13-23	
Selenium	**ND**	5.6	EPA 200.8	4-13-23	4-13-23	
Zinc	**ND**	28	EPA 200.8	4-13-23	4-13-23	

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-089
Project: 26410-001-01

DISSOLVED METALS
EPA 200.8/200.7/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-10-20230407**					
Laboratory ID:	04-089-01					
Arsenic	**ND**	3.0	EPA 200.8		4-13-23	
Cadmium	**ND**	4.0	EPA 200.8		4-13-23	
Calcium	**66000**	5000	EPA 200.7		4-10-23	
Chromium	**ND**	10	EPA 200.8		4-13-23	
Copper	**ND**	10	EPA 200.8		4-13-23	
Iron	**390**	56	EPA 200.7		4-10-23	
Lead	**ND**	1.0	EPA 200.8		4-13-23	
Magnesium	**20000**	1100	EPA 200.7		4-10-23	
Manganese	**760**	11	EPA 200.7		4-10-23	
Mercury	**ND**	0.025	EPA 7470A		4-12-23	
Nickel	**ND**	20	EPA 200.8		4-13-23	
Potassium	**4000**	1100	EPA 200.7		4-10-23	
Selenium	**ND**	5.0	EPA 200.8		4-13-23	
Sodium	**9300**	1100	EPA 200.7		4-10-23	
Zinc	**ND**	25	EPA 200.8		4-13-23	

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-089
Project: 26410-001-01

GASOLINE RANGE ORGANICS
NWTPH-Gx
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0410W1					
Gasoline	**ND**	100	NWTPH-Gx	4-10-23	4-10-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*79*	*65-122*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	04-092-01										
	ORIG	DUP									
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*83*	*75*	*65-122*			

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-089
Project: 26410-001-01

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx
QUALITY CONTROL

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0410W1					
Diesel Range Organics	**ND**	0.16	NWTPH-Dx	4-10-23	4-10-23	
Lube Oil Range Organics	**ND**	0.16	NWTPH-Dx	4-10-23	4-10-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*114*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	SB0410W1										
	ORIG	DUP									
Diesel Fuel #2	**0.470**	**0.423**	NA	NA		NA		NA	11	NA	
Surrogate:											
o-Terphenyl						*120*	*106*	*50-150*			

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-089
Project: 26410-001-01

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL
Page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0410W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260D	4-10-23	4-10-23	
Chloromethane	ND	1.0	EPA 8260D	4-10-23	4-10-23	
Vinyl Chloride	ND	0.20	EPA 8260D	4-10-23	4-10-23	
Bromomethane	ND	1.0	EPA 8260D	4-10-23	4-10-23	
Chloroethane	ND	1.0	EPA 8260D	4-10-23	4-10-23	
Trichlorofluoromethane	ND	0.20	EPA 8260D	4-10-23	4-10-23	
1,1-Dichloroethene	ND	0.20	EPA 8260D	4-10-23	4-10-23	
Acetone	ND	5.0	EPA 8260D	4-10-23	4-10-23	
Iodomethane	ND	5.0	EPA 8260D	4-10-23	4-10-23	
Carbon Disulfide	ND	0.20	EPA 8260D	4-10-23	4-10-23	
Methylene Chloride	ND	1.0	EPA 8260D	4-10-23	4-10-23	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	4-10-23	4-10-23	
Methyl t-Butyl Ether	ND	0.20	EPA 8260D	4-10-23	4-10-23	
1,1-Dichloroethane	ND	0.20	EPA 8260D	4-10-23	4-10-23	
Vinyl Acetate	ND	1.0	EPA 8260D	4-10-23	4-10-23	
2,2-Dichloropropane	ND	0.20	EPA 8260D	4-10-23	4-10-23	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	4-10-23	4-10-23	
2-Butanone	ND	5.0	EPA 8260D	4-10-23	4-10-23	
Bromochloromethane	ND	0.20	EPA 8260D	4-10-23	4-10-23	
Chloroform	ND	0.20	EPA 8260D	4-10-23	4-10-23	
1,1,1-Trichloroethane	ND	0.20	EPA 8260D	4-10-23	4-10-23	
Carbon Tetrachloride	ND	0.20	EPA 8260D	4-10-23	4-10-23	
1,1-Dichloropropene	ND	0.20	EPA 8260D	4-10-23	4-10-23	
Benzene	ND	0.20	EPA 8260D	4-10-23	4-10-23	
1,2-Dichloroethane	ND	0.20	EPA 8260D	4-10-23	4-10-23	
Trichloroethene	ND	0.20	EPA 8260D	4-10-23	4-10-23	
1,2-Dichloropropane	ND	0.20	EPA 8260D	4-10-23	4-10-23	
Dibromomethane	ND	0.20	EPA 8260D	4-10-23	4-10-23	
Bromodichloromethane	ND	0.20	EPA 8260D	4-10-23	4-10-23	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260D	4-10-23	4-10-23	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260D	4-10-23	4-10-23	
Toluene	ND	1.0	EPA 8260D	4-10-23	4-10-23	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260D	4-10-23	4-10-23	

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-089
Project: 26410-001-01

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL
Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0410W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260D	4-10-23	4-10-23	
Tetrachloroethene	ND	0.20	EPA 8260D	4-10-23	4-10-23	
1,3-Dichloropropane	ND	0.20	EPA 8260D	4-10-23	4-10-23	
2-Hexanone	ND	2.0	EPA 8260D	4-10-23	4-10-23	
Dibromochloromethane	ND	0.20	EPA 8260D	4-10-23	4-10-23	
1,2-Dibromoethane	ND	0.20	EPA 8260D	4-10-23	4-10-23	
Chlorobenzene	ND	0.20	EPA 8260D	4-10-23	4-10-23	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260D	4-10-23	4-10-23	
Ethylbenzene	ND	0.20	EPA 8260D	4-10-23	4-10-23	
m,p-Xylene	ND	0.40	EPA 8260D	4-10-23	4-10-23	
o-Xylene	ND	0.20	EPA 8260D	4-10-23	4-10-23	
Styrene	ND	0.20	EPA 8260D	4-10-23	4-10-23	
Bromoform	ND	1.0	EPA 8260D	4-10-23	4-10-23	
Isopropylbenzene	ND	0.20	EPA 8260D	4-10-23	4-10-23	
Bromobenzene	ND	0.20	EPA 8260D	4-10-23	4-10-23	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260D	4-10-23	4-10-23	
1,2,3-Trichloropropane	ND	0.20	EPA 8260D	4-10-23	4-10-23	
n-Propylbenzene	ND	0.20	EPA 8260D	4-10-23	4-10-23	
2-Chlorotoluene	ND	0.20	EPA 8260D	4-10-23	4-10-23	
4-Chlorotoluene	ND	0.20	EPA 8260D	4-10-23	4-10-23	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260D	4-10-23	4-10-23	
tert-Butylbenzene	ND	0.20	EPA 8260D	4-10-23	4-10-23	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260D	4-10-23	4-10-23	
sec-Butylbenzene	ND	0.20	EPA 8260D	4-10-23	4-10-23	
1,3-Dichlorobenzene	ND	0.20	EPA 8260D	4-10-23	4-10-23	
p-Isopropyltoluene	ND	0.20	EPA 8260D	4-10-23	4-10-23	
1,4-Dichlorobenzene	ND	0.20	EPA 8260D	4-10-23	4-10-23	
1,2-Dichlorobenzene	ND	0.20	EPA 8260D	4-10-23	4-10-23	
n-Butylbenzene	ND	0.20	EPA 8260D	4-10-23	4-10-23	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260D	4-10-23	4-10-23	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260D	4-10-23	4-10-23	
Hexachlorobutadiene	ND	1.0	EPA 8260D	4-10-23	4-10-23	
Naphthalene	ND	1.0	EPA 8260D	4-10-23	4-10-23	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260D	4-10-23	4-10-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*98*	*75-127*				
Toluene-d8	*97*	*80-127*				
4-Bromofluorobenzene	*95*	*78-125*				

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-089
Project: 26410-001-01

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL
Page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0410W1									
	SB	SBD	SB	SBD	SB	SBD				
Dichlorodifluoromethane	**9.97**	**9.57**	10.0	10.0	100	96	34-166	4	21	
Chloromethane	**10.1**	**10.5**	10.0	10.0	101	105	63-138	4	18	
Vinyl Chloride	**10.5**	**10.3**	10.0	10.0	105	103	71-135	2	20	
Bromomethane	**12.1**	**11.7**	10.0	10.0	121	117	20-151	3	36	
Chloroethane	**8.49**	**8.18**	10.0	10.0	85	82	76-125	4	20	
Trichlorofluoromethane	**9.50**	**9.14**	10.0	10.0	95	91	75-131	4	19	
1,1-Dichloroethene	**9.49**	**9.44**	10.0	10.0	95	94	78-125	1	19	
Acetone	**8.81**	**9.16**	10.0	10.0	88	92	76-125	4	18	
Iodomethane	**12.4**	**13.1**	10.0	10.0	124	131	10-155	5	40	
Carbon Disulfide	**9.22**	**8.88**	10.0	10.0	92	89	58-129	4	17	
Methylene Chloride	**9.56**	**9.19**	10.0	10.0	96	92	80-120	4	15	
(trans) 1,2-Dichloroethene	**9.96**	**9.81**	10.0	10.0	100	98	80-125	2	17	
Methyl t-Butyl Ether	**9.71**	**9.43**	10.0	10.0	97	94	80-122	3	15	
1,1-Dichloroethane	**9.94**	**9.82**	10.0	10.0	99	98	80-125	1	17	
Vinyl Acetate	**10.0**	**9.44**	10.0	10.0	100	94	80-131	6	15	
2,2-Dichloropropane	**10.8**	**10.7**	10.0	10.0	108	107	80-146	1	21	
(cis) 1,2-Dichloroethene	**9.99**	**9.85**	10.0	10.0	100	99	80-129	1	17	
2-Butanone	**9.11**	**8.63**	10.0	10.0	91	86	80-129	5	16	
Bromochloromethane	**11.1**	**10.7**	10.0	10.0	111	107	80-125	4	18	
Chloroform	**9.57**	**9.37**	10.0	10.0	96	94	80-123	2	16	
1,1,1-Trichloroethane	**9.44**	**9.25**	10.0	10.0	94	93	80-123	2	18	
Carbon Tetrachloride	**9.13**	**9.25**	10.0	10.0	91	93	80-126	1	17	
1,1-Dichloropropene	**9.35**	**9.22**	10.0	10.0	94	92	80-126	1	18	
Benzene	**9.87**	**9.61**	10.0	10.0	99	96	80-121	3	16	
1,2-Dichloroethane	**9.44**	**9.19**	10.0	10.0	94	92	80-124	3	15	
Trichloroethene	**10.7**	**10.6**	10.0	10.0	107	106	80-122	1	18	
1,2-Dichloropropane	**10.4**	**10.2**	10.0	10.0	104	102	80-123	2	15	
Dibromomethane	**11.0**	**10.6**	10.0	10.0	110	106	80-123	4	15	
Bromodichloromethane	**10.5**	**10.2**	10.0	10.0	105	102	80-125	3	15	
(cis) 1,3-Dichloropropene	**10.9**	**10.7**	10.0	10.0	109	107	80-129	2	15	
Methyl Isobutyl Ketone	**10.3**	**9.97**	10.0	10.0	103	100	80-124	3	15	
Toluene	**9.65**	**9.37**	10.0	10.0	97	94	80-120	3	18	
(trans) 1,3-Dichloropropene	**11.0**	**10.8**	10.0	10.0	110	108	80-134	2	17	

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-089
Project: 26410-001-01

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL
Page 2 of 2

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0410W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1,2-Trichloroethane	**10.4**	**10.3**	10.0	10.0	104	103	77-126	1	20	
Tetrachloroethene	**10.3**	**10.6**	10.0	10.0	103	106	80-124	3	18	
1,3-Dichloropropane	**10.0**	**9.86**	10.0	10.0	100	99	80-120	1	15	
2-Hexanone	**10.2**	**10.5**	10.0	10.0	102	105	80-130	3	16	
Dibromochloromethane	**11.0**	**10.7**	10.0	10.0	110	107	80-128	3	15	
1,2-Dibromoethane	**10.9**	**10.8**	10.0	10.0	109	108	80-127	1	15	
Chlorobenzene	**10.2**	**10.1**	10.0	10.0	102	101	80-120	1	17	
1,1,1,2-Tetrachloroethane	**10.5**	**10.3**	10.0	10.0	105	103	80-125	2	17	
Ethylbenzene	**10.5**	**10.4**	10.0	10.0	105	104	80-125	1	18	
m,p-Xylene	**21.0**	**21.0**	20.0	20.0	105	105	80-127	0	18	
o-Xylene	**10.5**	**10.4**	10.0	10.0	105	104	80-126	1	18	
Styrene	**9.53**	**9.34**	10.0	10.0	95	93	80-130	2	17	
Bromoform	**10.5**	**10.2**	10.0	10.0	105	102	80-130	3	15	
Isopropylbenzene	**9.63**	**9.57**	10.0	10.0	96	96	80-129	1	18	
Bromobenzene	**10.4**	**10.3**	10.0	10.0	104	103	76-128	1	16	
1,1,2,2-Tetrachloroethane	**10.2**	**10.1**	10.0	10.0	102	101	74-130	1	15	
1,2,3-Trichloropropane	**9.93**	**9.84**	10.0	10.0	99	98	71-129	1	25	
n-Propylbenzene	**10.7**	**10.8**	10.0	10.0	107	108	80-129	1	19	
2-Chlorotoluene	**10.4**	**10.6**	10.0	10.0	104	106	80-128	2	18	
4-Chlorotoluene	**10.9**	**10.9**	10.0	10.0	109	109	80-130	0	19	
1,3,5-Trimethylbenzene	**10.8**	**10.8**	10.0	10.0	108	108	80-131	0	18	
tert-Butylbenzene	**10.8**	**10.9**	10.0	10.0	108	109	80-130	1	18	
1,2,4-Trimethylbenzene	**11.0**	**11.0**	10.0	10.0	110	110	80-130	0	18	
sec-Butylbenzene	**11.0**	**11.0**	10.0	10.0	110	110	80-130	0	18	
1,3-Dichlorobenzene	**10.7**	**10.7**	10.0	10.0	107	107	80-126	0	17	
p-Isopropyltoluene	**11.2**	**11.3**	10.0	10.0	112	113	80-132	1	18	
1,4-Dichlorobenzene	**10.3**	**10.3**	10.0	10.0	103	103	80-121	0	17	
1,2-Dichlorobenzene	**10.4**	**10.5**	10.0	10.0	104	105	79-125	1	15	
n-Butylbenzene	**10.9**	**11.0**	10.0	10.0	109	110	80-138	1	19	
1,2-Dibromo-3-chloropropane	**10.1**	**10.3**	10.0	10.0	101	103	73-133	2	15	
1,2,4-Trichlorobenzene	**10.8**	**11.3**	10.0	10.0	108	113	80-139	5	18	
Hexachlorobutadiene	**10.3**	**10.6**	10.0	10.0	103	106	80-151	3	18	
Naphthalene	**8.60**	**9.15**	10.0	10.0	86	92	68-144	6	25	
1,2,3-Trichlorobenzene	**10.1**	**10.9**	10.0	10.0	101	109	75-146	8	28	
Surrogate:										
Dibromofluoromethane					*96*	*96*	*75-127*			
Toluene-d8					*100*	*99*	*80-127*			
4-Bromofluorobenzene					*104*	*103*	*78-125*			

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-089
Project: 26410-001-01

PAHs EPA 8270E/SIM
QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0410W1					
Naphthalene	**ND**	0.10	EPA 8270E/SIM	4-10-23	4-10-23	
2-Methylnaphthalene	**ND**	0.10	EPA 8270E/SIM	4-10-23	4-10-23	
1-Methylnaphthalene	**ND**	0.10	EPA 8270E/SIM	4-10-23	4-10-23	
Acenaphthylene	**ND**	0.10	EPA 8270E/SIM	4-10-23	4-10-23	
Acenaphthene	**ND**	0.10	EPA 8270E/SIM	4-10-23	4-10-23	
Fluorene	**ND**	0.10	EPA 8270E/SIM	4-10-23	4-10-23	
Phenanthrene	**ND**	0.10	EPA 8270E/SIM	4-10-23	4-10-23	
Anthracene	**ND**	0.10	EPA 8270E/SIM	4-10-23	4-10-23	
Fluoranthene	**ND**	0.10	EPA 8270E/SIM	4-10-23	4-10-23	
Pyrene	**ND**	0.10	EPA 8270E/SIM	4-10-23	4-10-23	
Benzo[a]anthracene	**ND**	0.010	EPA 8270E/SIM	4-10-23	4-10-23	
Chrysene	**ND**	0.010	EPA 8270E/SIM	4-10-23	4-10-23	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270E/SIM	4-10-23	4-10-23	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270E/SIM	4-10-23	4-10-23	
Benzo[a]pyrene	**ND**	0.010	EPA 8270E/SIM	4-10-23	4-10-23	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270E/SIM	4-10-23	4-10-23	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270E/SIM	4-10-23	4-10-23	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270E/SIM	4-10-23	4-10-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*79*	*20 - 106*				
Pyrene-d10	*98*	*19 - 104*				
Terphenyl-d14	*84*	*41 - 127*				

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-089
Project: 26410-001-01

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:	SB0410W1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	**0.334**	**0.291**	0.500	0.500	67	58	25 - 82	14	39	
Acenaphthylene	**0.377**	**0.335**	0.500	0.500	75	67	35 - 107	12	26	
Acenaphthene	**0.356**	**0.323**	0.500	0.500	71	65	33 - 99	10	26	
Fluorene	**0.428**	**0.401**	0.500	0.500	86	80	43 - 95	7	24	
Phenanthrene	**0.474**	**0.467**	0.500	0.500	95	93	49 - 100	1	20	
Anthracene	**0.378**	**0.373**	0.500	0.500	76	75	47 - 101	1	21	
Fluoranthene	**0.431**	**0.472**	0.500	0.500	86	94	51 - 115	9	23	
Pyrene	**0.434**	**0.453**	0.500	0.500	87	91	53 - 117	4	24	
Benzo[a]anthracene	**0.411**	**0.411**	0.500	0.500	82	82	57 - 114	0	21	
Chrysene	**0.384**	**0.380**	0.500	0.500	77	76	55 - 119	1	21	
Benzo[b]fluoranthene	**0.397**	**0.386**	0.500	0.500	79	77	56 - 125	3	26	
Benzo(j,k)fluoranthene	**0.414**	**0.422**	0.500	0.500	83	84	53 - 124	2	22	
Benzo[a]pyrene	**0.413**	**0.406**	0.500	0.500	83	81	54 - 119	2	22	
Indeno(1,2,3-c,d)pyrene	**0.459**	**0.441**	0.500	0.500	92	88	55 - 118	4	23	
Dibenz[a,h]anthracene	**0.425**	**0.422**	0.500	0.500	85	84	56 - 118	1	23	
Benzo[g,h,i]perylene	**0.402**	**0.404**	0.500	0.500	80	81	55 - 117	0	22	
Surrogate:										
2-Fluorobiphenyl					*61*	*53*	*20 - 106*			
Pyrene-d10					*84*	*82*	*19 - 104*			
Terphenyl-d14					*71*	*73*	*41 - 127*			

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-089
Project: 26410-001-01

ORGANOCHLORINE PESTICIDES EPA 8081B QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0411W1					
alpha-BHC	ND	0.0050	EPA 8081B	4-11-23	4-12-23	
gamma-BHC	ND	0.0050	EPA 8081B	4-11-23	4-12-23	
beta-BHC	ND	0.0050	EPA 8081B	4-11-23	4-12-23	
delta-BHC	ND	0.0050	EPA 8081B	4-11-23	4-12-23	
Heptachlor	ND	0.0050	EPA 8081B	4-11-23	4-12-23	
Aldrin	ND	0.0020	EPA 8081B	4-11-23	4-12-23	
Heptachlor epoxide	ND	0.0030	EPA 8081B	4-11-23	4-12-23	
gamma-Chlordane	ND	0.0050	EPA 8081B	4-11-23	4-12-23	
alpha-Chlordane	ND	0.0050	EPA 8081B	4-11-23	4-12-23	
4,4'-DDE	ND	0.0050	EPA 8081B	4-11-23	4-12-23	
Endosulfan I	ND	0.0050	EPA 8081B	4-11-23	4-12-23	
Dieldrin	ND	0.0050	EPA 8081B	4-11-23	4-12-23	
Endrin	ND	0.0050	EPA 8081B	4-11-23	4-12-23	
4,4'-DDD	ND	0.0050	EPA 8081B	4-11-23	4-12-23	
Endosulfan II	ND	0.0050	EPA 8081B	4-11-23	4-12-23	
4,4'-DDT	ND	0.0050	EPA 8081B	4-11-23	4-12-23	
Endrin aldehyde	ND	0.0050	EPA 8081B	4-11-23	4-12-23	
Methoxychlor	ND	0.010	EPA 8081B	4-11-23	4-12-23	
Endosulfan sulfate	ND	0.0050	EPA 8081B	4-11-23	4-12-23	
Endrin ketone	ND	0.020	EPA 8081B	4-11-23	4-12-23	
Toxaphene	ND	0.050	EPA 8081B	4-11-23	4-12-23	
Tech Chlordane	ND	0.050	EPA 8081B	4-11-23	4-12-23	
Surrogate:	*Percent Recovery*	*Control limits*				
Tetrachloro-m-xylene	*70*	*21-110*				
Decachlorobiphenyl	*94*	*42-113*				

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-089
Project: 26410-001-01

ORGANOCHLORINE PESTICIDES EPA 8081B QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB0411W2										
	SB	SBD	SB	SBD		SB	SBD				
alpha-BHC	**0.0884**	**0.0887**	0.100	0.100	N/A	**88**	**89**	50-113	0	19	
gamma-BHC	**0.0665**	**0.0653**	0.100	0.100	N/A	**67**	**65**	50-114	2	15	
beta-BHC	**0.0806**	**0.0813**	0.100	0.100	N/A	**81**	**81**	45-110	1	15	
delta-BHC	**0.0625**	**0.0611**	0.100	0.100	N/A	**63**	**61**	40-113	2	15	
Heptachlor	**0.0724**	**0.0691**	0.100	0.100	N/A	**72**	**69**	41-107	5	16	
Aldrin	**0.0934**	**0.0922**	0.100	0.100	N/A	**93**	**92**	39-105	1	15	
Heptachlor epoxide	**0.0962**	**0.0974**	0.100	0.100	N/A	**96**	**97**	53-106	1	15	
gamma-Chlordane	**0.0957**	**0.0974**	0.100	0.100	N/A	**96**	**97**	46-110	2	15	
alpha-Chlordane	**0.0900**	**0.0890**	0.100	0.100	N/A	**90**	**89**	46-110	1	15	
4,4'-DDE	**0.0947**	**0.0939**	0.100	0.100	N/A	**95**	**94**	39-129	1	15	
Endosulfan I	**0.0920**	**0.0935**	0.100	0.100	N/A	**92**	**94**	51-109	2	15	
Dieldrin	**0.0957**	**0.0952**	0.100	0.100	N/A	**96**	**95**	55-112	1	15	
Endrin	**0.0952**	**0.0952**	0.100	0.100	N/A	**95**	**95**	54-119	0	16	
4,4'-DDD	**0.0935**	**0.0935**	0.100	0.100	N/A	**94**	**94**	52-142	0	15	
Endosulfan II	**0.0701**	**0.0670**	0.100	0.100	N/A	**70**	**67**	49-115	5	15	
4,4'-DDT	**0.0781**	**0.0741**	0.100	0.100	N/A	**78**	**74**	52-136	5	15	
Endrin aldehyde	**0.0806**	**0.0804**	0.100	0.100	N/A	**81**	**80**	39-128	0	15	
Methoxychlor	**0.116**	**0.119**	0.100	0.100	N/A	**116**	**119**	56-156	3	19	
Endosulfan sulfate	**0.0640**	**0.0557**	0.100	0.100	N/A	**64**	**56**	44-120	14	15	
Endrin ketone	**0.0725**	**0.0719**	0.100	0.100	N/A	**73**	**72**	45-122	1	15	
Surrogate:											
Tetrachloro-m-xylene						*77*	*81*	*21-110*			
Decachlorobiphenyl						*93*	*95*	*42-113*			

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-089
Project: 26410-001-01

TOTAL ORGANIC CARBON
SM 5310B
QUALITY CONTROL

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0413W1					
Total Organic Carbon	**ND**	1.0	SM 5310B	4-13-23	4-13-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	04-045-01								
	ORIG	DUP							
Total Organic Carbon	**2.85**	**2.77**	NA	NA	NA	NA	3	12	
MATRIX SPIKE									
Laboratory ID:	04-045-01								
	MS		MS		MS				
Total Organic Carbon	**12.8**		10.0	2.85	100	80-120	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB0413W1								
	SB		SB		SB				
Total Organic Carbon	**9.99**		10.0	NA	100	80-118	NA	NA	

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-089
Project: 26410-001-01

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:	MB0410W1					
Total Alkalinity	**ND**	2.0	SM 2320B	4-10-23	4-10-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	04-088-01								
	ORIG	DUP							
Total Alkalinity	**122**	**116**	NA	NA	NA	NA	5	10	
SPIKE BLANK									
Laboratory ID:	SB0410W1								
	SB		SB		SB				
Total Alkalinity	**92.0**		100	NA	92	89-110	NA	NA	

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-089
Project: 26410-001-01

BICARBONATE
SM 2320B
QUALITY CONTROL

Matrix: Water
Units: mg CaCO3/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0410W1					
Bicarbonate	**ND**	2.0	SM 2320B	4-10-23	4-10-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	04-088-01								
	ORIG	DUP							
Bicarbonate	**122**	**116**	NA	NA	NA	NA	5	10	
SPIKE BLANK									
Laboratory ID:	SB0410W1								
	SB		SB		SB				
Bicarbonate	**92.0**		100	NA	92	89-110	NA	NA	

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-089
Project: 26410-001-01

CHLORIDE
SM 4500-Cl E
QUALITY CONTROL

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0417W1					
Chloride	**ND**	2.0	SM 4500-Cl E	4-17-23	4-17-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	04-045-01								
	ORIG	DUP							
Chloride	**5.20**	**4.98**	NA	NA	NA	NA	4	11	
MATRIX SPIKE									
Laboratory ID:	04-045-01								
	MS		MS		MS				
Chloride	**50.6**		50.0	5.20	91	85-121	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB0417W1								
	SB		SB		SB				
Chloride	**54.5**		50.0	NA	109	90-119	NA	NA	

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-089
Project: 26410-001-01

NITRATE (as Nitrogen)
EPA 353.2
QUALITY CONTROL

Matrix: Water
Units: mg/L-N

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0407W1					
Nitrate	**ND**	0.050	EPA 353.2	4-7-23	4-7-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	04-079-01								
	ORIG	DUP							
Nitrate	**0.0611**	**ND**	NA	NA	NA	NA	NA	10	
MATRIX SPIKE									
Laboratory ID:	04-079-01								
	MS		MS		MS				
Nitrate	**1.95**		2.00	0.0611	94	88-125	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB0407W1								
	SB		SB		SB				
Nitrate	**1.89**		2.00	NA	95	90-120	NA	NA	

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-089
Project: 26410-001-01

SULFATE
ASTM D516-11
QUALITY CONTROL

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0410W1					
Sulfate	**ND**	5.0	ASTM D516-11	4-10-23	4-10-23	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	04-079-03							
	ORIG DUP							
Sulfate	**ND** **ND**	NA	NA	NA	NA	NA	10	
MATRIX SPIKE								
Laboratory ID:	04-079-03							
	MS	MS		MS				
Sulfate	**9.42**	10.0	ND	94	72-128	NA	NA	
SPIKE BLANK								
Laboratory ID:	SB0410W1							
	SB	SB		SB				
Sulfate	**10.1**	10.0	NA	101	85-114	NA	NA	

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-089
Project: 26410-001-01

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:	MB0414W1					
Total Dissolved Solids	**ND**	13	SM 2540C	4-14-23	4-14-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	04-108-04								
	ORIG	DUP							
Total Dissolved Solids	**119**	**109**	NA	NA	NA	NA	9	23	
SPIKE BLANK									
Laboratory ID:	SB0414W1								
	SB		SB		SB				
Total Dissolved Solids	**495**		500	NA	99	89-120	NA	NA	

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-089
Project: 26410-001-01

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:	MB0411W1					
Ammonia	**ND**	0.050	SM 4500-NH3 D	4-11-23	4-11-23	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	03-300-01							
	ORIG DUP							
Ammonia	**ND** **ND**	NA	NA	NA	NA	NA	15	
MATRIX SPIKE								
Laboratory ID:	03-300-01							
	MS	MS		MS				
Ammonia	**4.58**	5.00	ND	92	87-110	NA	NA	
SPIKE BLANK								
Laboratory ID:	SB0411W1							
	SB	SB		SB				
Ammonia	**4.80**	5.00	NA	96	88-110	NA	NA	

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-089
Project: 26410-001-01

TOTAL METALS
EPA 200.8/200.7/7470A
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0410WH1					
Iron	**ND**	50	EPA 200.7	4-10-23	4-10-23	
Magnesium	**ND**	1000	EPA 200.7	4-10-23	4-10-23	
Manganese	**ND**	10	EPA 200.7	4-10-23	4-10-23	
Laboratory ID:	MB0413WM1					
Arsenic	**ND**	3.3	EPA 200.8	4-13-23	4-13-23	
Cadmium	**ND**	4.4	EPA 200.8	4-13-23	4-13-23	
Chromium	**ND**	11	EPA 200.8	4-13-23	4-13-23	
Copper	**ND**	11	EPA 200.8	4-13-23	4-13-23	
Lead	**ND**	1.1	EPA 200.8	4-13-23	4-13-23	
Nickel	**ND**	22	EPA 200.8	4-13-23	4-13-23	
Selenium	**ND**	5.6	EPA 200.8	4-13-23	4-13-23	
Zinc	**ND**	28	EPA 200.8	4-13-23	4-13-23	
Laboratory ID:	MB0412W1					
Mercury	**ND**	0.025	EPA 7470A	4-12-23	4-12-23	

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-089
Project: 26410-001-01

TOTAL METALS
EPA 200.8/200.7/7470A
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	04-089-01									
	ORIG	DUP								
Iron	**576**	**544**	NA	NA		NA	NA	6	20	
Magnesium	**20300**	**20400**	NA	NA		NA	NA	0	20	
Manganese	**749**	**764**	NA	NA		NA	NA	2	20	
Laboratory ID:	04-150-01									
Arsenic	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Cadmium	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Chromium	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Copper	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Lead	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Nickel	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Selenium	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Zinc	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Laboratory ID:	04-089-01									
Mercury	**ND**	**ND**	NA	NA		NA	NA	NA	20	
MATRIX SPIKES										
Laboratory ID:	04-089-01									
	MS	MSD	MS	MSD		MS	MSD			
Iron	**21600**	**21400**	20000	20000	576	**105**	**104**	75-125	1	20
Magnesium	**38700**	**40200**	20000	20000	20300	**92**	**100**	75-125	4	20
Manganese	**1230**	**1280**	500	500	749	**96**	**106**	75-125	4	20
Laboratory ID:	04-066-06									
Arsenic	**105**	**105**	111	111	ND	**95**	**95**	75-125	0	20
Cadmium	**102**	**99.3**	111	111	ND	**92**	**90**	75-125	3	20
Chromium	**105**	**103**	111	111	ND	**94**	**93**	75-125	2	20
Copper	**103**	**102**	111	111	ND	**93**	**92**	75-125	1	20
Lead	**106**	**99.1**	111	111	ND	**95**	**89**	75-125	6	20
Nickel	**104**	**102**	111	111	ND	**94**	**92**	75-125	2	20
Selenium	**110**	**105**	111	111	ND	**99**	**95**	75-125	5	20
Zinc	**120**	**121**	111	111	13.8	**96**	**97**	75-125	1	20
Laboratory ID:	04-089-01									
Mercury	**5.68**	**5.63**	6.25	6.25	ND	**91**	**90**	75-125	1	20

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-089
Project: 26410-001-01

DISSOLVED METALS
EPA 200.8/200.7/7470A
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0410D1					
Calcium	**ND**	1100	EPA 200.7		4-10-23	
Iron	**ND**	56	EPA 200.7		4-10-23	
Magnesium	**ND**	1100	EPA 200.7		4-10-23	
Manganese	**ND**	11	EPA 200.7		4-10-23	
Potassium	**ND**	1100	EPA 200.7		4-10-23	
Sodium	**ND**	1100	EPA 200.7		4-10-23	
Laboratory ID:	MB0413D1					
Arsenic	**ND**	3.0	EPA 200.8		4-13-23	
Cadmium	**ND**	4.0	EPA 200.8		4-13-23	
Chromium	**ND**	10	EPA 200.8		4-13-23	
Copper	**ND**	10	EPA 200.8		4-13-23	
Lead	**ND**	1.0	EPA 200.8		4-13-23	
Nickel	**ND**	20	EPA 200.8		4-13-23	
Selenium	**ND**	5.0	EPA 200.8		4-13-23	
Zinc	**ND**	25	EPA 200.8		4-13-23	
Laboratory ID:	MB0412D1					
Mercury	**ND**	0.025	EPA 7470A		4-12-23	

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-089
Project: 26410-001-01

DISSOLVED METALS
EPA 200.8/200.7/7470A
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	03-361-01									
	ORIG	DUP								
Calcium	**6820**	**6880**	NA	NA		NA	NA	1	20	
Iron	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Magnesium	**1150**	**1150**	NA	NA		NA	NA	0	20	
Manganese	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Potassium	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Sodium	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Laboratory ID:	04-150-01									
	ORIG	DUP								
Arsenic	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Cadmium	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Chromium	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Copper	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Lead	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Nickel	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Selenium	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Zinc	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Laboratory ID:	04-088-01									
Mercury	**ND**	**ND**	NA	NA		NA	NA	NA	20	

Date of Report: April 26, 2023
Samples Submitted: April 7, 2023
Laboratory Reference: 2304-089
Project: 26410-001-01

DISSOLVED METALS
EPA 200.8/200.7/7470A
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	03-361-01										
	MS	MSD	MS	MSD		MS	MSD				
Calcium	**31300**	**31200**	22200	22200	6820	**110**	**110**	75-125	0	20	
Iron	**24500**	**24300**	22200	22200	ND	**111**	**110**	75-125	1	20	
Magnesium	**24800**	**24600**	22200	22200	1150	**106**	**106**	75-125	0	20	
Manganese	**572**	**565**	556	556	ND	**103**	**102**	75-125	1	20	
Potassium	**24300**	**24200**	22200	22200	ND	**110**	**109**	75-125	0	20	
Sodium	**25300**	**25300**	22200	22200	ND	**114**	**114**	75-125	0	20	
Laboratory ID:	04-150-01										
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	**86.2**	**90.4**	80.0	80.0	ND	**108**	**113**	75-125	5	20	
Cadmium	**77.0**	**78.4**	80.0	80.0	ND	**96**	**98**	75-125	2	20	
Chromium	**83.4**	**86.2**	80.0	80.0	ND	**104**	**108**	75-125	3	20	
Copper	**75.0**	**76.6**	80.0	80.0	ND	**94**	**96**	75-125	2	20	
Lead	**74.8**	**76.2**	80.0	80.0	ND	**94**	**95**	75-125	2	20	
Nickel	**78.0**	**80.6**	80.0	80.0	ND	**98**	**101**	75-125	3	20	
Selenium	**93.4**	**92.0**	80.0	80.0	ND	**117**	**115**	75-125	2	20	
Zinc	**78.4**	**81.6**	80.0	80.0	ND	**98**	**102**	75-125	4	20	
Laboratory ID:	04-088-01										
Mercury	**5.80**	**5.58**	6.25	6.25	ND	**93**	**89**	75-125	4	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.
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: GeoEngineers

Project Number: NB ~~6694-002-05~~ 26410-001-01

Project Name: Go East

Project Manager: Garrett Leque

Sampled by: JDE

Turnaround Request (in working days)

(Check One)

☐ Same Day ☐ 1 Day

☐ 2 Days ☐ 3 Days

☒ Standard (7 Days) (TPH analysis 5 Days)

☐ _____ (other)

Laboratory Number: 04-089

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-Gx	NWTPH-Dx	Volatiles 8260B	PAHs 8270D/SIM (low-level)	Organochlorine Pesticides 8081A	TOC, alk+bicarb, Cl, NO3, SO4, TDS, NH3	TOC, TDS, NH3	T/D metals	T/D metals	T/D metals	Total metals	% Moisture
1	MW-10-20230407	4/7/23	1230	W	19	X	X	X	X	X	X		X*	X			

	Signature	Company	Date	Time
Relinquished		GEI	4/7/23	1430
Received		OSE	4/7/23	1430
Relinquished				
Received				
Relinquished				
Received				

Reviewed/Date

Reviewed/Date

Comments/Special Instructions

* total metals:
As, Cd, Cr, Cu, Fe, Pb, Mg
Mn, Hg, Ni, Se, Zn
+ dissolved metals:
As, Cd, Cr, Cu, Fe, Pb, Mg, Mn,
Hg, Ni, Se, Zn, Ca, K, Na

Chromatograms with final report ☐

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

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

May 12, 2023

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

Re: Analytical Data for Project 26410-001-01
Laboratory Reference No. 2304-150

Dear Garrett:

Enclosed are the analytical results and associated quality control data for samples submitted on April 12, 2023.

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: May 12, 2023
Samples Submitted: April 12, 2023
Laboratory Reference: 2304-150
Project: 26410-001-01

Case Narrative

Samples were collected on April 12, 2023 and received by the laboratory on April 12, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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

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

Total Dissolved Solids SM 2540C Analysis

The sample was initially analyzed on the 18th of April. The Quality Control was outside acceptance limits. Due to the constraints of the method, the sample was reanalyzed on the 4th of May, outside their holding time. Both analysis are reported.

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

Date of Report: May 12, 2023
Samples Submitted: April 12, 2023
Laboratory Reference: 2304-150
Project: 26410-001-01

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
MW-10-20230412	04-150-01	Water	4-12-23	4-12-23	

Date of Report: May 12, 2023
Samples Submitted: April 12, 2023
Laboratory Reference: 2304-150
Project: 26410-001-01

GASOLINE RANGE ORGANICS
NWTPH-Gx

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-10-20230412**					
Laboratory ID:	04-150-01					
Gasoline	**ND**	100	NWTPH-Gx	4-13-23	4-13-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*95*	*65-122*				

Date of Report: May 12, 2023
Samples Submitted: April 12, 2023
Laboratory Reference: 2304-150
Project: 26410-001-01

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-10-20230412**					
Laboratory ID:	04-150-01					
Diesel Range Organics	**ND**	0.20	NWTPH-Dx	4-18-23	4-18-23	
Lube Oil Range Organics	**0.29**	0.20	NWTPH-Dx	4-18-23	4-18-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*94*	*50-150*				

Date of Report: May 12, 2023
Samples Submitted: April 12, 2023
Laboratory Reference: 2304-150
Project: 26410-001-01

VOLATILE ORGANICS EPA 8260D
Page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-10-20230412**					
Laboratory ID:	04-150-01					
Dichlorodifluoromethane	ND	0.20	EPA 8260D	4-12-23	4-12-23	
Chloromethane	ND	1.0	EPA 8260D	4-12-23	4-12-23	
Vinyl Chloride	ND	0.20	EPA 8260D	4-12-23	4-12-23	
Bromomethane	ND	1.3	EPA 8260D	4-12-23	4-12-23	
Chloroethane	ND	1.0	EPA 8260D	4-12-23	4-12-23	
Trichlorofluoromethane	ND	0.20	EPA 8260D	4-12-23	4-12-23	
1,1-Dichloroethene	ND	0.20	EPA 8260D	4-12-23	4-12-23	
Acetone	ND	5.0	EPA 8260D	4-12-23	4-12-23	
Iodomethane	ND	5.0	EPA 8260D	4-12-23	4-12-23	
Carbon Disulfide	ND	0.20	EPA 8260D	4-12-23	4-12-23	
Methylene Chloride	ND	1.0	EPA 8260D	4-12-23	4-12-23	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	4-12-23	4-12-23	
Methyl t-Butyl Ether	ND	0.20	EPA 8260D	4-12-23	4-12-23	
1,1-Dichloroethane	ND	0.20	EPA 8260D	4-12-23	4-12-23	
Vinyl Acetate	ND	1.0	EPA 8260D	4-12-23	4-12-23	
2,2-Dichloropropane	ND	0.20	EPA 8260D	4-12-23	4-12-23	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	4-12-23	4-12-23	
2-Butanone	ND	5.0	EPA 8260D	4-12-23	4-12-23	
Bromochloromethane	ND	0.20	EPA 8260D	4-12-23	4-12-23	
Chloroform	ND	0.20	EPA 8260D	4-12-23	4-12-23	
1,1,1-Trichloroethane	ND	0.20	EPA 8260D	4-12-23	4-12-23	
Carbon Tetrachloride	ND	0.20	EPA 8260D	4-12-23	4-12-23	
1,1-Dichloropropene	ND	0.20	EPA 8260D	4-12-23	4-12-23	
Benzene	ND	0.20	EPA 8260D	4-12-23	4-12-23	
1,2-Dichloroethane	ND	0.20	EPA 8260D	4-12-23	4-12-23	
Trichloroethene	ND	0.20	EPA 8260D	4-12-23	4-12-23	
1,2-Dichloropropane	ND	0.20	EPA 8260D	4-12-23	4-12-23	
Dibromomethane	ND	0.20	EPA 8260D	4-12-23	4-12-23	
Bromodichloromethane	ND	0.20	EPA 8260D	4-12-23	4-12-23	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260D	4-12-23	4-12-23	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260D	4-12-23	4-12-23	
Toluene	ND	1.0	EPA 8260D	4-12-23	4-12-23	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260D	4-12-23	4-12-23	

Date of Report: May 12, 2023
Samples Submitted: April 12, 2023
Laboratory Reference: 2304-150
Project: 26410-001-01

VOLATILE ORGANICS EPA 8260D
Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-10-20230412**					
Laboratory ID:	04-150-01					
1,1,2-Trichloroethane	ND	0.20	EPA 8260D	4-12-23	4-12-23	
Tetrachloroethene	ND	0.20	EPA 8260D	4-12-23	4-12-23	
1,3-Dichloropropane	ND	0.20	EPA 8260D	4-12-23	4-12-23	
2-Hexanone	ND	2.0	EPA 8260D	4-12-23	4-12-23	
Dibromochloromethane	ND	0.20	EPA 8260D	4-12-23	4-12-23	
1,2-Dibromoethane	ND	0.20	EPA 8260D	4-12-23	4-12-23	
Chlorobenzene	ND	0.20	EPA 8260D	4-12-23	4-12-23	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260D	4-12-23	4-12-23	
Ethylbenzene	ND	0.20	EPA 8260D	4-12-23	4-12-23	
m,p-Xylene	ND	0.40	EPA 8260D	4-12-23	4-12-23	
o-Xylene	ND	0.20	EPA 8260D	4-12-23	4-12-23	
Styrene	ND	0.20	EPA 8260D	4-12-23	4-12-23	
Bromoform	ND	1.0	EPA 8260D	4-12-23	4-12-23	
Isopropylbenzene	ND	0.20	EPA 8260D	4-12-23	4-12-23	
Bromobenzene	ND	0.20	EPA 8260D	4-12-23	4-12-23	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260D	4-12-23	4-12-23	
1,2,3-Trichloropropane	ND	0.20	EPA 8260D	4-12-23	4-12-23	
n-Propylbenzene	ND	0.20	EPA 8260D	4-12-23	4-12-23	
2-Chlorotoluene	ND	0.20	EPA 8260D	4-12-23	4-12-23	
4-Chlorotoluene	ND	0.20	EPA 8260D	4-12-23	4-12-23	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260D	4-12-23	4-12-23	
tert-Butylbenzene	ND	0.20	EPA 8260D	4-12-23	4-12-23	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260D	4-12-23	4-12-23	
sec-Butylbenzene	ND	0.20	EPA 8260D	4-12-23	4-12-23	
1,3-Dichlorobenzene	ND	0.20	EPA 8260D	4-12-23	4-12-23	
p-Isopropyltoluene	ND	0.20	EPA 8260D	4-12-23	4-12-23	
1,4-Dichlorobenzene	ND	0.20	EPA 8260D	4-12-23	4-12-23	
1,2-Dichlorobenzene	ND	0.20	EPA 8260D	4-12-23	4-12-23	
n-Butylbenzene	ND	0.20	EPA 8260D	4-12-23	4-12-23	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260D	4-12-23	4-12-23	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260D	4-12-23	4-12-23	
Hexachlorobutadiene	ND	1.0	EPA 8260D	4-12-23	4-12-23	
Naphthalene	ND	1.0	EPA 8260D	4-12-23	4-12-23	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260D	4-12-23	4-12-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*100*	*75-127*				
Toluene-d8	*99*	*80-127*				
4-Bromofluorobenzene	*94*	*78-125*				

Date of Report: May 12, 2023
Samples Submitted: April 12, 2023
Laboratory Reference: 2304-150
Project: 26410-001-01

PAHs EPA 8270E/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-10-20230412**					
Laboratory ID:	04-150-01					
Naphthalene	**ND**	0.095	EPA 8270E/SIM	4-17-23	4-17-23	
2-Methylnaphthalene	**ND**	0.095	EPA 8270E/SIM	4-17-23	4-17-23	
1-Methylnaphthalene	**ND**	0.095	EPA 8270E/SIM	4-17-23	4-17-23	
Acenaphthylene	**ND**	0.095	EPA 8270E/SIM	4-17-23	4-17-23	
Acenaphthene	**0.26**	0.095	EPA 8270E/SIM	4-17-23	4-17-23	
Fluorene	**ND**	0.095	EPA 8270E/SIM	4-17-23	4-17-23	
Phenanthrene	**ND**	0.095	EPA 8270E/SIM	4-17-23	4-17-23	
Anthracene	**ND**	0.095	EPA 8270E/SIM	4-17-23	4-17-23	
Fluoranthene	**ND**	0.095	EPA 8270E/SIM	4-17-23	4-17-23	
Pyrene	**ND**	0.095	EPA 8270E/SIM	4-17-23	4-17-23	
Benzo[a]anthracene	**ND**	0.0095	EPA 8270E/SIM	4-17-23	4-17-23	
Chrysene	**ND**	0.0095	EPA 8270E/SIM	4-17-23	4-17-23	
Benzo[b]fluoranthene	**ND**	0.0095	EPA 8270E/SIM	4-17-23	4-17-23	
Benzo(j,k)fluoranthene	**ND**	0.0095	EPA 8270E/SIM	4-17-23	4-17-23	
Benzo[a]pyrene	**ND**	0.0095	EPA 8270E/SIM	4-17-23	4-17-23	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0095	EPA 8270E/SIM	4-17-23	4-17-23	
Dibenz[a,h]anthracene	**ND**	0.0095	EPA 8270E/SIM	4-17-23	4-17-23	
Benzo[g,h,i]perylene	**ND**	0.0095	EPA 8270E/SIM	4-17-23	4-17-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*62*	*20 - 106*				
Pyrene-d10	*67*	*19 - 104*				
Terphenyl-d14	*79*	*41 - 127*				

Date of Report: May 12, 2023
Samples Submitted: April 12, 2023
Laboratory Reference: 2304-150
Project: 26410-001-01

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-10-20230412**					
Laboratory ID:	04-150-01					
alpha-BHC	ND	0.0047	EPA 8081B	4-17-23	4-18-23	
gamma-BHC	ND	0.0047	EPA 8081B	4-17-23	4-18-23	
beta-BHC	ND	0.0047	EPA 8081B	4-17-23	4-18-23	
delta-BHC	ND	0.0047	EPA 8081B	4-17-23	4-18-23	
Heptachlor	ND	0.0047	EPA 8081B	4-17-23	4-18-23	
Aldrin	ND	0.0019	EPA 8081B	4-17-23	4-18-23	
Heptachlor epoxide	ND	0.0028	EPA 8081B	4-17-23	4-18-23	
gamma-Chlordane	ND	0.0047	EPA 8081B	4-17-23	4-18-23	
alpha-Chlordane	ND	0.0047	EPA 8081B	4-17-23	4-18-23	
4,4'-DDE	ND	0.0047	EPA 8081B	4-17-23	4-18-23	
Endosulfan I	ND	0.0047	EPA 8081B	4-17-23	4-18-23	
Dieldrin	ND	0.0047	EPA 8081B	4-17-23	4-18-23	
Endrin	ND	0.0047	EPA 8081B	4-17-23	4-18-23	
4,4'-DDD	ND	0.0047	EPA 8081B	4-17-23	4-18-23	
Endosulfan II	ND	0.0047	EPA 8081B	4-17-23	4-18-23	
4,4'-DDT	ND	0.0047	EPA 8081B	4-17-23	4-18-23	
Endrin aldehyde	ND	0.0047	EPA 8081B	4-17-23	4-18-23	
Methoxychlor	ND	0.0095	EPA 8081B	4-17-23	4-18-23	
Endosulfan sulfate	ND	0.0047	EPA 8081B	4-17-23	4-18-23	
Endrin ketone	ND	0.019	EPA 8081B	4-17-23	4-18-23	
Toxaphene	ND	0.047	EPA 8081B	4-17-23	4-18-23	
Tech Chlordane	ND	0.047	EPA 8081B	4-17-23	4-18-23	
Surrogate:	*Percent Recovery*	*Control limits*				
Tetrachloro-m-xylene	*39*	*21-110*				
Decachlorobiphenyl	*104*	*42-113*				

Date of Report: May 12, 2023
Samples Submitted: April 12, 2023
Laboratory Reference: 2304-150
Project: 26410-001-01

TOTAL ORGANIC CARBON
SM 5310B

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-10-20230412**					
Laboratory ID:	04-150-01					
Total Organic Carbon	**8.0**	1.0	SM 5310B	4-13-23	4-13-23	

Date of Report: May 12, 2023
Samples Submitted: April 12, 2023
Laboratory Reference: 2304-150
Project: 26410-001-01

TOTAL ALKALINITY
SM 2320B

Matrix: Water
Units: mg CaCO3/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-10-20230412**					
Laboratory ID:	04-150-01					
Total Alkalinity	**370**	2.0	SM 2320B	4-18-23	4-18-23	

Date of Report: May 12, 2023
Samples Submitted: April 12, 2023
Laboratory Reference: 2304-150
Project: 26410-001-01

BICARBONATE
SM 2320B

Matrix: Water
Units: mg CaCO3/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-10-20230412**					
Laboratory ID:	04-150-01					
Bicarbonate	**370**	2.0	SM 2320B	4-18-23	4-18-23	

Date of Report: May 12, 2023
Samples Submitted: April 12, 2023
Laboratory Reference: 2304-150
Project: 26410-001-01

CHLORIDE
SM 4500-Cl E

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-10-20230412**					
Laboratory ID:	04-150-01					
Chloride	**5.7**	2.0	SM 4500-Cl E	4-17-23	4-17-23	

Date of Report: May 12, 2023
Samples Submitted: April 12, 2023
Laboratory Reference: 2304-150
Project: 26410-001-01

NITRATE (as Nitrogen)
EPA 353.2

Matrix: Water
Units: mg/L-N

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-10-20230412**					
Laboratory ID:	04-150-01					
Nitrate	**ND**	0.050	EPA 353.2	4-12-23	4-12-23	

Date of Report: May 12, 2023
Samples Submitted: April 12, 2023
Laboratory Reference: 2304-150
Project: 26410-001-01

SULFATE
ASTM D516-11

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-10-20230412**					
Laboratory ID:	04-150-01					
Sulfate	**8.8**	5.0	ASTM D516-11	4-21-23	4-21-23	

Date of Report: May 12, 2023
Samples Submitted: April 12, 2023
Laboratory Reference: 2304-150
Project: 26410-001-01

TOTAL DISSOLVED SOLIDS
SM 2540C

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-10-20230412**					
Laboratory ID:	04-150-01					
Total Dissolved Solids	**410**	13	SM 2540C	4-18-23	4-18-23	

Date of Report: May 12, 2023
Samples Submitted: April 12, 2023
Laboratory Reference: 2304-150
Project: 26410-001-01

TOTAL DISSOLVED SOLIDS
SM 2540C

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:						
Laboratory ID:	04-150-01					
Total Dissolved Solids	**370**	13	SM 2540C	5-4-23	5-4-23	

Date of Report: May 12, 2023
Samples Submitted: April 12, 2023
Laboratory Reference: 2304-150
Project: 26410-001-01

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-10-20230412**					
Laboratory ID:	04-150-01					
Ammonia	**1.3**	0.050	SM 4500-NH3 D	4-21-23	4-21-23	

Date of Report: May 12, 2023
Samples Submitted: April 12, 2023
Laboratory Reference: 2304-150
Project: 26410-001-01

TOTAL METALS
EPA 200.8/200.7/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-10-20230412**					
Laboratory ID:	04-150-01					
Arsenic	**ND**	3.3	EPA 200.8	4-13-23	4-13-23	
Cadmium	**ND**	4.4	EPA 200.8	4-13-23	4-13-23	
Chromium	**ND**	11	EPA 200.8	4-13-23	4-13-23	
Copper	**ND**	11	EPA 200.8	4-13-23	4-13-23	
Iron	**9700**	50	EPA 200.7	4-13-23	4-14-23	
Lead	**ND**	1.1	EPA 200.8	4-13-23	4-13-23	
Magnesium	**25000**	1000	EPA 200.7	4-13-23	4-14-23	
Manganese	**1500**	10	EPA 200.7	4-13-23	4-14-23	
Mercury	**ND**	0.025	EPA 7470A	4-18-23	4-18-23	
Nickel	**ND**	22	EPA 200.8	4-13-23	4-13-23	
Selenium	**ND**	5.6	EPA 200.8	4-13-23	4-13-23	
Zinc	**ND**	28	EPA 200.8	4-13-23	4-13-23	

Date of Report: May 12, 2023
Samples Submitted: April 12, 2023
Laboratory Reference: 2304-150
Project: 26410-001-01

DISSOLVED METALS
EPA 200.8/200.7/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-10-20230412**					
Laboratory ID:	04-150-01					
Arsenic	**ND**	3.0	EPA 200.8		4-13-23	
Cadmium	**ND**	4.0	EPA 200.8		4-13-23	
Calcium	**95000**	10000	EPA 200.7		4-14-23	
Chromium	**ND**	10	EPA 200.8		4-13-23	
Copper	**ND**	10	EPA 200.8		4-13-23	
Iron	**9500**	500	EPA 200.7		4-14-23	
Lead	**ND**	1.0	EPA 200.8		4-13-23	
Magnesium	**25000**	10000	EPA 200.7		4-14-23	
Manganese	**1600**	11	EPA 200.7		4-14-23	
Mercury	**ND**	0.025	EPA 7470A		4-18-23	
Nickel	**ND**	20	EPA 200.8		4-13-23	
Potassium	**5900**	1100	EPA 200.7		4-14-23	
Selenium	**ND**	5.0	EPA 200.8		4-13-23	
Sodium	**11000**	1100	EPA 200.7		4-14-23	
Zinc	**ND**	25	EPA 200.8		4-13-23	

Date of Report: May 12, 2023
Samples Submitted: April 12, 2023
Laboratory Reference: 2304-150
Project: 26410-001-01

GASOLINE RANGE ORGANICS
NWTPH-Gx
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0413W2					
Gasoline	**ND**	100	NWTPH-Gx	4-13-23	4-13-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*88*	*65-122*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	04-150-01										
	ORIG	DUP									
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*95*	*86*	*65-122*			

Date of Report: May 12, 2023
Samples Submitted: April 12, 2023
Laboratory Reference: 2304-150
Project: 26410-001-01

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx
QUALITY CONTROL

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0418W1					
Diesel Range Organics	**ND**	0.16	NWTPH-Dx	4-18-23	4-18-23	
Lube Oil Range Organics	**ND**	0.16	NWTPH-Dx	4-18-23	4-18-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*97*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	SB0418W1										
	ORIG	DUP									
Diesel Fuel #2	**0.464**	**0.417**	NA	NA		NA		NA	11	NA	
Surrogate:											
o-Terphenyl						*122*	*116*	*50-150*			

Date of Report: May 12, 2023
Samples Submitted: April 12, 2023
Laboratory Reference: 2304-150
Project: 26410-001-01

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL
Page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0412W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260D	4-12-23	4-12-23	
Chloromethane	ND	1.0	EPA 8260D	4-12-23	4-12-23	
Vinyl Chloride	ND	0.20	EPA 8260D	4-12-23	4-12-23	
Bromomethane	ND	1.3	EPA 8260D	4-12-23	4-12-23	
Chloroethane	ND	1.0	EPA 8260D	4-12-23	4-12-23	
Trichlorofluoromethane	ND	0.20	EPA 8260D	4-12-23	4-12-23	
1,1-Dichloroethene	ND	0.20	EPA 8260D	4-12-23	4-12-23	
Acetone	ND	5.0	EPA 8260D	4-12-23	4-12-23	
Iodomethane	ND	5.0	EPA 8260D	4-12-23	4-12-23	
Carbon Disulfide	ND	0.20	EPA 8260D	4-12-23	4-12-23	
Methylene Chloride	ND	1.0	EPA 8260D	4-12-23	4-12-23	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260D	4-12-23	4-12-23	
Methyl t-Butyl Ether	ND	0.20	EPA 8260D	4-12-23	4-12-23	
1,1-Dichloroethane	ND	0.20	EPA 8260D	4-12-23	4-12-23	
Vinyl Acetate	ND	1.0	EPA 8260D	4-12-23	4-12-23	
2,2-Dichloropropane	ND	0.20	EPA 8260D	4-12-23	4-12-23	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260D	4-12-23	4-12-23	
2-Butanone	ND	5.0	EPA 8260D	4-12-23	4-12-23	
Bromochloromethane	ND	0.20	EPA 8260D	4-12-23	4-12-23	
Chloroform	ND	0.20	EPA 8260D	4-12-23	4-12-23	
1,1,1-Trichloroethane	ND	0.20	EPA 8260D	4-12-23	4-12-23	
Carbon Tetrachloride	ND	0.20	EPA 8260D	4-12-23	4-12-23	
1,1-Dichloropropene	ND	0.20	EPA 8260D	4-12-23	4-12-23	
Benzene	ND	0.20	EPA 8260D	4-12-23	4-12-23	
1,2-Dichloroethane	ND	0.20	EPA 8260D	4-12-23	4-12-23	
Trichloroethene	ND	0.20	EPA 8260D	4-12-23	4-12-23	
1,2-Dichloropropane	ND	0.20	EPA 8260D	4-12-23	4-12-23	
Dibromomethane	ND	0.20	EPA 8260D	4-12-23	4-12-23	
Bromodichloromethane	ND	0.20	EPA 8260D	4-12-23	4-12-23	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260D	4-12-23	4-12-23	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260D	4-12-23	4-12-23	
Toluene	ND	1.0	EPA 8260D	4-12-23	4-12-23	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260D	4-12-23	4-12-23	

Date of Report: May 12, 2023
Samples Submitted: April 12, 2023
Laboratory Reference: 2304-150
Project: 26410-001-01

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL
Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0412W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260D	4-12-23	4-12-23	
Tetrachloroethene	ND	0.20	EPA 8260D	4-12-23	4-12-23	
1,3-Dichloropropane	ND	0.20	EPA 8260D	4-12-23	4-12-23	
2-Hexanone	ND	2.0	EPA 8260D	4-12-23	4-12-23	
Dibromochloromethane	ND	0.20	EPA 8260D	4-12-23	4-12-23	
1,2-Dibromoethane	ND	0.20	EPA 8260D	4-12-23	4-12-23	
Chlorobenzene	ND	0.20	EPA 8260D	4-12-23	4-12-23	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260D	4-12-23	4-12-23	
Ethylbenzene	ND	0.20	EPA 8260D	4-12-23	4-12-23	
m,p-Xylene	ND	0.40	EPA 8260D	4-12-23	4-12-23	
o-Xylene	ND	0.20	EPA 8260D	4-12-23	4-12-23	
Styrene	ND	0.20	EPA 8260D	4-12-23	4-12-23	
Bromoform	ND	1.0	EPA 8260D	4-12-23	4-12-23	
Isopropylbenzene	ND	0.20	EPA 8260D	4-12-23	4-12-23	
Bromobenzene	ND	0.20	EPA 8260D	4-12-23	4-12-23	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260D	4-12-23	4-12-23	
1,2,3-Trichloropropane	ND	0.20	EPA 8260D	4-12-23	4-12-23	
n-Propylbenzene	ND	0.20	EPA 8260D	4-12-23	4-12-23	
2-Chlorotoluene	ND	0.20	EPA 8260D	4-12-23	4-12-23	
4-Chlorotoluene	ND	0.20	EPA 8260D	4-12-23	4-12-23	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260D	4-12-23	4-12-23	
tert-Butylbenzene	ND	0.20	EPA 8260D	4-12-23	4-12-23	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260D	4-12-23	4-12-23	
sec-Butylbenzene	ND	0.20	EPA 8260D	4-12-23	4-12-23	
1,3-Dichlorobenzene	ND	0.20	EPA 8260D	4-12-23	4-12-23	
p-Isopropyltoluene	ND	0.20	EPA 8260D	4-12-23	4-12-23	
1,4-Dichlorobenzene	ND	0.20	EPA 8260D	4-12-23	4-12-23	
1,2-Dichlorobenzene	ND	0.20	EPA 8260D	4-12-23	4-12-23	
n-Butylbenzene	ND	0.20	EPA 8260D	4-12-23	4-12-23	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260D	4-12-23	4-12-23	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260D	4-12-23	4-12-23	
Hexachlorobutadiene	ND	1.0	EPA 8260D	4-12-23	4-12-23	
Naphthalene	ND	1.0	EPA 8260D	4-12-23	4-12-23	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260D	4-12-23	4-12-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*99*	*75-127*				
Toluene-d8	*98*	*80-127*				
4-Bromofluorobenzene	*93*	*78-125*				

Date of Report: May 12, 2023
Samples Submitted: April 12, 2023
Laboratory Reference: 2304-150
Project: 26410-001-01

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL
Page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0412W1									
	SB	SBD	SB	SBD	SB	SBD				
Dichlorodifluoromethane	**9.12**	**8.44**	10.0	10.0	91	84	34-166	8	21	
Chloromethane	**10.2**	**10.1**	10.0	10.0	102	101	63-138	1	18	
Vinyl Chloride	**10.4**	**10.1**	10.0	10.0	104	101	71-135	3	20	
Bromomethane	**7.87**	**9.84**	10.0	10.0	79	98	20-151	22	36	
Chloroethane	**8.50**	**8.19**	10.0	10.0	85	82	76-125	4	20	
Trichlorofluoromethane	**9.37**	**9.14**	10.0	10.0	94	91	75-131	2	19	
1,1-Dichloroethene	**9.58**	**9.47**	10.0	10.0	96	95	78-125	1	19	
Acetone	**9.00**	**8.29**	10.0	10.0	90	83	76-125	8	18	
Iodomethane	**9.05**	**11.4**	10.0	10.0	91	114	10-155	23	40	
Carbon Disulfide	**8.72**	**7.75**	10.0	10.0	87	78	58-129	12	17	
Methylene Chloride	**9.79**	**9.48**	10.0	10.0	98	95	80-120	3	15	
(trans) 1,2-Dichloroethene	**10.1**	**9.97**	10.0	10.0	101	100	80-125	1	17	
Methyl t-Butyl Ether	**9.72**	**9.59**	10.0	10.0	97	96	80-122	1	15	
1,1-Dichloroethane	**10.1**	**9.87**	10.0	10.0	101	99	80-125	2	17	
Vinyl Acetate	**9.88**	**9.07**	10.0	10.0	99	91	80-131	9	15	
2,2-Dichloropropane	**11.0**	**10.7**	10.0	10.0	110	107	80-146	3	21	
(cis) 1,2-Dichloroethene	**10.2**	**10.1**	10.0	10.0	102	101	80-129	1	17	
2-Butanone	**9.03**	**8.98**	10.0	10.0	90	90	80-129	1	16	
Bromochloromethane	**11.6**	**10.8**	10.0	10.0	116	108	80-125	7	18	
Chloroform	**9.71**	**9.58**	10.0	10.0	97	96	80-123	1	16	
1,1,1-Trichloroethane	**9.59**	**9.48**	10.0	10.0	96	95	80-123	1	18	
Carbon Tetrachloride	**9.39**	**9.15**	10.0	10.0	94	92	80-126	3	17	
1,1-Dichloropropene	**9.50**	**9.42**	10.0	10.0	95	94	80-126	1	18	
Benzene	**10.0**	**9.88**	10.0	10.0	100	99	80-121	1	16	
1,2-Dichloroethane	**9.53**	**9.25**	10.0	10.0	95	93	80-124	3	15	
Trichloroethene	**10.8**	**10.7**	10.0	10.0	108	107	80-122	1	18	
1,2-Dichloropropane	**10.4**	**10.4**	10.0	10.0	104	104	80-123	0	15	
Dibromomethane	**11.1**	**10.8**	10.0	10.0	111	108	80-123	3	15	
Bromodichloromethane	**10.5**	**10.5**	10.0	10.0	105	105	80-125	0	15	
(cis) 1,3-Dichloropropene	**11.0**	**10.9**	10.0	10.0	110	109	80-129	1	15	
Methyl Isobutyl Ketone	**10.1**	**9.70**	10.0	10.0	101	97	80-124	4	15	
Toluene	**9.65**	**9.52**	10.0	10.0	97	95	80-120	1	18	
(trans) 1,3-Dichloropropene	**10.8**	**10.9**	10.0	10.0	108	109	80-134	1	17	

Date of Report: May 12, 2023
Samples Submitted: April 12, 2023
Laboratory Reference: 2304-150
Project: 26410-001-01

VOLATILE ORGANICS EPA 8260D
QUALITY CONTROL
Page 2 of 2

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0412W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1,2-Trichloroethane	**10.5**	**10.1**	10.0	10.0	105	101	77-126	4	20	
Tetrachloroethene	**10.4**	**10.3**	10.0	10.0	104	103	80-124	1	18	
1,3-Dichloropropane	**10.0**	**9.99**	10.0	10.0	100	100	80-120	0	15	
2-Hexanone	**10.4**	**9.54**	10.0	10.0	104	95	80-130	9	16	
Dibromochloromethane	**10.9**	**10.9**	10.0	10.0	109	109	80-128	0	15	
1,2-Dibromoethane	**10.8**	**10.8**	10.0	10.0	108	108	80-127	0	15	
Chlorobenzene	**10.0**	**10.1**	10.0	10.0	100	101	80-120	1	17	
1,1,1,2-Tetrachloroethane	**10.5**	**10.5**	10.0	10.0	105	105	80-125	0	17	
Ethylbenzene	**10.5**	**10.4**	10.0	10.0	105	104	80-125	1	18	
m,p-Xylene	**20.9**	**20.8**	20.0	20.0	105	104	80-127	0	18	
o-Xylene	**10.5**	**10.4**	10.0	10.0	105	104	80-126	1	18	
Styrene	**9.48**	**9.39**	10.0	10.0	95	94	80-130	1	17	
Bromoform	**10.5**	**10.3**	10.0	10.0	105	103	80-130	2	15	
Isopropylbenzene	**9.47**	**9.55**	10.0	10.0	95	96	80-129	1	18	
Bromobenzene	**10.5**	**10.2**	10.0	10.0	105	102	76-128	3	16	
1,1,2,2-Tetrachloroethane	**10.4**	**9.94**	10.0	10.0	104	99	74-130	5	15	
1,2,3-Trichloropropane	**9.93**	**9.63**	10.0	10.0	99	96	71-129	3	25	
n-Propylbenzene	**10.7**	**10.6**	10.0	10.0	107	106	80-129	1	19	
2-Chlorotoluene	**10.5**	**10.4**	10.0	10.0	105	104	80-128	1	18	
4-Chlorotoluene	**10.7**	**10.7**	10.0	10.0	107	107	80-130	0	19	
1,3,5-Trimethylbenzene	**10.8**	**10.7**	10.0	10.0	108	107	80-131	1	18	
tert-Butylbenzene	**10.9**	**10.8**	10.0	10.0	109	108	80-130	1	18	
1,2,4-Trimethylbenzene	**11.0**	**10.9**	10.0	10.0	110	109	80-130	1	18	
sec-Butylbenzene	**11.0**	**10.8**	10.0	10.0	110	108	80-130	2	18	
1,3-Dichlorobenzene	**10.7**	**10.6**	10.0	10.0	107	106	80-126	1	17	
p-Isopropyltoluene	**11.2**	**11.0**	10.0	10.0	112	110	80-132	2	18	
1,4-Dichlorobenzene	**10.2**	**10.1**	10.0	10.0	102	101	80-121	1	17	
1,2-Dichlorobenzene	**10.3**	**10.1**	10.0	10.0	103	101	79-125	2	15	
n-Butylbenzene	**10.7**	**10.8**	10.0	10.0	107	108	80-138	1	19	
1,2-Dibromo-3-chloropropane	**10.2**	**10.5**	10.0	10.0	102	105	73-133	3	15	
1,2,4-Trichlorobenzene	**10.7**	**10.8**	10.0	10.0	107	108	80-139	1	18	
Hexachlorobutadiene	**10.2**	**10.4**	10.0	10.0	102	104	80-151	2	18	
Naphthalene	**8.49**	**8.72**	10.0	10.0	85	87	68-144	3	25	
1,2,3-Trichlorobenzene	**10.1**	**10.5**	10.0	10.0	101	105	75-146	4	28	
Surrogate:										
Dibromofluoromethane					*98*	*96*	*75-127*			
Toluene-d8					*101*	*101*	*80-127*			
4-Bromofluorobenzene					*103*	*104*	*78-125*			

Date of Report: May 12, 2023
Samples Submitted: April 12, 2023
Laboratory Reference: 2304-150
Project: 26410-001-01

PAHs EPA 8270E/SIM
QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0417W1					
Naphthalene	**ND**	0.10	EPA 8270E/SIM	4-17-23	4-17-23	
2-Methylnaphthalene	**ND**	0.10	EPA 8270E/SIM	4-17-23	4-17-23	
1-Methylnaphthalene	**ND**	0.10	EPA 8270E/SIM	4-17-23	4-17-23	
Acenaphthylene	**ND**	0.10	EPA 8270E/SIM	4-17-23	4-17-23	
Acenaphthene	**ND**	0.10	EPA 8270E/SIM	4-17-23	4-17-23	
Fluorene	**ND**	0.10	EPA 8270E/SIM	4-17-23	4-17-23	
Phenanthrene	**ND**	0.10	EPA 8270E/SIM	4-17-23	4-17-23	
Anthracene	**ND**	0.10	EPA 8270E/SIM	4-17-23	4-17-23	
Fluoranthene	**ND**	0.10	EPA 8270E/SIM	4-17-23	4-17-23	
Pyrene	**ND**	0.10	EPA 8270E/SIM	4-17-23	4-17-23	
Benzo[a]anthracene	**ND**	0.010	EPA 8270E/SIM	4-17-23	4-17-23	
Chrysene	**ND**	0.010	EPA 8270E/SIM	4-17-23	4-17-23	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270E/SIM	4-17-23	4-17-23	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270E/SIM	4-17-23	4-17-23	
Benzo[a]pyrene	**ND**	0.010	EPA 8270E/SIM	4-17-23	4-17-23	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270E/SIM	4-17-23	4-17-23	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270E/SIM	4-17-23	4-17-23	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270E/SIM	4-17-23	4-17-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*65*	*20 - 106*				
Pyrene-d10	*80*	*19 - 104*				
Terphenyl-d14	*99*	*41 - 127*				

Date of Report: May 12, 2023
Samples Submitted: April 12, 2023
Laboratory Reference: 2304-150
Project: 26410-001-01

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:	SB0417W1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	**0.334**	**0.367**	0.500	0.500	67	73	25 - 82	9	39	
Acenaphthylene	**0.369**	**0.395**	0.500	0.500	74	79	35 - 107	7	26	
Acenaphthene	**0.355**	**0.388**	0.500	0.500	71	78	33 - 99	9	26	
Fluorene	**0.374**	**0.406**	0.500	0.500	75	81	43 - 95	8	24	
Phenanthrene	**0.383**	**0.410**	0.500	0.500	77	82	49 - 100	7	20	
Anthracene	**0.364**	**0.389**	0.500	0.500	73	78	47 - 101	7	21	
Fluoranthene	**0.400**	**0.415**	0.500	0.500	80	83	51 - 115	4	23	
Pyrene	**0.419**	**0.441**	0.500	0.500	84	88	53 - 117	5	24	
Benzo[a]anthracene	**0.459**	**0.505**	0.500	0.500	92	101	57 - 114	10	21	
Chrysene	**0.411**	**0.433**	0.500	0.500	82	87	55 - 119	5	21	
Benzo[b]fluoranthene	**0.419**	**0.439**	0.500	0.500	84	88	56 - 125	5	26	
Benzo(j,k)fluoranthene	**0.407**	**0.444**	0.500	0.500	81	89	53 - 124	9	22	
Benzo[a]pyrene	**0.390**	**0.422**	0.500	0.500	78	84	54 - 119	8	22	
Indeno(1,2,3-c,d)pyrene	**0.414**	**0.441**	0.500	0.500	83	88	55 - 118	6	23	
Dibenz[a,h]anthracene	**0.406**	**0.436**	0.500	0.500	81	87	56 - 118	7	23	
Benzo[g,h,i]perylene	**0.405**	**0.432**	0.500	0.500	81	86	55 - 117	6	22	
Surrogate:										
2-Fluorobiphenyl					*60*	*60*	*20 - 106*			
Pyrene-d10					*71*	*75*	*19 - 104*			
Terphenyl-d14					*83*	*96*	*41 - 127*			

Date of Report: May 12, 2023
Samples Submitted: April 12, 2023
Laboratory Reference: 2304-150
Project: 26410-001-01

ORGANOCHLORINE PESTICIDES EPA 8081B QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0417W1					
alpha-BHC	ND	0.0050	EPA 8081B	4-17-23	4-18-23	
gamma-BHC	ND	0.0050	EPA 8081B	4-17-23	4-18-23	
beta-BHC	ND	0.0050	EPA 8081B	4-17-23	4-18-23	
delta-BHC	ND	0.0050	EPA 8081B	4-17-23	4-18-23	
Heptachlor	ND	0.0050	EPA 8081B	4-17-23	4-18-23	
Aldrin	ND	0.0020	EPA 8081B	4-17-23	4-18-23	
Heptachlor epoxide	ND	0.0030	EPA 8081B	4-17-23	4-18-23	
gamma-Chlordane	ND	0.0050	EPA 8081B	4-17-23	4-18-23	
alpha-Chlordane	ND	0.0050	EPA 8081B	4-17-23	4-18-23	
4,4'-DDE	ND	0.0050	EPA 8081B	4-17-23	4-18-23	
Endosulfan I	ND	0.0050	EPA 8081B	4-17-23	4-18-23	
Dieldrin	ND	0.0050	EPA 8081B	4-17-23	4-18-23	
Endrin	ND	0.0050	EPA 8081B	4-17-23	4-18-23	
4,4'-DDD	ND	0.0050	EPA 8081B	4-17-23	4-18-23	
Endosulfan II	ND	0.0050	EPA 8081B	4-17-23	4-18-23	
4,4'-DDT	ND	0.0050	EPA 8081B	4-17-23	4-18-23	
Endrin aldehyde	ND	0.0050	EPA 8081B	4-17-23	4-18-23	
Methoxychlor	ND	0.010	EPA 8081B	4-17-23	4-18-23	
Endosulfan sulfate	ND	0.0050	EPA 8081B	4-17-23	4-18-23	
Endrin ketone	ND	0.020	EPA 8081B	4-17-23	4-18-23	
Toxaphene	ND	0.050	EPA 8081B	4-17-23	4-18-23	
Tech Chlordane	ND	0.050	EPA 8081B	4-17-23	4-18-23	
Surrogate:	*Percent Recovery*	*Control limits*				
Tetrachloro-m-xylene	*71*	*21-110*				
Decachlorobiphenyl	*100*	*42-113*				

Date of Report: May 12, 2023
Samples Submitted: April 12, 2023
Laboratory Reference: 2304-150
Project: 26410-001-01

ORGANOCHLORINE PESTICIDES EPA 8081B QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB0417W1										
	SB	SBD	SB	SBD		SB	SBD				
alpha-BHC	**0.0884**	**0.100**	0.100	0.100	N/A	**88**	**100**	50-113	12	19	
gamma-BHC	**0.0877**	**0.0997**	0.100	0.100	N/A	**88**	**100**	50-114	13	15	
beta-BHC	**0.0855**	**0.0961**	0.100	0.100	N/A	**86**	**96**	45-110	12	15	
delta-BHC	**0.0816**	**0.0936**	0.100	0.100	N/A	**82**	**94**	40-113	14	15	
Heptachlor	**0.0929**	**0.103**	0.100	0.100	N/A	**93**	**103**	41-107	10	16	
Aldrin	**0.0877**	**0.0963**	0.100	0.100	N/A	**88**	**96**	39-105	9	15	
Heptachlor epoxide	**0.0913**	**0.103**	0.100	0.100	N/A	**91**	**103**	53-106	12	15	
gamma-Chlordane	**0.0888**	**0.0972**	0.100	0.100	N/A	**89**	**97**	46-110	9	15	
alpha-Chlordane	**0.0813**	**0.0880**	0.100	0.100	N/A	**81**	**88**	46-110	8	15	
4,4'-DDE	**0.0855**	**0.0946**	0.100	0.100	N/A	**86**	**95**	39-129	10	15	
Endosulfan I	**0.0891**	**0.0969**	0.100	0.100	N/A	**89**	**97**	51-109	8	15	
Dieldrin	**0.0924**	**0.102**	0.100	0.100	N/A	**92**	**102**	55-112	10	15	
Endrin	**0.0942**	**0.104**	0.100	0.100	N/A	**94**	**104**	54-119	10	16	
4,4'-DDD	**0.0864**	**0.0972**	0.100	0.100	N/A	**86**	**97**	52-142	12	15	
Endosulfan II	**0.0892**	**0.103**	0.100	0.100	N/A	**89**	**103**	49-115	14	15	
4,4'-DDT	**0.0771**	**0.0890**	0.100	0.100	N/A	**77**	**89**	52-136	14	15	
Endrin aldehyde	**0.0927**	**0.105**	0.100	0.100	N/A	**93**	**105**	39-128	12	15	
Methoxychlor	**0.0664**	**0.0757**	0.100	0.100	N/A	**66**	**76**	56-156	13	19	
Endosulfan sulfate	**0.0904**	**0.101**	0.100	0.100	N/A	**90**	**101**	44-120	11	15	
Endrin ketone	**0.0991**	**0.111**	0.100	0.100	N/A	**99**	**111**	45-122	11	15	
Surrogate:											
Tetrachloro-m-xylene						*68*	*81*	*21-110*			
Decachlorobiphenyl						*87*	*96*	*42-113*			

Date of Report: May 12, 2023
Samples Submitted: April 12, 2023
Laboratory Reference: 2304-150
Project: 26410-001-01

TOTAL ORGANIC CARBON
SM 5310B
QUALITY CONTROL

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0413W1					
Total Organic Carbon	**ND**	1.0	SM 5310B	4-13-23	4-13-23	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	04-045-01							
	ORIG DUP							
Total Organic Carbon	**2.85** **2.77**	NA	NA	NA	NA	3	12	
MATRIX SPIKE								
Laboratory ID:	04-045-01							
	MS	MS		MS				
Total Organic Carbon	**12.8**	10.0	2.85	100	80-120	NA	NA	
SPIKE BLANK								
Laboratory ID:	SB0413W1							
	SB	SB		SB				
Total Organic Carbon	**9.99**	10.0	NA	100	80-118	NA	NA	

Date of Report: May 12, 2023
Samples Submitted: April 12, 2023
Laboratory Reference: 2304-150
Project: 26410-001-01

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:	MB0418W1					
Total Alkalinity	**ND**	2.0	SM 2320B	4-18-23	4-18-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	04-169-01								
	ORIG	DUP							
Total Alkalinity	**130**	**130**	NA	NA	NA	NA	0	10	
SPIKE BLANK									
Laboratory ID:	SB0418W1								
	SB		SB		SB				
Total Alkalinity	**92.0**		100	NA	92	89-110	NA	NA	

Date of Report: May 12, 2023
Samples Submitted: April 12, 2023
Laboratory Reference: 2304-150
Project: 26410-001-01

BICARBONATE
SM 2320B
QUALITY CONTROL

Matrix: Water
Units: mg CaCO3/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0418W1					
Bicarbonate	**ND**	2.0	SM 2320B	4-18-23	4-18-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	04-169-01								
	ORIG	DUP							
Bicarbonate	**130**	**130**	NA	NA	NA	NA	0	10	
SPIKE BLANK									
Laboratory ID:	SB0418W1								
	SB		SB		SB				
Bicarbonate	**92.0**		100	NA	92	89-110	NA	NA	

Date of Report: May 12, 2023
Samples Submitted: April 12, 2023
Laboratory Reference: 2304-150
Project: 26410-001-01

CHLORIDE
SM 4500-Cl E
QUALITY CONTROL

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0417W2					
Chloride	**ND**	2.0	SM 4500-Cl E	4-17-23	4-17-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	04-150-01								
	ORIG	DUP							
Chloride	**5.68**	**5.76**	NA	NA	NA	NA	1	11	
MATRIX SPIKE									
Laboratory ID:	04-150-01								
	MS		MS		MS				
Chloride	**54.2**		50.0	5.68	97	85-121	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB0417W2								
	SB		SB		SB				
Chloride	**46.4**		50.0	NA	93	90-119	NA	NA	

Date of Report: May 12, 2023
Samples Submitted: April 12, 2023
Laboratory Reference: 2304-150
Project: 26410-001-01

NITRATE (as Nitrogen)
EPA 353.2
QUALITY CONTROL

Matrix: Water
Units: mg/L-N

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0412W2					
Nitrate	**ND**	0.050	EPA 353.2	4-12-23	4-12-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	04-011-21								
	ORIG	DUP							
Nitrate	**2.04**	**1.96**	NA	NA	NA	NA	4	10	
MATRIX SPIKE									
Laboratory ID:	04-011-21								
	MS		MS		MS				
Nitrate	**4.25**		2.00	2.04	111	88-125	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB0412W2								
	SB		SB		SB				
Nitrate	**2.09**		2.00	NA	105	90-120	NA	NA	

Date of Report: May 12, 2023
Samples Submitted: April 12, 2023
Laboratory Reference: 2304-150
Project: 26410-001-01

SULFATE
ASTM D516-11
QUALITY CONTROL

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0420W2					
Sulfate	**ND**	5.0	ASTM D516-11	4-21-23	4-21-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	04-160-01								
	ORIG	DUP							
Sulfate	**5.89**	**5.31**	NA	NA	NA	NA	10	10	
MATRIX SPIKE									
Laboratory ID:	04-160-01								
	MS		MS		MS				
Sulfate	**16.2**		10.0	5.89	103	72-128	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB0420W2								
	SB		SB		SB				
Sulfate	**10.2**		10.0	NA	102	85-114	NA	NA	

Date of Report: May 12, 2023
Samples Submitted: April 12, 2023
Laboratory Reference: 2304-150
Project: 26410-001-01

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:	MB0418W1					
Total Dissolved Solids	**28**	13	SM 2540C	4-18-23	4-18-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	04-128-01								
	ORIG	DUP							
Total Dissolved Solids	**50.7**	**37.3**	NA	NA	NA	NA	30	23	K
SPIKE BLANK									
Laboratory ID:	SB0418W1								
	SB		SB		SB				
Total Dissolved Solids	**417**		500	NA	83	89-120	NA	NA	

Date of Report: May 12, 2023
Samples Submitted: April 12, 2023
Laboratory Reference: 2304-150
Project: 26410-001-01

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:	MB0504W1					
Total Dissolved Solids	**ND**	13	SM 2540C	5-4-23	5-4-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	04-128-03								
	ORIG	DUP							
Total Dissolved Solids	**109**	**123**	NA	NA	NA	NA	12	23	
SPIKE BLANK									
Laboratory ID:	SB0504W1								
	SB		SB		SB				
Total Dissolved Solids	**487**		500	NA	97	89-120	NA	NA	

Date of Report: May 12, 2023
Samples Submitted: April 12, 2023
Laboratory Reference: 2304-150
Project: 26410-001-01

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:	MB0421W1					
Ammonia	**ND**	0.050	SM 4500-NH3 D	4-21-23	4-21-23	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	04-012-03							
	ORIG DUP							
Ammonia	**ND** **ND**	NA	NA	NA	NA	NA	15	
MATRIX SPIKE								
Laboratory ID:	04-012-03							
	MS	MS		MS				
Ammonia	**4.73**	5.00	ND	95	87-110	NA	NA	
SPIKE BLANK								
Laboratory ID:	SB0421W1							
	SB	SB		SB				
Ammonia	**5.01**	5.00	NA	100	88-110	NA	NA	

Date of Report: May 12, 2023
Samples Submitted: April 12, 2023
Laboratory Reference: 2304-150
Project: 26410-001-01

TOTAL METALS
EPA 200.8/200.7/7470A
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0413WH2					
Iron	**ND**	50	EPA 200.7	4-13-23	4-14-23	
Magnesium	**ND**	1000	EPA 200.7	4-13-23	4-14-23	
Manganese	**ND**	10	EPA 200.7	4-13-23	4-14-23	
Laboratory ID:	MB0413WM1					
Arsenic	**ND**	3.3	EPA 200.8	4-13-23	4-13-23	
Cadmium	**ND**	4.4	EPA 200.8	4-13-23	4-13-23	
Chromium	**ND**	11	EPA 200.8	4-13-23	4-13-23	
Copper	**ND**	11	EPA 200.8	4-13-23	4-13-23	
Lead	**ND**	1.1	EPA 200.8	4-13-23	4-13-23	
Nickel	**ND**	22	EPA 200.8	4-13-23	4-13-23	
Selenium	**ND**	5.6	EPA 200.8	4-13-23	4-13-23	
Zinc	**ND**	28	EPA 200.8	4-13-23	4-13-23	
Laboratory ID:	MB0418W1					
Mercury	**ND**	0.025	EPA 7470A	4-18-23	4-18-23	

Date of Report: May 12, 2023
Samples Submitted: April 12, 2023
Laboratory Reference: 2304-150
Project: 26410-001-01

TOTAL METALS
EPA 200.8/200.7/7470A
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	04-108-01										
	ORIG	DUP									
Iron	**150**	**140**	NA	NA		NA		NA	7	20	
Magnesium	**1830**	**1740**	NA	NA		NA		NA	5	20	
Manganese	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Laboratory ID:	04-066-06										
Arsenic	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Cadmium	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Chromium	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Copper	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Lead	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Nickel	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Selenium	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Zinc	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Laboratory ID:	04-150-01										
Mercury	**ND**	**ND**	NA	NA		NA		NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	04-108-01										
	MS	MSD	MS	MSD		MS	MSD				
Iron	**22000**	**21100**	20000	20000	150	**109**	**105**	75-125	4	20	
Magnesium	**23500**	**22600**	20000	20000	1830	**108**	**104**	75-125	4	20	
Manganese	**521**	**501**	500	500	ND	**104**	**100**	75-125	4	20	
Laboratory ID:	04-066-06										
Arsenic	**105**	**105**	111	111	ND	**95**	**95**	75-125	0	20	
Cadmium	**102**	**99.3**	111	111	ND	**92**	**90**	75-125	3	20	
Chromium	**105**	**103**	111	111	ND	**94**	**93**	75-125	2	20	
Copper	**103**	**102**	111	111	ND	**93**	**92**	75-125	1	20	
Lead	**106**	**99.1**	111	111	ND	**95**	**89**	75-125	6	20	
Nickel	**104**	**102**	111	111	ND	**94**	**92**	75-125	2	20	
Selenium	**114**	**109**	111	111	ND	**102**	**99**	75-125	4	20	
Zinc	**120**	**121**	111	111	13.8	**96**	**97**	75-125	1	20	
Laboratory ID:	04-150-01										
Mercury	**5.75**	**5.83**	6.25	6.25	ND	**92**	**93**	75-125	1	20	

Date of Report: May 12, 2023
Samples Submitted: April 12, 2023
Laboratory Reference: 2304-150
Project: 26410-001-01

DISSOLVED METALS
EPA 200.8/200.7/7470A
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0414D1					
Calcium	**ND**	1100	EPA 200.7		4-14-23	
Iron	**ND**	56	EPA 200.7		4-14-23	
Magnesium	**ND**	1100	EPA 200.7		4-14-23	
Manganese	**ND**	11	EPA 200.7		4-14-23	
Potassium	**ND**	1100	EPA 200.7		4-14-23	
Sodium	**ND**	1100	EPA 200.7		4-14-23	
Laboratory ID:	MB0413D1					
Arsenic	**ND**	3.0	EPA 200.8		4-13-23	
Cadmium	**ND**	4.0	EPA 200.8		4-13-23	
Chromium	**ND**	10	EPA 200.8		4-13-23	
Copper	**ND**	10	EPA 200.8		4-13-23	
Lead	**ND**	1.0	EPA 200.8		4-13-23	
Nickel	**ND**	20	EPA 200.8		4-13-23	
Selenium	**ND**	5.0	EPA 200.8		4-13-23	
Zinc	**ND**	25	EPA 200.8		4-13-23	
Laboratory ID:	MB0418D1					
Mercury	**ND**	0.025	EPA 7470A		4-18-23	

Date of Report: May 12, 2023
Samples Submitted: April 12, 2023
Laboratory Reference: 2304-150
Project: 26410-001-01

DISSOLVED METALS
EPA 200.8/200.7/7470A
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	04-108-01										
	ORIG	DUP									
Calcium	**6590**	**6680**	NA	NA		NA		NA	1	20	
Iron	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Magnesium	**1760**	**1790**	NA	NA		NA		NA	1	20	
Manganese	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Potassium	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Sodium	**3110**	**3200**	NA	NA		NA		NA	3	20	
Laboratory ID:	04-150-01										
Arsenic	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Cadmium	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Chromium	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Copper	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Lead	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Nickel	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Selenium	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Zinc	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Laboratory ID:	04-150-01										
Mercury	**ND**	**ND**	NA	NA		NA		NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	04-108-01										
	MS	MSD	MS	MSD		MS	MSD				
Calcium	**30000**	**29400**	22200	22200	6590	**105**	**103**	75-125	2	20	
Iron	**24400**	**24300**	22200	22200	ND	**110**	**110**	75-125	0	20	
Magnesium	**26000**	**25900**	22200	22200	1760	**109**	**109**	75-125	0	20	
Manganese	**554**	**551**	556	556	ND	**100**	**99**	75-125	1	20	
Potassium	**24000**	**23900**	22200	22200	ND	**108**	**108**	75-125	0	20	
Sodium	**25900**	**25600**	22200	22200	3110	**103**	**102**	75-125	1	20	
Laboratory ID:	04-150-01										
Arsenic	**86.2**	**90.4**	80.0	80.0	ND	**108**	**113**	75-125	5	20	
Cadmium	**77.0**	**78.4**	80.0	80.0	ND	**96**	**98**	75-125	2	20	
Chromium	**83.4**	**86.2**	80.0	80.0	ND	**104**	**108**	75-125	3	20	
Copper	**75.0**	**76.6**	80.0	80.0	ND	**94**	**96**	75-125	2	20	
Lead	**74.8**	**76.2**	80.0	80.0	ND	**94**	**95**	75-125	2	20	
Nickel	**78.0**	**80.6**	80.0	80.0	ND	**98**	**101**	75-125	3	20	
Selenium	**93.4**	**92.0**	80.0	80.0	ND	**117**	**115**	75-125	2	20	
Zinc	**78.4**	**81.6**	80.0	80.0	ND	**98**	**102**	75-125	4	20	
Laboratory ID:	04-150-01										
Mercury	**5.78**	**5.08**	6.25	6.25	ND	**92**	**81**	75-125	13	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.
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: GeoEngineers

Project Number: NB ~~6694-002-05~~ 24410-001-01

Project Name: Go East

Project Manager: Garrett Leque

Sampled by: JDE

Turnaround Request (in working days)

(Check One)

☐ Same Day ☐ 1 Day

☐ 2 Days ☐ 3 Days

☒ Standard (7 Days) (TPH analysis 5 Days)

☐ _____ (other)

Laboratory Number: 04-150

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-Gx	NWTPH-Dx	Volatiles 8260B	PAHs 8270D/SIM (low-level)	Organochlorine Pesticides 8081A	TOC, alk+bicarb, Cl, NO3, SO4, TDS, NH3)	TOC, TDS, NH3	☆ T/D metals	☆ T/D metals	T/D metals	Total metals	% Moisture
1	MW-10-20230412	4/12/23	1230	W	18	X	X	X	X	X	X		X	X			

	Signature	Company	Date	Time
Relinquished		GEI	4/12/23	1355
Received		OSE	4/12/23	1355
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

☆ Tot. metals: As, Cd, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Ni, Zn, Se
T diss.: As, Cd, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Ni, Se, Zn, Cd, K, Na
FF: field filtered

Chromatograms with final report ☐

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

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

May 11, 2023

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

Re: Analytical Data for Project 26410-001-01
Laboratory Reference No. 2304-169

Dear Garrett:

Enclosed are the analytical results and associated quality control data for samples submitted on April 14, 2023.

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: May 11, 2023
Samples Submitted: April 14, 2023
Laboratory Reference: 2304-169
Project: 26410-001-01

Case Narrative

Samples were collected on April 14, 2023 and received by the laboratory on April 14, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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

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

Total Dissolved Solids SM 2540C Analysis

The sample was initially analyzed on the 21st of April. The Quality Control was outside acceptance limits. Due to the constraints of the method, the sample was reanalyzed on the 4th of May, outside their holding time. Both analysis are reported.

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

Date of Report: May 11, 2023
Samples Submitted: April 14, 2023
Laboratory Reference: 2304-169
Project: 26410-001-01

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
MW-5-20230414	04-169-01	Water	4-14-23	4-14-23	

Date of Report: May 11, 2023
Samples Submitted: April 14, 2023
Laboratory Reference: 2304-169
Project: 26410-001-01

TOTAL ORGANIC CARBON
SM 5310B

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-5-20230414**					
Laboratory ID:	04-169-01					
Total Organic Carbon	**ND**	1.0	SM 5310B	4-19-23	4-19-23	

Date of Report: May 11, 2023
Samples Submitted: April 14, 2023
Laboratory Reference: 2304-169
Project: 26410-001-01

TOTAL ALKALINITY
SM 2320B

Matrix: Water
Units: mg CaCO3/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-5-20230414**					
Laboratory ID:	04-169-01					
Total Alkalinity	**130**	2.0	SM 2320B	4-18-23	4-18-23	

Date of Report: May 11, 2023
Samples Submitted: April 14, 2023
Laboratory Reference: 2304-169
Project: 26410-001-01

BICARBONATE
SM 2320B

Matrix: Water
Units: mg CaCO3/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-5-20230414**					
Laboratory ID:	04-169-01					
Bicarbonate	**130**	2.0	SM 2320B	4-18-23	4-18-23	

Date of Report: May 11, 2023
Samples Submitted: April 14, 2023
Laboratory Reference: 2304-169
Project: 26410-001-01

CHLORIDE
SM 4500-Cl E

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-5-20230414**					
Laboratory ID:	04-169-01					
Chloride	**6.9**	2.0	SM 4500-Cl E	4-17-23	4-17-23	

Date of Report: May 11, 2023
Samples Submitted: April 14, 2023
Laboratory Reference: 2304-169
Project: 26410-001-01

NITRATE (as Nitrogen)
EPA 353.2

Matrix: Water
Units: mg/L-N

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-5-20230414**					
Laboratory ID:	04-169-01					
Nitrate	**ND**	0.050	EPA 353.2	4-20-23	4-20-23	

Date of Report: May 11, 2023
Samples Submitted: April 14, 2023
Laboratory Reference: 2304-169
Project: 26410-001-01

SULFATE
ASTM D516-11

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-5-20230414**					
Laboratory ID:	04-169-01					
Sulfate	**15**	5.0	ASTM D516-11	4-21-23	4-21-23	

Date of Report: May 11, 2023
Samples Submitted: April 14, 2023
Laboratory Reference: 2304-169
Project: 26410-001-01

TOTAL DISSOLVED SOLIDS
SM 2540C

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-5-20230414**					
Laboratory ID:	04-169-01					
Total Dissolved Solids	**180**	9.8	SM 2540C	4-21-23	4-21-23	

Date of Report: May 11, 2023
Samples Submitted: April 14, 2023
Laboratory Reference: 2304-169
Project: 26410-001-01

TOTAL DISSOLVED SOLIDS
SM 2540C

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-5-20230414**					
Laboratory ID:	04-169-01					
Total Dissolved Solids	**200**	13	SM 2540C	5-4-23	5-4-23	

Date of Report: May 11, 2023
Samples Submitted: April 14, 2023
Laboratory Reference: 2304-169
Project: 26410-001-01

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-5-20230414**					
Laboratory ID:	04-169-01					
Ammonia	**ND**	0.050	SM 4500-NH3 D	4-21-23	4-21-23	

Date of Report: May 11, 2023
Samples Submitted: April 14, 2023
Laboratory Reference: 2304-169
Project: 26410-001-01

DISSOLVED METALS
EPA 200.8/200.7

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-5-20230414**					
Laboratory ID:	04-169-01					
Arsenic	**5.6**	3.0	EPA 200.8		4-19-23	
Calcium	**31000**	1100	EPA 200.7		4-18-23	
Iron	**ND**	56	EPA 200.7		4-18-23	
Magnesium	**16000**	1100	EPA 200.7		4-18-23	
Manganese	**160**	11	EPA 200.7		4-18-23	
Potassium	**2900**	1100	EPA 200.7		4-18-23	
Sodium	**7000**	1100	EPA 200.7		4-18-23	

Date of Report: May 11, 2023
Samples Submitted: April 14, 2023
Laboratory Reference: 2304-169
Project: 26410-001-01

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-5-20230414**					
Laboratory ID:	04-169-01					
Arsenic	**6.7**	3.3	EPA 200.8	4-18-23	4-19-23	
Iron	**1700**	50	EPA 200.7	4-17-23	4-18-23	
Magnesium	**16000**	1000	EPA 200.7	4-17-23	4-18-23	
Manganese	**300**	10	EPA 200.7	4-17-23	4-18-23	

Date of Report: May 11, 2023
Samples Submitted: April 14, 2023
Laboratory Reference: 2304-169
Project: 26410-001-01

TOTAL ORGANIC CARBON
SM 5310B
QUALITY CONTROL

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0419W1					
Total Organic Carbon	**ND**	1.0	SM 5310B	4-19-23	4-19-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	04-161-01								
	ORIG	DUP							
Total Organic Carbon	**29.3**	**29.7**	NA	NA	NA	NA	1	12	
MATRIX SPIKE									
Laboratory ID:	04-161-01								
	MS		MS		MS				
Total Organic Carbon	**40.0**		10.0	29.3	107	80-120	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB0419W1								
	SB		SB		SB				
Total Organic Carbon	**10.1**		10.0	NA	101	80-118	NA	NA	

Date of Report: May 11, 2023
Samples Submitted: April 14, 2023
Laboratory Reference: 2304-169
Project: 26410-001-01

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:	MB0418W1					
Total Alkalinity	**ND**	2.0	SM 2320B	4-18-23	4-18-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	04-169-01								
	ORIG	DUP							
Total Alkalinity	**130**	**130**	NA	NA	NA	NA	0	10	
SPIKE BLANK									
Laboratory ID:	SB0418W1								
	SB		SB		SB				
Total Alkalinity	**92.0**		100	NA	92	89-110	NA	NA	

Date of Report: May 11, 2023
Samples Submitted: April 14, 2023
Laboratory Reference: 2304-169
Project: 26410-001-01

BICARBONATE
SM 2320B
QUALITY CONTROL

Matrix: Water
Units: mg CaCO3/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0418W1					
Bicarbonate	**ND**	2.0	SM 2320B	4-18-23	4-18-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	04-169-01								
	ORIG	DUP							
Bicarbonate	**130**	**130**	NA	NA	NA	NA	0	10	
SPIKE BLANK									
Laboratory ID:	SB0418W1								
	SB		SB		SB				
Bicarbonate	**92.0**		100	NA	92	89-110	NA	NA	

Date of Report: May 11, 2023
Samples Submitted: April 14, 2023
Laboratory Reference: 2304-169
Project: 26410-001-01

CHLORIDE
SM 4500-Cl E
QUALITY CONTROL

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0417W2					
Chloride	**ND**	2.0	SM 4500-Cl E	4-17-23	4-17-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	04-150-01								
	ORIG	DUP							
Chloride	**5.68**	**5.76**	NA	NA	NA	NA	1	11	
MATRIX SPIKE									
Laboratory ID:	04-150-01								
	MS		MS		MS				
Chloride	**54.2**		50.0	5.68	97	85-121	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB0417W2								
	SB		SB		SB				
Chloride	**46.4**		50.0	NA	93	90-119	NA	NA	

Date of Report: May 11, 2023
Samples Submitted: April 14, 2023
Laboratory Reference: 2304-169
Project: 26410-001-01

NITRATE (as Nitrogen)
EPA 353.2
QUALITY CONTROL

Matrix: Water
Units: mg/L-N

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0420W1					
Nitrate	**ND**	0.050	EPA 353.2	4-20-23	4-20-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	04-013-02								
	ORIG	DUP							
Nitrate	**0.0604**	**0.0659**	NA	NA	NA	NA	9	10	
MATRIX SPIKE									
Laboratory ID:	04-013-02								
	MS		MS		MS				
Nitrate	**2.07**		2.00	0.0604	100	88-125	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB0420W1								
	SB		SB		SB				
Nitrate	**2.08**		2.00	NA	104	90-120	NA	NA	

Date of Report: May 11, 2023
Samples Submitted: April 14, 2023
Laboratory Reference: 2304-169
Project: 26410-001-01

SULFATE
ASTM D516-11
QUALITY CONTROL

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0420W2					
Sulfate	**ND**	5.0	ASTM D516-11	4-21-23	4-21-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	04-160-01								
	ORIG	DUP							
Sulfate	**5.89**	**5.31**	NA	NA	NA	NA	10	10	
MATRIX SPIKE									
Laboratory ID:	04-160-01								
	MS		MS		MS				
Sulfate	**16.2**		10.0	5.89	103	72-128	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB0420W2								
	SB		SB		SB				
Sulfate	**10.2**		10.0	NA	102	85-114	NA	NA	

Date of Report: May 11, 2023
Samples Submitted: April 14, 2023
Laboratory Reference: 2304-169
Project: 26410-001-01

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:	MB0421W1					
Total Dissolved Solids	**ND**	13	SM 2540C	4-21-23	4-21-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	01-148-01								
	ORIG	DUP							
Total Dissolved Solids	**38.7**	**84.0**	NA	NA	NA	NA	74	23	K
SPIKE BLANK									
Laboratory ID:	SB0421W1								
	SB		SB		SB				
Total Dissolved Solids	**472**		500	NA	94	89-120	NA	NA	

Date of Report: May 11, 2023
Samples Submitted: April 14, 2023
Laboratory Reference: 2304-169
Project: 26410-001-01

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:	MB0504W1					
Total Dissolved Solids	**ND**	13	SM 2540C	5-4-23	5-4-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	04-128-03								
	ORIG	DUP							
Total Dissolved Solids	**109**	**123**	NA	NA	NA	NA	12	23	
SPIKE BLANK									
Laboratory ID:	SB0504W1								
	SB		SB		SB				
Total Dissolved Solids	**487**		500	NA	97	89-120	NA	NA	

Date of Report: May 11, 2023
Samples Submitted: April 14, 2023
Laboratory Reference: 2304-169
Project: 26410-001-01

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:	MB0421W1					
Ammonia	**ND**	0.050	SM 4500-NH3 D	4-21-23	4-21-23	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	04-012-03							
	ORIG DUP							
Ammonia	**ND** **ND**	NA	NA	NA	NA	NA	15	
MATRIX SPIKE								
Laboratory ID:	04-012-03							
	MS	MS		MS				
Ammonia	**4.73**	5.00	ND	95	87-110	NA	NA	
SPIKE BLANK								
Laboratory ID:	SB0421W1							
	SB	SB		SB				
Ammonia	**5.01**	5.00	NA	100	88-110	NA	NA	

Date of Report: May 11, 2023
Samples Submitted: April 14, 2023
Laboratory Reference: 2304-169
Project: 26410-001-01

DISSOLVED 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:	MB0418F1					
Calcium	**ND**	1100	EPA 200.7	4-18-23	4-18-23	
Iron	**ND**	56	EPA 200.7	4-18-23	4-18-23	
Magnesium	**ND**	1100	EPA 200.7	4-18-23	4-18-23	
Manganese	**ND**	11	EPA 200.7	4-18-23	4-18-23	
Potassium	**ND**	1100	EPA 200.7	4-18-23	4-18-23	
Sodium	**ND**	1100	EPA 200.7	4-18-23	4-18-23	
Laboratory ID:	MB0419D1					
Arsenic	**ND**	3.0	EPA 200.8		4-19-23	

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	04-180-07									
	ORIG	DUP								
Calcium	**12500**	**12700**	NA	NA		NA	NA	1	20	
Iron	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Magnesium	**4230**	**4310**	NA	NA		NA	NA	2	20	
Manganese	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Potassium	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Sodium	**5290**	**5340**	NA	NA		NA	NA	1	20	
Laboratory ID:	04-159-01									
Arsenic	**ND**	**ND**	NA	NA		NA	NA	NA	20	
MATRIX SPIKES										
Laboratory ID:	04-180-07									
	MS	MSD	MS	MSD		MS	MSD			
Calcium	**36300**	**36100**	22200	22200	12500	**107**	**106**	75-125	1	20
Iron	**24300**	**24300**	22200	22200	ND	**110**	**110**	75-125	0	20
Magnesium	**27300**	**27200**	22200	22200	4230	**104**	**103**	75-125	0	20
Manganese	**578**	**575**	556	556	ND	**104**	**103**	75-125	1	20
Potassium	**24900**	**24600**	22200	22200	ND	**112**	**111**	75-125	1	20
Sodium	**27500**	**27100**	22200	22200	5290	**100**	**98**	75-125	2	20
Laboratory ID:	04-159-01									
Arsenic	**82.0**	**84.0**	80.0	80.0	ND	**103**	**105**	75-125	2	20

Date of Report: May 11, 2023
Samples Submitted: April 14, 2023
Laboratory Reference: 2304-169
Project: 26410-001-01

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:	MB0417WH3					
Iron	**ND**	50	EPA 200.7	4-17-23	4-18-23	
Magnesium	**ND**	1000	EPA 200.7	4-17-23	4-18-23	
Manganese	**ND**	10	EPA 200.7	4-17-23	4-18-23	
Laboratory ID:	MB0418WM1					
Arsenic	**ND**	3.3	EPA 200.8	4-18-23	4-18-23	

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	04-167-02									
	ORIG	DUP								
Iron	**606**	**518**	NA	NA		NA	NA	16	20	
Magnesium	**2640**	**2430**	NA	NA		NA	NA	8	20	
Manganese	**20.3**	**18.0**	NA	NA		NA	NA	12	20	
Laboratory ID:	04-108-07									
Arsenic	**ND**	**ND**	NA	NA		NA	NA	NA	20	
MATRIX SPIKES										
Laboratory ID:	04-167-02									
	MS	MSD	MS	MSD		MS	MSD			
Iron	**22000**	**22400**	20000	20000	606	**107**	**109**	75-125	2	20
Magnesium	**23300**	**23600**	20000	20000	2640	**103**	**105**	75-125	1	20
Manganese	**565**	**571**	500	500	20.3	**109**	**110**	75-125	1	20
Laboratory ID:	04-108-07									
Arsenic	**106**	**108**	111	111	ND	**95**	**97**	75-125	2	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.
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: GeoEngineers

Project Number: ~~6694-002-05~~ 26410-001-01

Project Name: Go East

Project Manager: Garrett Leque

Sampled by: BRIAN ANDERSON

Turnaround Request (in working days)

(Check One)

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

Laboratory Number: 04-169

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-Gx	NWTPH-Dx	Volatiles 8260B	PAHs 8270D/SIM (low-level)	Organochlorine Pesticides 8081A	TOC, alk+bicarb, Cl, NO3, SO4, TDS, NH3)	TOC, TDS, NH3	T/D metals	T/D metals	T/D metals	Total metals	% Moisture
1	MW-5-20230414	4-14-23	1100	GW	6						X				X	X	

	Signature	Company	Date	Time
Relinquished		GEOENGINEERS	4-14-23	1258
Received		OSE	4/14/23	1258
Relinquished				
Received				
Relinquished				
Received				

Comments/Special Instructions

TOTAL METALS:
As, Fe, Mg, Mn
DISSOLVED METALS:
As, Fe, Mg, Mn, Ca, K, Na

DISS METALS: FIELD FILTERED

Reviewed/Date

Reviewed/Date

Chromatograms with final report ☐

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

Data Validation Report

1101 Fawcett Avenue, Suite 200, Tacoma, Washington 98402, Telephone: 253.383.4940, Fax: 253.383.4923 www.geoengineers.com

Project:	March and April 2023 Groundwater and Surface Water Sampling Results Go East Landfill Site, Everett, Washington
GEI File:	6694-002-05
Date:	March 11, 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 water samples collected as part of the March and April 2023 sampling events, and the associated laboratory quality control (QC) samples. The samples were obtained from the Go East Landfill Site located in Everett, Washington.

OBJECTIVE AND QUALITY CONTROL ELEMENTS

GeoEngineers, Inc. (GeoEngineers) completed the data validation consistent with the USEPA Contract Laboratory Program National Functional Guidelines for Organic Superfund Data Review (USEPA 2020a) and Inorganic Superfund Data Review (USEPA 2020b) 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 measured by well-defined control limits to provide defensible data; and
- The quality assurance/quality control (QA/QC) procedures utilized by the laboratory meet acceptable industry practices and standards.

The data validation included review of the following QC elements:

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

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 GROUP

Laboratory SDG	Samples Validated
2303-347	Seep-1-20230330, SWS-1-20230330
2303-361	MW-1-20230331, MW-8-20230331
2304-019	MW-3-20230403
2304-045	MW-6-20230405, MW-7-20230405
2304-088	MW-2-20230407
2304-089	MW-10-20230407
2304-150	MW-10-20230412
2304-169	MW-5-20230414

CHEMICAL ANALYSIS PERFORMED

OnSite Environmental, Inc. (OnSite) of Redmond, Washington, performed laboratory analysis on the water samples using one or more of the following methods:

- Gasoline-range Hydrocarbons (NWTPH-Gx) by Method NWTPH-Gx;
- Petroleum Hydrocarbons (NWTPH-Dx) by Method NWTPH-Dx;
- Volatile Organic Compounds (VOCs) by Method EPA 8260D;
- Low-level Polycyclic Aromatic Hydrocarbons (PAHs) by Method EPA 8270E/Selective Ion Monitoring (SIM);
- Organochlorine Pesticides by Method EPA 8081B;
- Total and Dissolved Metals by Methods EPA 200.7, EPA 200.8, or EPA 7470A;
- Total Alkalinity and Bicarbonate by Method SM2320B;
- Total Dissolved Solids (TDS) by Method SM2540C;
- Total Organic Carbon (TOC) by Method SM5310B;

- Chloride by Method SM4500-Cl E;
- Nitrate by Method EPA 353.2;
- Sulfate by ASTM D516-11; and
- Ammonia by Method SM4500-NH3 D

DATA VALIDATION SUMMARY

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

Data Package Completeness

OnSite 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. The forms were appropriately signed and dated by both field collectors and laboratory personnel upon receipt.

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 coolers arrived at the laboratory within the appropriate temperatures of between two and six degrees Celsius.

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 above the reporting limits in the method blanks.

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.

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.

For inorganic methods, the matrix spike is followed by a post-digestion spike sample if an element percent recovery was outside the control limits in the matrix spike. The percent recovery control limits for matrix spikes are 75% to 125%.

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, control limits for accuracy and precision in the LCS and its duplicate (LCSD) are usually more rigorous than for MS/MSD analyses. Additionally, data qualification based on LCS/LCSD analyses would apply to each sample in the associated batch, instead of just the parent sample. The percent recovery control limits for LCS and LCSD analyses are specified in the laboratory documents, as are the RPD control limits for LCS/LCSD sample sets.

One LCS/LCSD 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 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. For organic analyses, the RPD control limits are specified in the laboratory documents. For inorganic analyses, the RPD control limit for water samples is 20 percent. Laboratory duplicates were analyzed at the proper frequency and the specified acceptance criteria were met, with the following exception:

SDG 2303-361: (Nitrate) A laboratory duplicate sample set was performed on Sample MW-1-20230331. The RPD for nitrate was greater than the control limit in the laboratory duplicate extracted on 3/31/2023. The positive result for this target analyte was qualified as estimated (J) in this sample.

Reporting Limits

The contract required quantitation limits (CRQL) were met by the laboratory for the target analytes throughout this sampling event, with some exceptions where the CRQL was elevated due to required sample dilution.

Miscellaneous

SDG 2304-150: (TDS) The laboratory reported two sets of results for Sample MW-10-20230412, initial results and reanalysis results, due to laboratory duplicate precision exceedance. The reanalysis results were labeled as DNR and should not be used for any purpose.

SDG 2304-169: (TDS) The laboratory reported two sets of results for Sample MW-5-20230414, initial results and reanalysis results, due to laboratory duplicate precision exceedance. The reanalysis results were labeled as DNR and should not be used for any purpose.

OVERALL ASSESSMENT

As was determined by this data validation, the laboratory followed the specified analytical methods. Accuracy was acceptable, as demonstrated by the surrogates, LCS/LCSD, and MS/MSD percent recovery values. Precision was also acceptable, as demonstrated by the LCS/LCSD, MS/MSD, and laboratory duplicate RPD values, with the exception 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-1-20230331	Nitrate	J	Laboratory Duplicate Precision

REFERENCES

GeoEngineers, Inc., "Interim Action Work Plan, Go East Corp Landfill Site, Everett, Washington, Ecology Agreed Order No. DE 18121 – prepared for Washington State Department of Ecology on Behalf of PG&E, LLC. GEI File No. 6694-002-03, April 23, 2020.

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.

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

October 23, 2023

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

Re: Analytical Data for Project 6694-006-03
Laboratory Reference No. 2310-043

Dear Garrett:

Enclosed are the analytical results and associated quality control data for samples submitted on October 4, 2023.

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: October 23, 2023
Samples Submitted: October 4, 2023
Laboratory Reference: 2310-043
Project: 6694-006-03

Case Narrative

Samples were collected on October 3 and 4, 2023 and received by the laboratory on October 4, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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

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

Total Dissolved Solids SM 2540C Analysis

Due to an error in our system, sample 20231004-MW-2 was analyzed outside of holding time.

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

Date of Report: October 23, 2023
Samples Submitted: October 4, 2023
Laboratory Reference: 2310-043
Project: 6694-006-03

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
20231003-MW-8	10-043-01	Water	10-3-23	10-4-23	
20231003-MW-5	10-043-02	Water	10-3-23	10-4-23	
20231004-MW-2	10-043-03	Water	10-4-23	10-4-23	

Date of Report: October 23, 2023
Samples Submitted: October 4, 2023
Laboratory Reference: 2310-043
Project: 6694-006-03

TOTAL METALS
EPA 200.8/200.7/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**20231003-MW-8**					
Laboratory ID:	10-043-01					
Arsenic	**ND**	3.3	EPA 200.8	10-9-23	10-10-23	
Chromium	**ND**	11	EPA 200.8	10-9-23	10-10-23	
Iron	**4800**	50	EPA 200.7	10-10-23	10-10-23	
Magnesium	**33000**	1000	EPA 200.7	10-10-23	10-10-23	
Manganese	**510**	10	EPA 200.7	10-10-23	10-10-23	
Nickel	**ND**	22	EPA 200.8	10-9-23	10-10-23	
Client ID:	**20231003-MW-5**					
Laboratory ID:	10-043-02					
Arsenic	**4.8**	3.3	EPA 200.8	10-9-23	10-10-23	
Cadmium	**ND**	4.4	EPA 200.8	10-9-23	10-10-23	
Chromium	**ND**	11	EPA 200.8	10-9-23	10-10-23	
Copper	**ND**	11	EPA 200.8	10-9-23	10-10-23	
Iron	**240**	50	EPA 200.7	10-10-23	10-10-23	
Lead	**ND**	1.1	EPA 200.8	10-9-23	10-10-23	
Magnesium	**16000**	1000	EPA 200.7	10-10-23	10-10-23	
Manganese	**190**	10	EPA 200.7	10-10-23	10-10-23	
Mercury	**ND**	0.025	EPA 7470A	10-12-23	10-12-23	
Nickel	**ND**	22	EPA 200.8	10-9-23	10-10-23	
Selenium	**ND**	5.6	EPA 200.8	10-9-23	10-10-23	
Client ID:	**20231004-MW-2**					
Laboratory ID:	10-043-03					
Arsenic	**7.4**	3.3	EPA 200.8	10-9-23	10-10-23	
Cadmium	**ND**	4.4	EPA 200.8	10-9-23	10-10-23	
Chromium	**ND**	11	EPA 200.8	10-9-23	10-10-23	
Copper	**ND**	11	EPA 200.8	10-9-23	10-10-23	
Iron	**5400**	50	EPA 200.7	10-10-23	10-10-23	
Lead	**1.7**	1.1	EPA 200.8	10-9-23	10-10-23	
Magnesium	**14000**	1000	EPA 200.7	10-10-23	10-10-23	
Manganese	**330**	10	EPA 200.7	10-10-23	10-10-23	
Mercury	**ND**	0.025	EPA 7470A	10-12-23	10-12-23	
Nickel	**ND**	22	EPA 200.8	10-9-23	10-10-23	
Selenium	**ND**	5.6	EPA 200.8	10-9-23	10-10-23	

Date of Report: October 23, 2023
Samples Submitted: October 4, 2023
Laboratory Reference: 2310-043
Project: 6694-006-03

DISSOLVED METALS
EPA 200.8/200.7/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**20231003-MW-8**					
Laboratory ID:	10-043-01					
Arsenic	**ND**	3.0	EPA 200.8		10-10-23	
Calcium	**25000**	1100	EPA 200.7		10-12-23	
Chromium	**ND**	10	EPA 200.8		10-10-23	
Iron	**80**	56	EPA 200.7		10-12-23	
Magnesium	**31000**	1100	EPA 200.7		10-12-23	
Manganese	**260**	11	EPA 200.7		10-12-23	
Nickel	**ND**	20	EPA 200.8		10-10-23	
Potassium	**3500**	1100	EPA 200.7		10-12-23	
Sodium	**7200**	1100	EPA 200.7		10-13-23	
Client ID:	**20231003-MW-5**					
Laboratory ID:	10-043-02					
Arsenic	**5.0**	3.0	EPA 200.8		10-10-23	
Cadmium	**ND**	4.0	EPA 200.8		10-10-23	
Calcium	**30000**	1100	EPA 200.7		10-12-23	
Chromium	**ND**	10	EPA 200.8		10-10-23	
Copper	**ND**	10	EPA 200.8		10-10-23	
Iron	**57**	56	EPA 200.7		10-12-23	
Lead	**ND**	1.0	EPA 200.8		10-10-23	
Magnesium	**17000**	1100	EPA 200.7		10-12-23	
Manganese	**160**	11	EPA 200.7		10-12-23	
Mercury	**ND**	0.025	EPA 7470A		10-10-23	
Nickel	**ND**	20	EPA 200.8		10-10-23	
Potassium	**2800**	1100	EPA 200.7		10-12-23	
Selenium	**ND**	5.0	EPA 200.8		10-10-23	
Sodium	**6500**	1100	EPA 200.7		10-13-23	

Date of Report: October 23, 2023
Samples Submitted: October 4, 2023
Laboratory Reference: 2310-043
Project: 6694-006-03

DISSOLVED METALS
EPA 200.8/200.7/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**20231004-MW-2**					
Laboratory ID:	10-043-03					
Arsenic	**5.9**	3.0	EPA 200.8		10-10-23	
Cadmium	**ND**	4.0	EPA 200.8		10-10-23	
Calcium	**22000**	1100	EPA 200.7		10-12-23	
Chromium	**ND**	10	EPA 200.8		10-10-23	
Copper	**ND**	10	EPA 200.8		10-10-23	
Iron	**100**	56	EPA 200.7		10-12-23	
Lead	**ND**	1.0	EPA 200.8		10-10-23	
Magnesium	**13000**	1100	EPA 200.7		10-12-23	
Manganese	**230**	11	EPA 200.7		10-12-23	
Mercury	**ND**	0.025	EPA 7470A		10-10-23	
Nickel	**ND**	20	EPA 200.8		10-10-23	
Potassium	**2700**	1100	EPA 200.7		10-12-23	
Selenium	**ND**	5.0	EPA 200.8		10-10-23	
Sodium	**5000**	1100	EPA 200.7		10-13-23	

Date of Report: October 23, 2023
Samples Submitted: October 4, 2023
Laboratory Reference: 2310-043
Project: 6694-006-03

AMMONIA (as Nitrogen)
SM 4500-NH_3 D

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**20231003-MW-8**					
Laboratory ID:	10-043-01					
Ammonia	**ND**	0.050	SM 4500-NH3 D	10-11-23	10-11-23	
Client ID:	**20231003-MW-5**					
Laboratory ID:	10-043-02					
Ammonia	**ND**	0.050	SM 4500-NH3 D	10-11-23	10-11-23	
Client ID:	**20231004-MW-2**					
Laboratory ID:	10-043-03					
Ammonia	**0.057**	0.050	SM 4500-NH3 D	10-11-23	10-11-23	

Date of Report: October 23, 2023
Samples Submitted: October 4, 2023
Laboratory Reference: 2310-043
Project: 6694-006-03

TOTAL ORGANIC CARBON
SM 5310B

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**20231003-MW-8**					
Laboratory ID:	10-043-01					
Total Organic Carbon	**ND**	1.0	SM 5310B	10-6-23	10-6-23	
Client ID:	**20231003-MW-5**					
Laboratory ID:	10-043-02					
Total Organic Carbon	**ND**	1.0	SM 5310B	10-6-23	10-6-23	
Client ID:	**20231004-MW-2**					
Laboratory ID:	10-043-03					
Total Organic Carbon	**ND**	1.0	SM 5310B	10-6-23	10-6-23	

Date of Report: October 23, 2023
Samples Submitted: October 4, 2023
Laboratory Reference: 2310-043
Project: 6694-006-03

TOTAL DISSOLVED SOLIDS
SM 2540C

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**20231003-MW-8**					
Laboratory ID:	10-043-01					
Total Dissolved Solids	**220**	13	SM 2540C	10-6-23	10-6-23	
Client ID:	**20231003-MW-5**					
Laboratory ID:	10-043-02					
Total Dissolved Solids	**200**	13	SM 2540C	10-6-23	10-6-23	
Client ID:	**20231004-MW-2**					
Laboratory ID:	10-043-03					
Total Dissolved Solids	**150**	13	SM 2540C	10-17-23	10-17-23	

Date of Report: October 23, 2023
Samples Submitted: October 4, 2023
Laboratory Reference: 2310-043
Project: 6694-006-03

TOTAL ALKALINITY
SM 2320B

Matrix: Water
Units: mg CaCO3/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**20231003-MW-8**					
Laboratory ID:	10-043-01					
Total Alkalinity	**160**	2.0	SM 2320B	10-9-23	10-9-23	
Client ID:	**20231003-MW-5**					
Laboratory ID:	10-043-02					
Total Alkalinity	**130**	2.0	SM 2320B	10-9-23	10-9-23	
Client ID:	**20231004-MW-2**					
Laboratory ID:	10-043-03					
Total Alkalinity	**110**	2.0	SM 2320B	10-9-23	10-9-23	

Date of Report: October 23, 2023
Samples Submitted: October 4, 2023
Laboratory Reference: 2310-043
Project: 6694-006-03

BICARBONATE
SM 2320B

Matrix: Water
Units: mg CaCO3/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**20231003-MW-8**					
Laboratory ID:	10-043-01					
Bicarbonate	**160**	2.0	SM 2320B	10-9-23	10-9-23	
Client ID:	**20231003-MW-5**					
Laboratory ID:	10-043-02					
Bicarbonate	**130**	2.0	SM 2320B	10-9-23	10-9-23	
Client ID:	**20231004-MW-2**					
Laboratory ID:	10-043-03					
Bicarbonate	**110**	2.0	SM 2320B	10-9-23	10-9-23	

Date of Report: October 23, 2023
Samples Submitted: October 4, 2023
Laboratory Reference: 2310-043
Project: 6694-006-03

CHLORIDE
SM 4500-Cl E

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**20231003-MW-8**					
Laboratory ID:	10-043-01					
Chloride	**5.4**	2.0	SM 4500-Cl E	10-9-23	10-9-23	
Client ID:	**20231003-MW-5**					
Laboratory ID:	10-043-02					
Chloride	**12**	2.0	SM 4500-Cl E	10-9-23	10-9-23	
Client ID:	**20231004-MW-2**					
Laboratory ID:	10-043-03					
Chloride	**5.0**	2.0	SM 4500-Cl E	10-9-23	10-9-23	

Date of Report: October 23, 2023
Samples Submitted: October 4, 2023
Laboratory Reference: 2310-043
Project: 6694-006-03

NITRATE (as Nitrogen)
EPA 353.2

Matrix: Water
Units: mg/L-N

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**20231003-MW-8**					
Laboratory ID:	10-043-01					
Nitrate	**0.067**	0.050	EPA 353.2	10-5-23	10-5-23	
Client ID:	**20231003-MW-5**					
Laboratory ID:	10-043-02					
Nitrate	**ND**	0.050	EPA 353.2	10-5-23	10-5-23	
Client ID:	**20231004-MW-2**					
Laboratory ID:	10-043-03					
Nitrate	**ND**	0.050	EPA 353.2	10-5-23	10-5-23	

Date of Report: October 23, 2023
Samples Submitted: October 4, 2023
Laboratory Reference: 2310-043
Project: 6694-006-03

SULFATE
ASTM D516-11

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**20231003-MW-8**					
Laboratory ID:	10-043-01					
Sulfate	**35**	10	ASTM D516-11	10-12-23	10-12-23	
Client ID:	**20231003-MW-5**					
Laboratory ID:	10-043-02					
Sulfate	**16**	5.0	ASTM D516-11	10-12-23	10-12-23	
Client ID:	**20231004-MW-2**					
Laboratory ID:	10-043-03					
Sulfate	**7.0**	5.0	ASTM D516-11	10-12-23	10-12-23	

Date of Report: October 23, 2023
Samples Submitted: October 4, 2023
Laboratory Reference: 2310-043
Project: 6694-006-03

TOTAL METALS
EPA 200.8/200.7/7470A
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1010WH1					
Iron	**ND**	50	EPA 200.7	10-10-23	10-10-23	
Magnesium	**ND**	1000	EPA 200.7	10-10-23	10-10-23	
Manganese	**ND**	10	EPA 200.7	10-10-23	10-10-23	
Laboratory ID:	MB1009WM1					
Arsenic	**ND**	3.3	EPA 200.8	10-9-23	10-10-23	
Cadmium	**ND**	4.4	EPA 200.8	10-9-23	10-10-23	
Chromium	**ND**	11	EPA 200.8	10-9-23	10-10-23	
Copper	**ND**	11	EPA 200.8	10-9-23	10-10-23	
Lead	**ND**	1.1	EPA 200.8	10-9-23	10-10-23	
Nickel	**ND**	22	EPA 200.8	10-9-23	10-10-23	
Selenium	**ND**	5.6	EPA 200.8	10-9-23	10-10-23	
Laboratory ID:	MB1012W2					
Mercury	**ND**	0.025	EPA 7470A	10-12-23	10-12-23	

Date of Report: October 23, 2023
Samples Submitted: October 4, 2023
Laboratory Reference: 2310-043
Project: 6694-006-03

TOTAL METALS
EPA 200.8/200.7/7470A
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	10-043-01									
	ORIG	DUP								
Iron	**4810**	**5080**	NA	NA		NA	NA	5	20	
Magnesium	**33200**	**31900**	NA	NA		NA	NA	4	20	
Manganese	**508**	**490**	NA	NA		NA	NA	4	20	
Laboratory ID:	09-253-11									
Arsenic	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Cadmium	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Chromium	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Copper	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Lead	**1.50**	**1.50**	NA	NA		NA	NA	0	20	
Nickel	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Selenium	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Laboratory ID:	10-117-01									
Mercury	**ND**	**ND**	NA	NA		NA	NA	NA	20	
MATRIX SPIKES										
Laboratory ID:	10-043-01									
	MS	MSD	MS	MSD		MS	MSD			
Iron	**23200**	**23800**	20000	20000	4810	**92**	**95**	75-125	3	20
Magnesium	**49800**	**50500**	20000	20000	33200	**83**	**87**	75-125	1	20
Manganese	**953**	**970**	500	500	508	**89**	**92**	75-125	2	20
Laboratory ID:	09-253-11									
Arsenic	**114**	**112**	111	111	ND	**102**	**101**	75-125	1	20
Cadmium	**112**	**110**	111	111	ND	**101**	**99**	75-125	2	20
Chromium	**111**	**108**	111	111	ND	**100**	**97**	75-125	3	20
Copper	**105**	**103**	111	111	ND	**95**	**93**	75-125	2	20
Lead	**111**	**109**	111	111	1.50	**99**	**97**	75-125	2	20
Nickel	**108**	**106**	111	111	ND	**97**	**96**	75-125	1	20
Selenium	**115**	**113**	111	111	ND	**103**	**102**	75-125	2	20
Laboratory ID:	10-117-01									
Mercury	**6.48**	**6.33**	6.25	6.25	ND	**104**	**101**	75-125	2	20

Date of Report: October 23, 2023
Samples Submitted: October 4, 2023
Laboratory Reference: 2310-043
Project: 6694-006-03

DISSOLVED METALS
EPA 200.8/200.7/7470A
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1012D1					
Calcium	**ND**	1100	EPA 200.7		10-12-23	
Iron	**ND**	56	EPA 200.7		10-12-23	
Magnesium	**ND**	1100	EPA 200.7		10-12-23	
Manganese	**ND**	11	EPA 200.7		10-12-23	
Potassium	**ND**	1100	EPA 200.7		10-12-23	
Laboratory ID:	MB1005F1					
Arsenic	**ND**	3.0	EPA 200.8	10-5-23	10-10-23	
Cadmium	**ND**	4.0	EPA 200.8	10-5-23	10-10-23	
Chromium	**ND**	10	EPA 200.8	10-5-23	10-10-23	
Copper	**ND**	10	EPA 200.8	10-5-23	10-10-23	
Lead	**ND**	1.0	EPA 200.8	10-5-23	10-10-23	
Nickel	**ND**	20	EPA 200.8	10-5-23	10-10-23	
Selenium	**ND**	5.0	EPA 200.8	10-5-23	10-10-23	
Laboratory ID:	MB1010D1					
Mercury	**ND**	0.025	EPA 7470A		10-10-23	
Laboratory ID:	MB1013D1					
Sodium	**ND**	1100	EPA 200.7		10-13-23	

Date of Report: October 23, 2023
Samples Submitted: October 4, 2023
Laboratory Reference: 2310-043
Project: 6694-006-03

DISSOLVED METALS
EPA 200.8/200.7/7470A
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	10-087-01									
	ORIG	DUP								
Calcium	**18100**	**17200**	NA	NA		NA	NA	5	20	
Iron	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Magnesium	**6980**	**6790**	NA	NA		NA	NA	3	20	
Manganese	**186**	**179**	NA	NA		NA	NA	4	20	
Potassium	**1840**	**1880**	NA	NA		NA	NA	2	20	
Laboratory ID:	10-049-01									
Arsenic	**11.1**	**11.2**	NA	NA		NA	NA	0	20	
Cadmium	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Chromium	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Copper	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Lead	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Nickel	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Selenium	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Laboratory ID:	10-025-01									
Mercury	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Laboratory ID:	10-087-01									
	ORIG	DUP								
Sodium	**3930**	**3640**	NA	NA		NA	NA	8	20	

Date of Report: October 23, 2023
Samples Submitted: October 4, 2023
Laboratory Reference: 2310-043
Project: 6694-006-03

DISSOLVED METALS
EPA 200.8/200.7/7470A
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	10-087-01										
	MS	MSD	MS	MSD		MS	MSD				
Calcium	**38600**	**38300**	22200	22200	18100	**93**	**91**	75-125	1	20	
Iron	**23200**	**22900**	22200	22200	ND	**105**	**103**	75-125	1	20	
Magnesium	**30200**	**30100**	22200	22200	6980	**105**	**104**	75-125	0	20	
Manganese	**727**	**727**	556	556	186	**97**	**97**	75-125	0	20	
Potassium	**24200**	**24200**	22200	22200	1840	**101**	**101**	75-125	0	20	
Laboratory ID:	10-049-01										
Arsenic	**96.8**	**99.6**	80.0	80.0	11.1	**107**	**111**	75-125	3	20	
Cadmium	**87.6**	**88.4**	80.0	80.0	ND	**110**	**111**	75-125	1	20	
Chromium	**83.2**	**82.0**	80.0	80.0	ND	**104**	**103**	75-125	1	20	
Copper	**78.8**	**76.8**	80.0	80.0	ND	**99**	**96**	75-125	3	20	
Lead	**86.8**	**87.0**	80.0	80.0	ND	**109**	**109**	75-125	0	20	
Nickel	**80.6**	**79.0**	80.0	80.0	ND	**101**	**99**	75-125	2	20	
Selenium	**90.6**	**93.2**	80.0	80.0	ND	**113**	**117**	75-125	3	20	
Laboratory ID:	10-025-01										
Mercury	**6.13**	**6.18**	6.25	6.25	ND	**98**	**99**	75-125	1	20	
Laboratory ID:	10-087-01										
	MS	MSD	MS	MSD		MS	MSD				
Sodium	**27100**	**27100**	22200	22200	3930	**104**	**104**	75-125	0	20	

Date of Report: October 23, 2023
Samples Submitted: October 4, 2023
Laboratory Reference: 2310-043
Project: 6694-006-03

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:	MB1011W1					
Ammonia	**ND**	0.050	SM 4500-NH3 D	10-11-23	10-11-23	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	10-043-01							
	ORIG DUP							
Ammonia	**ND** **ND**	NA	NA	NA	NA	NA	27	
MATRIX SPIKE								
Laboratory ID:	10-043-01							
	MS	MS		MS				
Ammonia	**5.45**	5.00	ND	109	78-118	NA	NA	
SPIKE BLANK								
Laboratory ID:	SB1011W1							
	SB	SB		SB				
Ammonia	**4.67**	5.00	NA	93	85-114	NA	NA	

Date of Report: October 23, 2023
Samples Submitted: October 4, 2023
Laboratory Reference: 2310-043
Project: 6694-006-03

TOTAL ORGANIC CARBON
SM 5310B
QUALITY CONTROL

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1006W1					
Total Organic Carbon	**ND**	1.0	SM 5310B	10-6-23	10-6-23	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	09-254-01							
	ORIG DUP							
Total Organic Carbon	**ND** **ND**	NA	NA	NA	NA	NA	13	
MATRIX SPIKE								
Laboratory ID:	09-254-01							
	MS	MS		MS				
Total Organic Carbon	**9.17**	10.0	ND	92	86-127	NA	NA	
SPIKE BLANK								
Laboratory ID:	SB1006W1							
	SB	SB		SB				
Total Organic Carbon	**9.20**	10.0	NA	92	90-122	NA	NA	

Date of Report: October 23, 2023
Samples Submitted: October 4, 2023
Laboratory Reference: 2310-043
Project: 6694-006-03

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:	MB1006W1					
Total Dissolved Solids	**ND**	13	SM 2540C	10-6-23	10-6-23	
Laboratory ID:	MB1017W1					
Total Dissolved Solids	**ND**	13	SM 2540C	10-6-23	10-6-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	10-046-01								
	ORIG	DUP							
Total Dissolved Solids	**428**	**423**	NA	NA	NA	NA	1	30	
Laboratory ID:	10-168-01								
	ORIG	DUP							
Total Dissolved Solids	**357**	**357**	NA	NA	NA	NA	0	30	
SPIKE BLANK									
Laboratory ID:	SB1006W1								
	SB		SB		SB				
Total Dissolved Solids	**475**		500	NA	95	80-120	NA	NA	
Laboratory ID:	SB1017W1								
	SB		SB		SB				
Total Dissolved Solids	**487**		500	NA	97	80-120	NA	NA	

Date of Report: October 23, 2023
Samples Submitted: October 4, 2023
Laboratory Reference: 2310-043
Project: 6694-006-03

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:	MB1009W1					
Total Alkalinity	**ND**	2.0	SM 2320B	10-9-23	10-9-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	10-057-01								
	ORIG	DUP							
Total Alkalinity	**102**	**100**	NA	NA	NA	NA	2	10	
SPIKE BLANK									
Laboratory ID:	SB1009W1								
	SB		SB		SB				
Total Alkalinity	**86.0**		100	NA	86	82-112	NA	NA	

Date of Report: October 23, 2023
Samples Submitted: October 4, 2023
Laboratory Reference: 2310-043
Project: 6694-006-03

BICARBONATE
SM 2320B
QUALITY CONTROL

Matrix: Water
Units: mg CaCO3/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1009W1					
Bicarbonate	**ND**	2.0	SM 2320B	10-9-23	10-9-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	10-057-01								
	ORIG	DUP							
Bicarbonate	**102**	**100**	NA	NA	NA	NA	2	10	
SPIKE BLANK									
Laboratory ID:	SB1009W1								
	SB		SB		SB				
Bicarbonate	**86.0**		100	NA	86	82-112	NA	NA	

Date of Report: October 23, 2023
Samples Submitted: October 4, 2023
Laboratory Reference: 2310-043
Project: 6694-006-03

CHLORIDE
SM 4500-Cl E
QUALITY CONTROL

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1009W1					
Chloride	**ND**	2.0	SM 4500-Cl E	10-9-23	10-9-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	10-087-01								
	ORIG	DUP							
Chloride	**3.47**	**3.40**	NA	NA	NA	NA	2	12	
MATRIX SPIKE									
Laboratory ID:	10-087-01								
	MS		MS		MS				
Chloride	**51.6**		50.0	3.47	96	83-120	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB1009W1								
	SB		SB		SB				
Chloride	**46.7**		50.0	NA	93	83-119	NA	NA	

Date of Report: October 23, 2023
Samples Submitted: October 4, 2023
Laboratory Reference: 2310-043
Project: 6694-006-03

NITRATE (as Nitrogen)
EPA 353.2
QUALITY CONTROL

Matrix: Water
Units: mg/L-N

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1005W1					
Nitrate	**ND**	0.050	EPA 353.2	10-5-23	10-5-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	10-043-01								
	ORIG	DUP							
Nitrate	**0.0667**	**0.0643**	NA	NA	NA	NA	4	19	
MATRIX SPIKE									
Laboratory ID:	10-043-01								
	MS		MS		MS				
Nitrate	**1.95**		2.00	0.0667	94	85-121	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB1005W1								
	SB		SB		SB				
Nitrate	**1.90**		2.00	NA	95	87-118	NA	NA	

Date of Report: October 23, 2023
Samples Submitted: October 4, 2023
Laboratory Reference: 2310-043
Project: 6694-006-03

SULFATE
ASTM D516-11
QUALITY CONTROL

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1012W1					
Sulfate	**ND**	5.0	ASTM D516-11	10-12-23	10-12-23	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	10-043-03							
	ORIG DUP							
Sulfate	**6.97** **6.57**	NA	NA	NA	NA	6	10	
MATRIX SPIKE								
Laboratory ID:	10-043-03							
	MS	MS		MS				
Sulfate	**16.7**	10.0	6.97	97	73-127	NA	NA	
SPIKE BLANK								
Laboratory ID:	SB1012W1							
	SB	SB		SB				
Sulfate	**9.49**	10.0	NA	95	85-114	NA	NA	

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:
Project Name: Go East
Project Manager: Garret Leque
Sampled by: JDE

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

Laboratory Number: 10-043

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers
1	20231003-mw-8	10/3/23	1315	GW	5
~~2~~	~~20231003-mw-5~~	~~10/3/23~~			7
2	20231003-mw-5	10/3/23	1545	GW	6
3	20231004-mw-2	10/4/23	1330	GW	6

Lab ID	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	Organochlorine Pesticides 8081	Organophosphorus Pesticides 8270/SIM	Chlorinated Acid Herbicides 8151	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664	Metals full list	Leachate indicators	Geochem Parameters	Metals Short list	% Moisture
1																			X	X	X	
~~2~~																						
2																		X	X	X		
3																		X	X	X		

	Signature	Company	Date	Time
Relinquished		GEI	10/4/23	1500
Received		SPECT	10/4/23	15:00
Relinquished		"	10/4/23	16:00
Received		CORE	10/4/23	1600
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

metals full list: Tot+diss As, Cd, Cr, Cu, Fe, Pb, Mn, Hg, Ni, Se
Metals short list: Tot+Diss As, Cr, Fe, Mn, Ni
Leachate indicators: NH4, TOC TDS
Geochem Params: Alk, Bicarb, Diss Ca, Chloride, Tot+Diss Mg, Mn, n. trace, Diss K, Diss Na, Sulfate

Data Package: Standard ☐ Level III ☐ Level IV ☐

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

Call Garret for questions

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

October 17, 2023

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

Re: Analytical Data for Project 6694-006-03
Laboratory Reference No. 2310-057

Dear Garrett:

Enclosed are the analytical results and associated quality control data for samples submitted on October 5, 2023.

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: October 17, 2023
Samples Submitted: October 5, 2023
Laboratory Reference: 2310-057
Project: 6694-006-03

Case Narrative

Samples were collected on October 4 and 5, 2023 and received by the laboratory on October 5, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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

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

Date of Report: October 17, 2023
Samples Submitted: October 5, 2023
Laboratory Reference: 2310-057
Project: 6694-006-03

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
20231005-MW-7	10-057-01	Water	10-5-23	10-5-23	
20231004-MW-3	10-057-02	Water	10-4-23	10-5-23	

Date of Report: October 17, 2023
Samples Submitted: October 5, 2023
Laboratory Reference: 2310-057
Project: 6694-006-03

SEMIVOLATILE ORGANICS EPA 8270E/SIM
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**20231005-MW-7**					
Laboratory ID:	10-057-01					
n-Nitrosodimethylamine	**ND**	0.97	EPA 8270E	10-9-23	10-10-23	
Pyridine	**ND**	0.97	EPA 8270E	10-9-23	10-10-23	
Phenol	**ND**	0.97	EPA 8270E	10-9-23	10-10-23	
Aniline	**ND**	4.8	EPA 8270E	10-9-23	10-10-23	
bis(2-Chloroethyl)ether	**ND**	0.97	EPA 8270E	10-9-23	10-10-23	
2-Chlorophenol	**ND**	0.97	EPA 8270E	10-9-23	10-10-23	
1,3-Dichlorobenzene	**ND**	0.97	EPA 8270E	10-9-23	10-10-23	
1,4-Dichlorobenzene	**ND**	0.97	EPA 8270E	10-9-23	10-10-23	
Benzyl alcohol	**ND**	0.97	EPA 8270E	10-9-23	10-10-23	
1,2-Dichlorobenzene	**ND**	0.97	EPA 8270E	10-9-23	10-10-23	
2-Methylphenol (o-Cresol)	**ND**	0.97	EPA 8270E	10-9-23	10-10-23	
bis(2-Chloroisopropyl)ether	**ND**	0.97	EPA 8270E	10-9-23	10-10-23	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.97	EPA 8270E	10-9-23	10-10-23	
n-Nitroso-di-n-propylamine	**ND**	0.97	EPA 8270E	10-9-23	10-10-23	
Hexachloroethane	**ND**	0.97	EPA 8270E	10-9-23	10-10-23	
Nitrobenzene	**ND**	0.97	EPA 8270E	10-9-23	10-10-23	
Isophorone	**ND**	0.97	EPA 8270E	10-9-23	10-10-23	
2-Nitrophenol	**ND**	0.97	EPA 8270E	10-9-23	10-10-23	
2,4-Dimethylphenol	**ND**	0.97	EPA 8270E	10-9-23	10-10-23	
bis(2-Chloroethoxy)methane	**ND**	0.97	EPA 8270E	10-9-23	10-10-23	
2,4-Dichlorophenol	**ND**	1.9	EPA 8270E	10-9-23	10-10-23	
1,2,4-Trichlorobenzene	**ND**	0.97	EPA 8270E	10-9-23	10-10-23	
Naphthalene	**ND**	0.097	EPA 8270E/SIM	10-9-23	10-10-23	
4-Chloroaniline	**ND**	0.97	EPA 8270E	10-9-23	10-10-23	
Hexachlorobutadiene	**ND**	0.97	EPA 8270E	10-9-23	10-10-23	
4-Chloro-3-methylphenol	**ND**	0.97	EPA 8270E	10-9-23	10-10-23	
2-Methylnaphthalene	**ND**	0.097	EPA 8270E/SIM	10-9-23	10-10-23	
1-Methylnaphthalene	**ND**	0.097	EPA 8270E/SIM	10-9-23	10-10-23	
Hexachlorocyclopentadiene	**ND**	12	EPA 8270E	10-9-23	10-10-23	
2,4,6-Trichlorophenol	**ND**	0.97	EPA 8270E	10-9-23	10-10-23	
2,3-Dichloroaniline	**ND**	0.97	EPA 8270E	10-9-23	10-10-23	
2,4,5-Trichlorophenol	**ND**	0.97	EPA 8270E	10-9-23	10-10-23	
2-Chloronaphthalene	**ND**	0.97	EPA 8270E	10-9-23	10-10-23	
2-Nitroaniline	**ND**	0.97	EPA 8270E	10-9-23	10-10-23	
1,4-Dinitrobenzene	**ND**	0.97	EPA 8270E	10-9-23	10-10-23	
Dimethylphthalate	**ND**	4.8	EPA 8270E	10-9-23	10-10-23	
1,3-Dinitrobenzene	**ND**	0.97	EPA 8270E	10-9-23	10-10-23	
2,6-Dinitrotoluene	**ND**	0.97	EPA 8270E	10-9-23	10-10-23	
1,2-Dinitrobenzene	**ND**	0.97	EPA 8270E	10-9-23	10-10-23	
Acenaphthylene	**ND**	0.097	EPA 8270E/SIM	10-9-23	10-10-23	
3-Nitroaniline	**ND**	0.97	EPA 8270E	10-9-23	10-10-23	

Date of Report: October 17, 2023
Samples Submitted: October 5, 2023
Laboratory Reference: 2310-057
Project: 6694-006-03

SEMIVOLATILE ORGANICS EPA 8270E/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**20231005-MW-7**					
Laboratory ID:	10-057-01					
2,4-Dinitrophenol	**ND**	17	EPA 8270E	10-9-23	10-10-23	
Acenaphthene	**ND**	0.097	EPA 8270E/SIM	10-9-23	10-10-23	
4-Nitrophenol	**ND**	1.9	EPA 8270E	10-9-23	10-10-23	
2,4-Dinitrotoluene	**ND**	0.97	EPA 8270E	10-9-23	10-10-23	
Dibenzofuran	**ND**	0.97	EPA 8270E	10-9-23	10-10-23	
2,3,5,6-Tetrachlorophenol	**ND**	1.9	EPA 8270E	10-9-23	10-10-23	
2,3,4,6-Tetrachlorophenol	**ND**	1.9	EPA 8270E	10-9-23	10-10-23	
Diethylphthalate	**ND**	0.97	EPA 8270E	10-9-23	10-10-23	
4-Chlorophenyl-phenylether	**ND**	0.97	EPA 8270E	10-9-23	10-10-23	
4-Nitroaniline	**ND**	0.97	EPA 8270E	10-9-23	10-10-23	
Fluorene	**ND**	0.097	EPA 8270E/SIM	10-9-23	10-10-23	
4,6-Dinitro-2-methylphenol	**ND**	11	EPA 8270E	10-9-23	10-10-23	
n-Nitrosodiphenylamine	**ND**	0.97	EPA 8270E	10-9-23	10-10-23	
1,2-Diphenylhydrazine	**ND**	0.97	EPA 8270E	10-9-23	10-10-23	
4-Bromophenyl-phenylether	**ND**	0.97	EPA 8270E	10-9-23	10-10-23	
Hexachlorobenzene	**ND**	0.97	EPA 8270E	10-9-23	10-10-23	
Pentachlorophenol	**ND**	7.2	EPA 8270E	10-9-23	10-10-23	
Phenanthrene	**ND**	0.097	EPA 8270E/SIM	10-9-23	10-10-23	
Anthracene	**ND**	0.097	EPA 8270E/SIM	10-9-23	10-10-23	
Carbazole	**ND**	0.97	EPA 8270E	10-9-23	10-10-23	
Di-n-butylphthalate	**ND**	4.8	EPA 8270E	10-9-23	10-10-23	
Fluoranthene	**ND**	0.097	EPA 8270E/SIM	10-9-23	10-10-23	
Pyrene	**ND**	0.097	EPA 8270E/SIM	10-9-23	10-10-23	
Butylbenzylphthalate	**ND**	0.97	EPA 8270E	10-9-23	10-10-23	
bis-2-Ethylhexyladipate	**ND**	4.8	EPA 8270E	10-9-23	10-10-23	
3,3'-Dichlorobenzidine	**ND**	4.8	EPA 8270E	10-9-23	10-10-23	
Benzo[a]anthracene	**ND**	0.0097	EPA 8270E/SIM	10-9-23	10-10-23	
Chrysene	**ND**	0.0097	EPA 8270E/SIM	10-9-23	10-10-23	
bis(2-Ethylhexyl)phthalate	**ND**	4.8	EPA 8270E	10-9-23	10-10-23	
Di-n-octylphthalate	**ND**	0.97	EPA 8270E	10-9-23	10-10-23	
Benzo[b]fluoranthene	**ND**	0.0097	EPA 8270E/SIM	10-9-23	10-10-23	
Benzo(j,k)fluoranthene	**ND**	0.0097	EPA 8270E/SIM	10-9-23	10-10-23	
Benzo[a]pyrene	**ND**	0.0097	EPA 8270E/SIM	10-9-23	10-10-23	
Indeno[1,2,3-cd]pyrene	**ND**	0.0097	EPA 8270E/SIM	10-9-23	10-10-23	
Dibenz[a,h]anthracene	**ND**	0.0097	EPA 8270E/SIM	10-9-23	10-10-23	
Benzo[g,h,i]perylene	**ND**	0.0097	EPA 8270E/SIM	10-9-23	10-10-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*40*	*10 - 79*				
Phenol-d6	*30*	*10 - 82*				
Nitrobenzene-d5	*68*	*28 - 105*				
2-Fluorobiphenyl	*67*	*33 - 100*				
2,4,6-Tribromophenol	*81*	*25 - 124*				
Terphenyl-d14	*70*	*34 - 116*				

Date of Report: October 17, 2023
Samples Submitted: October 5, 2023
Laboratory Reference: 2310-057
Project: 6694-006-03

TOTAL METALS
EPA 200.8/200.7

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**20231005-MW-7**					
Laboratory ID:	10-057-01					
Arsenic	**8.7**	3.3	EPA 200.8	10-9-23	10-10-23	
Chromium	**ND**	11	EPA 200.8	10-9-23	10-10-23	
Iron	**2000**	50	EPA 200.7	10-10-23	10-10-23	
Magnesium	**13000**	1000	EPA 200.7	10-10-23	10-10-23	
Manganese	**70**	10	EPA 200.7	10-10-23	10-10-23	
Nickel	**ND**	22	EPA 200.8	10-9-23	10-10-23	
Client ID:	**20231004-MW-3**					
Laboratory ID:	10-057-02					
Arsenic	**4.9**	3.3	EPA 200.8	10-9-23	10-10-23	
Chromium	**ND**	11	EPA 200.8	10-9-23	10-10-23	
Iron	**1500**	50	EPA 200.7	10-10-23	10-10-23	
Magnesium	**13000**	1000	EPA 200.7	10-10-23	10-10-23	
Manganese	**190**	10	EPA 200.7	10-10-23	10-10-23	
Nickel	**ND**	22	EPA 200.8	10-9-23	10-10-23	

Date of Report: October 17, 2023
Samples Submitted: October 5, 2023
Laboratory Reference: 2310-057
Project: 6694-006-03

DISSOLVED METALS
EPA 200.8/200.7

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**20231005-MW-7**					
Laboratory ID:	10-057-01					
Arsenic	**9.0**	3.0	EPA 200.8		10-10-23	
Calcium	**18000**	1100	EPA 200.7		10-12-23	
Chromium	**ND**	10	EPA 200.8		10-10-23	
Iron	**ND**	56	EPA 200.7		10-12-23	
Magnesium	**13000**	1100	EPA 200.7		10-12-23	
Manganese	**16**	11	EPA 200.7		10-12-23	
Nickel	**ND**	20	EPA 200.8		10-10-23	
Potassium	**2100**	1100	EPA 200.7		10-12-23	
Sodium	**4900**	1100	EPA 200.7		10-13-23	
Client ID:	**20231004-MW-3**					
Laboratory ID:	10-057-02					
Arsenic	**4.3**	3.0	EPA 200.8		10-10-23	
Calcium	**24000**	1100	EPA 200.7		10-12-23	
Chromium	**ND**	10	EPA 200.8		10-10-23	
Iron	**ND**	56	EPA 200.7		10-12-23	
Magnesium	**14000**	1100	EPA 200.7		10-12-23	
Manganese	**140**	11	EPA 200.7		10-12-23	
Nickel	**ND**	20	EPA 200.8		10-10-23	
Potassium	**2400**	1100	EPA 200.7		10-12-23	
Sodium	**8400**	1100	EPA 200.7		10-13-23	

Date of Report: October 17, 2023
Samples Submitted: October 5, 2023
Laboratory Reference: 2310-057
Project: 6694-006-03

AMMONIA (as Nitrogen)
SM 4500-NH_3 D

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**20231005-MW-7**					
Laboratory ID:	10-057-01					
Ammonia	**ND**	0.050	SM 4500-NH3 D	10-11-23	10-11-23	
Client ID:	**20231004-MW-3**					
Laboratory ID:	10-057-02					
Ammonia	**ND**	0.050	SM 4500-NH3 D	10-11-23	10-11-23	

Date of Report: October 17, 2023
Samples Submitted: October 5, 2023
Laboratory Reference: 2310-057
Project: 6694-006-03

TOTAL ORGANIC CARBON
SM 5310B

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**20231005-MW-7**					
Laboratory ID:	10-057-01					
Total Organic Carbon	**ND**	1.0	SM 5310B	10-6-23	10-6-23	
Client ID:	**20231004-MW-3**					
Laboratory ID:	10-057-02					
Total Organic Carbon	**ND**	1.0	SM 5310B	10-6-23	10-6-23	

Date of Report: October 17, 2023
Samples Submitted: October 5, 2023
Laboratory Reference: 2310-057
Project: 6694-006-03

TOTAL DISSOLVED SOLIDS
SM 2540C

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**20231005-MW-7**					
Laboratory ID:	10-057-01					
Total Dissolved Solids	**150**	13	SM 2540C	10-6-23	10-6-23	
Client ID:	**20231004-MW-3**					
Laboratory ID:	10-057-02					
Total Dissolved Solids	**150**	13	SM 2540C	10-6-23	10-6-23	

Date of Report: October 17, 2023
Samples Submitted: October 5, 2023
Laboratory Reference: 2310-057
Project: 6694-006-03

TOTAL ALKALINITY
SM 2320B

Matrix: Water
Units: mg CaCO3/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**20231005-MW-7**					
Laboratory ID:	10-057-01					
Total Alkalinity	**100**	2.0	SM 2320B	10-9-23	10-9-23	
Client ID:	**20231004-MW-3**					
Laboratory ID:	10-057-02					
Total Alkalinity	**110**	2.0	SM 2320B	10-9-23	10-9-23	

Date of Report: October 17, 2023
Samples Submitted: October 5, 2023
Laboratory Reference: 2310-057
Project: 6694-006-03

BICARBONATE
SM 2320B

Matrix: Water
Units: mg CaCO3/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**20231005-MW-7**					
Laboratory ID:	10-057-01					
Bicarbonate	**100**	2.0	SM 2320B	10-9-23	10-9-23	
Client ID:	**20231004-MW-3**					
Laboratory ID:	10-057-02					
Bicarbonate	**110**	2.0	SM 2320B	10-9-23	10-9-23	

Date of Report: October 17, 2023
Samples Submitted: October 5, 2023
Laboratory Reference: 2310-057
Project: 6694-006-03

CHLORIDE
SM 4500-Cl E

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**20231005-MW-7**					
Laboratory ID:	10-057-01					
Chloride	**6.2**	2.0	SM 4500-Cl E	10-9-23	10-9-23	
Client ID:	**20231004-MW-3**					
Laboratory ID:	10-057-02					
Chloride	**7.4**	2.0	SM 4500-Cl E	10-9-23	10-9-23	

Date of Report: October 17, 2023
Samples Submitted: October 5, 2023
Laboratory Reference: 2310-057
Project: 6694-006-03

NITRATE (as Nitrogen)
EPA 353.2

Matrix: Water
Units: mg/L-N

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**20231005-MW-7**					
Laboratory ID:	10-057-01					
Nitrate	**0.12**	0.050	EPA 353.2	10-6-23	10-6-23	
Client ID:	**20231004-MW-3**					
Laboratory ID:	10-057-02					
Nitrate	**0.067**	0.050	EPA 353.2	10-6-23	10-6-23	

Date of Report: October 17, 2023
Samples Submitted: October 5, 2023
Laboratory Reference: 2310-057
Project: 6694-006-03

SULFATE
ASTM D516-11

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**20231005-MW-7**					
Laboratory ID:	10-057-01					
Sulfate	**ND**	5.0	ASTM D516-11	10-12-23	10-12-23	
Client ID:	**20231004-MW-3**					
Laboratory ID:	10-057-02					
Sulfate	**13**	5.0	ASTM D516-11	10-12-23	10-12-23	

Date of Report: October 17, 2023
Samples Submitted: October 5, 2023
Laboratory Reference: 2310-057
Project: 6694-006-03

SEMIVOLATILE ORGANICS EPA 8270E/SIM
QUALITY CONTROL
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1009W1					
n-Nitrosodimethylamine	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
Pyridine	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
Phenol	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
Aniline	**ND**	5.0	EPA 8270E	10-9-23	10-9-23	
bis(2-Chloroethyl)ether	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
2-Chlorophenol	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
1,3-Dichlorobenzene	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
1,4-Dichlorobenzene	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
Benzyl alcohol	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
1,2-Dichlorobenzene	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
2-Methylphenol (o-Cresol)	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
bis(2-Chloroisopropyl)ether	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
n-Nitroso-di-n-propylamine	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
Hexachloroethane	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
Nitrobenzene	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
Isophorone	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
2-Nitrophenol	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
2,4-Dimethylphenol	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
bis(2-Chloroethoxy)methane	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
2,4-Dichlorophenol	**ND**	2.0	EPA 8270E	10-9-23	10-9-23	
1,2,4-Trichlorobenzene	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
Naphthalene	**ND**	0.10	EPA 8270E/SIM	10-9-23	10-9-23	
4-Chloroaniline	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
Hexachlorobutadiene	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
4-Chloro-3-methylphenol	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
2-Methylnaphthalene	**ND**	0.10	EPA 8270E/SIM	10-9-23	10-9-23	
1-Methylnaphthalene	**ND**	0.10	EPA 8270E/SIM	10-9-23	10-9-23	
Hexachlorocyclopentadiene	**ND**	10	EPA 8270E	10-9-23	10-9-23	
2,4,6-Trichlorophenol	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
2,3-Dichloroaniline	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
2,4,5-Trichlorophenol	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
2-Chloronaphthalene	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
2-Nitroaniline	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
1,4-Dinitrobenzene	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
Dimethylphthalate	**ND**	5.0	EPA 8270E	10-9-23	10-9-23	
1,3-Dinitrobenzene	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
2,6-Dinitrotoluene	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
1,2-Dinitrobenzene	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
Acenaphthylene	**ND**	0.10	EPA 8270E/SIM	10-9-23	10-9-23	
3-Nitroaniline	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	

Date of Report: October 17, 2023
Samples Submitted: October 5, 2023
Laboratory Reference: 2310-057
Project: 6694-006-03

SEMIVOLATILE ORGANICS EPA 8270E/SIM
QUALITY CONTROL
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1009W1					
2,4-Dinitrophenol	**ND**	12	EPA 8270E	10-9-23	10-9-23	
Acenaphthene	**ND**	0.10	EPA 8270E/SIM	10-9-23	10-9-23	
4-Nitrophenol	**ND**	2.0	EPA 8270E	10-9-23	10-9-23	
2,4-Dinitrotoluene	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
Dibenzofuran	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
2,3,5,6-Tetrachlorophenol	**ND**	2.0	EPA 8270E	10-9-23	10-9-23	
2,3,4,6-Tetrachlorophenol	**ND**	2.0	EPA 8270E	10-9-23	10-9-23	
Diethylphthalate	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
4-Chlorophenyl-phenylether	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
4-Nitroaniline	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
Fluorene	**ND**	0.10	EPA 8270E/SIM	10-9-23	10-9-23	
4,6-Dinitro-2-methylphenol	**ND**	9.4	EPA 8270E	10-9-23	10-9-23	
n-Nitrosodiphenylamine	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
1,2-Diphenylhydrazine	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
4-Bromophenyl-phenylether	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
Hexachlorobenzene	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
Pentachlorophenol	**ND**	6.8	EPA 8270E	10-9-23	10-9-23	
Phenanthrene	**ND**	0.10	EPA 8270E/SIM	10-9-23	10-9-23	
Anthracene	**ND**	0.10	EPA 8270E/SIM	10-9-23	10-9-23	
Carbazole	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
Di-n-butylphthalate	**ND**	5.0	EPA 8270E	10-9-23	10-9-23	
Fluoranthene	**ND**	0.10	EPA 8270E/SIM	10-9-23	10-9-23	
Pyrene	**ND**	0.10	EPA 8270E/SIM	10-9-23	10-9-23	
Butylbenzylphthalate	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
bis-2-Ethylhexyladipate	**ND**	5.0	EPA 8270E	10-9-23	10-9-23	
3,3'-Dichlorobenzidine	**ND**	8.0	EPA 8270E	10-9-23	10-9-23	
Benzo[a]anthracene	**ND**	0.010	EPA 8270E/SIM	10-9-23	10-9-23	
Chrysene	**ND**	0.010	EPA 8270E/SIM	10-9-23	10-9-23	
bis(2-Ethylhexyl)phthalate	**ND**	5.0	EPA 8270E	10-9-23	10-9-23	
Di-n-octylphthalate	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270E/SIM	10-9-23	10-9-23	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270E/SIM	10-9-23	10-9-23	
Benzo[a]pyrene	**ND**	0.010	EPA 8270E/SIM	10-9-23	10-9-23	
Indeno[1,2,3-cd]pyrene	**ND**	0.010	EPA 8270E/SIM	10-9-23	10-9-23	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270E/SIM	10-9-23	10-9-23	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270E/SIM	10-9-23	10-9-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*44*	*10 - 79*				
Phenol-d6	*35*	*10 - 82*				
Nitrobenzene-d5	*77*	*28 - 105*				
2-Fluorobiphenyl	*79*	*33 - 100*				
2,4,6-Tribromophenol	*107*	*25 - 124*				
Terphenyl-d14	*91*	*34 - 116*				

Date of Report: October 17, 2023
Samples Submitted: October 5, 2023
Laboratory Reference: 2310-057
Project: 6694-006-03

SEMIVOLATILE ORGANICS EPA 8270E/SIM
QUALITY CONTROL
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1009W1									
	SB	SBD	SB	SBD	SB	SBD				
n-Nitrosodimethylamine	**12.7**	**10.7**	20.0	20.0	64	54	40 - 120	17	30	
Pyridine	**12.6**	**9.60**	20.0	20.0	63	48	40 - 120	27	30	
Phenol	**8.19**	**6.70**	20.0	20.0	41	34	20 - 80	20	26	
Aniline	**18.4**	**14.3**	20.0	20.0	92	72	40 - 120	25	30	
bis(2-Chloroethyl)ether	**16.6**	**12.3**	20.0	20.0	83	62	40 - 120	30	30	
2-Chlorophenol	**17.1**	**13.0**	20.0	20.0	86	65	45 - 100	27	31	
1,3-Dichlorobenzene	**16.4**	**12.5**	20.0	20.0	82	63	40 - 120	27	30	
1,4-Dichlorobenzene	**15.8**	**12.2**	20.0	20.0	79	61	34 - 100	26	37	
Benzyl alcohol	**16.7**	**13.8**	20.0	20.0	84	69	40 - 120	19	30	
1,2-Dichlorobenzene	**16.4**	**12.6**	20.0	20.0	82	63	40 - 120	26	30	
2-Methylphenol (o-Cresol)	**16.8**	**13.5**	20.0	20.0	84	68	40 - 120	22	30	
bis(2-Chloroisopropyl)ether	**17.4**	**12.9**	20.0	20.0	87	65	40 - 120	30	30	
(3+4)-Methylphenol (m,p-Cresol)	**16.0**	**12.9**	20.0	20.0	80	65	40 - 120	21	30	
n-Nitroso-di-n-propylamine	**18.4**	**14.4**	20.0	20.0	92	72	44 - 120	24	26	
Hexachloroethane	**15.1**	**11.6**	20.0	20.0	76	58	40 - 120	26	30	
Nitrobenzene	**18.7**	**14.9**	20.0	20.0	94	75	40 - 120	23	30	
Isophorone	**19.3**	**16.4**	20.0	20.0	97	82	40 - 120	16	30	
2-Nitrophenol	**18.8**	**15.3**	20.0	20.0	94	77	40 - 120	21	30	
2,4-Dimethylphenol	**23.2**	**19.9**	20.0	20.0	116	100	40 - 120	15	30	
bis(2-Chloroethoxy)methane	**19.2**	**15.1**	20.0	20.0	96	76	40 - 120	24	30	
2,4-Dichlorophenol	**19.4**	**16.4**	20.0	20.0	97	82	40 - 120	17	30	
1,2,4-Trichlorobenzene	**18.2**	**14.7**	20.0	20.0	91	74	40 - 100	21	33	
Naphthalene	**18.6**	**15.2**	20.0	20.0	93	76	40 - 120	20	30	
4-Chloroaniline	**20.2**	**18.0**	20.0	20.0	101	90	40 - 120	12	30	
Hexachlorobutadiene	**18.5**	**14.6**	20.0	20.0	93	73	40 - 120	24	30	
4-Chloro-3-methylphenol	**20.0**	**18.1**	20.0	20.0	100	91	52 - 120	10	21	
2-Methylnaphthalene	**19.7**	**16.5**	20.0	20.0	99	83	40 - 120	18	30	
1-Methylnaphthalene	**18.7**	**16.2**	20.0	20.0	94	81	40 - 120	14	30	
Hexachlorocyclopentadiene	**8.75**	**8.05**	20.0	20.0	44	40	20 - 100	8	30	
2,4,6-Trichlorophenol	**20.1**	**17.5**	20.0	20.0	101	88	40 - 120	14	30	
2,3-Dichloroaniline	**19.4**	**16.8**	20.0	20.0	97	84	40 - 120	14	30	
2,4,5-Trichlorophenol	**20.0**	**17.4**	20.0	20.0	100	87	40 - 120	14	30	
2-Chloronaphthalene	**19.0**	**16.9**	20.0	20.0	95	85	40 - 120	12	30	
2-Nitroaniline	**21.6**	**19.0**	20.0	20.0	108	95	40 - 120	13	30	
1,4-Dinitrobenzene	**19.2**	**18.1**	20.0	20.0	96	91	40 - 120	6	30	
Dimethylphthalate	**20.2**	**18.6**	20.0	20.0	101	93	40 - 120	8	30	
1,3-Dinitrobenzene	**20.4**	**18.8**	20.0	20.0	102	94	40 - 120	8	30	
2,6-Dinitrotoluene	**20.1**	**18.3**	20.0	20.0	101	92	40 - 120	9	30	
1,2-Dinitrobenzene	**17.1**	**16.6**	20.0	20.0	86	83	40 - 120	3	30	
Acenaphthylene	**19.3**	**17.4**	20.0	20.0	97	87	40 - 120	10	30	
3-Nitroaniline	**19.4**	**18.0**	20.0	20.0	97	90	40 - 120	7	30	

Date of Report: October 17, 2023
Samples Submitted: October 5, 2023
Laboratory Reference: 2310-057
Project: 6694-006-03

SEMIVOLATILE ORGANICS EPA 8270E/SIM
QUALITY CONTROL
page 2 of 2

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1009W1									
	SB	SBD	SB	SBD	SB	SBD				
2,4-Dinitrophenol	**5.80**	**6.05**	20.0	20.0	29	30	20 - 100	4	30	
Acenaphthene	**19.6**	**17.6**	20.0	20.0	98	88	52 - 100	11	23	
4-Nitrophenol	**11.5**	**11.2**	20.0	20.0	58	56	23 - 100	3	20	
2,4-Dinitrotoluene	**20.6**	**19.6**	20.0	20.0	103	98	53 - 103	5	22	
Dibenzofuran	**19.8**	**18.0**	20.0	20.0	99	90	40 - 120	10	30	
2,3,5,6-Tetrachlorophenol	**15.0**	**13.7**	20.0	20.0	75	69	40 - 120	9	30	
2,3,4,6-Tetrachlorophenol	**15.8**	**17.3**	20.0	20.0	79	87	40 - 120	9	30	
Diethylphthalate	**20.0**	**18.3**	20.0	20.0	100	92	40 - 120	9	30	
4-Chlorophenyl-phenylether	**20.0**	**18.3**	20.0	20.0	100	92	40 - 120	9	30	
4-Nitroaniline	**19.9**	**18.5**	20.0	20.0	100	93	40 - 120	7	30	
Fluorene	**19.9**	**18.6**	20.0	20.0	100	93	40 - 120	7	30	
4,6-Dinitro-2-methylphenol	**10.4**	**9.92**	20.0	20.0	52	50	20 - 100	5	30	
n-Nitrosodiphenylamine	**20.6**	**19.3**	20.0	20.0	103	97	40 - 120	7	30	
1,2-Diphenylhydrazine	**20.5**	**19.1**	20.0	20.0	103	96	40 - 120	7	30	
4-Bromophenyl-phenylether	**21.2**	**19.4**	20.0	20.0	106	97	40 - 120	9	30	
Hexachlorobenzene	**20.9**	**19.9**	20.0	20.0	105	100	40 - 120	5	30	
Pentachlorophenol	**11.8**	**13.4**	20.0	20.0	59	67	52 - 134	13	25	
Phenanthrene	**20.6**	**18.6**	20.0	20.0	103	93	40 - 120	10	30	
Anthracene	**21.6**	**19.6**	20.0	20.0	108	98	40 - 120	10	30	
Carbazole	**21.1**	**19.5**	20.0	20.0	106	98	40 - 120	8	30	
Di-n-butylphthalate	**21.1**	**19.9**	20.0	20.0	106	100	40 - 120	6	30	
Fluoranthene	**20.8**	**19.5**	20.0	20.0	104	98	40 - 120	6	30	
Pyrene	**18.9**	**17.6**	20.0	20.0	95	88	54 - 110	7	20	
Butylbenzylphthalate	**20.7**	**19.2**	20.0	20.0	104	96	40 - 120	8	30	
bis-2-Ethylhexyladipate	**21.3**	**18.7**	20.0	20.0	107	94	40 - 120	13	30	
3,3'-Dichlorobenzidine	**20.6**	**19.2**	20.0	20.0	103	96	40 - 120	7	30	
Benzo[a]anthracene	**19.9**	**18.3**	20.0	20.0	100	92	40 - 120	8	30	
Chrysene	**20.4**	**18.5**	20.0	20.0	102	93	40 - 120	10	30	
bis(2-Ethylhexyl)phthalate	**22.5**	**20.1**	20.0	20.0	113	101	40 - 120	11	30	
Di-n-octylphthalate	**23.2**	**20.8**	20.0	20.0	116	104	40 - 120	11	30	
Benzo[b]fluoranthene	**20.0**	**18.9**	20.0	20.0	100	95	40 - 120	6	30	
Benzo(j,k)fluoranthene	**22.7**	**20.0**	20.0	20.0	114	100	40 - 120	13	30	
Benzo[a]pyrene	**22.7**	**20.5**	20.0	20.0	114	103	40 - 120	10	30	
Indeno[1,2,3-cd]pyrene	**22.0**	**19.7**	20.0	20.0	110	99	40 - 120	11	30	
Dibenz[a,h]anthracene	**23.1**	**21.0**	20.0	20.0	116	105	40 - 120	10	30	
Benzo[g,h,i]perylene	**21.8**	**19.8**	20.0	20.0	109	99	40 - 120	10	30	
Surrogate:										
2-Fluorophenol					*57*	*44*	*10 - 79*			
Phenol-d6					*42*	*34*	*10 - 82*			
Nitrobenzene-d5					*90*	*69*	*28 - 105*			
2-Fluorobiphenyl					*91*	*77*	*33 - 100*			
2,4,6-Tribromophenol					*107*	*99*	*25 - 124*			
Terphenyl-d14					*91*	*83*	*34 - 116*			

Date of Report: October 17, 2023
Samples Submitted: October 5, 2023
Laboratory Reference: 2310-057
Project: 6694-006-03

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:	MB1010WH1					
Iron	**ND**	50	EPA 200.7	10-10-23	10-10-23	
Magnesium	**ND**	1000	EPA 200.7	10-10-23	10-10-23	
Manganese	**ND**	10	EPA 200.7	10-10-23	10-10-23	
Laboratory ID:	MB1009WM1					
Arsenic	**ND**	3.3	EPA 200.8	10-9-23	10-10-23	
Chromium	**ND**	11	EPA 200.8	10-9-23	10-10-23	
Nickel	**ND**	22	EPA 200.8	10-9-23	10-10-23	

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	10-043-01										
	ORIG	DUP									
Iron	**4810**	**5080**	NA	NA		NA		NA	5	20	
Magnesium	**33200**	**31900**	NA	NA		NA		NA	4	20	
Manganese	**508**	**490**	NA	NA		NA		NA	4	20	
Laboratory ID:	09-253-11										
Arsenic	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Chromium	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Nickel	**ND**	**ND**	NA	NA		NA		NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	10-043-01										
	MS	MSD	MS	MSD		MS	MSD				
Iron	**23200**	**23800**	20000	20000	4810	**92**	**95**	75-125	3	20	
Magnesium	**49800**	**50500**	20000	20000	33200	**83**	**87**	75-125	1	20	
Manganese	**953**	**970**	500	500	508	**89**	**92**	75-125	2	20	
Laboratory ID:	09-253-11										
Arsenic	**114**	**112**	111	111	ND	**102**	**101**	75-125	1	20	
Chromium	**111**	**108**	111	111	ND	**100**	**97**	75-125	3	20	
Nickel	**108**	**106**	111	111	ND	**97**	**96**	75-125	1	20	

Date of Report: October 17, 2023
Samples Submitted: October 5, 2023
Laboratory Reference: 2310-057
Project: 6694-006-03

DISSOLVED 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:	MB1012D1					
Calcium	**ND**	1100	EPA 200.7		10-12-23	
Iron	**ND**	56	EPA 200.7		10-12-23	
Magnesium	**ND**	1100	EPA 200.7		10-12-23	
Manganese	**ND**	11	EPA 200.7		10-12-23	
Potassium	**ND**	1100	EPA 200.7		10-12-23	
Laboratory ID:	MB1005F1					
Arsenic	**ND**	3.0	EPA 200.8	10-5-23	10-10-23	
Chromium	**ND**	10	EPA 200.8	10-5-23	10-10-23	
Nickel	**ND**	20	EPA 200.8	10-5-23	10-10-23	
Laboratory ID:	MB1013D1					
Sodium	**ND**	1100	EPA 200.7		10-13-23	

Date of Report: October 17, 2023
Samples Submitted: October 5, 2023
Laboratory Reference: 2310-057
Project: 6694-006-03

DISSOLVED METALS
EPA 200.8/200.7
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	10-087-01									
	ORIG	DUP								
Calcium	**18100**	**17200**	NA	NA		NA	NA	5	20	
Iron	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Magnesium	**6980**	**6790**	NA	NA		NA	NA	3	20	
Manganese	**186**	**179**	NA	NA		NA	NA	4	20	
Potassium	**1840**	**1880**	NA	NA		NA	NA	2	20	
Laboratory ID:	10-049-01									
Arsenic	**11.1**	**11.2**	NA	NA		NA	NA	0	20	
Chromium	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Nickel	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Laboratory ID:	10-087-01									
	ORIG	DUP								
Sodium	**3930**	**3640**	NA	NA		NA	NA	8	20	
MATRIX SPIKES										
Laboratory ID:	10-087-01									
	MS	MSD	MS	MSD		MS	MSD			
Calcium	**38600**	**38300**	22200	22200	18100	**93**	**91**	75-125	1	20
Iron	**23200**	**22900**	22200	22200	ND	**105**	**103**	75-125	1	20
Magnesium	**30200**	**30100**	22200	22200	6980	**105**	**104**	75-125	0	20
Manganese	**727**	**727**	556	556	186	**97**	**97**	75-125	0	20
Potassium	**24200**	**24200**	22200	22200	1840	**101**	**101**	75-125	0	20
Laboratory ID:	10-049-01									
Arsenic	**96.8**	**99.6**	80.0	80.0	11.1	**107**	**111**	75-125	3	20
Chromium	**83.2**	**82.0**	80.0	80.0	ND	**104**	**103**	75-125	1	20
Nickel	**80.6**	**79.0**	80.0	80.0	ND	**101**	**99**	75-125	2	20
Laboratory ID:	10-087-01									
	MS	MSD	MS	MSD		MS	MSD			
Sodium	**27100**	**27100**	22200	22200	3930	**104**	**104**	75-125	0	20

Date of Report: October 17, 2023
Samples Submitted: October 5, 2023
Laboratory Reference: 2310-057
Project: 6694-006-03

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:	MB1011W1					
Ammonia	**ND**	0.050	SM 4500-NH3 D	10-11-23	10-11-23	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	10-043-01							
	ORIG DUP							
Ammonia	**ND** **ND**	NA	NA	NA	NA	NA	27	
MATRIX SPIKE								
Laboratory ID:	10-043-01							
	MS	MS		MS				
Ammonia	**5.45**	5.00	ND	109	78-118	NA	NA	
SPIKE BLANK								
Laboratory ID:	SB1011W1							
	SB	SB		SB				
Ammonia	**4.67**	5.00	NA	93	85-114	NA	NA	

Date of Report: October 17, 2023
Samples Submitted: October 5, 2023
Laboratory Reference: 2310-057
Project: 6694-006-03

TOTAL ORGANIC CARBON
SM 5310B
QUALITY CONTROL

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1006W1					
Total Organic Carbon	**ND**	1.0	SM 5310B	10-6-23	10-6-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	09-254-01								
	ORIG	DUP							
Total Organic Carbon	**ND**	**ND**	NA	NA	NA	NA	NA	13	
MATRIX SPIKE									
Laboratory ID:	09-254-01								
	MS		MS		MS				
Total Organic Carbon	**9.17**		10.0	ND	92	86-127	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB1006W1								
	SB		SB		SB				
Total Organic Carbon	**9.20**		10.0	NA	92	90-122	NA	NA	

Date of Report: October 17, 2023
Samples Submitted: October 5, 2023
Laboratory Reference: 2310-057
Project: 6694-006-03

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:	MB1006W1					
Total Dissolved Solids	**ND**	13	SM 2540C	10-6-23	10-6-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	10-046-01								
	ORIG	DUP							
Total Dissolved Solids	**428**	**423**	NA	NA	NA	NA	1	30	
SPIKE BLANK									
Laboratory ID:	SB1006W1								
	SB		SB		SB				
Total Dissolved Solids	**475**		500	NA	95	80-120	NA	NA	

Date of Report: October 17, 2023
Samples Submitted: October 5, 2023
Laboratory Reference: 2310-057
Project: 6694-006-03

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:	MB1009W1					
Total Alkalinity	**ND**	2.0	SM 2320B	10-9-23	10-9-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	10-057-01								
	ORIG	DUP							
Total Alkalinity	**102**	**100**	NA	NA	NA	NA	2	10	
SPIKE BLANK									
Laboratory ID:	SB1009W1								
	SB		SB		SB				
Total Alkalinity	**86.0**		100	NA	86	82-112	NA	NA	

Date of Report: October 17, 2023
Samples Submitted: October 5, 2023
Laboratory Reference: 2310-057
Project: 6694-006-03

BICARBONATE
SM 2320B
QUALITY CONTROL

Matrix: Water
Units: mg CaCO3/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1009W1					
Bicarbonate	**ND**	2.0	SM 2320B	10-9-23	10-9-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	10-057-01								
	ORIG	DUP							
Bicarbonate	**102**	**100**	NA	NA	NA	NA	2	10	
SPIKE BLANK									
Laboratory ID:	SB1009W1								
	SB		SB		SB				
Bicarbonate	**86.0**		100	NA	86	82-112	NA	NA	

Date of Report: October 17, 2023
Samples Submitted: October 5, 2023
Laboratory Reference: 2310-057
Project: 6694-006-03

CHLORIDE
SM 4500-Cl E
QUALITY CONTROL

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1009W1					
Chloride	**ND**	2.0	SM 4500-Cl E	10-9-23	10-9-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	10-087-01								
	ORIG	DUP							
Chloride	**3.47**	**3.40**	NA	NA	NA	NA	2	12	
MATRIX SPIKE									
Laboratory ID:	10-087-01								
	MS		MS		MS				
Chloride	**51.6**		50.0	3.47	96	83-120	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB1009W1								
	SB		SB		SB				
Chloride	**46.7**		50.0	NA	93	83-119	NA	NA	

Date of Report: October 17, 2023
Samples Submitted: October 5, 2023
Laboratory Reference: 2310-057
Project: 6694-006-03

NITRATE (as Nitrogen)
EPA 353.2
QUALITY CONTROL

Matrix: Water
Units: mg/L-N

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1006W1					
Nitrate	**ND**	0.050	EPA 353.2	10-6-23	10-6-23	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	10-057-01							
	ORIG DUP							
Nitrate	**0.120** **0.0809**	NA	NA	NA	NA	39	19	C
MATRIX SPIKE								
Laboratory ID:	10-057-01							
	MS	MS		MS				
Nitrate	**2.19**	2.00	0.120	104	85-121	NA	NA	
SPIKE BLANK								
Laboratory ID:	SB1006W1							
	SB	SB		SB				
Nitrate	**1.98**	2.00	NA	99	87-118	NA	NA	

Date of Report: October 17, 2023
Samples Submitted: October 5, 2023
Laboratory Reference: 2310-057
Project: 6694-006-03

SULFATE
ASTM D516-11
QUALITY CONTROL

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1012W1					
Sulfate	**ND**	5.0	ASTM D516-11	10-12-23	10-12-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	10-043-03								
	ORIG	DUP							
Sulfate	**6.97**	**6.57**	NA	NA	NA	NA	6	10	
MATRIX SPIKE									
Laboratory ID:	10-043-03								
	MS		MS		MS				
Sulfate	**16.7**		10.0	6.97	97	73-127	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB1012W1								
	SB		SB		SB				
Sulfate	**9.49**		10.0	NA	95	85-114	NA	NA	

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.
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Phone: (425) 883-3881 • www.onsite-env.com

Company: GEI
Project Number: 6694-006-03
Project Name: Go East
Project Manager: Garret Leque
Sampled by: JDE

Turnaround Request (in working days)

(Check One)

- ☐ Same Day
- ☐ 1 Day
- ☐ 2 Days
- ☐ 3 Days
- ☒ Standard (7 Days)
- ☐ _____ (other)

Laboratory Number: 10-057

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	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	Organochlorine Pesticides 8081	Organophosphorus Pesticides 8270/SIM	Chlorinated Acid Herbicides 8151	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664	Metals Short List	Leachate indicators	Geochem Params		% Moisture
1	20231005-MW-7	10/5/23	1205	GW	7								X										X	X	X		
2	20231004-MW-3	10/4/23	1705	GW	6																		X	X	X		

	Signature	Company	Date	Time
Relinquished	[signature]	GEI	10/5/23	1500
Received	[signature]	SPEEDY	10/5/23	1500
Relinquished	[signature]	"	10/5/23	15:20
Received	[signature]	OSE	10/5/23	1520
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Metals Short List: Tot+diss As, Cr, Fe Mn, Ni
Leachate indicators: NH_4, TOC, TDS
Geochem params: Alk, b.carb, diss Ca, chloride, tot+diss Mg and Mn, nitrate, diss K and Na, sulfate

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

October 18, 2023

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

Re: Analytical Data for Project 6694-002-05
Laboratory Reference No. 2310-087

Dear Garrett:

Enclosed are the analytical results and associated quality control data for samples submitted on October 6, 2023.

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: October 18, 2023
Samples Submitted: October 6, 2023
Laboratory Reference: 2310-087
Project: 6694-002-05

Case Narrative

Samples were collected on October 5 and 6, 2023 and received by the laboratory on October 6, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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

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

Date of Report: October 18, 2023
Samples Submitted: October 6, 2023
Laboratory Reference: 2310-087
Project: 6694-002-05

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
20231005-MW-1	10-087-01	Water	10-5-23	10-6-23	
20231006-MW-6	10-087-02	Water	10-6-23	10-6-23	

Date of Report: October 18, 2023
Samples Submitted: October 6, 2023
Laboratory Reference: 2310-087
Project: 6694-002-05

SEMIVOLATILE ORGANICS EPA 8270E/SIM
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**20231006-MW-6**					
Laboratory ID:	10-087-02					
n-Nitrosodimethylamine	**ND**	0.96	EPA 8270E	10-9-23	10-10-23	
Pyridine	**ND**	0.96	EPA 8270E	10-9-23	10-10-23	
Phenol	**ND**	0.96	EPA 8270E	10-9-23	10-10-23	
Aniline	**ND**	4.8	EPA 8270E	10-9-23	10-10-23	
bis(2-Chloroethyl)ether	**ND**	0.96	EPA 8270E	10-9-23	10-10-23	
2-Chlorophenol	**ND**	0.96	EPA 8270E	10-9-23	10-10-23	
1,3-Dichlorobenzene	**ND**	0.96	EPA 8270E	10-9-23	10-10-23	
1,4-Dichlorobenzene	**ND**	0.96	EPA 8270E	10-9-23	10-10-23	
Benzyl alcohol	**ND**	0.96	EPA 8270E	10-9-23	10-10-23	
1,2-Dichlorobenzene	**ND**	0.96	EPA 8270E	10-9-23	10-10-23	
2-Methylphenol (o-Cresol)	**ND**	0.96	EPA 8270E	10-9-23	10-10-23	
bis(2-Chloroisopropyl)ether	**ND**	0.96	EPA 8270E	10-9-23	10-10-23	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.96	EPA 8270E	10-9-23	10-10-23	
n-Nitroso-di-n-propylamine	**ND**	0.96	EPA 8270E	10-9-23	10-10-23	
Hexachloroethane	**ND**	0.96	EPA 8270E	10-9-23	10-10-23	
Nitrobenzene	**ND**	0.96	EPA 8270E	10-9-23	10-10-23	
Isophorone	**ND**	0.96	EPA 8270E	10-9-23	10-10-23	
2-Nitrophenol	**ND**	0.96	EPA 8270E	10-9-23	10-10-23	
2,4-Dimethylphenol	**ND**	0.96	EPA 8270E	10-9-23	10-10-23	
bis(2-Chloroethoxy)methane	**ND**	0.96	EPA 8270E	10-9-23	10-10-23	
2,4-Dichlorophenol	**ND**	1.9	EPA 8270E	10-9-23	10-10-23	
1,2,4-Trichlorobenzene	**ND**	0.96	EPA 8270E	10-9-23	10-10-23	
Naphthalene	**ND**	0.096	EPA 8270E/SIM	10-9-23	10-10-23	
4-Chloroaniline	**ND**	0.96	EPA 8270E	10-9-23	10-10-23	
Hexachlorobutadiene	**ND**	0.96	EPA 8270E	10-9-23	10-10-23	
4-Chloro-3-methylphenol	**ND**	0.96	EPA 8270E	10-9-23	10-10-23	
2-Methylnaphthalene	**ND**	0.096	EPA 8270E/SIM	10-9-23	10-10-23	
1-Methylnaphthalene	**ND**	0.096	EPA 8270E/SIM	10-9-23	10-10-23	
Hexachlorocyclopentadiene	**ND**	12	EPA 8270E	10-9-23	10-10-23	
2,4,6-Trichlorophenol	**ND**	0.96	EPA 8270E	10-9-23	10-10-23	
2,3-Dichloroaniline	**ND**	0.96	EPA 8270E	10-9-23	10-10-23	
2,4,5-Trichlorophenol	**ND**	0.96	EPA 8270E	10-9-23	10-10-23	
2-Chloronaphthalene	**ND**	0.96	EPA 8270E	10-9-23	10-10-23	
2-Nitroaniline	**ND**	0.96	EPA 8270E	10-9-23	10-10-23	
1,4-Dinitrobenzene	**ND**	0.96	EPA 8270E	10-9-23	10-10-23	
Dimethylphthalate	**ND**	4.8	EPA 8270E	10-9-23	10-10-23	
1,3-Dinitrobenzene	**ND**	0.96	EPA 8270E	10-9-23	10-10-23	
2,6-Dinitrotoluene	**ND**	0.96	EPA 8270E	10-9-23	10-10-23	
1,2-Dinitrobenzene	**ND**	0.96	EPA 8270E	10-9-23	10-10-23	
Acenaphthylene	**ND**	0.096	EPA 8270E/SIM	10-9-23	10-10-23	
3-Nitroaniline	**ND**	0.96	EPA 8270E	10-9-23	10-10-23	

Date of Report: October 18, 2023
Samples Submitted: October 6, 2023
Laboratory Reference: 2310-087
Project: 6694-002-05

SEMIVOLATILE ORGANICS EPA 8270E/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**20231006-MW-6**					
Laboratory ID:	10-087-02					
2,4-Dinitrophenol	**ND**	17	EPA 8270E	10-9-23	10-10-23	
Acenaphthene	**ND**	0.096	EPA 8270E/SIM	10-9-23	10-10-23	
4-Nitrophenol	**ND**	1.9	EPA 8270E	10-9-23	10-10-23	
2,4-Dinitrotoluene	**ND**	0.96	EPA 8270E	10-9-23	10-10-23	
Dibenzofuran	**ND**	0.96	EPA 8270E	10-9-23	10-10-23	
2,3,5,6-Tetrachlorophenol	**ND**	1.9	EPA 8270E	10-9-23	10-10-23	
2,3,4,6-Tetrachlorophenol	**ND**	1.9	EPA 8270E	10-9-23	10-10-23	
Diethylphthalate	**ND**	0.96	EPA 8270E	10-9-23	10-10-23	
4-Chlorophenyl-phenylether	**ND**	0.96	EPA 8270E	10-9-23	10-10-23	
4-Nitroaniline	**ND**	0.96	EPA 8270E	10-9-23	10-10-23	
Fluorene	**ND**	0.096	EPA 8270E/SIM	10-9-23	10-10-23	
4,6-Dinitro-2-methylphenol	**ND**	10	EPA 8270E	10-9-23	10-10-23	
n-Nitrosodiphenylamine	**ND**	0.96	EPA 8270E	10-9-23	10-10-23	
1,2-Diphenylhydrazine	**ND**	0.96	EPA 8270E	10-9-23	10-10-23	
4-Bromophenyl-phenylether	**ND**	0.96	EPA 8270E	10-9-23	10-10-23	
Hexachlorobenzene	**ND**	0.96	EPA 8270E	10-9-23	10-10-23	
Pentachlorophenol	**ND**	7.1	EPA 8270E	10-9-23	10-10-23	
Phenanthrene	**ND**	0.096	EPA 8270E/SIM	10-9-23	10-10-23	
Anthracene	**ND**	0.096	EPA 8270E/SIM	10-9-23	10-10-23	
Carbazole	**ND**	0.96	EPA 8270E	10-9-23	10-10-23	
Di-n-butylphthalate	**ND**	4.8	EPA 8270E	10-9-23	10-10-23	
Fluoranthene	**ND**	0.096	EPA 8270E/SIM	10-9-23	10-10-23	
Pyrene	**ND**	0.096	EPA 8270E/SIM	10-9-23	10-10-23	
Butylbenzylphthalate	**ND**	0.96	EPA 8270E	10-9-23	10-10-23	
bis-2-Ethylhexyladipate	**ND**	4.8	EPA 8270E	10-9-23	10-10-23	
3,3'-Dichlorobenzidine	**ND**	4.8	EPA 8270E	10-9-23	10-10-23	
Benzo[a]anthracene	**ND**	0.0096	EPA 8270E/SIM	10-9-23	10-10-23	
Chrysene	**ND**	0.0096	EPA 8270E/SIM	10-9-23	10-10-23	
bis(2-Ethylhexyl)phthalate	**ND**	4.8	EPA 8270E	10-9-23	10-10-23	
Di-n-octylphthalate	**ND**	0.96	EPA 8270E	10-9-23	10-10-23	
Benzo[b]fluoranthene	**ND**	0.0096	EPA 8270E/SIM	10-9-23	10-10-23	
Benzo(j,k)fluoranthene	**ND**	0.0096	EPA 8270E/SIM	10-9-23	10-10-23	
Benzo[a]pyrene	**ND**	0.0096	EPA 8270E/SIM	10-9-23	10-10-23	
Indeno[1,2,3-cd]pyrene	**ND**	0.0096	EPA 8270E/SIM	10-9-23	10-10-23	
Dibenz[a,h]anthracene	**ND**	0.0096	EPA 8270E/SIM	10-9-23	10-10-23	
Benzo[g,h,i]perylene	**ND**	0.0096	EPA 8270E/SIM	10-9-23	10-10-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*27*	*10 - 79*				
Phenol-d6	*22*	*10 - 82*				
Nitrobenzene-d5	*52*	*28 - 105*				
2-Fluorobiphenyl	*54*	*33 - 100*				
2,4,6-Tribromophenol	*74*	*25 - 124*				
Terphenyl-d14	*61*	*34 - 116*				

Date of Report: October 18, 2023
Samples Submitted: October 6, 2023
Laboratory Reference: 2310-087
Project: 6694-002-05

TOTAL ORGANIC CARBON
SM 5310B

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**20231005-MW-1**					
Laboratory ID:	10-087-01					
Total Organic Carbon	**ND**	1.0	SM 5310B	10-16-23	10-16-23	
Client ID:	**20231006-MW-6**					
Laboratory ID:	10-087-02					
Total Organic Carbon	**3.0**	1.0	SM 5310B	10-16-23	10-16-23	

Date of Report: October 18, 2023
Samples Submitted: October 6, 2023
Laboratory Reference: 2310-087
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:	**20231005-MW-1**					
Laboratory ID:	10-087-01					
Total Alkalinity	**78**	2.0	SM 2320B	10-9-23	10-9-23	
Client ID:	**20231006-MW-6**					
Laboratory ID:	10-087-02					
Total Alkalinity	**230**	2.0	SM 2320B	10-9-23	10-9-23	

Date of Report: October 18, 2023
Samples Submitted: October 6, 2023
Laboratory Reference: 2310-087
Project: 6694-002-05

BICARBONATE
SM 2320B

Matrix: Water
Units: mg CaCO3/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**20231005-MW-1**					
Laboratory ID:	10-087-01					
Bicarbonate	**78**	2.0	SM 2320B	10-9-23	10-9-23	
Client ID:	**20231006-MW-6**					
Laboratory ID:	10-087-02					
Bicarbonate	**230**	2.0	SM 2320B	10-9-23	10-9-23	

Date of Report: October 18, 2023
Samples Submitted: October 6, 2023
Laboratory Reference: 2310-087
Project: 6694-002-05

CHLORIDE
SM 4500-Cl E

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**20231005-MW-1**					
Laboratory ID:	10-087-01					
Chloride	**3.5**	2.0	SM 4500-Cl E	10-9-23	10-9-23	
Client ID:	**20231006-MW-6**					
Laboratory ID:	10-087-02					
Chloride	**6.0**	2.0	SM 4500-Cl E	10-9-23	10-9-23	

Date of Report: October 18, 2023
Samples Submitted: October 6, 2023
Laboratory Reference: 2310-087
Project: 6694-002-05

NITRATE (as Nitrogen)
EPA 353.2

Matrix: Water
Units: mg/L-N

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**20231005-MW-1**					
Laboratory ID:	10-087-01					
Nitrate	**0.11**	0.050	EPA 353.2	10-6-23	10-6-23	
Client ID:	**20231006-MW-6**					
Laboratory ID:	10-087-02					
Nitrate	**ND**	0.050	EPA 353.2	10-6-23	10-6-23	

Date of Report: October 18, 2023
Samples Submitted: October 6, 2023
Laboratory Reference: 2310-087
Project: 6694-002-05

SULFATE
ASTM D516-11

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**20231005-MW-1**					
Laboratory ID:	10-087-01					
Sulfate	**5.2**	5.0	ASTM D516-11	10-12-23	10-12-23	
Client ID:	**20231006-MW-6**					
Laboratory ID:	10-087-02					
Sulfate	**30**	10	ASTM D516-11	10-12-23	10-12-23	

Date of Report: October 18, 2023
Samples Submitted: October 6, 2023
Laboratory Reference: 2310-087
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:	**20231005-MW-1**					
Laboratory ID:	10-087-01					
Total Dissolved Solids	**68**	13	SM 2540C	10-11-23	10-11-23	
Client ID:	**20231006-MW-6**					
Laboratory ID:	10-087-02					
Total Dissolved Solids	**270**	13	SM 2540C	10-11-23	10-11-23	

Date of Report: October 18, 2023
Samples Submitted: October 6, 2023
Laboratory Reference: 2310-087
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:	**20231005-MW-1**					
Laboratory ID:	10-087-01					
Ammonia	**ND**	0.050	SM 4500-NH3 D	10-11-23	10-11-23	
Client ID:	**20231006-MW-6**					
Laboratory ID:	10-087-02					
Ammonia	**ND**	0.050	SM 4500-NH3 D	10-11-23	10-11-23	

Date of Report: October 18, 2023
Samples Submitted: October 6, 2023
Laboratory Reference: 2310-087
Project: 6694-002-05

TOTAL METALS
EPA 200.8/200.7/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**20231005-MW-1**					
Laboratory ID:	10-087-01					
Arsenic	**7.9**	3.3	EPA 200.8	10-9-23	10-10-23	
Cadmium	**ND**	4.4	EPA 200.8	10-9-23	10-10-23	
Chromium	**ND**	11	EPA 200.8	10-9-23	10-10-23	
Copper	**ND**	11	EPA 200.8	10-9-23	10-10-23	
Iron	**1900**	50	EPA 200.7	10-10-23	10-10-23	
Lead	**2.2**	1.1	EPA 200.8	10-9-23	10-10-23	
Magnesium	**7300**	1000	EPA 200.7	10-10-23	10-10-23	
Manganese	**230**	10	EPA 200.7	10-10-23	10-10-23	
Mercury	**ND**	0.50	EPA 7470A	10-12-23	10-12-23	
Nickel	**ND**	22	EPA 200.8	10-9-23	10-10-23	
Selenium	**ND**	5.6	EPA 200.8	10-9-23	10-10-23	
Client ID:	**20231006-MW-6**					
Laboratory ID:	10-087-02					
Arsenic	**7.0**	3.3	EPA 200.8	10-9-23	10-10-23	
Chromium	**ND**	11	EPA 200.8	10-9-23	10-10-23	
Iron	**1800**	50	EPA 200.7	10-10-23	10-10-23	
Magnesium	**28000**	1000	EPA 200.7	10-10-23	10-10-23	
Manganese	**1100**	10	EPA 200.7	10-10-23	10-10-23	
Nickel	**ND**	22	EPA 200.8	10-9-23	10-10-23	

Date of Report: October 18, 2023
Samples Submitted: October 6, 2023
Laboratory Reference: 2310-087
Project: 6694-002-05

DISSOLVED METALS
EPA 200.8/200.7/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**20231005-MW-1**					
Laboratory ID:	10-087-01					
Arsenic	**7.1**	3.0	EPA 200.8		10-10-23	
Cadmium	**ND**	4.0	EPA 200.8		10-10-23	
Calcium	**18000**	1100	EPA 200.7		10-12-23	
Chromium	**ND**	10	EPA 200.8		10-10-23	
Copper	**ND**	10	EPA 200.8		10-10-23	
Iron	**ND**	56	EPA 200.7		10-12-23	
Lead	**ND**	1.0	EPA 200.8		10-10-23	
Magnesium	**7000**	1100	EPA 200.7		10-12-23	
Manganese	**190**	11	EPA 200.7		10-12-23	
Mercury	**ND**	0.025	EPA 7470A		10-12-23	
Nickel	**ND**	20	EPA 200.8		10-10-23	
Potassium	**1800**	1100	EPA 200.7		10-12-23	
Selenium	**ND**	5.0	EPA 200.8		10-10-23	
Sodium	**3900**	1100	EPA 200.7		10-13-23	
Client ID:	**20231006-MW-6**					
Laboratory ID:	10-087-02					
Arsenic	**7.4**	3.0	EPA 200.8		10-10-23	
Calcium	**45000**	1100	EPA 200.7		10-12-23	
Chromium	**ND**	10	EPA 200.8		10-10-23	
Iron	**700**	56	EPA 200.7		10-12-23	
Magnesium	**30000**	1100	EPA 200.7		10-12-23	
Manganese	**1200**	11	EPA 200.7		10-12-23	
Nickel	**ND**	20	EPA 200.8		10-10-23	
Potassium	**3100**	1100	EPA 200.7		10-12-23	
Sodium	**13000**	1100	EPA 200.7		10-13-23	

Date of Report: October 18, 2023
Samples Submitted: October 6, 2023
Laboratory Reference: 2310-087
Project: 6694-002-05

SEMIVOLATILE ORGANICS EPA 8270E/SIM
QUALITY CONTROL
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1009W1					
n-Nitrosodimethylamine	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
Pyridine	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
Phenol	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
Aniline	**ND**	5.0	EPA 8270E	10-9-23	10-9-23	
bis(2-Chloroethyl)ether	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
2-Chlorophenol	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
1,3-Dichlorobenzene	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
1,4-Dichlorobenzene	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
Benzyl alcohol	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
1,2-Dichlorobenzene	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
2-Methylphenol (o-Cresol)	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
bis(2-Chloroisopropyl)ether	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
n-Nitroso-di-n-propylamine	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
Hexachloroethane	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
Nitrobenzene	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
Isophorone	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
2-Nitrophenol	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
2,4-Dimethylphenol	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
bis(2-Chloroethoxy)methane	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
2,4-Dichlorophenol	**ND**	2.0	EPA 8270E	10-9-23	10-9-23	
1,2,4-Trichlorobenzene	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
Naphthalene	**ND**	0.10	EPA 8270E/SIM	10-9-23	10-9-23	
4-Chloroaniline	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
Hexachlorobutadiene	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
4-Chloro-3-methylphenol	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
2-Methylnaphthalene	**ND**	0.10	EPA 8270E/SIM	10-9-23	10-9-23	
1-Methylnaphthalene	**ND**	0.10	EPA 8270E/SIM	10-9-23	10-9-23	
Hexachlorocyclopentadiene	**ND**	10	EPA 8270E	10-9-23	10-9-23	
2,4,6-Trichlorophenol	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
2,3-Dichloroaniline	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
2,4,5-Trichlorophenol	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
2-Chloronaphthalene	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
2-Nitroaniline	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
1,4-Dinitrobenzene	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
Dimethylphthalate	**ND**	5.0	EPA 8270E	10-9-23	10-9-23	
1,3-Dinitrobenzene	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
2,6-Dinitrotoluene	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
1,2-Dinitrobenzene	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
Acenaphthylene	**ND**	0.10	EPA 8270E/SIM	10-9-23	10-9-23	
3-Nitroaniline	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	

Date of Report: October 18, 2023
Samples Submitted: October 6, 2023
Laboratory Reference: 2310-087
Project: 6694-002-05

SEMIVOLATILE ORGANICS EPA 8270E/SIM
QUALITY CONTROL
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1009W1					
2,4-Dinitrophenol	**ND**	12	EPA 8270E	10-9-23	10-9-23	
Acenaphthene	**ND**	0.10	EPA 8270E/SIM	10-9-23	10-9-23	
4-Nitrophenol	**ND**	2.0	EPA 8270E	10-9-23	10-9-23	
2,4-Dinitrotoluene	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
Dibenzofuran	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
2,3,5,6-Tetrachlorophenol	**ND**	2.0	EPA 8270E	10-9-23	10-9-23	
2,3,4,6-Tetrachlorophenol	**ND**	2.0	EPA 8270E	10-9-23	10-9-23	
Diethylphthalate	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
4-Chlorophenyl-phenylether	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
4-Nitroaniline	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
Fluorene	**ND**	0.10	EPA 8270E/SIM	10-9-23	10-9-23	
4,6-Dinitro-2-methylphenol	**ND**	9.4	EPA 8270E	10-9-23	10-9-23	
n-Nitrosodiphenylamine	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
1,2-Diphenylhydrazine	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
4-Bromophenyl-phenylether	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
Hexachlorobenzene	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
Pentachlorophenol	**ND**	6.8	EPA 8270E	10-9-23	10-9-23	
Phenanthrene	**ND**	0.10	EPA 8270E/SIM	10-9-23	10-9-23	
Anthracene	**ND**	0.10	EPA 8270E/SIM	10-9-23	10-9-23	
Carbazole	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
Di-n-butylphthalate	**ND**	5.0	EPA 8270E	10-9-23	10-9-23	
Fluoranthene	**ND**	0.10	EPA 8270E/SIM	10-9-23	10-9-23	
Pyrene	**ND**	0.10	EPA 8270E/SIM	10-9-23	10-9-23	
Butylbenzylphthalate	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
bis-2-Ethylhexyladipate	**ND**	5.0	EPA 8270E	10-9-23	10-9-23	
3,3'-Dichlorobenzidine	**ND**	8.0	EPA 8270E	10-9-23	10-9-23	
Benzo[a]anthracene	**ND**	0.010	EPA 8270E/SIM	10-9-23	10-9-23	
Chrysene	**ND**	0.010	EPA 8270E/SIM	10-9-23	10-9-23	
bis(2-Ethylhexyl)phthalate	**ND**	5.0	EPA 8270E	10-9-23	10-9-23	
Di-n-octylphthalate	**ND**	1.0	EPA 8270E	10-9-23	10-9-23	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270E/SIM	10-9-23	10-9-23	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270E/SIM	10-9-23	10-9-23	
Benzo[a]pyrene	**ND**	0.010	EPA 8270E/SIM	10-9-23	10-9-23	
Indeno[1,2,3-cd]pyrene	**ND**	0.010	EPA 8270E/SIM	10-9-23	10-9-23	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270E/SIM	10-9-23	10-9-23	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270E/SIM	10-9-23	10-9-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*44*	*10 - 79*				
Phenol-d6	*35*	*10 - 82*				
Nitrobenzene-d5	*77*	*28 - 105*				
2-Fluorobiphenyl	*79*	*33 - 100*				
2,4,6-Tribromophenol	*107*	*25 - 124*				
Terphenyl-d14	*91*	*34 - 116*				

Date of Report: October 18, 2023
Samples Submitted: October 6, 2023
Laboratory Reference: 2310-087
Project: 6694-002-05

SEMIVOLATILE ORGANICS EPA 8270E/SIM
QUALITY CONTROL
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1009W1									
	SB	SBD	SB	SBD	SB	SBD				
n-Nitrosodimethylamine	**12.7**	**10.7**	20.0	20.0	64	54	40 - 120	17	30	
Pyridine	**12.6**	**9.60**	20.0	20.0	63	48	40 - 120	27	30	
Phenol	**8.19**	**6.70**	20.0	20.0	41	34	20 - 80	20	26	
Aniline	**18.4**	**14.3**	20.0	20.0	92	72	40 - 120	25	30	
bis(2-Chloroethyl)ether	**16.6**	**12.3**	20.0	20.0	83	62	40 - 120	30	30	
2-Chlorophenol	**17.1**	**13.0**	20.0	20.0	86	65	45 - 100	27	31	
1,3-Dichlorobenzene	**16.4**	**12.5**	20.0	20.0	82	63	40 - 120	27	30	
1,4-Dichlorobenzene	**15.8**	**12.2**	20.0	20.0	79	61	34 - 100	26	37	
Benzyl alcohol	**16.7**	**13.8**	20.0	20.0	84	69	40 - 120	19	30	
1,2-Dichlorobenzene	**16.4**	**12.6**	20.0	20.0	82	63	40 - 120	26	30	
2-Methylphenol (o-Cresol)	**16.8**	**13.5**	20.0	20.0	84	68	40 - 120	22	30	
bis(2-Chloroisopropyl)ether	**17.4**	**12.9**	20.0	20.0	87	65	40 - 120	30	30	
(3+4)-Methylphenol (m,p-Cresol)	**16.0**	**12.9**	20.0	20.0	80	65	40 - 120	21	30	
n-Nitroso-di-n-propylamine	**18.4**	**14.4**	20.0	20.0	92	72	44 - 120	24	26	
Hexachloroethane	**15.1**	**11.6**	20.0	20.0	76	58	40 - 120	26	30	
Nitrobenzene	**18.7**	**14.9**	20.0	20.0	94	75	40 - 120	23	30	
Isophorone	**19.3**	**16.4**	20.0	20.0	97	82	40 - 120	16	30	
2-Nitrophenol	**18.8**	**15.3**	20.0	20.0	94	77	40 - 120	21	30	
2,4-Dimethylphenol	**23.2**	**19.9**	20.0	20.0	116	100	40 - 120	15	30	
bis(2-Chloroethoxy)methane	**19.2**	**15.1**	20.0	20.0	96	76	40 - 120	24	30	
2,4-Dichlorophenol	**19.4**	**16.4**	20.0	20.0	97	82	40 - 120	17	30	
1,2,4-Trichlorobenzene	**18.2**	**14.7**	20.0	20.0	91	74	40 - 100	21	33	
Naphthalene	**18.6**	**15.2**	20.0	20.0	93	76	40 - 120	20	30	
4-Chloroaniline	**20.2**	**18.0**	20.0	20.0	101	90	40 - 120	12	30	
Hexachlorobutadiene	**18.5**	**14.6**	20.0	20.0	93	73	40 - 120	24	30	
4-Chloro-3-methylphenol	**20.0**	**18.1**	20.0	20.0	100	91	52 - 120	10	21	
2-Methylnaphthalene	**19.7**	**16.5**	20.0	20.0	99	83	40 - 120	18	30	
1-Methylnaphthalene	**18.7**	**16.2**	20.0	20.0	94	81	40 - 120	14	30	
Hexachlorocyclopentadiene	**8.75**	**8.05**	20.0	20.0	44	40	20 - 100	8	30	
2,4,6-Trichlorophenol	**20.1**	**17.5**	20.0	20.0	101	88	40 - 120	14	30	
2,3-Dichloroaniline	**19.4**	**16.8**	20.0	20.0	97	84	40 - 120	14	30	
2,4,5-Trichlorophenol	**20.0**	**17.4**	20.0	20.0	100	87	40 - 120	14	30	
2-Chloronaphthalene	**19.0**	**16.9**	20.0	20.0	95	85	40 - 120	12	30	
2-Nitroaniline	**21.6**	**19.0**	20.0	20.0	108	95	40 - 120	13	30	
1,4-Dinitrobenzene	**19.2**	**18.1**	20.0	20.0	96	91	40 - 120	6	30	
Dimethylphthalate	**20.2**	**18.6**	20.0	20.0	101	93	40 - 120	8	30	
1,3-Dinitrobenzene	**20.4**	**18.8**	20.0	20.0	102	94	40 - 120	8	30	
2,6-Dinitrotoluene	**20.1**	**18.3**	20.0	20.0	101	92	40 - 120	9	30	
1,2-Dinitrobenzene	**17.1**	**16.6**	20.0	20.0	86	83	40 - 120	3	30	
Acenaphthylene	**19.3**	**17.4**	20.0	20.0	97	87	40 - 120	10	30	
3-Nitroaniline	**19.4**	**18.0**	20.0	20.0	97	90	40 - 120	7	30	

Date of Report: October 18, 2023
Samples Submitted: October 6, 2023
Laboratory Reference: 2310-087
Project: 6694-002-05

SEMIVOLATILE ORGANICS EPA 8270E/SIM
QUALITY CONTROL
page 2 of 2

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1009W1									
	SB	SBD	SB	SBD	SB	SBD				
2,4-Dinitrophenol	**5.80**	**6.05**	20.0	20.0	29	30	20 - 100	4	30	
Acenaphthene	**19.6**	**17.6**	20.0	20.0	98	88	52 - 100	11	23	
4-Nitrophenol	**11.5**	**11.2**	20.0	20.0	58	56	23 - 100	3	20	
2,4-Dinitrotoluene	**20.6**	**19.6**	20.0	20.0	103	98	53 - 103	5	22	
Dibenzofuran	**19.8**	**18.0**	20.0	20.0	99	90	40 - 120	10	30	
2,3,5,6-Tetrachlorophenol	**15.0**	**13.7**	20.0	20.0	75	69	40 - 120	9	30	
2,3,4,6-Tetrachlorophenol	**15.8**	**17.3**	20.0	20.0	79	87	40 - 120	9	30	
Diethylphthalate	**20.0**	**18.3**	20.0	20.0	100	92	40 - 120	9	30	
4-Chlorophenyl-phenylether	**20.0**	**18.3**	20.0	20.0	100	92	40 - 120	9	30	
4-Nitroaniline	**19.9**	**18.5**	20.0	20.0	100	93	40 - 120	7	30	
Fluorene	**19.9**	**18.6**	20.0	20.0	100	93	40 - 120	7	30	
4,6-Dinitro-2-methylphenol	**10.4**	**9.92**	20.0	20.0	52	50	20 - 100	5	30	
n-Nitrosodiphenylamine	**20.6**	**19.3**	20.0	20.0	103	97	40 - 120	7	30	
1,2-Diphenylhydrazine	**20.5**	**19.1**	20.0	20.0	103	96	40 - 120	7	30	
4-Bromophenyl-phenylether	**21.2**	**19.4**	20.0	20.0	106	97	40 - 120	9	30	
Hexachlorobenzene	**20.9**	**19.9**	20.0	20.0	105	100	40 - 120	5	30	
Pentachlorophenol	**11.8**	**13.4**	20.0	20.0	59	67	52 - 134	13	25	
Phenanthrene	**20.6**	**18.6**	20.0	20.0	103	93	40 - 120	10	30	
Anthracene	**21.6**	**19.6**	20.0	20.0	108	98	40 - 120	10	30	
Carbazole	**21.1**	**19.5**	20.0	20.0	106	98	40 - 120	8	30	
Di-n-butylphthalate	**21.1**	**19.9**	20.0	20.0	106	100	40 - 120	6	30	
Fluoranthene	**20.8**	**19.5**	20.0	20.0	104	98	40 - 120	6	30	
Pyrene	**18.9**	**17.6**	20.0	20.0	95	88	54 - 110	7	20	
Butylbenzylphthalate	**20.7**	**19.2**	20.0	20.0	104	96	40 - 120	8	30	
bis-2-Ethylhexyladipate	**21.3**	**18.7**	20.0	20.0	107	94	40 - 120	13	30	
3,3'-Dichlorobenzidine	**20.6**	**19.2**	20.0	20.0	103	96	40 - 120	7	30	
Benzo[a]anthracene	**19.9**	**18.3**	20.0	20.0	100	92	40 - 120	8	30	
Chrysene	**20.4**	**18.5**	20.0	20.0	102	93	40 - 120	10	30	
bis(2-Ethylhexyl)phthalate	**22.5**	**20.1**	20.0	20.0	113	101	40 - 120	11	30	
Di-n-octylphthalate	**23.2**	**20.8**	20.0	20.0	116	104	40 - 120	11	30	
Benzo[b]fluoranthene	**20.0**	**18.9**	20.0	20.0	100	95	40 - 120	6	30	
Benzo(j,k)fluoranthene	**22.7**	**20.0**	20.0	20.0	114	100	40 - 120	13	30	
Benzo[a]pyrene	**22.7**	**20.5**	20.0	20.0	114	103	40 - 120	10	30	
Indeno[1,2,3-cd]pyrene	**22.0**	**19.7**	20.0	20.0	110	99	40 - 120	11	30	
Dibenz[a,h]anthracene	**23.1**	**21.0**	20.0	20.0	116	105	40 - 120	10	30	
Benzo[g,h,i]perylene	**21.8**	**19.8**	20.0	20.0	109	99	40 - 120	10	30	
Surrogate:										
2-Fluorophenol					*57*	*44*	*10 - 79*			
Phenol-d6					*42*	*34*	*10 - 82*			
Nitrobenzene-d5					*90*	*69*	*28 - 105*			
2-Fluorobiphenyl					*91*	*77*	*33 - 100*			
2,4,6-Tribromophenol					*107*	*99*	*25 - 124*			
Terphenyl-d14					*91*	*83*	*34 - 116*			

Date of Report: October 18, 2023
Samples Submitted: October 6, 2023
Laboratory Reference: 2310-087
Project: 6694-002-05

TOTAL ORGANIC CARBON
SM 5310B
QUALITY CONTROL

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1016D2					
Total Organic Carbon	**ND**	1.0	SM 5310B	10-16-23	10-16-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	10-116-01								
	ORIG	DUP							
Total Organic Carbon	**5.50**	**5.08**	NA	NA	NA	NA	8	13	
MATRIX SPIKE									
Laboratory ID:	10-116-01								
	MS		MS		MS				
Total Organic Carbon	**15.8**		10.0	5.50	103	86-127	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB1016D2								
	SB		SB		SB				
Total Organic Carbon	**9.34**		10.0	NA	93	90-122	NA	NA	

Date of Report: October 18, 2023
Samples Submitted: October 6, 2023
Laboratory Reference: 2310-087
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:	MB1009W1					
Total Alkalinity	**ND**	2.0	SM 2320B	10-9-23	10-9-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	10-057-01								
	ORIG	DUP							
Total Alkalinity	**102**	**100**	NA	NA	NA	NA	2	10	
SPIKE BLANK									
Laboratory ID:	SB1009W1								
	SB		SB		SB				
Total Alkalinity	**86.0**		100	NA	86	82-112	NA	NA	

Date of Report: October 18, 2023
Samples Submitted: October 6, 2023
Laboratory Reference: 2310-087
Project: 6694-002-05

BICARBONATE
SM 2320B
QUALITY CONTROL

Matrix: Water
Units: mg CaCO3/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1009W1					
Bicarbonate	**ND**	2.0	SM 2320B	10-9-23	10-9-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	10-057-01								
	ORIG	DUP							
Bicarbonate	**102**	**100**	NA	NA	NA	NA	2	10	
SPIKE BLANK									
Laboratory ID:	SB1009W1								
	SB		SB		SB				
Bicarbonate	**86.0**		100	NA	86	82-112	NA	NA	

Date of Report: October 18, 2023
Samples Submitted: October 6, 2023
Laboratory Reference: 2310-087
Project: 6694-002-05

CHLORIDE
SM 4500-Cl E
QUALITY CONTROL

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1009W1					
Chloride	**ND**	2.0	SM 4500-Cl E	10-9-23	10-9-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	10-087-01								
	ORIG	DUP							
Chloride	**3.47**	**3.40**	NA	NA	NA	NA	2	12	
MATRIX SPIKE									
Laboratory ID:	10-087-01								
	MS		MS		MS				
Chloride	**51.6**		50.0	3.47	96	83-120	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB1009W1								
	SB		SB		SB				
Chloride	**46.7**		50.0	NA	93	83-119	NA	NA	

Date of Report: October 18, 2023
Samples Submitted: October 6, 2023
Laboratory Reference: 2310-087
Project: 6694-002-05

NITRATE (as Nitrogen)
EPA 353.2
QUALITY CONTROL

Matrix: Water
Units: mg/L-N

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1006W1					
Nitrate	**ND**	0.050	EPA 353.2	10-6-23	10-6-23	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	10-057-01							
	ORIG DUP							
Nitrate	**0.120** **0.0809**	NA	NA	NA	NA	39	19	C
MATRIX SPIKE								
Laboratory ID:	10-057-01							
	MS	MS		MS				
Nitrate	**2.19**	2.00	0.120	104	85-121	NA	NA	
SPIKE BLANK								
Laboratory ID:	SB1006W1							
	SB	SB		SB				
Nitrate	**1.98**	2.00	NA	99	87-118	NA	NA	

Date of Report: October 18, 2023
Samples Submitted: October 6, 2023
Laboratory Reference: 2310-087
Project: 6694-002-05

SULFATE
ASTM D516-11
QUALITY CONTROL

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1012W1					
Sulfate	**ND**	5.0	ASTM D516-11	10-12-23	10-12-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	10-043-03								
	ORIG	DUP							
Sulfate	**6.97**	**6.57**	NA	NA	NA	NA	6	10	
MATRIX SPIKE									
Laboratory ID:	10-043-03								
	MS		MS		MS				
Sulfate	**16.7**		10.0	6.97	97	73-127	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB1012W1								
	SB		SB		SB				
Sulfate	**9.49**		10.0	NA	95	85-114	NA	NA	

Date of Report: October 18, 2023
Samples Submitted: October 6, 2023
Laboratory Reference: 2310-087
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:	MB1011W1					
Total Dissolved Solids	**ND**	13	SM 2540C	10-11-23	10-11-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	10-087-01								
	ORIG	DUP							
Total Dissolved Solids	**68.0**	**61.3**	NA	NA	NA	NA	10	30	
SPIKE BLANK									
Laboratory ID:	SB1011W1								
	SB		SB		SB				
Total Dissolved Solids	**439**		500	NA	88	80-120	NA	NA	

Date of Report: October 18, 2023
Samples Submitted: October 6, 2023
Laboratory Reference: 2310-087
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:	MB1011W1					
Ammonia	**ND**	0.050	SM 4500-NH3 D	10-11-23	10-11-23	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	10-043-01							
	ORIG DUP							
Ammonia	**ND** **ND**	NA	NA	NA	NA	NA	27	
MATRIX SPIKE								
Laboratory ID:	10-043-01							
	MS	MS		MS				
Ammonia	**5.45**	5.00	ND	109	78-118	NA	NA	
SPIKE BLANK								
Laboratory ID:	SB1011W1							
	SB	SB		SB				
Ammonia	**4.67**	5.00	NA	93	85-114	NA	NA	

Date of Report: October 18, 2023
Samples Submitted: October 6, 2023
Laboratory Reference: 2310-087
Project: 6694-002-05

TOTAL METALS
EPA 200.8/200.7/7470A
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1010WH1					
Iron	**ND**	50	EPA 200.7	10-10-23	10-10-23	
Magnesium	**ND**	1000	EPA 200.7	10-10-23	10-10-23	
Manganese	**ND**	10	EPA 200.7	10-10-23	10-10-23	
Laboratory ID:	MB1009WM1					
Arsenic	**ND**	3.3	EPA 200.8	10-9-23	10-10-23	
Cadmium	**ND**	4.4	EPA 200.8	10-9-23	10-10-23	
Chromium	**ND**	11	EPA 200.8	10-9-23	10-10-23	
Copper	**ND**	11	EPA 200.8	10-9-23	10-10-23	
Lead	**ND**	1.1	EPA 200.8	10-9-23	10-10-23	
Nickel	**ND**	22	EPA 200.8	10-9-23	10-10-23	
Selenium	**ND**	5.6	EPA 200.8	10-9-23	10-10-23	
Laboratory ID:	MB1012W1					
Mercury	**ND**	0.025	EPA 7470A	10-12-23	10-12-23	

Date of Report: October 18, 2023
Samples Submitted: October 6, 2023
Laboratory Reference: 2310-087
Project: 6694-002-05

TOTAL METALS
EPA 200.8/200.7/7470A
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	10-043-01									
	ORIG	DUP								
Iron	**4810**	**5080**	NA	NA		NA	NA	5	20	
Magnesium	**33200**	**31900**	NA	NA		NA	NA	4	20	
Manganese	**508**	**490**	NA	NA		NA	NA	4	20	
Laboratory ID:	09-253-11									
Arsenic	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Cadmium	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Chromium	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Copper	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Lead	**1.50**	**1.50**	NA	NA		NA	NA	0	20	
Nickel	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Selenium	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Laboratory ID:	10-049-01									
Mercury	**ND**	**ND**	NA	NA		NA	NA	NA	20	
MATRIX SPIKES										
Laboratory ID:	10-043-01									
	MS	MSD	MS	MSD		MS	MSD			
Iron	**23200**	**23800**	20000	20000	4810	**92**	**95**	75-125	3	20
Magnesium	**49800**	**50500**	20000	20000	33200	**83**	**87**	75-125	1	20
Manganese	**953**	**970**	500	500	508	**89**	**92**	75-125	2	20
Laboratory ID:	09-253-11									
Arsenic	**114**	**112**	111	111	ND	**102**	**101**	75-125	1	20
Cadmium	**112**	**110**	111	111	ND	**101**	**99**	75-125	2	20
Chromium	**111**	**108**	111	111	ND	**100**	**97**	75-125	3	20
Copper	**105**	**103**	111	111	ND	**95**	**93**	75-125	2	20
Lead	**111**	**109**	111	111	1.50	**99**	**97**	75-125	2	20
Nickel	**108**	**106**	111	111	ND	**97**	**96**	75-125	1	20
Selenium	**115**	**113**	111	111	ND	**103**	**102**	75-125	2	20
Laboratory ID:	10-049-01									
Mercury	**5.70**	**5.63**	6.25	6.25	ND	**91**	**90**	75-125	1	20

Date of Report: October 18, 2023
Samples Submitted: October 6, 2023
Laboratory Reference: 2310-087
Project: 6694-002-05

DISSOLVED METALS
EPA 200.8/200.7/7470A
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1012D1					
Calcium	**ND**	1100	EPA 200.7		10-12-23	
Iron	**ND**	56	EPA 200.7		10-12-23	
Magnesium	**ND**	1100	EPA 200.7		10-12-23	
Manganese	**ND**	11	EPA 200.7		10-12-23	
Potassium	**ND**	1100	EPA 200.7		10-12-23	
Laboratory ID:	MB1005F1					
Arsenic	**ND**	3.0	EPA 200.8	10-5-23	10-10-23	
Cadmium	**ND**	4.0	EPA 200.8	10-5-23	10-10-23	
Chromium	**ND**	10	EPA 200.8	10-5-23	10-10-23	
Copper	**ND**	10	EPA 200.8	10-5-23	10-10-23	
Lead	**ND**	1.0	EPA 200.8	10-5-23	10-10-23	
Nickel	**ND**	20	EPA 200.8	10-5-23	10-10-23	
Selenium	**ND**	5.0	EPA 200.8	10-5-23	10-10-23	
Laboratory ID:	MB1012D1					
Mercury	**ND**	0.025	EPA 7470A		10-12-23	
Laboratory ID:	MB1013D1					
Sodium	**ND**	1100	EPA 200.7		10-13-23	

Date of Report: October 18, 2023
Samples Submitted: October 6, 2023
Laboratory Reference: 2310-087
Project: 6694-002-05

DISSOLVED METALS
EPA 200.8/200.7/7470A
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	10-087-01									
	ORIG	DUP								
Calcium	**18100**	**17200**	NA	NA		NA	NA	5	20	
Iron	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Magnesium	**6980**	**6790**	NA	NA		NA	NA	3	20	
Manganese	**186**	**179**	NA	NA		NA	NA	4	20	
Potassium	**1840**	**1880**	NA	NA		NA	NA	2	20	
Laboratory ID:	10-049-01									
Arsenic	**11.1**	**11.2**	NA	NA		NA	NA	0	20	
Cadmium	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Chromium	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Copper	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Lead	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Nickel	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Selenium	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Laboratory ID:	10-087-01									
Mercury	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Laboratory ID:	10-087-01									
	ORIG	DUP								
Sodium	**3930**	**3640**	NA	NA		NA	NA	8	20	

Date of Report: October 18, 2023
Samples Submitted: October 6, 2023
Laboratory Reference: 2310-087
Project: 6694-002-05

DISSOLVED METALS
EPA 200.8/200.7/7470A
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	10-087-01										
	MS	MSD	MS	MSD		MS	MSD				
Calcium	**38600**	**38300**	22200	22200	18100	**93**	**91**	75-125	1	20	
Iron	**23200**	**22900**	22200	22200	ND	**105**	**103**	75-125	1	20	
Magnesium	**30200**	**30100**	22200	22200	6980	**105**	**104**	75-125	0	20	
Manganese	**727**	**727**	556	556	186	**97**	**97**	75-125	0	20	
Potassium	**24200**	**24200**	22200	22200	1840	**101**	**101**	75-125	0	20	
Laboratory ID:	10-049-01										
Arsenic	**96.8**	**99.6**	80.0	80.0	11.1	**107**	**111**	75-125	3	20	
Cadmium	**87.6**	**88.4**	80.0	80.0	ND	**110**	**111**	75-125	1	20	
Chromium	**83.2**	**82.0**	80.0	80.0	ND	**104**	**103**	75-125	1	20	
Copper	**78.8**	**76.8**	80.0	80.0	ND	**99**	**96**	75-125	3	20	
Lead	**86.8**	**87.0**	80.0	80.0	ND	**109**	**109**	75-125	0	20	
Nickel	**80.6**	**79.0**	80.0	80.0	ND	**101**	**99**	75-125	2	20	
Selenium	**90.6**	**93.2**	80.0	80.0	ND	**113**	**117**	75-125	3	20	
Laboratory ID:	10-087-01										
Mercury	**5.88**	**5.83**	6.25	6.25	ND	**94**	**93**	75-125	1	20	
Laboratory ID:	10-087-01										
	MS	MSD	MS	MSD		MS	MSD				
Sodium	**27100**	**27100**	22200	22200	3930	**104**	**104**	75-125	0	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.
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: GeoEngineers
Project Number: 6694-002-05
Project Name: Go East
Project Manager: Garrett Leque
Sampled by: JDE

Turnaround Request (in working days)

(Check One)

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

Laboratory Number: 10-087

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-Gx	NWTPH-Dx	Volatiles 8260B	8270D/SIM (low-level) SVOC	Organochlorine Pesticides 8081A	TOC, alk+bicarb, Cl, NO3, SO4, TDS, NH3	TOC, TDS, NH3	T/D metals Full	T/D metals short	T/D metals Mg	Total metals	Diss. K, Na, Ca	% Moisture
1	20231005-mw-1	10/5/23	1540	GW	6						X		X		X		X	
2	20231006-mw-6	10/6/23	1300	GW	7				X		X			X	X		X	

	Signature	Company	Date	Time
Relinquished		GeoE	10/6/23	1600
Received		OSE	10/6/23	1600
Relinquished				
Received				
Relinquished				
Received				

Comments/Special Instructions

full: As, Cd, Cr, Cu, Fe, Pb, Mn, Hg, Ni, Se
short: As, Cr, Fe, Mn, Ni

Reviewed/Date

Reviewed/Date

Chromatograms with final report ☐

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

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

November 1, 2023

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

Re: Analytical Data for Project 6694-006-03
Laboratory Reference No. 2310-168

Dear Garrett:

Enclosed are the analytical results and associated quality control data for samples submitted on October 12, 2023.

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

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

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: November 1, 2023
Samples Submitted: October 12, 2023
Laboratory Reference: 2310-168
Project: 6694-006-03

Case Narrative

Samples were collected on October 12, 2023 and received by the laboratory on October 12, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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

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

Semivolatiles EPA 8270E/SIM Analysis

The percent recovery for Pyridine and 2,4-Dinitrophenol is outside the control limits in the Spike Blank and/or Spike Blank Duplicate.The method allows for a percentage of the compounds to fall outside of the control limits due to the large number of analytes being spiked.

Nitrate EPA 353.2 Analysis

The reported Nitrate for SWS-1 (10-168-03) results are a calculated value based on the subtraction of Nitrite from the Nitrate plus Nitrite result. The Nitrite analysis, which has a 48-hour holding time, was performed **outside** of the holding time. The preserved sample was then analyzed within the maximum 28-day holding time for the Nitrate plus Nitrite analysis.

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

Date of Report: November 1, 2023
Samples Submitted: October 12, 2023
Laboratory Reference: 2310-168
Project: 6694-006-03

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
MW-9	10-168-01	Water	10-12-23	10-12-23	
MW-10	10-168-02	Water	10-12-23	10-12-23	
SWS-1	10-168-03	Water	10-12-23	10-12-23	

Date of Report: November 1, 2023
Samples Submitted: October 12, 2023
Laboratory Reference: 2310-168
Project: 6694-006-03

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-9**					
Laboratory ID:	10-168-01					
Diesel Range Organics	**ND**	0.21	NWTPH-Dx	10-17-23	10-17-23	
Lube Oil Range Organics	**ND**	0.21	NWTPH-Dx	10-17-23	10-17-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*80*	*50-150*				
Client ID:	**MW-10**					
Laboratory ID:	10-168-02					
Diesel Range Organics	**ND**	0.20	NWTPH-Dx	10-17-23	10-17-23	
Lube Oil Range Organics	**ND**	0.20	NWTPH-Dx	10-17-23	10-17-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*78*	*50-150*				
Client ID:	**SWS-1**					
Laboratory ID:	10-168-03					
Diesel Range Organics	**ND**	0.22	NWTPH-Dx	10-17-23	10-17-23	
Lube Oil Range Organics	**ND**	0.22	NWTPH-Dx	10-17-23	10-17-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*75*	*50-150*				

Date of Report: November 1, 2023
Samples Submitted: October 12, 2023
Laboratory Reference: 2310-168
Project: 6694-006-03

SEMIVOLATILE ORGANICS EPA 8270E/SIM
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-9**					
Laboratory ID:	10-168-01					
n-Nitrosodimethylamine	**ND**	1.4	EPA 8270E	10-18-23	10-18-23	
Pyridine	**ND**	1.2	EPA 8270E	10-18-23	10-18-23	
Phenol	**ND**	0.98	EPA 8270E	10-18-23	10-18-23	
Aniline	**ND**	4.9	EPA 8270E	10-18-23	10-18-23	
bis(2-Chloroethyl)ether	**ND**	0.98	EPA 8270E	10-18-23	10-18-23	
2-Chlorophenol	**ND**	0.98	EPA 8270E	10-18-23	10-18-23	
1,3-Dichlorobenzene	**ND**	0.98	EPA 8270E	10-18-23	10-18-23	
1,4-Dichlorobenzene	**ND**	0.98	EPA 8270E	10-18-23	10-18-23	
Benzyl alcohol	**ND**	0.98	EPA 8270E	10-18-23	10-18-23	
1,2-Dichlorobenzene	**ND**	0.98	EPA 8270E	10-18-23	10-18-23	
2-Methylphenol (o-Cresol)	**ND**	0.98	EPA 8270E	10-18-23	10-18-23	
bis(2-Chloroisopropyl)ether	**ND**	1.3	EPA 8270E	10-18-23	10-18-23	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.98	EPA 8270E	10-18-23	10-18-23	
n-Nitroso-di-n-propylamine	**ND**	1.3	EPA 8270E	10-18-23	10-18-23	
Hexachloroethane	**ND**	0.98	EPA 8270E	10-18-23	10-18-23	
Nitrobenzene	**ND**	0.98	EPA 8270E	10-18-23	10-18-23	
Isophorone	**ND**	0.98	EPA 8270E	10-18-23	10-18-23	
2-Nitrophenol	**ND**	0.98	EPA 8270E	10-18-23	10-18-23	
2,4-Dimethylphenol	**ND**	0.98	EPA 8270E	10-18-23	10-18-23	
bis(2-Chloroethoxy)methane	**ND**	0.98	EPA 8270E	10-18-23	10-18-23	
2,4-Dichlorophenol	**ND**	2.0	EPA 8270E	10-18-23	10-18-23	
1,2,4-Trichlorobenzene	**ND**	0.98	EPA 8270E	10-18-23	10-18-23	
Naphthalene	**ND**	0.098	EPA 8270E/SIM	10-18-23	10-18-23	
4-Chloroaniline	**ND**	0.98	EPA 8270E	10-18-23	10-18-23	
Hexachlorobutadiene	**ND**	0.98	EPA 8270E	10-18-23	10-18-23	
4-Chloro-3-methylphenol	**ND**	0.98	EPA 8270E	10-18-23	10-18-23	
2-Methylnaphthalene	**ND**	0.098	EPA 8270E/SIM	10-18-23	10-18-23	
1-Methylnaphthalene	**ND**	0.098	EPA 8270E/SIM	10-18-23	10-18-23	
Hexachlorocyclopentadiene	**ND**	4.9	EPA 8270E	10-18-23	10-18-23	
2,4,6-Trichlorophenol	**ND**	0.98	EPA 8270E	10-18-23	10-18-23	
2,3-Dichloroaniline	**ND**	0.98	EPA 8270E	10-18-23	10-18-23	
2,4,5-Trichlorophenol	**ND**	0.98	EPA 8270E	10-18-23	10-18-23	
2-Chloronaphthalene	**ND**	0.98	EPA 8270E	10-18-23	10-18-23	
2-Nitroaniline	**ND**	0.98	EPA 8270E	10-18-23	10-18-23	
1,4-Dinitrobenzene	**ND**	0.98	EPA 8270E	10-18-23	10-18-23	
Dimethylphthalate	**ND**	4.9	EPA 8270E	10-18-23	10-18-23	
1,3-Dinitrobenzene	**ND**	0.98	EPA 8270E	10-18-23	10-18-23	
2,6-Dinitrotoluene	**ND**	0.98	EPA 8270E	10-18-23	10-18-23	
1,2-Dinitrobenzene	**ND**	0.98	EPA 8270E	10-18-23	10-18-23	
Acenaphthylene	**ND**	0.098	EPA 8270E/SIM	10-18-23	10-18-23	
3-Nitroaniline	**ND**	0.98	EPA 8270E	10-18-23	10-18-23	

Date of Report: November 1, 2023
Samples Submitted: October 12, 2023
Laboratory Reference: 2310-168
Project: 6694-006-03

SEMIVOLATILE ORGANICS EPA 8270E/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-9**					
Laboratory ID:	10-168-01					
2,4-Dinitrophenol	**ND**	7.2	EPA 8270E	10-18-23	10-18-23	
Acenaphthene	**0.18**	0.098	EPA 8270E/SIM	10-18-23	10-18-23	
4-Nitrophenol	**ND**	2.0	EPA 8270E	10-18-23	10-18-23	
2,4-Dinitrotoluene	**ND**	0.98	EPA 8270E	10-18-23	10-18-23	
Dibenzofuran	**ND**	0.98	EPA 8270E	10-18-23	10-18-23	
2,3,5,6-Tetrachlorophenol	**ND**	2.0	EPA 8270E	10-18-23	10-18-23	
2,3,4,6-Tetrachlorophenol	**ND**	2.0	EPA 8270E	10-18-23	10-18-23	
Diethylphthalate	**ND**	0.98	EPA 8270E	10-18-23	10-18-23	
4-Chlorophenyl-phenylether	**ND**	0.98	EPA 8270E	10-18-23	10-18-23	
4-Nitroaniline	**ND**	0.98	EPA 8270E	10-18-23	10-18-23	
Fluorene	**ND**	0.098	EPA 8270E/SIM	10-18-23	10-18-23	
4,6-Dinitro-2-methylphenol	**ND**	6.1	EPA 8270E	10-18-23	10-18-23	
n-Nitrosodiphenylamine	**ND**	0.98	EPA 8270E	10-18-23	10-18-23	
1,2-Diphenylhydrazine	**ND**	0.98	EPA 8270E	10-18-23	10-18-23	
4-Bromophenyl-phenylether	**ND**	0.98	EPA 8270E	10-18-23	10-18-23	
Hexachlorobenzene	**ND**	0.98	EPA 8270E	10-18-23	10-18-23	
Pentachlorophenol	**ND**	4.9	EPA 8270E	10-18-23	10-18-23	
Phenanthrene	**ND**	0.098	EPA 8270E/SIM	10-18-23	10-18-23	
Anthracene	**ND**	0.098	EPA 8270E/SIM	10-18-23	10-18-23	
Carbazole	**ND**	0.98	EPA 8270E	10-18-23	10-18-23	
Di-n-butylphthalate	**ND**	4.9	EPA 8270E	10-18-23	10-18-23	
Fluoranthene	**ND**	0.098	EPA 8270E/SIM	10-18-23	10-18-23	
Pyrene	**ND**	0.098	EPA 8270E/SIM	10-18-23	10-18-23	
Butylbenzylphthalate	**ND**	0.98	EPA 8270E	10-18-23	10-18-23	
bis-2-Ethylhexyladipate	**ND**	4.9	EPA 8270E	10-18-23	10-18-23	
3,3'-Dichlorobenzidine	**ND**	4.9	EPA 8270E	10-18-23	10-18-23	
Benzo[a]anthracene	**ND**	0.0098	EPA 8270E/SIM	10-18-23	10-18-23	
Chrysene	**ND**	0.0098	EPA 8270E/SIM	10-18-23	10-18-23	
bis(2-Ethylhexyl)phthalate	**ND**	4.9	EPA 8270E	10-18-23	10-18-23	
Di-n-octylphthalate	**ND**	0.98	EPA 8270E	10-18-23	10-18-23	
Benzo[b]fluoranthene	**ND**	0.0098	EPA 8270E/SIM	10-18-23	10-18-23	
Benzo(j,k)fluoranthene	**ND**	0.0098	EPA 8270E/SIM	10-18-23	10-18-23	
Benzo[a]pyrene	**ND**	0.0098	EPA 8270E/SIM	10-18-23	10-18-23	
Indeno[1,2,3-cd]pyrene	**ND**	0.0098	EPA 8270E/SIM	10-18-23	10-18-23	
Dibenz[a,h]anthracene	**ND**	0.0098	EPA 8270E/SIM	10-18-23	10-18-23	
Benzo[g,h,i]perylene	**ND**	0.0098	EPA 8270E/SIM	10-18-23	10-18-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*28*	*10 - 79*				
Phenol-d6	*24*	*10 - 82*				
Nitrobenzene-d5	*56*	*28 - 105*				
2-Fluorobiphenyl	*58*	*33 - 100*				
2,4,6-Tribromophenol	*79*	*25 - 124*				
Terphenyl-d14	*67*	*34 - 116*				

Date of Report: November 1, 2023
Samples Submitted: October 12, 2023
Laboratory Reference: 2310-168
Project: 6694-006-03

SEMIVOLATILE ORGANICS EPA 8270E/SIM
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-10**					
Laboratory ID:	10-168-02					
n-Nitrosodimethylamine	**ND**	1.4	EPA 8270E	10-18-23	10-18-23	
Pyridine	**ND**	1.2	EPA 8270E	10-18-23	10-18-23	
Phenol	**ND**	0.96	EPA 8270E	10-18-23	10-18-23	
Aniline	**ND**	4.8	EPA 8270E	10-18-23	10-18-23	
bis(2-Chloroethyl)ether	**ND**	0.96	EPA 8270E	10-18-23	10-18-23	
2-Chlorophenol	**ND**	0.96	EPA 8270E	10-18-23	10-18-23	
1,3-Dichlorobenzene	**ND**	0.96	EPA 8270E	10-18-23	10-18-23	
1,4-Dichlorobenzene	**ND**	0.96	EPA 8270E	10-18-23	10-18-23	
Benzyl alcohol	**ND**	0.96	EPA 8270E	10-18-23	10-18-23	
1,2-Dichlorobenzene	**ND**	0.96	EPA 8270E	10-18-23	10-18-23	
2-Methylphenol (o-Cresol)	**ND**	0.96	EPA 8270E	10-18-23	10-18-23	
bis(2-Chloroisopropyl)ether	**ND**	1.3	EPA 8270E	10-18-23	10-18-23	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.96	EPA 8270E	10-18-23	10-18-23	
n-Nitroso-di-n-propylamine	**ND**	1.3	EPA 8270E	10-18-23	10-18-23	
Hexachloroethane	**ND**	0.96	EPA 8270E	10-18-23	10-18-23	
Nitrobenzene	**ND**	0.96	EPA 8270E	10-18-23	10-18-23	
Isophorone	**ND**	0.96	EPA 8270E	10-18-23	10-18-23	
2-Nitrophenol	**ND**	0.96	EPA 8270E	10-18-23	10-18-23	
2,4-Dimethylphenol	**ND**	0.96	EPA 8270E	10-18-23	10-18-23	
bis(2-Chloroethoxy)methane	**ND**	0.96	EPA 8270E	10-18-23	10-18-23	
2,4-Dichlorophenol	**ND**	1.9	EPA 8270E	10-18-23	10-18-23	
1,2,4-Trichlorobenzene	**ND**	0.96	EPA 8270E	10-18-23	10-18-23	
Naphthalene	**ND**	0.096	EPA 8270E/SIM	10-18-23	10-18-23	
4-Chloroaniline	**ND**	0.96	EPA 8270E	10-18-23	10-18-23	
Hexachlorobutadiene	**ND**	0.96	EPA 8270E	10-18-23	10-18-23	
4-Chloro-3-methylphenol	**ND**	0.96	EPA 8270E	10-18-23	10-18-23	
2-Methylnaphthalene	**ND**	0.096	EPA 8270E/SIM	10-18-23	10-18-23	
1-Methylnaphthalene	**ND**	0.096	EPA 8270E/SIM	10-18-23	10-18-23	
Hexachlorocyclopentadiene	**ND**	4.8	EPA 8270E	10-18-23	10-18-23	
2,4,6-Trichlorophenol	**ND**	0.96	EPA 8270E	10-18-23	10-18-23	
2,3-Dichloroaniline	**ND**	0.96	EPA 8270E	10-18-23	10-18-23	
2,4,5-Trichlorophenol	**ND**	0.96	EPA 8270E	10-18-23	10-18-23	
2-Chloronaphthalene	**ND**	0.96	EPA 8270E	10-18-23	10-18-23	
2-Nitroaniline	**ND**	0.96	EPA 8270E	10-18-23	10-18-23	
1,4-Dinitrobenzene	**ND**	0.96	EPA 8270E	10-18-23	10-18-23	
Dimethylphthalate	**ND**	4.8	EPA 8270E	10-18-23	10-18-23	
1,3-Dinitrobenzene	**ND**	0.96	EPA 8270E	10-18-23	10-18-23	
2,6-Dinitrotoluene	**ND**	0.96	EPA 8270E	10-18-23	10-18-23	
1,2-Dinitrobenzene	**ND**	0.96	EPA 8270E	10-18-23	10-18-23	
Acenaphthylene	**ND**	0.096	EPA 8270E/SIM	10-18-23	10-18-23	
3-Nitroaniline	**ND**	0.96	EPA 8270E	10-18-23	10-18-23	

Date of Report: November 1, 2023
Samples Submitted: October 12, 2023
Laboratory Reference: 2310-168
Project: 6694-006-03

SEMIVOLATILE ORGANICS EPA 8270E/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-10**					
Laboratory ID:	10-168-02					
2,4-Dinitrophenol	**ND**	7.1	EPA 8270E	10-18-23	10-18-23	
Acenaphthene	**0.14**	0.096	EPA 8270E/SIM	10-18-23	10-18-23	
4-Nitrophenol	**ND**	1.9	EPA 8270E	10-18-23	10-18-23	
2,4-Dinitrotoluene	**ND**	0.96	EPA 8270E	10-18-23	10-18-23	
Dibenzofuran	**ND**	0.96	EPA 8270E	10-18-23	10-18-23	
2,3,5,6-Tetrachlorophenol	**ND**	1.9	EPA 8270E	10-18-23	10-18-23	
2,3,4,6-Tetrachlorophenol	**ND**	1.9	EPA 8270E	10-18-23	10-18-23	
Diethylphthalate	**ND**	0.96	EPA 8270E	10-18-23	10-18-23	
4-Chlorophenyl-phenylether	**ND**	0.96	EPA 8270E	10-18-23	10-18-23	
4-Nitroaniline	**ND**	0.96	EPA 8270E	10-18-23	10-18-23	
Fluorene	**ND**	0.096	EPA 8270E/SIM	10-18-23	10-18-23	
4,6-Dinitro-2-methylphenol	**ND**	6.0	EPA 8270E	10-18-23	10-18-23	
n-Nitrosodiphenylamine	**ND**	0.96	EPA 8270E	10-18-23	10-18-23	
1,2-Diphenylhydrazine	**ND**	0.96	EPA 8270E	10-18-23	10-18-23	
4-Bromophenyl-phenylether	**ND**	0.96	EPA 8270E	10-18-23	10-18-23	
Hexachlorobenzene	**ND**	0.96	EPA 8270E	10-18-23	10-18-23	
Pentachlorophenol	**ND**	4.8	EPA 8270E	10-18-23	10-18-23	
Phenanthrene	**ND**	0.096	EPA 8270E/SIM	10-18-23	10-18-23	
Anthracene	**ND**	0.096	EPA 8270E/SIM	10-18-23	10-18-23	
Carbazole	**ND**	0.96	EPA 8270E	10-18-23	10-18-23	
Di-n-butylphthalate	**ND**	4.8	EPA 8270E	10-18-23	10-18-23	
Fluoranthene	**ND**	0.096	EPA 8270E/SIM	10-18-23	10-18-23	
Pyrene	**ND**	0.096	EPA 8270E/SIM	10-18-23	10-18-23	
Butylbenzylphthalate	**ND**	0.96	EPA 8270E	10-18-23	10-18-23	
bis-2-Ethylhexyladipate	**ND**	4.8	EPA 8270E	10-18-23	10-18-23	
3,3'-Dichlorobenzidine	**ND**	4.8	EPA 8270E	10-18-23	10-18-23	
Benzo[a]anthracene	**ND**	0.0096	EPA 8270E/SIM	10-18-23	10-18-23	
Chrysene	**ND**	0.0096	EPA 8270E/SIM	10-18-23	10-18-23	
bis(2-Ethylhexyl)phthalate	**ND**	4.8	EPA 8270E	10-18-23	10-18-23	
Di-n-octylphthalate	**ND**	0.96	EPA 8270E	10-18-23	10-18-23	
Benzo[b]fluoranthene	**ND**	0.0096	EPA 8270E/SIM	10-18-23	10-18-23	
Benzo(j,k)fluoranthene	**ND**	0.0096	EPA 8270E/SIM	10-18-23	10-18-23	
Benzo[a]pyrene	**ND**	0.0096	EPA 8270E/SIM	10-18-23	10-18-23	
Indeno[1,2,3-cd]pyrene	**ND**	0.0096	EPA 8270E/SIM	10-18-23	10-18-23	
Dibenz[a,h]anthracene	**ND**	0.0096	EPA 8270E/SIM	10-18-23	10-18-23	
Benzo[g,h,i]perylene	**ND**	0.0096	EPA 8270E/SIM	10-18-23	10-18-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*19*	*10 - 79*				
Phenol-d6	*16*	*10 - 82*				
Nitrobenzene-d5	*45*	*28 - 105*				
2-Fluorobiphenyl	*43*	*33 - 100*				
2,4,6-Tribromophenol	*54*	*25 - 124*				
Terphenyl-d14	*46*	*34 - 116*				

Date of Report: November 1, 2023
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Laboratory Reference: 2310-168
Project: 6694-006-03

SEMIVOLATILE ORGANICS EPA 8270E/SIM
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SWS-1**					
Laboratory ID:	10-168-03					
n-Nitrosodimethylamine	**ND**	1.6	EPA 8270E	10-18-23	10-18-23	
Pyridine	**ND**	1.4	EPA 8270E	10-18-23	10-18-23	
Phenol	**ND**	1.1	EPA 8270E	10-18-23	10-18-23	
Aniline	**ND**	5.6	EPA 8270E	10-18-23	10-18-23	
bis(2-Chloroethyl)ether	**ND**	1.1	EPA 8270E	10-18-23	10-18-23	
2-Chlorophenol	**ND**	1.1	EPA 8270E	10-18-23	10-18-23	
1,3-Dichlorobenzene	**ND**	1.1	EPA 8270E	10-18-23	10-18-23	
1,4-Dichlorobenzene	**ND**	1.1	EPA 8270E	10-18-23	10-18-23	
Benzyl alcohol	**ND**	1.1	EPA 8270E	10-18-23	10-18-23	
1,2-Dichlorobenzene	**ND**	1.1	EPA 8270E	10-18-23	10-18-23	
2-Methylphenol (o-Cresol)	**ND**	1.1	EPA 8270E	10-18-23	10-18-23	
bis(2-Chloroisopropyl)ether	**ND**	1.5	EPA 8270E	10-18-23	10-18-23	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	1.1	EPA 8270E	10-18-23	10-18-23	
n-Nitroso-di-n-propylamine	**ND**	1.5	EPA 8270E	10-18-23	10-18-23	
Hexachloroethane	**ND**	1.1	EPA 8270E	10-18-23	10-18-23	
Nitrobenzene	**ND**	1.1	EPA 8270E	10-18-23	10-18-23	
Isophorone	**ND**	1.1	EPA 8270E	10-18-23	10-18-23	
2-Nitrophenol	**ND**	1.1	EPA 8270E	10-18-23	10-18-23	
2,4-Dimethylphenol	**ND**	1.1	EPA 8270E	10-18-23	10-18-23	
bis(2-Chloroethoxy)methane	**ND**	1.1	EPA 8270E	10-18-23	10-18-23	
2,4-Dichlorophenol	**ND**	2.3	EPA 8270E	10-18-23	10-18-23	
1,2,4-Trichlorobenzene	**ND**	1.1	EPA 8270E	10-18-23	10-18-23	
Naphthalene	**ND**	0.11	EPA 8270E/SIM	10-18-23	10-18-23	
4-Chloroaniline	**ND**	1.1	EPA 8270E	10-18-23	10-18-23	
Hexachlorobutadiene	**ND**	1.1	EPA 8270E	10-18-23	10-18-23	
4-Chloro-3-methylphenol	**ND**	1.1	EPA 8270E	10-18-23	10-18-23	
2-Methylnaphthalene	**ND**	0.11	EPA 8270E/SIM	10-18-23	10-18-23	
1-Methylnaphthalene	**ND**	0.11	EPA 8270E/SIM	10-18-23	10-18-23	
Hexachlorocyclopentadiene	**ND**	5.6	EPA 8270E	10-18-23	10-18-23	
2,4,6-Trichlorophenol	**ND**	1.1	EPA 8270E	10-18-23	10-18-23	
2,3-Dichloroaniline	**ND**	1.1	EPA 8270E	10-18-23	10-18-23	
2,4,5-Trichlorophenol	**ND**	1.1	EPA 8270E	10-18-23	10-18-23	
2-Chloronaphthalene	**ND**	1.1	EPA 8270E	10-18-23	10-18-23	
2-Nitroaniline	**ND**	1.1	EPA 8270E	10-18-23	10-18-23	
1,4-Dinitrobenzene	**ND**	1.1	EPA 8270E	10-18-23	10-18-23	
Dimethylphthalate	**ND**	5.6	EPA 8270E	10-18-23	10-18-23	
1,3-Dinitrobenzene	**ND**	1.1	EPA 8270E	10-18-23	10-18-23	
2,6-Dinitrotoluene	**ND**	1.1	EPA 8270E	10-18-23	10-18-23	
1,2-Dinitrobenzene	**ND**	1.1	EPA 8270E	10-18-23	10-18-23	
Acenaphthylene	**ND**	0.11	EPA 8270E/SIM	10-18-23	10-18-23	
3-Nitroaniline	**ND**	1.1	EPA 8270E	10-18-23	10-18-23	

Date of Report: November 1, 2023
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Laboratory Reference: 2310-168
Project: 6694-006-03

SEMIVOLATILE ORGANICS EPA 8270E/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SWS-1**					
Laboratory ID:	10-168-03					
2,4-Dinitrophenol	**ND**	8.3	EPA 8270E	10-18-23	10-18-23	
Acenaphthene	**0.29**	0.11	EPA 8270E/SIM	10-18-23	10-18-23	
4-Nitrophenol	**ND**	2.3	EPA 8270E	10-18-23	10-18-23	
2,4-Dinitrotoluene	**ND**	1.1	EPA 8270E	10-18-23	10-18-23	
Dibenzofuran	**ND**	1.1	EPA 8270E	10-18-23	10-18-23	
2,3,5,6-Tetrachlorophenol	**ND**	2.3	EPA 8270E	10-18-23	10-18-23	
2,3,4,6-Tetrachlorophenol	**ND**	2.3	EPA 8270E	10-18-23	10-18-23	
Diethylphthalate	**ND**	1.1	EPA 8270E	10-18-23	10-18-23	
4-Chlorophenyl-phenylether	**ND**	1.1	EPA 8270E	10-18-23	10-18-23	
4-Nitroaniline	**ND**	1.1	EPA 8270E	10-18-23	10-18-23	
Fluorene	**ND**	0.11	EPA 8270E/SIM	10-18-23	10-18-23	
4,6-Dinitro-2-methylphenol	**ND**	7.0	EPA 8270E	10-18-23	10-18-23	
n-Nitrosodiphenylamine	**ND**	1.1	EPA 8270E	10-18-23	10-18-23	
1,2-Diphenylhydrazine	**ND**	1.1	EPA 8270E	10-18-23	10-18-23	
4-Bromophenyl-phenylether	**ND**	1.1	EPA 8270E	10-18-23	10-18-23	
Hexachlorobenzene	**ND**	1.1	EPA 8270E	10-18-23	10-18-23	
Pentachlorophenol	**ND**	5.6	EPA 8270E	10-18-23	10-18-23	
Phenanthrene	**ND**	0.11	EPA 8270E/SIM	10-18-23	10-18-23	
Anthracene	**ND**	0.11	EPA 8270E/SIM	10-18-23	10-18-23	
Carbazole	**ND**	1.1	EPA 8270E	10-18-23	10-18-23	
Di-n-butylphthalate	**ND**	5.6	EPA 8270E	10-18-23	10-18-23	
Fluoranthene	**ND**	0.11	EPA 8270E/SIM	10-18-23	10-18-23	
Pyrene	**ND**	0.11	EPA 8270E/SIM	10-18-23	10-18-23	
Butylbenzylphthalate	**ND**	1.1	EPA 8270E	10-18-23	10-18-23	
bis-2-Ethylhexyladipate	**ND**	5.6	EPA 8270E	10-18-23	10-18-23	
3,3'-Dichlorobenzidine	**ND**	5.6	EPA 8270E	10-18-23	10-18-23	
Benzo[a]anthracene	**ND**	0.011	EPA 8270E/SIM	10-18-23	10-18-23	
Chrysene	**ND**	0.011	EPA 8270E/SIM	10-18-23	10-18-23	
bis(2-Ethylhexyl)phthalate	**ND**	5.6	EPA 8270E	10-18-23	10-18-23	
Di-n-octylphthalate	**ND**	1.1	EPA 8270E	10-18-23	10-18-23	
Benzo[b]fluoranthene	**ND**	0.011	EPA 8270E/SIM	10-18-23	10-18-23	
Benzo(j,k)fluoranthene	**ND**	0.011	EPA 8270E/SIM	10-18-23	10-18-23	
Benzo[a]pyrene	**ND**	0.011	EPA 8270E/SIM	10-18-23	10-18-23	
Indeno[1,2,3-cd]pyrene	**ND**	0.011	EPA 8270E/SIM	10-18-23	10-18-23	
Dibenz[a,h]anthracene	**ND**	0.011	EPA 8270E/SIM	10-18-23	10-18-23	
Benzo[g,h,i]perylene	**ND**	0.011	EPA 8270E/SIM	10-18-23	10-18-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*34*	*10 - 79*				
Phenol-d6	*27*	*10 - 82*				
Nitrobenzene-d5	*55*	*28 - 105*				
2-Fluorobiphenyl	*58*	*33 - 100*				
2,4,6-Tribromophenol	*81*	*25 - 124*				
Terphenyl-d14	*66*	*34 - 116*				

Date of Report: November 1, 2023
Samples Submitted: October 12, 2023
Laboratory Reference: 2310-168
Project: 6694-006-03

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-9**					
Laboratory ID:	10-168-01					
alpha-BHC	ND	0.0049	EPA 8081B	10-17-23	10-18-23	
gamma-BHC	ND	0.0049	EPA 8081B	10-17-23	10-18-23	
beta-BHC	ND	0.0049	EPA 8081B	10-17-23	10-18-23	
delta-BHC	ND	0.0049	EPA 8081B	10-17-23	10-18-23	
Heptachlor	ND	0.0049	EPA 8081B	10-17-23	10-18-23	
Aldrin	ND	0.0049	EPA 8081B	10-17-23	10-18-23	
Heptachlor epoxide	ND	0.0049	EPA 8081B	10-17-23	10-18-23	
gamma-Chlordane	ND	0.0049	EPA 8081B	10-17-23	10-18-23	
alpha-Chlordane	ND	0.0049	EPA 8081B	10-17-23	10-18-23	
4,4'-DDE	ND	0.0049	EPA 8081B	10-17-23	10-18-23	
Endosulfan I	ND	0.0049	EPA 8081B	10-17-23	10-18-23	
Dieldrin	ND	0.0049	EPA 8081B	10-17-23	10-18-23	
Endrin	ND	0.0049	EPA 8081B	10-17-23	10-18-23	
4,4'-DDD	ND	0.0049	EPA 8081B	10-17-23	10-18-23	
Endosulfan II	ND	0.0049	EPA 8081B	10-17-23	10-18-23	
4,4'-DDT	ND	0.0049	EPA 8081B	10-17-23	10-18-23	
Endrin aldehyde	ND	0.0049	EPA 8081B	10-17-23	10-18-23	
Methoxychlor	ND	0.0097	EPA 8081B	10-17-23	10-18-23	
Endosulfan sulfate	ND	0.0049	EPA 8081B	10-17-23	10-18-23	
Endrin ketone	ND	0.019	EPA 8081B	10-17-23	10-18-23	
Toxaphene	ND	0.049	EPA 8081B	10-17-23	10-18-23	
Surrogate:	*Percent Recovery*	*Control limits*				
Tetrachloro-m-xylene	*57*	*29-110*				
Decachlorobiphenyl	*86*	*42-120*				

Date of Report: November 1, 2023
Samples Submitted: October 12, 2023
Laboratory Reference: 2310-168
Project: 6694-006-03

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-10**					
Laboratory ID:	10-168-02					
alpha-BHC	ND	0.0049	EPA 8081B	10-17-23	10-18-23	
gamma-BHC	ND	0.0049	EPA 8081B	10-17-23	10-18-23	
beta-BHC	ND	0.0049	EPA 8081B	10-17-23	10-18-23	
delta-BHC	ND	0.0049	EPA 8081B	10-17-23	10-18-23	
Heptachlor	ND	0.0049	EPA 8081B	10-17-23	10-18-23	
Aldrin	ND	0.0049	EPA 8081B	10-17-23	10-18-23	
Heptachlor epoxide	ND	0.0049	EPA 8081B	10-17-23	10-18-23	
gamma-Chlordane	ND	0.0049	EPA 8081B	10-17-23	10-18-23	
alpha-Chlordane	ND	0.0049	EPA 8081B	10-17-23	10-18-23	
4,4'-DDE	ND	0.0049	EPA 8081B	10-17-23	10-18-23	
Endosulfan I	ND	0.0049	EPA 8081B	10-17-23	10-18-23	
Dieldrin	ND	0.0049	EPA 8081B	10-17-23	10-18-23	
Endrin	ND	0.0049	EPA 8081B	10-17-23	10-18-23	
4,4'-DDD	ND	0.0049	EPA 8081B	10-17-23	10-18-23	
Endosulfan II	ND	0.0049	EPA 8081B	10-17-23	10-18-23	
4,4'-DDT	ND	0.0049	EPA 8081B	10-17-23	10-18-23	
Endrin aldehyde	ND	0.0049	EPA 8081B	10-17-23	10-18-23	
Methoxychlor	ND	0.0099	EPA 8081B	10-17-23	10-18-23	
Endosulfan sulfate	ND	0.0049	EPA 8081B	10-17-23	10-18-23	
Endrin ketone	ND	0.020	EPA 8081B	10-17-23	10-18-23	
Toxaphene	ND	0.049	EPA 8081B	10-17-23	10-18-23	
Surrogate:	*Percent Recovery*	*Control limits*				
Tetrachloro-m-xylene	*40*	*29-110*				
Decachlorobiphenyl	*78*	*42-120*				

Date of Report: November 1, 2023
Samples Submitted: October 12, 2023
Laboratory Reference: 2310-168
Project: 6694-006-03

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-9**					
Laboratory ID:	10-168-01					
Arsenic	**ND**	3.0	EPA 200.8	10-19-23	10-19-23	
Chromium	**ND**	10	EPA 200.8	10-19-23	10-19-23	
Iron	**6100**	50	EPA 200.7	10-18-23	10-19-23	
Lead	**ND**	1.0	EPA 200.8	10-19-23	10-19-23	
Magnesium	**27000**	1000	EPA 200.7	10-18-23	10-19-23	
Manganese	**1500**	10	EPA 200.7	10-18-23	10-19-23	
Nickel	**ND**	20	EPA 200.8	10-19-23	10-19-23	
Client ID:	**MW-10**					
Laboratory ID:	10-168-02					
Arsenic	**ND**	3.0	EPA 200.8	10-19-23	10-19-23	
Chromium	**ND**	10	EPA 200.8	10-19-23	10-19-23	
Iron	**8100**	50	EPA 200.7	10-18-23	10-19-23	
Lead	**ND**	1.0	EPA 200.8	10-19-23	10-19-23	
Magnesium	**29000**	1000	EPA 200.7	10-18-23	10-19-23	
Manganese	**1700**	10	EPA 200.7	10-18-23	10-19-23	
Nickel	**ND**	20	EPA 200.8	10-19-23	10-19-23	
Client ID:	**SWS-1**					
Laboratory ID:	10-168-03					
Arsenic	**ND**	3.0	EPA 200.8	10-19-23	10-19-23	
Chromium	**ND**	10	EPA 200.8	10-19-23	10-19-23	
Iron	**14000**	50	EPA 200.7	10-18-23	10-19-23	
Lead	**ND**	1.0	EPA 200.8	10-19-23	10-19-23	
Magnesium	**30000**	1000	EPA 200.7	10-18-23	10-19-23	
Manganese	**1900**	10	EPA 200.7	10-18-23	10-19-23	
Nickel	**ND**	20	EPA 200.8	10-19-23	10-19-23	

Date of Report: November 1, 2023
Samples Submitted: October 12, 2023
Laboratory Reference: 2310-168
Project: 6694-006-03

DISSOLVED METALS
EPA 200.8/200.7/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-9**					
Laboratory ID:	10-168-01					
Cadmium	**ND**	4.0	EPA 200.8		10-19-23	
Copper	**ND**	10	EPA 200.8		10-19-23	
Magnesium	**24000**	1100	EPA 200.7		10-20-23	
Manganese	**1300**	11	EPA 200.7		10-20-23	
Mercury	**ND**	0.025	EPA 7470A		10-19-23	
Potassium	**4600**	1100	EPA 200.7		10-20-23	
Selenium	**ND**	5.0	EPA 200.8		10-19-23	
Sodium	**10000**	1100	EPA 200.7		10-20-23	
Client ID:	**MW-10**					
Laboratory ID:	10-168-02					
Cadmium	**ND**	4.0	EPA 200.8		10-19-23	
Copper	**ND**	10	EPA 200.8		10-19-23	
Magnesium	**25000**	1100	EPA 200.7		10-20-23	
Manganese	**1400**	11	EPA 200.7		10-20-23	
Mercury	**ND**	0.025	EPA 7470A		10-19-23	
Potassium	**5100**	1100	EPA 200.7		10-20-23	
Selenium	**ND**	5.0	EPA 200.8		10-19-23	
Sodium	**11000**	1100	EPA 200.7		10-20-23	
Client ID:	**SWS-1**					
Laboratory ID:	10-168-03					
Magnesium	**26000**	1100	EPA 200.7	10-16-23	10-20-23	
Manganese	**1600**	11	EPA 200.7	10-16-23	10-20-23	
Potassium	**5800**	1100	EPA 200.7	10-16-23	10-20-23	
Sodium	**11000**	1100	EPA 200.7	10-16-23	10-20-23	

Date of Report: November 1, 2023
Samples Submitted: October 12, 2023
Laboratory Reference: 2310-168
Project: 6694-006-03

TOTAL ALKALINITY
SM 2320B

Matrix: Water
Units: mg CaCO3/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-9**					
Laboratory ID:	10-168-01					
Total Alkalinity	**320**	2.0	SM 2320B	10-18-23	10-18-23	
Client ID:	**MW-10**					
Laboratory ID:	10-168-02					
Total Alkalinity	**370**	2.0	SM 2320B	10-18-23	10-18-23	
Client ID:	**SWS-1**					
Laboratory ID:	10-168-03					
Total Alkalinity	**420**	2.0	SM 2320B	10-18-23	10-18-23	

Date of Report: November 1, 2023
Samples Submitted: October 12, 2023
Laboratory Reference: 2310-168
Project: 6694-006-03

BICARBONATE
SM 2320B

Matrix: Water
Units: mg CaCO3/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-9**					
Laboratory ID:	10-168-01					
Bicarbonate	**320**	2.0	SM 2320B	10-18-23	10-18-23	
Client ID:	**MW-10**					
Laboratory ID:	10-168-02					
Bicarbonate	**370**	2.0	SM 2320B	10-18-23	10-18-23	
Client ID:	**SWS-1**					
Laboratory ID:	10-168-03					
Bicarbonate	**420**	2.0	SM 2320B	10-18-23	10-18-23	

Date of Report: November 1, 2023
Samples Submitted: October 12, 2023
Laboratory Reference: 2310-168
Project: 6694-006-03

CHLORIDE
SM 4500-Cl E

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-9**					
Laboratory ID:	10-168-01					
Chloride	**6.5**	2.0	SM 4500-Cl E	10-16-23	10-16-23	
Client ID:	**MW-10**					
Laboratory ID:	10-168-02					
Chloride	**7.3**	2.0	SM 4500-Cl E	10-16-23	10-16-23	
Client ID:	**SWS-1**					
Laboratory ID:	10-168-03					
Chloride	**7.7**	2.0	SM 4500-Cl E	10-16-23	10-16-23	

Date of Report: November 1, 2023
Samples Submitted: October 12, 2023
Laboratory Reference: 2310-168
Project: 6694-006-03

NITRATE (as Nitrogen)
EPA 353.2

Matrix: Water
Units: mg/L-N

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-9**					
Laboratory ID:	10-168-01					
Nitrate	**0.11**	0.050	EPA 353.2	10-13-23	10-13-23	
Client ID:	**MW-10**					
Laboratory ID:	10-168-02					
Nitrate	**0.13**	0.050	EPA 353.2	10-13-23	10-13-23	
Client ID:	**SWS-1**					
Laboratory ID:	10-168-03					
Nitrate	**0.11**	0.050	EPA 353.2	10-13-23	10-13-23	

Date of Report: November 1, 2023
Samples Submitted: October 12, 2023
Laboratory Reference: 2310-168
Project: 6694-006-03

SULFATE
ASTM D516-11

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-9**					
Laboratory ID:	10-168-01					
Sulfate	**19**	5.0	ASTM D516-11	10-16-23	10-16-23	
Client ID:	**MW-10**					
Laboratory ID:	10-168-02					
Sulfate	**6.4**	5.0	ASTM D516-11	10-16-23	10-16-23	
Client ID:	**SWS-1**					
Laboratory ID:	10-168-03					
Sulfate	**8.5**	5.0	ASTM D516-11	10-16-23	10-16-23	

Date of Report: November 1, 2023
Samples Submitted: October 12, 2023
Laboratory Reference: 2310-168
Project: 6694-006-03

TOTAL DISSOLVED SOLIDS
SM 2540C

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-9**					
Laboratory ID:	10-168-01					
Total Dissolved Solids	**360**	13	SM 2540C	10-17-23	10-17-23	
Client ID:	**MW-10**					
Laboratory ID:	10-168-02					
Total Dissolved Solids	**400**	13	SM 2540C	10-17-23	10-17-23	
Client ID:	**SWS-1**					
Laboratory ID:	10-168-03					
Total Dissolved Solids	**450**	13	SM 2540C	10-17-23	10-17-23	

Date of Report: November 1, 2023
Samples Submitted: October 12, 2023
Laboratory Reference: 2310-168
Project: 6694-006-03

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-9**					
Laboratory ID:	10-168-01					
Ammonia	**0.93**	0.050	SM 4500-NH3 D	10-27-23	10-27-23	
Client ID:	**MW-10**					
Laboratory ID:	10-168-02					
Ammonia	**1.7**	0.050	SM 4500-NH3 D	10-27-23	10-27-23	
Client ID:	**SWS-1**					
Laboratory ID:	10-168-03					
Ammonia	**1.3**	0.050	SM 4500-NH3 D	10-27-23	10-27-23	

Date of Report: November 1, 2023
Samples Submitted: October 12, 2023
Laboratory Reference: 2310-168
Project: 6694-006-03

TOTAL ORGANIC CARBON
SM 5310B

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-9**					
Laboratory ID:	10-168-01					
Total Organic Carbon	**6.4**	1.0	SM 5310B	10-16-23	10-16-23	
Client ID:	**MW-10**					
Laboratory ID:	10-168-02					
Total Organic Carbon	**6.3**	1.0	SM 5310B	10-16-23	10-16-23	
Client ID:	**SWS-1**					
Laboratory ID:	10-168-03					
Total Organic Carbon	**8.3**	1.0	SM 5310B	10-16-23	10-16-23	

Date of Report: November 1, 2023
Samples Submitted: October 12, 2023
Laboratory Reference: 2310-168
Project: 6694-006-03

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx
QUALITY CONTROL

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1017W1					
Diesel Range Organics	**ND**	0.16	NWTPH-Dx	10-17-23	10-17-23	
Lube Oil Range Organics	**ND**	0.16	NWTPH-Dx	10-17-23	10-17-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*79*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	SB1017W1										
	ORIG	DUP									
Diesel Fuel #2	**0.403**	**0.368**	NA	NA		NA		NA	9	40	
Surrogate:											
o-Terphenyl						*87*	*81*	*50-150*			

Date of Report: November 1, 2023
Samples Submitted: October 12, 2023
Laboratory Reference: 2310-168
Project: 6694-006-03

SEMIVOLATILE ORGANICS EPA 8270E/SIM
QUALITY CONTROL
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1018W1					
n-Nitrosodimethylamine	**ND**	1.0	EPA 8270E	10-18-23	10-18-23	
Pyridine	**ND**	1.0	EPA 8270E	10-18-23	10-18-23	
Phenol	**ND**	1.0	EPA 8270E	10-18-23	10-18-23	
Aniline	**ND**	5.0	EPA 8270E	10-18-23	10-18-23	
bis(2-Chloroethyl)ether	**ND**	1.0	EPA 8270E	10-18-23	10-18-23	
2-Chlorophenol	**ND**	1.0	EPA 8270E	10-18-23	10-18-23	
1,3-Dichlorobenzene	**ND**	1.0	EPA 8270E	10-18-23	10-18-23	
1,4-Dichlorobenzene	**ND**	1.0	EPA 8270E	10-18-23	10-18-23	
Benzyl alcohol	**ND**	1.0	EPA 8270E	10-18-23	10-18-23	
1,2-Dichlorobenzene	**ND**	1.0	EPA 8270E	10-18-23	10-18-23	
2-Methylphenol (o-Cresol)	**ND**	1.0	EPA 8270E	10-18-23	10-18-23	
bis(2-Chloroisopropyl)ether	**ND**	1.0	EPA 8270E	10-18-23	10-18-23	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	1.0	EPA 8270E	10-18-23	10-18-23	
n-Nitroso-di-n-propylamine	**ND**	1.0	EPA 8270E	10-18-23	10-18-23	
Hexachloroethane	**ND**	1.0	EPA 8270E	10-18-23	10-18-23	
Nitrobenzene	**ND**	1.0	EPA 8270E	10-18-23	10-18-23	
Isophorone	**ND**	1.0	EPA 8270E	10-18-23	10-18-23	
2-Nitrophenol	**ND**	1.0	EPA 8270E	10-18-23	10-18-23	
2,4-Dimethylphenol	**ND**	1.0	EPA 8270E	10-18-23	10-18-23	
bis(2-Chloroethoxy)methane	**ND**	1.0	EPA 8270E	10-18-23	10-18-23	
2,4-Dichlorophenol	**ND**	2.0	EPA 8270E	10-18-23	10-18-23	
1,2,4-Trichlorobenzene	**ND**	1.0	EPA 8270E	10-18-23	10-18-23	
Naphthalene	**ND**	0.10	EPA 8270E/SIM	10-18-23	10-18-23	
4-Chloroaniline	**ND**	1.0	EPA 8270E	10-18-23	10-18-23	
Hexachlorobutadiene	**ND**	1.0	EPA 8270E	10-18-23	10-18-23	
4-Chloro-3-methylphenol	**ND**	1.0	EPA 8270E	10-18-23	10-18-23	
2-Methylnaphthalene	**ND**	0.10	EPA 8270E/SIM	10-18-23	10-18-23	
1-Methylnaphthalene	**ND**	0.10	EPA 8270E/SIM	10-18-23	10-18-23	
Hexachlorocyclopentadiene	**ND**	5.0	EPA 8270E	10-18-23	10-18-23	
2,4,6-Trichlorophenol	**ND**	1.0	EPA 8270E	10-18-23	10-18-23	
2,3-Dichloroaniline	**ND**	1.0	EPA 8270E	10-18-23	10-18-23	
2,4,5-Trichlorophenol	**ND**	1.0	EPA 8270E	10-18-23	10-18-23	
2-Chloronaphthalene	**ND**	1.0	EPA 8270E	10-18-23	10-18-23	
2-Nitroaniline	**ND**	1.0	EPA 8270E	10-18-23	10-18-23	
1,4-Dinitrobenzene	**ND**	1.0	EPA 8270E	10-18-23	10-18-23	
Dimethylphthalate	**ND**	5.0	EPA 8270E	10-18-23	10-18-23	
1,3-Dinitrobenzene	**ND**	1.0	EPA 8270E	10-18-23	10-18-23	
2,6-Dinitrotoluene	**ND**	1.0	EPA 8270E	10-18-23	10-18-23	
1,2-Dinitrobenzene	**ND**	1.0	EPA 8270E	10-18-23	10-18-23	
Acenaphthylene	**ND**	0.10	EPA 8270E/SIM	10-18-23	10-18-23	
3-Nitroaniline	**ND**	1.0	EPA 8270E	10-18-23	10-18-23	

Date of Report: November 1, 2023
Samples Submitted: October 12, 2023
Laboratory Reference: 2310-168
Project: 6694-006-03

SEMIVOLATILE ORGANICS EPA 8270E/SIM
QUALITY CONTROL
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1018W1					
2,4-Dinitrophenol	**ND**	5.0	EPA 8270E	10-18-23	10-18-23	
Acenaphthene	**ND**	0.10	EPA 8270E/SIM	10-18-23	10-18-23	
4-Nitrophenol	**ND**	2.0	EPA 8270E	10-18-23	10-18-23	
2,4-Dinitrotoluene	**ND**	1.0	EPA 8270E	10-18-23	10-18-23	
Dibenzofuran	**ND**	1.0	EPA 8270E	10-18-23	10-18-23	
2,3,5,6-Tetrachlorophenol	**ND**	2.0	EPA 8270E	10-18-23	10-18-23	
2,3,4,6-Tetrachlorophenol	**ND**	2.0	EPA 8270E	10-18-23	10-18-23	
Diethylphthalate	**ND**	1.0	EPA 8270E	10-18-23	10-18-23	
4-Chlorophenyl-phenylether	**ND**	1.0	EPA 8270E	10-18-23	10-18-23	
4-Nitroaniline	**ND**	1.0	EPA 8270E	10-18-23	10-18-23	
Fluorene	**ND**	0.10	EPA 8270E/SIM	10-18-23	10-18-23	
4,6-Dinitro-2-methylphenol	**ND**	5.0	EPA 8270E	10-18-23	10-18-23	
n-Nitrosodiphenylamine	**ND**	1.0	EPA 8270E	10-18-23	10-18-23	
1,2-Diphenylhydrazine	**ND**	1.0	EPA 8270E	10-18-23	10-18-23	
4-Bromophenyl-phenylether	**ND**	1.0	EPA 8270E	10-18-23	10-18-23	
Hexachlorobenzene	**ND**	1.0	EPA 8270E	10-18-23	10-18-23	
Pentachlorophenol	**ND**	5.0	EPA 8270E	10-18-23	10-18-23	
Phenanthrene	**ND**	0.10	EPA 8270E/SIM	10-18-23	10-18-23	
Anthracene	**ND**	0.10	EPA 8270E/SIM	10-18-23	10-18-23	
Carbazole	**ND**	1.0	EPA 8270E	10-18-23	10-18-23	
Di-n-butylphthalate	**ND**	5.0	EPA 8270E	10-18-23	10-18-23	
Fluoranthene	**ND**	0.10	EPA 8270E/SIM	10-18-23	10-18-23	
Pyrene	**ND**	0.10	EPA 8270E/SIM	10-18-23	10-18-23	
Butylbenzylphthalate	**ND**	1.0	EPA 8270E	10-18-23	10-18-23	
bis-2-Ethylhexyladipate	**ND**	5.0	EPA 8270E	10-18-23	10-18-23	
3,3'-Dichlorobenzidine	**ND**	5.0	EPA 8270E	10-18-23	10-18-23	
Benzo[a]anthracene	**ND**	0.010	EPA 8270E/SIM	10-18-23	10-18-23	
Chrysene	**ND**	0.010	EPA 8270E/SIM	10-18-23	10-18-23	
bis(2-Ethylhexyl)phthalate	**ND**	5.0	EPA 8270E	10-18-23	10-18-23	
Di-n-octylphthalate	**ND**	1.0	EPA 8270E	10-18-23	10-18-23	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270E/SIM	10-18-23	10-18-23	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270E/SIM	10-18-23	10-18-23	
Benzo[a]pyrene	**ND**	0.010	EPA 8270E/SIM	10-18-23	10-18-23	
Indeno[1,2,3-cd]pyrene	**ND**	0.010	EPA 8270E/SIM	10-18-23	10-18-23	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270E/SIM	10-18-23	10-18-23	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270E/SIM	10-18-23	10-18-23	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*71*	*10 - 79*				
Phenol-d6	*77*	*10 - 82*				
Nitrobenzene-d5	*71*	*28 - 105*				
2-Fluorobiphenyl	*67*	*33 - 100*				
2,4,6-Tribromophenol	*76*	*25 - 124*				
Terphenyl-d14	*71*	*34 - 116*				

Date of Report: November 1, 2023
Samples Submitted: October 12, 2023
Laboratory Reference: 2310-168
Project: 6694-006-03

SEMIVOLATILE ORGANICS EPA 8270E/SIM
QUALITY CONTROL
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1018W1									
	SB	SBD	SB	SBD	SB	SBD				
n-Nitrosodimethylamine	**14.2**	**13.0**	20.0	20.0	71	65	40 - 120	9	30	
Pyridine	**7.07**	**7.49**	20.0	20.0	35	37	40 - 120	6	30	I,I
Phenol	**15.7**	**15.7**	20.0	20.0	79	79	20 - 80	0	26	
Aniline	**9.04**	**10.9**	20.0	20.0	45	55	40 - 120	19	30	
bis(2-Chloroethyl)ether	**15.5**	**15.0**	20.0	20.0	78	75	40 - 120	3	30	
2-Chlorophenol	**16.1**	**15.8**	20.0	20.0	81	79	45 - 100	2	31	
1,3-Dichlorobenzene	**15.8**	**15.2**	20.0	20.0	79	76	40 - 120	4	30	
1,4-Dichlorobenzene	**15.9**	**15.1**	20.0	20.0	80	76	34 - 100	5	37	
Benzyl alcohol	**16.7**	**17.4**	20.0	20.0	84	87	40 - 120	4	30	
1,2-Dichlorobenzene	**16.2**	**15.0**	20.0	20.0	81	75	40 - 120	8	30	
2-Methylphenol (o-Cresol)	**15.6**	**16.0**	20.0	20.0	78	80	40 - 120	3	30	
bis(2-Chloroisopropyl)ether	**14.6**	**14.9**	20.0	20.0	73	75	40 - 120	2	30	
(3+4)-Methylphenol (m,p-Cresol)	**15.7**	**16.1**	20.0	20.0	79	81	40 - 120	3	30	
n-Nitroso-di-n-propylamine	**14.1**	**14.7**	20.0	20.0	71	74	44 - 120	4	26	
Hexachloroethane	**14.7**	**14.5**	20.0	20.0	74	73	40 - 120	1	30	
Nitrobenzene	**15.6**	**17.3**	20.0	20.0	78	87	40 - 120	10	30	
Isophorone	**15.2**	**18.4**	20.0	20.0	76	92	40 - 120	19	30	
2-Nitrophenol	**16.6**	**16.8**	20.0	20.0	83	84	40 - 120	1	30	
2,4-Dimethylphenol	**14.9**	**15.6**	20.0	20.0	75	78	40 - 120	5	30	
bis(2-Chloroethoxy)methane	**15.4**	**16.5**	20.0	20.0	77	83	40 - 120	7	30	
2,4-Dichlorophenol	**16.5**	**18.5**	20.0	20.0	83	93	40 - 120	11	30	
1,2,4-Trichlorobenzene	**16.6**	**17.1**	20.0	20.0	83	86	40 - 100	3	33	
Naphthalene	**17.0**	**18.1**	20.0	20.0	85	91	40 - 120	6	30	
4-Chloroaniline	**11.9**	**15.7**	20.0	20.0	60	79	40 - 120	28	30	
Hexachlorobutadiene	**15.3**	**16.8**	20.0	20.0	77	84	40 - 120	9	30	
4-Chloro-3-methylphenol	**17.6**	**19.2**	20.0	20.0	88	96	52 - 120	9	21	
2-Methylnaphthalene	**16.0**	**18.5**	20.0	20.0	80	93	40 - 120	14	30	
1-Methylnaphthalene	**16.7**	**18.1**	20.0	20.0	84	91	40 - 120	8	30	
Hexachlorocyclopentadiene	**13.2**	**14.7**	20.0	20.0	66	74	20 - 100	11	30	
2,4,6-Trichlorophenol	**17.4**	**19.7**	20.0	20.0	87	99	40 - 120	12	30	
2,3-Dichloroaniline	**16.9**	**18.5**	20.0	20.0	85	93	40 - 120	9	30	
2,4,5-Trichlorophenol	**18.2**	**20.3**	20.0	20.0	91	102	40 - 120	11	30	
2-Chloronaphthalene	**18.2**	**19.2**	20.0	20.0	91	96	40 - 120	5	30	
2-Nitroaniline	**19.0**	**20.8**	20.0	20.0	95	104	40 - 120	9	30	
1,4-Dinitrobenzene	**19.1**	**20.1**	20.0	20.0	96	101	40 - 120	5	30	
Dimethylphthalate	**17.6**	**19.4**	20.0	20.0	88	97	40 - 120	10	30	
1,3-Dinitrobenzene	**17.7**	**20.6**	20.0	20.0	89	103	40 - 120	15	30	
2,6-Dinitrotoluene	**18.5**	**20.2**	20.0	20.0	93	101	40 - 120	9	30	
1,2-Dinitrobenzene	**21.6**	**21.3**	20.0	20.0	108	107	40 - 120	1	30	
Acenaphthylene	**18.3**	**19.5**	20.0	20.0	92	98	40 - 120	6	30	
3-Nitroaniline	**17.2**	**19.7**	20.0	20.0	86	99	40 - 120	14	30	

Date of Report: November 1, 2023
Samples Submitted: October 12, 2023
Laboratory Reference: 2310-168
Project: 6694-006-03

SEMIVOLATILE ORGANICS EPA 8270E/SIM
QUALITY CONTROL
page 2 of 2

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1018W1									
	SB	SBD	SB	SBD	SB	SBD				
2,4-Dinitrophenol	**18.2**	**21.7**	20.0	20.0	91	109	20 - 100	18	30	I
Acenaphthene	**15.9**	**18.5**	20.0	20.0	80	93	52 - 100	15	23	
4-Nitrophenol	**17.5**	**19.5**	20.0	20.0	88	98	23 - 100	11	20	
2,4-Dinitrotoluene	**16.3**	**18.9**	20.0	20.0	82	95	53 - 103	15	22	
Dibenzofuran	**17.0**	**19.3**	20.0	20.0	85	97	40 - 120	13	30	
2,3,5,6-Tetrachlorophenol	**15.2**	**17.8**	20.0	20.0	76	89	40 - 120	16	30	
2,3,4,6-Tetrachlorophenol	**15.3**	**17.1**	20.0	20.0	77	86	40 - 120	11	30	
Diethylphthalate	**18.6**	**20.2**	20.0	20.0	93	101	40 - 120	8	30	
4-Chlorophenyl-phenylether	**16.3**	**19.2**	20.0	20.0	82	96	40 - 120	16	30	
4-Nitroaniline	**15.6**	**18.1**	20.0	20.0	78	91	40 - 120	15	30	
Fluorene	**18.2**	**18.9**	20.0	20.0	91	95	40 - 120	4	30	
4,6-Dinitro-2-methylphenol	**17.8**	**19.2**	20.0	20.0	89	96	20 - 100	8	30	
n-Nitrosodiphenylamine	**17.1**	**18.2**	20.0	20.0	86	91	40 - 120	6	30	
1,2-Diphenylhydrazine	**18.1**	**17.8**	20.0	20.0	91	89	40 - 120	2	30	
4-Bromophenyl-phenylether	**17.8**	**18.2**	20.0	20.0	89	91	40 - 120	2	30	
Hexachlorobenzene	**17.5**	**18.3**	20.0	20.0	88	92	40 - 120	4	30	
Pentachlorophenol	**15.0**	**17.2**	20.0	20.0	75	86	52 - 134	14	25	
Phenanthrene	**17.7**	**17.5**	20.0	20.0	89	88	40 - 120	1	30	
Anthracene	**17.5**	**18.0**	20.0	20.0	88	90	40 - 120	3	30	
Carbazole	**16.2**	**18.4**	20.0	20.0	81	92	40 - 120	13	30	
Di-n-butylphthalate	**17.2**	**17.8**	20.0	20.0	86	89	40 - 120	3	30	
Fluoranthene	**18.1**	**18.4**	20.0	20.0	91	92	40 - 120	2	30	
Pyrene	**17.9**	**17.8**	20.0	20.0	90	89	54 - 110	1	20	
Butylbenzylphthalate	**18.2**	**17.9**	20.0	20.0	91	90	40 - 120	2	30	
bis-2-Ethylhexyladipate	**17.1**	**17.8**	20.0	20.0	86	89	40 - 120	4	30	
3,3'-Dichlorobenzidine	**14.4**	**14.9**	20.0	20.0	72	75	40 - 120	3	30	
Benzo[a]anthracene	**16.5**	**17.2**	20.0	20.0	83	86	40 - 120	4	30	
Chrysene	**15.7**	**17.9**	20.0	20.0	79	90	40 - 120	13	30	
bis(2-Ethylhexyl)phthalate	**17.2**	**17.4**	20.0	20.0	86	87	40 - 120	1	30	
Di-n-octylphthalate	**18.4**	**18.5**	20.0	20.0	92	93	40 - 120	1	30	
Benzo[b]fluoranthene	**17.7**	**18.6**	20.0	20.0	89	93	40 - 120	5	30	
Benzo(j,k)fluoranthene	**16.4**	**18.3**	20.0	20.0	82	92	40 - 120	11	30	
Benzo[a]pyrene	**16.5**	**17.5**	20.0	20.0	83	88	40 - 120	6	30	
Indeno[1,2,3-cd]pyrene	**18.7**	**18.9**	20.0	20.0	94	95	40 - 120	1	30	
Dibenz[a,h]anthracene	**16.6**	**18.7**	20.0	20.0	83	94	40 - 120	12	30	
Benzo[g,h,i]perylene	**17.5**	**17.9**	20.0	20.0	88	90	40 - 120	2	30	
Surrogate:										
2-Fluorophenol					*69*	*65*	*10 - 79*			
Phenol-d6					*73*	*70*	*10 - 82*			
Nitrobenzene-d5					*71*	*71*	*28 - 105*			
2-Fluorobiphenyl					*75*	*76*	*33 - 100*			
2,4,6-Tribromophenol					*87*	*92*	*25 - 124*			
Terphenyl-d14					*76*	*79*	*34 - 116*			

Date of Report: November 1, 2023
Samples Submitted: October 12, 2023
Laboratory Reference: 2310-168
Project: 6694-006-03

ORGANOCHLORINE PESTICIDES EPA 8081B QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1017W1					
alpha-BHC	ND	0.0050	EPA 8081B	10-12-23	10-18-23	
gamma-BHC	ND	0.0050	EPA 8081B	10-12-23	10-18-23	
beta-BHC	ND	0.0050	EPA 8081B	10-12-23	10-18-23	
delta-BHC	ND	0.0050	EPA 8081B	10-12-23	10-18-23	
Heptachlor	ND	0.0050	EPA 8081B	10-12-23	10-18-23	
Aldrin	ND	0.0050	EPA 8081B	10-12-23	10-18-23	
Heptachlor epoxide	ND	0.0050	EPA 8081B	10-12-23	10-18-23	
gamma-Chlordane	ND	0.0050	EPA 8081B	10-12-23	10-18-23	
alpha-Chlordane	ND	0.0050	EPA 8081B	10-12-23	10-18-23	
4,4'-DDE	ND	0.0050	EPA 8081B	10-12-23	10-18-23	
Endosulfan I	ND	0.0050	EPA 8081B	10-12-23	10-18-23	
Dieldrin	ND	0.0050	EPA 8081B	10-12-23	10-18-23	
Endrin	ND	0.0050	EPA 8081B	10-12-23	10-18-23	
4,4'-DDD	ND	0.0050	EPA 8081B	10-12-23	10-18-23	
Endosulfan II	ND	0.0050	EPA 8081B	10-12-23	10-18-23	
4,4'-DDT	ND	0.0050	EPA 8081B	10-12-23	10-18-23	
Endrin aldehyde	ND	0.0050	EPA 8081B	10-12-23	10-18-23	
Methoxychlor	ND	0.010	EPA 8081B	10-12-23	10-18-23	
Endosulfan sulfate	ND	0.0050	EPA 8081B	10-12-23	10-18-23	
Endrin ketone	ND	0.020	EPA 8081B	10-12-23	10-18-23	
Toxaphene	ND	0.050	EPA 8081B	10-12-23	10-18-23	
Surrogate:	*Percent Recovery*	*Control limits*				
Tetrachloro-m-xylene	*54*	*29-110*				
Decachlorobiphenyl	*84*	*42-120*				

Date of Report: November 1, 2023
Samples Submitted: October 12, 2023
Laboratory Reference: 2310-168
Project: 6694-006-03

ORGANOCHLORINE PESTICIDES EPA 8081B QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB1017W1										
	SB	SBD	SB	SBD		SB	SBD				
alpha-BHC	**0.0725**	**0.0761**	0.100	0.100	N/A	**73**	**76**	50-114	5	15	
gamma-BHC	**0.0742**	**0.0769**	0.100	0.100	N/A	**74**	**77**	50-114	4	15	
beta-BHC	**0.0720**	**0.0699**	0.100	0.100	N/A	**72**	**70**	50-110	3	15	
delta-BHC	**0.0639**	**0.0649**	0.100	0.100	N/A	**64**	**65**	50-132	2	15	
Heptachlor	**0.0678**	**0.0703**	0.100	0.100	N/A	**68**	**70**	46-110	4	28	
Aldrin	**0.0544**	**0.0568**	0.100	0.100	N/A	**54**	**57**	37-107	4	37	
Heptachlor epoxide	**0.0766**	**0.0734**	0.100	0.100	N/A	**77**	**73**	53-105	4	15	
gamma-Chlordane	**0.0640**	**0.0651**	0.100	0.100	N/A	**64**	**65**	50-110	2	18	
alpha-Chlordane	**0.0654**	**0.0652**	0.100	0.100	N/A	**65**	**65**	50-110	0	16	
4,4'-DDE	**0.0666**	**0.0654**	0.100	0.100	N/A	**67**	**65**	50-120	2	15	
Endosulfan I	**0.0760**	**0.0726**	0.100	0.100	N/A	**76**	**73**	60-109	5	15	
Dieldrin	**0.0738**	**0.0727**	0.100	0.100	N/A	**74**	**73**	60-111	2	15	
Endrin	**0.0815**	**0.0773**	0.100	0.100	N/A	**82**	**77**	60-129	5	14	
4,4'-DDD	**0.0821**	**0.0780**	0.100	0.100	N/A	**82**	**78**	60-122	5	15	
Endosulfan II	**0.0787**	**0.0778**	0.100	0.100	N/A	**79**	**78**	60-112	1	14	
4,4'-DDT	**0.0821**	**0.0787**	0.100	0.100	N/A	**82**	**79**	57-135	4	17	
Endrin aldehyde	**0.0809**	**0.0741**	0.100	0.100	N/A	**81**	**74**	60-120	9	15	
Methoxychlor	**0.0939**	**0.0882**	0.100	0.100	N/A	**94**	**88**	53-142	6	20	
Endosulfan sulfate	**0.0825**	**0.0793**	0.100	0.100	N/A	**83**	**79**	50-129	4	15	
Endrin ketone	**0.0833**	**0.0822**	0.100	0.100	N/A	**83**	**82**	47-134	1	15	
Surrogate:											
Tetrachloro-m-xylene						*52*	*58*	*29-110*			
Decachlorobiphenyl						*82*	*75*	*42-120*			

Date of Report: November 1, 2023
Samples Submitted: October 12, 2023
Laboratory Reference: 2310-168
Project: 6694-006-03

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:	MB1019WH2					
Iron	**ND**	50	EPA 200.7	10-18-23	10-20-23	
Magnesium	**ND**	1000	EPA 200.7	10-18-23	10-19-23	
Manganese	**ND**	10	EPA 200.7	10-18-23	10-19-23	
Laboratory ID:	MB1019WH1					
Arsenic	**ND**	3.0	EPA 200.8	10-19-23	10-19-23	
Chromium	**ND**	10	EPA 200.8	10-19-23	10-19-23	
Lead	**ND**	1.0	EPA 200.8	10-19-23	10-19-23	
Nickel	**ND**	20	EPA 200.8	10-19-23	10-19-23	

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	10-168-02									
	ORIG	DUP								
Iron	**8090**	**7920**	NA	NA		NA	NA	2	20	
Magnesium	**28700**	**28000**	NA	NA		NA	NA	2	20	
Manganese	**1650**	**1600**	NA	NA		NA	NA	3	20	
Laboratory ID:	10-190-05									
Arsenic	**ND**	**ND**	NA	NA		NA	NA	NA	20	
Chromium	**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:	10-168-02									
	MS	MSD	MS	MSD		MS	MSD			
Iron	**25800**	**26200**	20000	20000	8090	**89**	**91**	75-125	2	20
Magnesium	**49600**	**50300**	20000	20000	28700	**105**	**108**	75-125	1	20
Manganese	**2130**	**2140**	500	500	1650	**96**	**98**	75-125	0	20
Laboratory ID:	10-190-05									
Arsenic	**101**	**108**	100	100	ND	**101**	**108**	75-125	6	20
Chromium	**109**	**113**	100	100	ND	**109**	**113**	75-125	4	20
Lead	**106**	**109**	100	100	ND	**106**	**109**	75-125	3	20
Nickel	**107**	**112**	100	100	ND	**107**	**112**	75-125	4	20

Date of Report: November 1, 2023
Samples Submitted: October 12, 2023
Laboratory Reference: 2310-168
Project: 6694-006-03

DISSOLVED METALS
EPA 200.8/200.7/7470A
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1016F1					
Magnesium	**ND**	1100	EPA 200.7	10-16-23	10-20-23	
Manganese	**ND**	11	EPA 200.7	10-16-23	10-20-23	
Potassium	**ND**	1100	EPA 200.7	10-16-23	10-20-23	
Sodium	**ND**	1100	EPA 200.7	10-16-23	10-20-23	
Laboratory ID:	MB1018F1					
Cadmium	**ND**	4.0	EPA 200.8	10-18-23	10-19-23	
Copper	**ND**	10	EPA 200.8	10-18-23	10-19-23	
Selenium	**ND**	5.0	EPA 200.8	10-18-23	10-19-23	
Laboratory ID:	MB1023D1					
Mercury	**ND**	0.50	EPA 7470A		10-23-23	

Date of Report: November 1, 2023
Samples Submitted: October 12, 2023
Laboratory Reference: 2310-168
Project: 6694-006-03

DISSOLVED METALS
EPA 200.8/200.7/7470A
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	10-192-02										
	ORIG	DUP									
Magnesium	**5690**	**5640**	NA	NA		NA		NA	1	20	
Manganese	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Potassium	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Sodium	**3660**	**3600**	NA	NA		NA		NA	2	20	
Laboratory ID:	10-206-01										
Cadmium	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Copper	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Selenium	**ND**	**ND**	NA	NA		NA		NA	NA	20	
Laboratory ID:	10-168-01										
Mercury	**ND**	**ND**	NA	NA		NA		NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	10-192-02										
	MS	MSD	MS	MSD		MS	MSD				
Magnesium	**27200**	**27600**	22200	22200	5690	**97**	**99**	75-125	2	20	
Manganese	**526**	**513**	556	556	ND	**95**	**92**	75-125	3	20	
Potassium	**21800**	**22100**	22200	22200	ND	**98**	**100**	75-125	2	20	
Sodium	**25000**	**25300**	22200	22200	3660	**96**	**98**	75-125	1	20	
Laboratory ID:	10-206-01										
Cadmium	**78.4**	**80.4**	80.0	80.0	ND	**98**	**101**	75-125	3	20	
Copper	**77.6**	**76.8**	80.0	80.0	ND	**97**	**96**	75-125	1	20	
Selenium	**79.6**	**82.0**	80.0	80.0	ND	**100**	**103**	75-125	3	20	
Laboratory ID:	10-168-01										
Mercury	**5.98**	**5.95**	6.25	6.25	ND	**96**	**95**	75-125	0	20	

Date of Report: November 1, 2023
Samples Submitted: October 12, 2023
Laboratory Reference: 2310-168
Project: 6694-006-03

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:	MB1018W1					
Total Alkalinity	**ND**	2.0	SM 2320B	10-18-23	10-18-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	10-168-01								
	ORIG	DUP							
Total Alkalinity	**320**	**318**	NA	NA	NA	NA	1	10	
SPIKE BLANK									
Laboratory ID:	SB1018W1								
	SB		SB		SB				
Total Alkalinity	**88.0**		100	NA	88	82-112	NA	NA	

Date of Report: November 1, 2023
Samples Submitted: October 12, 2023
Laboratory Reference: 2310-168
Project: 6694-006-03

BICARBONATE
SM 2320B
QUALITY CONTROL

Matrix: Water
Units: mg CaCO3/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1018W1					
Bicarbonate	**1.0**	2.0	SM 2320B	10-18-23	10-18-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	10-168-01								
	ORIG	DUP							
Bicarbonate	**320**	**318**	NA	NA	NA	NA	1	10	
SPIKE BLANK									
Laboratory ID:	SB1018W1								
	SB		SB		SB				
Bicarbonate	**88.0**		100	NA	88	82-112	NA	NA	

Date of Report: November 1, 2023
Samples Submitted: October 12, 2023
Laboratory Reference: 2310-168
Project: 6694-006-03

CHLORIDE
SM 4500-Cl E
QUALITY CONTROL

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1016W1					
Chloride	**ND**	2.0	SM 4500-Cl E	10-16-23	10-16-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	10-117-01								
	ORIG	DUP							
Chloride	**20.0**	**19.3**	NA	NA	NA	NA	4	12	
MATRIX SPIKE									
Laboratory ID:	10-117-01								
	MS		MS		MS				
Chloride	**68.4**		50.0	20.0	97	83-120	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB1016W1								
	SB		SB		SB				
Chloride	**47.3**		50.0	NA	95	83-119	NA	NA	

Date of Report: November 1, 2023
Samples Submitted: October 12, 2023
Laboratory Reference: 2310-168
Project: 6694-006-03

NITRATE (as Nitrogen)
EPA 353.2
QUALITY CONTROL

Matrix: Water
Units: mg/L-N

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1013W1					
Nitrate	**ND**	0.050	EPA 353.2	10-13-23	10-13-23	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	10-168-01							
	ORIG DUP							
Nitrate	**0.110** **0.174**	NA	NA	NA	NA	45	19	C
MATRIX SPIKE								
Laboratory ID:	10-168-01							
	MS	MS		MS				
Nitrate	**2.09**	2.00	0.110	99	85-121	NA	NA	
SPIKE BLANK								
Laboratory ID:	SB1013W1							
	SB	SB		SB				
Nitrate	**2.07**	2.00	NA	104	87-118	NA	NA	

Date of Report: November 1, 2023
Samples Submitted: October 12, 2023
Laboratory Reference: 2310-168
Project: 6694-006-03

SULFATE
ASTM D516-11
QUALITY CONTROL

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1016W1					
Sulfate	**ND**	5.0	ASTM D516-11	10-16-23	10-16-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	10-129-05								
	ORIG	DUP							
Sulfate	**11.4**	**11.7**	NA	NA	NA	NA	3	10	
MATRIX SPIKE									
Laboratory ID:	10-129-05								
	MS		MS		MS				
Sulfate	**20.7**		10.0	11.4	93	73-127	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB1016W1								
	SB		SB		SB				
Sulfate	**9.56**		10.0	NA	96	85-114	NA	NA	

Date of Report: November 1, 2023
Samples Submitted: October 12, 2023
Laboratory Reference: 2310-168
Project: 6694-006-03

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:	MB1017W1					
Total Dissolved Solids	**ND**	13	SM 2540C	10-17-23	10-17-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	10-168-01								
	ORIG	DUP							
Total Dissolved Solids	**357**	**357**	NA	NA	NA	NA	0	30	
SPIKE BLANK									
Laboratory ID:	SB1017W1								
	SB		SB		SB				
Total Dissolved Solids	**487**		500	NA	97	80-120	NA	NA	

Date of Report: November 1, 2023
Samples Submitted: October 12, 2023
Laboratory Reference: 2310-168
Project: 6694-006-03

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:	MB1027W1					
Ammonia	**ND**	0.050	SM 4500-NH3 D	10-27-23	10-27-23	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	10-199-01							
	ORIG DUP							
Ammonia	**ND** **ND**	NA	NA	NA	NA	NA	27	
MATRIX SPIKE								
Laboratory ID:	10-199-01							
	MS	MS		MS				
Ammonia	**4.71**	5.00	ND	94	78-118	NA	NA	
SPIKE BLANK								
Laboratory ID:	SB1027W1							
	SB	SB		SB				
Ammonia	**4.82**	5.00	NA	96	85-114	NA	NA	

Date of Report: November 1, 2023
Samples Submitted: October 12, 2023
Laboratory Reference: 2310-168
Project: 6694-006-03

TOTAL ORGANIC CARBON
SM 5310B
QUALITY CONTROL

Matrix: Water
Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1016D1					
Total Organic Carbon	**ND**	1.0	SM 5310B	10-16-23	10-16-23	

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	10-056-01								
	ORIG	DUP							
Total Organic Carbon	**4.26**	**4.60**	NA	NA	NA	NA	8	13	
MATRIX SPIKE									
Laboratory ID:	10-056-01								
	MS		MS		MS				
Total Organic Carbon	**14.9**		10.0	4.26	106	86-127	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB1016D1								
	SB		SB		SB				
Total Organic Carbon	**9.46**		10.0	NA	95	90-122	NA	NA	

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: ~~26410-001-01~~ 6694-002-05 DB

Project Name: Go Easy

Project Manager: Garrett LeQuire

Sampled by: Craig Lund

Turnaround Request (in working days)

(Check One)

- ☐ Same Day
- ☐ 1 Day
- ☐ 2 Days
- ☐ 3 Days
- ☒ Standard (7 Days)
- ☐ _____ (other)

Laboratory Number: 10-168

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	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) SVOCs	PCBs 8082	Organochlorine Pesticides 8081	Organophosphorus Pesticides 8270/SIM	Chlorinated Acid Herbicides 8151	Total ~~RCRA~~ Metals *	~~Total WTCA~~ Metals Dissolved **	~~TCLP~~ Metals Dissolved Na, K, Mg, Ca	HEM (oil and grease) 1664	NH3, TOC, TDS	Alk, Bicarb, Cl, NO3, SO4			% Moisture
1	MW-9	10/12/23	1205	H2O	12			X	X					X		X			V	X	X		X	X			
2	MW-10	↓	1325	↓	12			X	X					X		X			X	X	X		X	X			
3	SWS-1	↓	1410	↓	7				X					X					X		X		X	X			

	Signature	Company	Date	Time
Relinquished	Craig Lund	GEI	10/12/23	1655
Received		CORE	10/12/23	1655
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

*-As, Cr, Fe, Mn, Ni, Pb, Mg

**-Cd, Cu, Hg, Se

SAMPLE #1, 2 - Field Filtered
SAMPLE #3 - Needs Lab Filter.

Data Package: Standard ☐ Level III ☐ Level IV ☐

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

Sample/Cooler Receipt and Acceptance Checklist

Client: GET 6694-002-05 DB

Client Project Name/Number: ~~26410-001-01~~

OnSite Project Number: 10-168

Initiated by: MV

Date Initiated: 10/12/23

1.0 Cooler Verification

1.1 Were there custody seals on the outside of the cooler?	Yes	(No)	N/A	1 2 3 4	
1.2 Were the custody seals intact?	Yes	No	(N/A)	1 2 3 4	
1.3 Were the custody seals signed and dated by last custodian?	Yes	No	(N/A)	1 2 3 4	
1.4 Were the samples delivered on ice or blue ice?	(Yes)	No	N/A	1 2 3 4	
1.5 Were samples received between 0-6 degrees Celsius?	(Yes)	No	N/A	Temperature: 6	
1.6 Have shipping bills (if any) been attached to the back of this form?	Yes	(N/A)			
1.7 How were the samples delivered?	(Client)	Courier	UPS/FedEx	OSE Pickup	Other

2.0 Chain of Custody Verification

2.1 Was a Chain of Custody submitted with the samples?	(Yes)	No		1 2 3 4
2.2 Was the COC legible and written in permanent ink?	(Yes)	No		1 2 3 4
2.3 Have samples been relinquished and accepted by each custodian?	(Yes)	No		1 2 3 4
2.4 Did the sample labels (ID, date, time, preservative) agree with COC?	(Yes)	No		1 2 3 4
2.5 Were all of the samples listed on the COC submitted?	(Yes)	No		1 2 3 4
2.6 Were any of the samples submitted omitted from the COC?	Yes	(No)		1 2 3 4

3.0 Sample Verification

3.1 Were any sample containers broken or compromised?	Yes	(No)		1 2 3 4
3.2 Were any sample labels missing or illegible?	Yes	(No)		1 2 3 4
3.3 Have the correct containers been used for each analysis requested?	Yes	(No)		1 2 3 4
3.4 Have the samples been correctly preserved?	(Yes)	No	N/A	1 2 3 4
3.5 Are volatiles samples free from headspace and bubbles greater than 6mm?	Yes	No	(N/A)	1 2 3 4
3.6 Is there sufficient sample submitted to perform requested analyses?	Yes	(No)		1 2 3 4
3.7 Have any holding times already expired or will expire in 24 hours?	Yes	(No)		1 2 3 4
3.8 Was method 5035A used?	Yes	No	(N/A)	1 2 3 4
3.9 If 5035A was used, which sampling option was used (#1, 2, or 3).	#		(N/A)	1 2 3 4

Explain any discrepancies:

3.3 & 3.6) #3) unpreserved poly not submitted

1 - Discuss issue in Case Narrative

2 - Process Sample As-is

3 - Client contacted to discuss problem

4 - Sample cannot be analyzed or client does not wish to proceed

GeoEngineers

Data Validation Report

1101 Fawcett Avenue, Suite 200, Tacoma, Washington 98402, Telephone: 253.383.4940, Fax: 253.383.4923 www.geoengineers.com

Project:	October 2023 Groundwater and Surface Water Sampling Results Go East Landfill Site, Everett, Washington
GEI File:	6694-002-05
Date:	March 11, 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 water samples collected as part of the October 2023 sampling event, and the associated laboratory quality control (QC) samples. The samples were obtained from the Go East Landfill Site located in Everett, Washington.

OBJECTIVE AND QUALITY CONTROL ELEMENTS

GeoEngineers, Inc. (GeoEngineers) completed the data validation consistent with the USEPA Contract Laboratory Program National Functional Guidelines for Organic Superfund Data Review (USEPA 2020a) and Inorganic Superfund Data Review (USEPA 2020b) 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 measured by well-defined control limits to provide defensible data; and
- The quality assurance/quality control (QA/QC) procedures utilized by the laboratory meet acceptable industry practices and standards.

The data validation included review of the following QC elements:

- Data Package Completeness
- Chain-of-Custody Documentation
- Holding Times and Sample Preservation
- Method Blanks
- Surrogates
- Matrix Spikes/Matrix Spike Duplicates
- Laboratory Control Samples/Laboratory Control Sample Duplicates
- Laboratory Duplicates
- Reporting Limits

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 GROUP

Laboratory SDG	Samples Validated
2310-043	20231004-MW-2, 20231003-MW-5, 20231003-MW-8
2310-057	20231004-MW-3, 20231005-MW-7
2310-087	20231005-MW-1, 20231006-MW-6
2310-168	MW-9, MW-10, SWS-1

CHEMICAL ANALYSIS PERFORMED

OnSite Environmental, Inc. (OnSite) of Redmond, Washington, performed laboratory analysis on the water samples using one or more of the following methods:

- Petroleum Hydrocarbons (NWTPH-Dx) by Method NWTPH-Dx;
- Semi-volatile Organic Compounds (SVOCs) by Method EPA 8270E (Full-scan Compound list);
- Low-level Polycyclic Aromatic Hydrocarbons (PAHs) by Method EPA 8270E/Selective Ion Monitoring (SIM);
- Organochlorine Pesticides by Method EPA 8081B;
- Total and Dissolved Metals by Methods EPA 200.7, EPA 200.8, or EPA 7470A;
- Total Alkalinity and Bicarbonate by Method SM2320B;
- Total Dissolved Solids (TDS) by Method SM2540C;
- Total Organic Carbon (TOC) by Method SM5310B;
- Chloride by Method SM4500-Cl E;
- Nitrate by Method EPA 353.2;
- Sulfate by ASTM D516-11; and
- Ammonia by Method SM4500-NH3 D

DATA VALIDATION SUMMARY

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

Data Package Completeness

OnSite 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. The forms were appropriately signed and dated by both field collectors and laboratory personnel upon receipt.

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

SDG 2310-043: (TDS) The 7-day holding time for TDS analysis was exceeded in Sample 20231004-MW-2. The positive result for this target analyte was qualified as estimated (J) in this sample.

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 above the reporting limits in the method blanks.

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.

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.

For inorganic methods, the matrix spike is followed by a post-digestion spike sample if an element percent recovery was outside the control limits in the matrix spike. The percent recovery control limits for matrix spikes are 75% to 125%.

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, control limits for accuracy and precision in the LCS and its duplicate (LCSD) are usually more rigorous than for MS/MSD analyses. Additionally, data qualification based on LCS/LCSD analyses would apply to each sample in the associated batch, instead of just the parent sample. The percent recovery control limits for LCS and LCSD analyses are specified in the laboratory documents, as are the RPD control limits for LCS/LCSD sample sets.

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

SDG 2310-168: (SVOCs) The percent recovery for pyridine was less than the control limits in the LCS/LCSD sample set extracted on 10/18/2023. The reporting limits for this target analyte were qualified as estimated (UJ) in Samples MW-9, MW-10, and SWS-1.

Additionally, in the same LCS/LCSD sample set, the percent recovery for 2,4-Dinitrophenol was greater than the control limits in the LCSD; however, the percent recovery for this target analyte was within the control limits in the corresponding LCS. 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. For organic analyses, the RPD control limits are specified in the laboratory documents. For inorganic analyses, the RPD control limit for water samples is 20 percent. Laboratory duplicates were analyzed at the proper frequency and the specified acceptance criteria were met, with the following exception:

SDG 2310-057: (Nitrate) A laboratory duplicate sample set was performed on Sample 20231005-MW-7. The RPD for nitrate was greater than the control limit in the laboratory duplicate extracted on 10/6/2023. The positive result for this target analyte was qualified as estimated (J) in this sample.

SDG 2310-168: (Nitrate) A laboratory duplicate sample set was performed on Sample MW-9. The RPD for nitrate was greater than the control limit in the laboratory duplicate extracted on 10/13/2023. The positive result for this target analyte was qualified as estimated (J) in this sample.

Reporting Limits

The contract required quantitation limits (CRQL) were met by the laboratory for the target analytes throughout this sampling event, with some exceptions where the CRQL was elevated due to required sample dilution.

OVERALL ASSESSMENT

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

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

TABLE 2: SUMMARY OF QUALIFIED SAMPLES

Sample ID	Analyte	Qualifier	Reason
20231004-MW-2	TDS	J	Holding Time
20231005-MW-7	Nitrate	J	Laboratory Duplicate Precision
MW-9	Nitrate	J	Laboratory Duplicate Precision
	Pyridine	UJ	LCS/LCSD Recovery
MW-10	Pyridine	UJ	LCS/LCSD Recovery
SWS-1	Pyridine	UJ	LCS/LCSD Recovery

REFERENCES

GeoEngineers, Inc., "Interim Action Work Plan, Go East Corp Landfill Site, Everett, Washington, Ecology Agreed Order No. DE 18121 – prepared for Washington State Department of Ecology on Behalf of PG&E, LLC. GEI File No. 6694-002-03, April 23, 2020.

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.