

Memorandum

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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

Groundwater and Surface Water Data 2021-2023

Go East Corp Landfill Site

			Location ID			I	MW1		I			MV		
	1		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											
	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
Conventionals	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
Conventionais	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
	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
Total Metals	Lead	2.5	ug/L		1.1 U	1.1 U	1.1 U			2.2		1.1 U	1.1 U	2
TOTAL MIELAIS	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
	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
Dissolved Metals	Magnesium	NE	ug/L	8500	9200	8800	9900	9200	1200	7000	13000	16000	15000	13000
wetais	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
Destinist	cis-Chlordane	0.005	ug/L		0.0049 U	0.0048 U	0.0048 U		-			0.0047 U	0.0048 U	0.0049 U
Pesticides	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



Groundwater and Surface Water Data 2021-2023

Go East Corp Landfill Site

			Location ID		MV	V2					M	WЗ			
			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
		Groundwater and													
		Surface Water													
Method	Analyte	Cleanup Level	Units												
	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
Conventionals	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
Conventionais	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
	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
Total Matala	Lead	2.5	ug/L				1.7		1.1 U	1.2	1.1	1.1 U			
Total Metals	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
	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	56 U				
Disculation	Lead	2.5	ug/L				1 U		1 U	1 U	1 U	1 U			
Dissolved Metals	Magnesium	NE	ug/L	15000	15000	15000	13000	12000	14000	13000	13000	13000	14000	14000	14000
IVIELAIS	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
Destisides	cis-Chlordane	0.005	ug/L						0.0047 U	0.005 U	0.005 U				
Pesticides	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	-			



Groundwater and Surface Water Data 2021-2023

Go East Corp Landfill Site

			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											
	Total Organic Carbon		mg/L			-	-		-	1 U	1 U	1 U	1 U	1 U
	Alkalinity as CaCO3		mg/L			120	120	120 J	120	120	120	120	130	130
	Bicarbonate Ion (HCO3)		mg/L			120	120	120 J	120	120	120	120	130	130
Conventionals	Ammonia (Total as N)		mg/L	0.05 U	0.05 U	0.061	0.05 U	0.05 U						
conventionais	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
	Arsenic		ug/L	5.1	5.8	6.6	6.6	7.8	5.7	6.5	6	4.8	6.7	4.8
	Iron		ug/L	360	1000	130 J	200	600	470	220	240	380	1700	240
Total Metals	Lead		ug/L	1.1 U	1.1 U			1.1 U						
	Magnesium		ug/L	17000	15000	13000	15000	14000	15000	140000	13000	15000	16000	16000
	Manganese		ug/L	390	290	270	230	290	260	290	150	170	300	190
	Nickel		ug/L	22 U	22 U			22 U						
	Arsenic		ug/L	4.2	4.7	5.7	4.9	5.7	5.7	6	5.2	5.4	5.6	5
	Calcium		ug/L	27000	26000	28000	24000	27000	28000	29000	27000	27000	31000	30000
	Iron		ug/L	56 U	56 U	65	56 U	56 U	56 U	56 U	56 U	56 U	56 U	57
Dissolved	Lead	2.5	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U			1 U
Metals	Magnesium		ug/L	15000	14000	14000	12000	16000	14000	14000	14000	16000	16000	17000
motalo	Manganese		ug/L	330	260	280	190	300	250	260	110	120	160	160
	Nickel		ug/L	20 U	20 U			20 U						
	Potassium		ug/L	2000	3600	2000	2400	2500	2700	2300	2500	2500	2900	2800
	Sodium		ug/L	7400	6600	6500	6700	7200	7200	7700	6700	7000	7000	6500
Pesticides	cis-Chlordane		ug/L	0.0048 U					-					
1 05000005	Heptachlor		ug/L	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 1Groundwater and Surface Water Data 2021-2023

Go East Corp Landfill Site

			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														
	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
Conventionale	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
Conventionals	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
	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
Total Metals	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
	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
Dissolved	Lead	2.5	ug/L	1 U	1 U	1 U			-		1 U	1 U	1 U			-	
Metals	Magnesium	NE	ug/L	22000	21000	23000	24000	23000	27000	30000	14000	12000	13000	12000	14000	14000	13000
motalo	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			-	
1 00000000	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

Groundwater and Surface Water Data 2021-2023

Go East Corp Landfill Site

			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														
litetted	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
Conventionals	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
	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 U				
	Iron	3,010	ug/L	1300	2800	2100	1400	1100	17000	4800	6800	1400	1300	6400	580	9700	8100
Total Metals	Lead	2.5	ug/L	1.1 U	1.1 U	1.1 U					4.5	1.1 U	1 U				
TOLAT WIELAIS	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	20 U						
	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	
Dissolved	Lead	2.5	ug/L	1 U	1 U	1 U					1 U	1 U	1 U	1 U	1 U	1 U	
Metals	Magnesium	NE	ug/L	41000	40000	36000	35000	39000	43000	31000	18000	23000	22000	28000	20000	25000	25000
metale	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							
	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				SW	S-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
		Groundwater and									
		Surface Water									
Method	Analyte	Cleanup Level	Units								
	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
Conventionale	Ammonia (Total as N)	NE	mg/L		2.5	2.3	2	2.3	1.7	1.9	1.3
Conventionals	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
	Arsenic	7.3	ug/L	3.3 U	3 U						
	Iron	3,010	ug/L	11000	8000	12000	6400	5000	7300	9500	14000
Total Metals	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			20 U				
	Arsenic	7.3	ug/L	3 U	-			3 U			
	Calcium	NE	ug/L					100000			
	Iron	3,010	ug/L	2400				56 U			
Discoluted	Lead	2.5	ug/L	1 U				1 U			
Dissolved Metals	Magnesium	NE	ug/L					28000			26000
IVIELAIS	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
Destisidas	cis-Chlordane	0.005	ug/L	0.0051 U	0.0052 U	0.0052 U	0.0049 U				
Pesticides	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

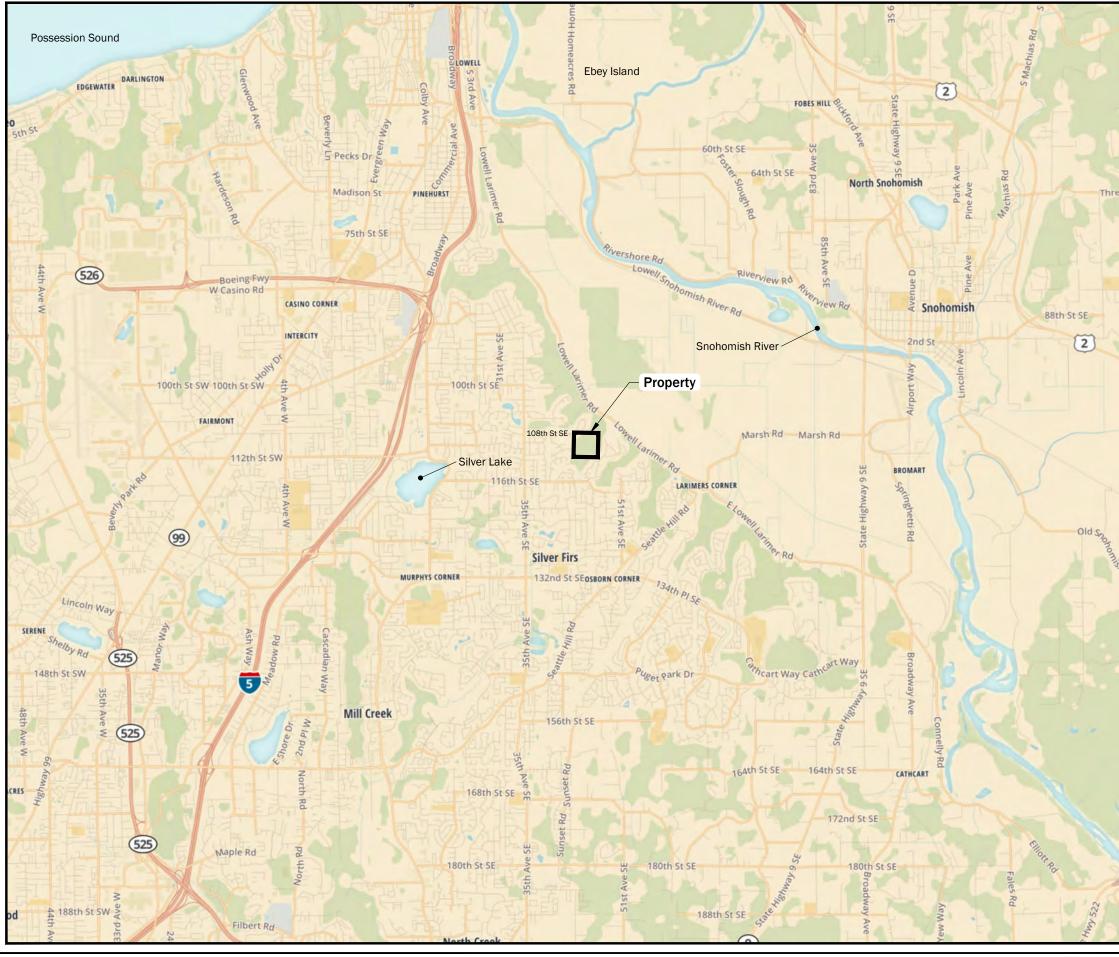
Bold font indicates a detection

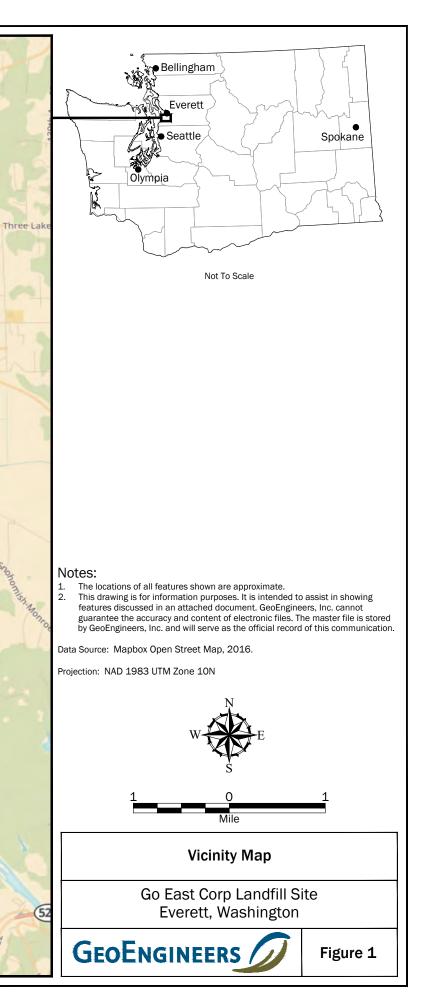
Gray-shading indicates a detected exceedance of the cleanup level

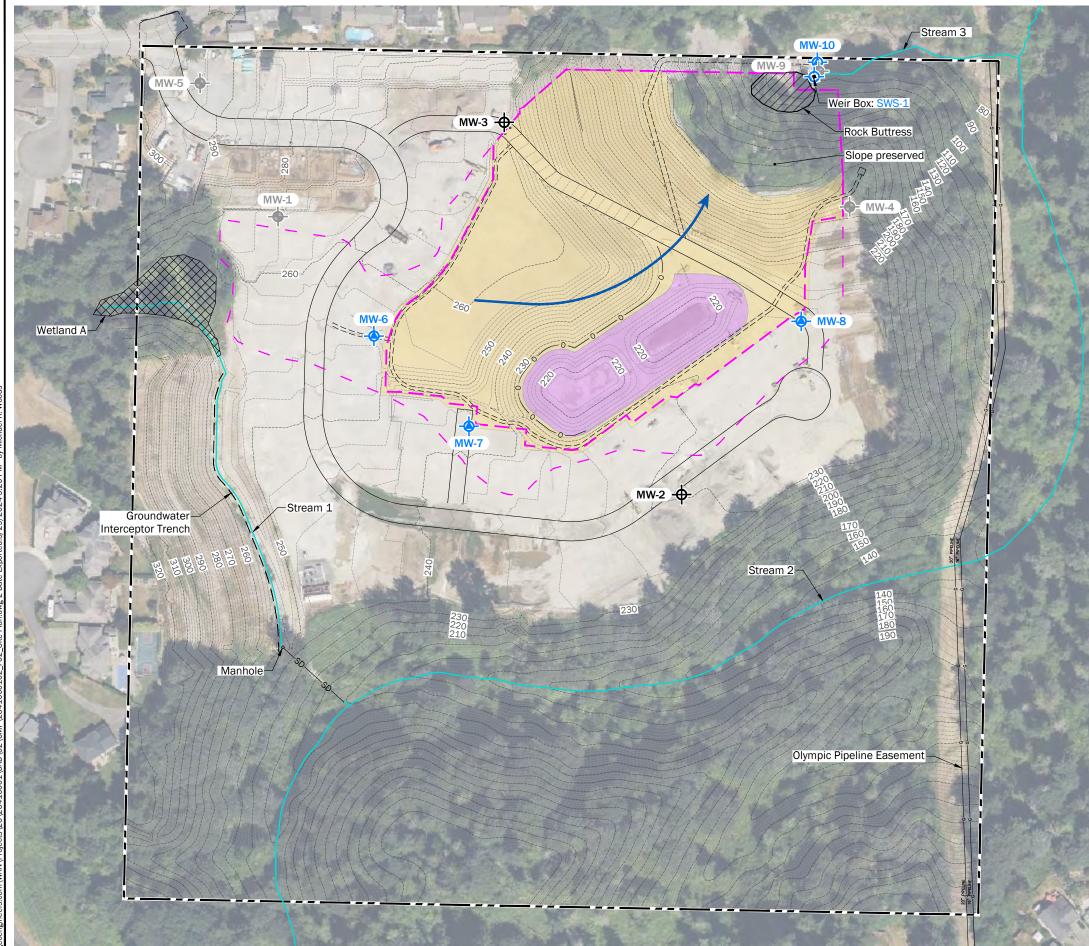
Blue shading indicates a non detected exceedance of the cleanup level

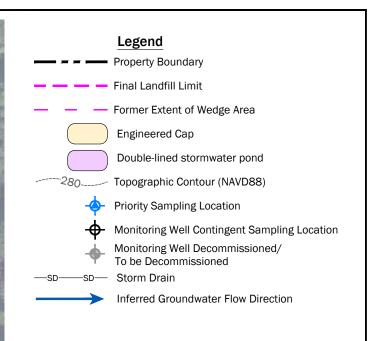
cPAH TEQ = Total toxic equivalent concentration of carcinogenic polycyclic aromatic hydrocarbons calculated per WAC 173-340-708(8)(e)(3), treating non-detects at half the reporting limit









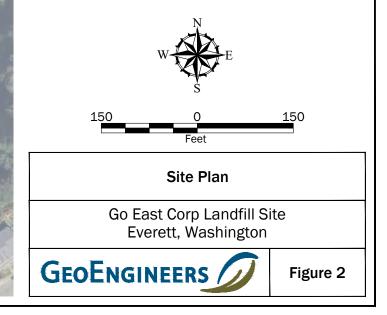


Notes:

- 1. The locations of all features shown are approximate.
- 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





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
	00.047.04				
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	



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

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				



PAHs EPA 8270E/SIM

Matrix: Water Units: ug/L

5				Date	Date	
Analyte	Result	PQL	Method	Prepared	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				



TOTAL ORGANIC CARBON SM 5310B

Matrix: Water Units: mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



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TOTAL ALKALINITY SM 2320B

Matrix: Water Units: mg CaCO3/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



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BICARBONATE SM 2320B

Matrix: Water Units: mg CaCO3/L

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



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

CHLORIDE SM 4500-CI E

Matrix:	Water
Units:	mg/L

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



NITRATE (as Nitrogen) EPA 353.2

Matrix:	Water
Units:	mg/L-N

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



SULFATE ASTM D516-11

Matrix:	Water
Units:	mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



TOTAL DISSOLVED SOLIDS SM 2540C

Matrix: Water Units: mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



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AMMONIA (as Nitrogen) SM 4500-NH₃ D

Matrix: Water Units: mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



TOTAL METALS EPA 200.8/200.7

Matrix: Water Units: ug/L (ppb)

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
Seep-1-20230330					
03-347-01					
ND	3.3	EPA 200.8	3-31-23	3-31-23	
280	50	EPA 200.7	3-31-23	3-31-23	
ND	1.1	EPA 200.8	3-31-23	3-31-23	
ND	10	EPA 200.7	3-31-23	3-31-23	
	Seep-1-20230330 03-347-01 ND 280 ND	ND 3.3 280 50 ND 1.1	ND 3.3 EPA 200.8 280 50 EPA 200.7 ND 1.1 EPA 200.8	ResultPQLMethodPreparedSeep-1-20230330	Result PQL Method Prepared Analyzed Seep-1-20230330

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	



DIESEL AND HEAVY OIL RANGE ORGANICS NWTPH-Dx QUALITY CONTROL

Matrix: Water Units: mg/L (ppm)

U (11)				Date	Date	
Analyte	Result	PQL	Method	Prepared	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				

					Source	Percent	Recovery		RPD	
Analyte	Re	sult	Spike	Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE										
Laboratory ID:	03-3	10-04								
	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			



PAHs EPA 8270E/SIM QUALITY CONTROL

Matrix: Water Units: ug/L

onna. ug/L				Date	Date	
Analyte	Result	PQL	Method	Prepared	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				



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PAHs EPA 8270E/SIM QUALITY CONTROL

Matrix: Water Units: ug/L

					Per	cent	Recovery		RPD	
Analyte	Re	sult	Spike	Level	Rec	overy	Limits	RPD	Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB04	03W1								
	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			



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TOTAL ORGANIC CARBON SM 5310B QUALITY CONTROL

Matrix: Water Units: mg/L

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

				Source	Percent	Recovery		RPD	
Analyte	Re	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	03-34	47-01							
	ORIG	DUP							
Total Organic Carbon	3.23	3.21	NA	NA	NA	NA	1	12	
MATRIX SPIKE									
Laboratory ID:	03-34	47-01							
	Ν	IS	MS		MS				
Total Organic Carbon	13	3.4	10.0	3.23	102	80-120	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB04	06W1							
	S	B	SB		SB				
Total Organic Carbon	11	1.6	10.0	NA	116	80-118	NA	NA	



TOTAL ALKALINITY SM 2320B QUALITY CONTROL

Matrix: Water Units: mg CaCO3/L

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

Analyte	Res	sult	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	03-34	47-02							
	ORIG	DUP							
Total Alkalinity	422	432	NA	NA	NA	NA	2	10	
SPIKE BLANK									
Laboratory ID:	SB04	04W1							
	S	В	SB		SB				
Total Alkalinity	94	l.0	100	NA	94	89-110	NA	NA	



BICARBONATE SM 2320B QUALITY CONTROL

Matrix: Water Units: mg CaCO3/L

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

Analyte	Res	sult	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	03-34	47-02							
	ORIG	DUP							
Bicarbonate	422	432	NA	NA	NA	NA	2	10	
SPIKE BLANK									
Laboratory ID:	SB04	04W1							
	S	В	SB		SB				
Bicarbonate	94	l.0	100	NA	94	89-110	NA	NA	



CHLORIDE SM 4500-CI E QUALITY CONTROL

Matrix: Water Units: mg/L

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
MB0404W1					
ND	2.0	SM 4500-CI E	4-5-23	4-5-23	
	MB0404W1	MB0404W1	MB0404W1	MB0404W1	MB0404W1

				Source	Percent	Recovery		RPD	
Analyte	Res	ult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	03-33	0-02							
	ORIG	DUP							
Chloride	45.7	50.8	NA	NA	NA	NA	11	11	
MATRIX SPIKE									
Laboratory ID:	03-33	0-02							
	M	S	MS		MS				
Chloride	91	.1	50.0	45.7	91	85-121	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB040	04W1							
	SI	В	SB		SB				
Chloride	45	.7	50.0	NA	91	90-119	NA	NA	



NITRATE (as Nitrogen) EPA 353.2 QUALITY CONTROL

Matrix: Water Units: mg/L-N

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

				Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	03-347-02								
	ORIG	DUP							
Nitrate	ND	ND	NA	NA	NA	NA	NA	10	
MATRIX SPIKE									
Laboratory ID:	03-34	47-02							
	Μ	IS	MS		MS				
Nitrate	2.2	20	2.00	ND	110	88-125	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB03	30W2							
	S	В	SB		SB				
Nitrate	2.1	18	2.00	NA	109	90-120	NA	NA	



SULFATE ASTM D516-11 QUALITY CONTROL

Matrix: Water Units: mg/L

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

				Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	03-33	30-01							
	ORIG	DUP							
Sulfate	5.53	5.75	NA	NA	NA	NA	4	10	
MATRIX SPIKE									
Laboratory ID:	03-33	30-01							
	Μ	IS	MS		MS				
Sulfate	16	6.1	10.0	5.53	106	72-128	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB04	05W1							
	S	В	SB		SB				
Sulfate	9.	54	10.0	NA	95	85-114	NA	NA	



TOTAL DISSOLVED SOLIDS SM 2540C QUALITY CONTROL

Matrix: Water Units: mg/L

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
MB0404W1					
ND	13	SM 2540C	4-4-23	4-7-23	
	MB0404W1	MB0404W1	MB0404W1	Result PQL Method Prepared MB0404W1 MB0404W1 Method Method <td>Result PQL Method Prepared Analyzed MB0404W1 MB0404W1</td>	Result PQL Method Prepared Analyzed MB0404W1 MB0404W1

				Source	Percent	Recovery		RPD	
Analyte	Result		Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	03-34	47-01							
	ORIG	DUP							
Total Dissolved Solids	143	164	NA	NA	NA	NA	14	23	
SPIKE BLANK									
Laboratory ID:	SB04	04W1							
	SB		SB		SB				
Total Dissolved Solids	47	79	500	NA	96	89-120	NA	NA	



AMMONIA (as Nitrogen) SM 4500-NH₃ D QUALITY CONTROL

Matrix: Water Units: mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0403W2					
Ammonia	ND	0.050	SM 4500-NH3 D	4-3-23	4-3-23	

				Source	Percent	Recovery		RPD	
Analyte	Re	sult	Spike Level	Result	Recovery	Limits	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								
	N	IS	MS		MS				
Ammonia	5.01		5.00	ND	100	87-110	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB04	03W2							
	S	B	SB		SB				
Ammonia	5.	50	5.00	NA	110	88-110	NA	NA	



TOTAL METALS EPA 200.8/200.7 QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	

					Source	Percent	Recovery		RPD	
Analyte	Re	sult	Spike	e Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE										
Laboratory ID:	03-34	47-01								
	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:	03-29	95-07								
Arsenic	ND	ND	NA	NA		NA	NA	NA	20	
Lead	ND	ND	NA	NA		NA	NA	NA	20	
MATRIX SPIKES										
Laboratory ID:	03-34	47-01								
-	MS	MSD	MS	MSD		MS MSD				

	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:	03-29	95-07									
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	



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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.

Ζ-

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



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Environmental Inc.	Tur (ii	naround Rec n working da	quest ays)		Lai	bora	tory	/ Nu	mb	er:	()3	-	34	7					
Phone: (425) 883-3881 + www.onsite-env.com Company: GeoEngineers Project Number: <u>6694-002-05-</u> 26410-001-01 Project Name: Go East Project Manager: Garrett Leque Sampled by: TDE	Sar		1 Day	Number of Containers					PAHs 8270D/SIM (jow-level)	Organochlorine Pesticides 8081A	CI, NO3, SO4, TDS, NH3)				the 1 th	Actuls				
VDE	Data	(other)		ber of (NWTPH-Gx	NWTPH-Dx	Volatiles 8260B	8270D	inochlor	TOC, alk+bicarb,	TOC, TDS, NH3	T/D metals	T/D metals	M metals					sture
Lab ID Sample Identification	Date Sampled	Time Sampled	Matrix			ITWN	NWT	Volati	PAHS	Orga	100	100	TB	T21	1	1 1				% Moisture
1 Seep-1-20230330	3/30/23	1350	W	4		_	-					X			P	18				
L SWS-1-20230330 1 Mtpth	333723	[315		9			X									×				
Signature Relinquished Received Received Relinquished Received Relinquished		GE G	I pl	14		12 3-3 1301	23 30 U		1	2 2	Comm A	A	S ₁	Fe Fe		ns Pb, Ng	M	In		
Reviewed/Date	1	Reviewed/Dat	te		l,					0	Chrom	atogra	ms wit	n final i	eport					 -

Data Package: Level III 🗌 Level IV 🗌 Electronic Data Deliverables (EDDs)



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.



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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	



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PAHs EPA 8270E/SIM

Matrix: Water Units: ug/L

Ū				Date	Date	
Analyte	Result	PQL	Method	Prepared	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				



TOTAL ORGANIC CARBON SM 5310B

Matrix: Water Units: mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



TOTAL ALKALINITY SM 2320B

Matrix: Water Units: mg CaCO3/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



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BICARBONATE SM 2320B

Matrix: Water Units: mg CaCO3/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



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CHLORIDE SM 4500-CI E

Matrix: Water Units: mg/L

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



NITRATE (as Nitrogen) EPA 353.2

Matrix: Water Units: mg/L-N

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



SULFATE ASTM D516-11

Matrix: Water Units: mg/L

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
MW-1-20230331					
03-361-01					
ND	5.0	ASTM D516-11	3-9-23	4-5-23	
MW-8-20230331					
03-361-02					
87	25	ASTM D516-11	3-9-23	4-5-23	
	MW-1-20230331 03-361-01 ND MW-8-20230331 03-361-02	MW-1-20230331 03-361-01 ND 5.0 MW-8-20230331 03-361-02	MW-1-20230331 03-361-01 ND 5.0 ASTM D516-11 MW-8-20230331 03-361-02	Result PQL Method Prepared MW-1-20230331 03-361-01	Result PQL Method Prepared Analyzed MW-1-20230331 03-361-01 3-9-23 4-5-23 ND 5.0 ASTM D516-11 3-9-23 4-5-23 MW-8-20230331 03-361-02 5.0 1000000000000000000000000000000000000



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TOTAL DISSOLVED SOLIDS SM 2540C

Matrix: Water Units: mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



AMMONIA (as Nitrogen) SM 4500-NH₃ D

Matrix: Water Units: mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



TOTAL METALS EPA 200.8/200.7

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



DISSOLVED METALS EPA 200.8/200.7

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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



PAHs EPA 8270E/SIM QUALITY CONTROL

Matrix: Water Units: ug/L

onna. ug/L				Date	Date	
Analyte	Result	PQL	Method	Prepared	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				



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PAHs EPA 8270E/SIM QUALITY CONTROL

Matrix: Water Units: ug/L

					Per	rcent	Recovery		RPD	
Analyte	Re	sult	Spike	Level	Rec	overy	Limits	RPD	Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB04	03W1								
	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			



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TOTAL ORGANIC CARBON SM 5310B QUALITY CONTROL

Matrix: Water Units: mg/L

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
MB0406W1					
ND	1.0	SM 5310B	4-6-23	4-7-23	
	MB0406W1	MB0406W1	MB0406W1	Result PQL Method Prepared MB0406W1	Result PQL Method Prepared Analyzed MB0406W1

				Source	Percent	Recovery		RPD	
Analyte	Re	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	03-34	47-01							
	ORIG	DUP							
Total Organic Carbon	3.23	3.21	NA	NA	NA	NA	1	12	
MATRIX SPIKE									
Laboratory ID:	03-34	47-01							
	N	IS	MS		MS				
Total Organic Carbon	13	3.4	10.0	3.23	102	80-120	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB04	06W1							
	S	B	SB		SB				
Total Organic Carbon	11	1.6	10.0	NA	116	80-118	NA	NA	



TOTAL ALKALINITY SM 2320B QUALITY CONTROL

Matrix: Water Units: mg CaCO3/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0404W1					
Total Alkalinity	ND	2.0	SM 2320B	4-4-23	4-4-23	
Total / altainity	NB	2.0	6111 2020B	1120	1120	

Analyte	Res	sult	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	03-34	47-02							
	ORIG	DUP							
Total Alkalinity	422	432	NA	NA	NA	NA	2	10	
SPIKE BLANK									
Laboratory ID:	SB04	04W1							
	S	В	SB		SB				
Total Alkalinity	94	l.0	100	NA	94	89-110	NA	NA	



BICARBONATE SM 2320B QUALITY CONTROL

Matrix: Water Units: mg CaCO3/L

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

Analyte	Res	sult	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE			•						
Laboratory ID:	03-34	17-02							
	ORIG	DUP							
Bicarbonate	422	432	NA	NA	NA	NA	2	10	
SPIKE BLANK									
Laboratory ID:	SB04	04W1							
	S	В	SB		SB				
Bicarbonate	94	.0	100	NA	94	89-110	NA	NA	



CHLORIDE SM 4500-CI E QUALITY CONTROL

Matrix: Water Units: mg/L

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
MB0404W1					
ND	2.0	SM 4500-CI E	4-5-23	4-5-23	
	MB0404W1	MB0404W1	MB0404W1	MB0404W1	MB0404W1

				Source	Percent	Recovery		RPD	
Analyte	Res	ult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	03-33	0-02							
	ORIG	DUP							
Chloride	45.7	50.8	NA	NA	NA	NA	11	11	
MATRIX SPIKE									
Laboratory ID:	03-33	0-02							
	M	S	MS		MS				
Chloride	91	.1	50.0	45.7	91	85-121	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB040	04W1							
	SI	В	SB		SB				
Chloride	45	.7	50.0	NA	91	90-119	NA	NA	



NITRATE (as Nitrogen) EPA 353.2 QUALITY CONTROL

Matrix: Water Units: mg/L-N

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
MB0331W3					
ND	0.050	EPA 353.2	3-31-23	3-31-23	
	MB0331W3	MB0331W3	MB0331W3	Result PQL Method Prepared MB0331W3	Result PQL Method Prepared Analyzed MB0331W3 MB031W3 MB031W3

			Source	Percent	Recovery		RPD	
Analyte	Result	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE								
Laboratory ID:	03-361-01							
	ORIG DUP							
Nitrate	0.157 0.118	NA	NA	NA	NA	28	10	С
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	



SULFATE ASTM D516-11 QUALITY CONTROL

Matrix: Water Units: mg/L

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

				Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	03-33	30-01							
	ORIG	DUP							
Sulfate	5.53	5.75	NA	NA	NA	NA	4	10	
MATRIX SPIKE									
Laboratory ID:	03-33	30-01							
	Μ	IS	MS		MS				
Sulfate	16	6.1	10.0	5.53	106	72-128	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB04	05W1							
	S	В	SB		SB				
Sulfate	9.	54	10.0	NA	95	85-114	NA	NA	



TOTAL DISSOLVED SOLIDS SM 2540C QUALITY CONTROL

Matrix: Water Units: mg/L

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
MB0404W1					
ND	13	SM 2540C	4-4-23	4-7-23	
	MB0404W1	MB0404W1	MB0404W1	Result PQL Method Prepared MB0404W1 MB0404W1 Method Method <td>Result PQL Method Prepared Analyzed MB0404W1 MB0404W1</td>	Result PQL Method Prepared Analyzed MB0404W1 MB0404W1

				Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	03-34	47-01							
	ORIG	DUP							
Total Dissolved Solids	143	164	NA	NA	NA	NA	14	23	
SPIKE BLANK									
Laboratory ID:	SB04	04W1							
	S	В	SB		SB				
Total Dissolved Solids	47	79	500	NA	96	89-120	NA	NA	



AMMONIA (as Nitrogen) SM 4500-NH₃ D QUALITY CONTROL

Matrix: Water Units: mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0403W2					
Ammonia	ND	0.050	SM 4500-NH3 D	4-3-23	4-3-23	

				Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	03-27	77-01							
	ORIG	DUP							
Ammonia	ND	ND	NA	NA	NA	NA	NA	15	
MATRIX SPIKE									
Laboratory ID:	03-27	77-01							
	Μ	IS	MS		MS				
Ammonia	5.	01	5.00	ND	100	87-110	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB04	03W2							
	S	В	SB		SB				
Ammonia	5.	50	5.00	NA	110	88-110	NA	NA	



TOTAL METALS EPA 200.8/200.7 QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	

					Source	Pe	rcent	Recovery		RPD	
Analyte	Re	sult	Spike	Level	Result	Rec	overy	Limits	RPD	Limit	Flags
DUPLICATE											
Laboratory ID:	03-28	33-03									
	ORIG	DUP									
Iron	ND	ND	NA	NA		l	NA	NA	NA	20	
Magnesium	ND	ND	NA	NA		I	NA	NA	NA	20	
Manganese	ND	ND	NA	NA			NA	NA	NA	20	
Laboratory ID:	03-3 ⁻	10-04									
Arsenic	7.31	6.47	NA	NA			NA	NA	12	20	
MATRIX SPIKES											
Laboratory ID:	03-28	33-03									
	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:	03-3 ⁻	10-04									
Arsenic	120	123	111	111	7.31	101	104	75-125	3	20	



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DISSOLVED METALS EPA 200.8/200.7 QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	

					Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike	Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE										
Laboratory ID:	03-36	61-01								
	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:	04-00	01-03								
Arsenic	23.0	24.8	NA	NA		NA	NA	8	20	

Laboratory ID:	03-30	61-01									
	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:	04-00	01-03									
Arsenic	111	113	80.0	80.0	23.0	110	113	75-125	2	20	



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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.

Ζ-

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



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OnSite		Cha	ain d	of (Cust	to	ly									Page	1	of/	
Environmental Inc. 14648 NE 95th Street • Redmond, WA 98052		around Requ working day			Lab	orat	ory	Nu	mb	er:	0	3 -	3	61					
Phone: (425) 883-3881 = www.onsite-env.com Company: GeoEngineers	-	(Check One)			Laboratory Number: 03-361					. 10.			13. J						
Project Number:	Sam		1 Day							1A	t, TDS, NI			CENHENES	COUNENT				
Project Name: Go East	Stan	dard (7 Days)				-		/olatiles 8260B PAHs 8270D/SIM (low-level)	evel)	CI.	TQC, alk+bicarb, Cl, NO3, SO. TOC, TDS, NH3 T/D metals								
Project Manager: Garrett Leque Sampled by:		l analysis 5 D	ays)	Number of Containers					-wol) MIS/C				SEE.	ls SR					
	Date	(other) Time		imber of		NWTPH-Gx	NWTPH-Dx	Volatiles 8260B	Hs 8270	rganochlo	TQC, alk+bicarb, TOC TDS NH3	T/D metals	T/D metals	TOmetals	Total metals				% Moisture
Lab ID Sample Identification 1 MW-1-20230351	Sampled	Sampled	Matrix W	MIN (MN	MN	Vol	PA		× ×	. II		3	+ VQ				N %
2 MW-8-20230331	3-3123		W	8				1	p	-	2			P	\$				
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Signature	Coi	npany		1 1	Date	B		Time			Comme	nts/Sp	ecial	Instru	ctions	1			
Relinquished B. Choland	1) Chocard (SE				3-31-23 1541			0	TOTAL METALS: As, Fe, Mg, Mn				Nn						
leceived (OFE			3/31/2		15	41	0	DI	550	321	ÆØ	MET.	415:	Cas	K	11-
Received																			
Received											¥ l	15	sa	ED.	MET	ACS I	WEU	VE F	FIELD
Reviewed/Date	F	leviewed/Dat	e							1	Chromate								

Data Package: Level III 🗌 Level IV 🗌 Electronic Data Deliverables (EDDs)



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	



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TOTAL ORGANIC CARBON SM 5310B

Matrix: Water Units: mg/L				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



TOTAL ALKALINITY SM 2320B

Matrix: Water Units: mg CaCO3/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



BICARBONATE SM 2320B

Matrix: Water Units: mg CaCO3/L

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



CHLORIDE SM 4500-CI E

Matrix:	Water
Units:	mg/L

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



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NITRATE (as Nitrogen) EPA 353.2

Matrix: Water						
Units: mg/L-N						
				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



SULFATE ASTM D516-11

Matrix:	Water
Units:	mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



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TOTAL DISSOLVED SOLIDS SM 2540C

Matrix: Water Units: mg/L				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



AMMONIA (as Nitrogen) SM 4500-NH₃ D

Matrix:	Water						
Units: Analyte	mg/L	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID):	MW-3-20230403				,	
Laborato	ory ID:	04-019-01					
Ammonia	а	0.13	0.050	SM 4500-NH3 D	4-6-23	4-6-23	



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TOTAL METALS EPA 200.8/200.7

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



DISSOLVED METALS EPA 200.8/200.7

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



TOTAL ORGANIC CARBON SM 5310B QUALITY CONTROL

Matrix: Water Units: mg/L

onno. mg/L						Date	Date		
Analyte		Result	PQL	Me	ethod	Prepared	Analyz	ed	Flags
METHOD BLANK									
Laboratory ID:		MB0406W1							
Total Organic Carbon		ND	1.0	SM	5310B	4-6-23	4-7-23	3	
Analyte	Res	sult	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									•
Laboratory ID:	03-34	1 7-01							
	ORIG	DUP							
Total Organic Carbon	3.23	3.21	NA	NA	NA	NA	1	12	
MATRIX SPIKE									
Laboratory ID:	03-34	1 7-01							
	Μ	S	MS		MS				
Total Organic Carbon	13	.4	10.0	3.23	102	80-120	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB04	06W1							
	S	В	SB		SB				
Total Organic Carbon	11	.6	10.0	NA	116	80-118	NA	NA	



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TOTAL ALKALINITY SM 2320B QUALITY CONTROL

Matrix: Water Units: mg CaCO3/L

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

	_			Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	04-08	38-01							
	ORIG	DUP							
Total Alkalinity	122	116	NA	NA	NA	NA	5	10	
SPIKE BLANK									
Laboratory ID:	SB04	10W1							
	S	В	SB		SB				
Total Alkalinity	92.0		100	NA	92	89-110	NA	NA	



BICARBONATE SM 2320B QUALITY CONTROL

Matrix: Water Units: mg CaCO3/L

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
MB0410W1					
ND	2.0	SM 2320B	4-10-23	4-10-23	
	MB0410W1	MB0410W1	MB0410W1	Result PQL Method Prepared MB0410W1	Result PQL Method Prepared Analyzed MB0410W1 MB0410W1

Analyte	Result		Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE			-					-	
Laboratory ID:	04-08	38-01							
	ORIG	DUP							
Bicarbonate	122	116	NA	NA	NA	NA	5	10	
SPIKE BLANK									
Laboratory ID:	SB04	10W1							
	S	В	SB		SB				
Bicarbonate	92.0		100	NA	92	89-110	NA	NA	



CHLORIDE SM 4500-CI E QUALITY CONTROL

Matrix: Water Units: mg/L

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

				Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	04-01	19-01							
	ORIG	DUP							
Chloride	5.02	4.78	NA	NA	NA	NA	5	11	
MATRIX SPIKE									
Laboratory ID:	04-01	19-01							
	Μ	IS	MS		MS				
Chloride	55	5.0	50.0	5.02	100	85-121	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB04	05W1							
	S	В	SB		SB				
Chloride	47	.2	50.0	NA	94	90-119	NA	NA	



NITRATE (as Nitrogen) EPA 353.2 QUALITY CONTROL

Matrix: Water Units: mg/L-N

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

				Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	03-29	98-21							
	ORIG	DUP							
Nitrate	4.64	4.91	NA	NA	NA	NA	6	10	
MATRIX SPIKE									
Laboratory ID:	03-29	98-21							
	Μ	IS	MS		MS				
Nitrate	9.1	12	4.00	4.64	112	88-125	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB04	06W2							
	S	В	SB		SB				
Nitrate	2.	03	2.00	NA	102	90-120	NA	NA	



SULFATE ASTM D516-11 QUALITY CONTROL

Matrix: Water Units: mg/L

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

				Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	03-33	30-01							
	ORIG	DUP							
Sulfate	5.53	5.75	NA	NA	NA	NA	4	10	
MATRIX SPIKE									
Laboratory ID:	03-33	30-01							
	Μ	IS	MS		MS				
Sulfate	16	6.1	10.0	5.53	106	72-128	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB04	05W1							
	S	В	SB		SB				
Sulfate	9.	54	10.0	NA	95	85-114	NA	NA	



TOTAL DISSOLVED SOLIDS SM 2540C QUALITY CONTROL

Matrix: Water Units: mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0407W1					
Total Dissolved Solids	ND	13	SM 2540C	4-7-23	4-7-23	

				Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	04-01	19-01							
	ORIG	DUP							
Total Dissolved Solids	167	148	NA	NA	NA	NA	12	23	
SPIKE BLANK									
Laboratory ID:	SB04	07W1							
	S	В	SB		SB				
Total Dissolved Solids	49	91	500	NA	98	89-120	NA	NA	



AMMONIA (as Nitrogen) SM 4500-NH₃ D QUALITY CONTROL

Matrix: Water Units: mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0406W1					
Ammonia	ND	0.050	SM 4500-NH3 D	4-6-23	4-6-23	

				Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	03-29	99-01							
	ORIG	DUP							
Ammonia	ND	ND	NA	NA	NA	NA	NA	15	
MATRIX SPIKE									
Laboratory ID:	03-29	99-01							
	N	1S	MS		MS				
Ammonia	4.	58	5.00	ND	92	87-110	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB04	06W1							
	S	B	SB		SB				
Ammonia	4.	57	5.00	NA	91	88-110	NA	NA	



TOTAL METALS EPA 200.8/200.7 QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
MB0406WH1					
ND	50	EPA 200.7	4-6-23	4-6-23	
ND	1000	EPA 200.7	4-6-23	4-6-23	
ND	10	EPA 200.7	4-6-23	4-6-23	
MB0406WM1					
ND	3.3	EPA 200.8	4-6-23	4-6-23	
	MB0406WH1 ND ND ND MB0406WM1	MB0406WH1 ND 50 ND 1000 ND 10 MB0406WM1	MB0406WH1 ND 50 EPA 200.7 ND 1000 EPA 200.7 ND 10 EPA 200.7 MB0406WM1	Result PQL Method Prepared MB0406WH1	Result PQL Method Prepared Analyzed MB0406WH1

					Source	Pe	rcent	Recovery		RPD	
Analyte	Res	sult	Spike	Level	Result	Rec	overy	Limits	RPD	Limit	Flags
DUPLICATE											
Laboratory ID:	03-28	33-03									
	ORIG	DUP									
Iron	ND	ND	NA	NA		I	NA	NA	NA	20	
Magnesium	ND	ND	NA	NA		I	NA	NA	NA	20	
Manganese	ND	ND	NA	NA		I	NA	NA	NA	20	
Laboratory ID:	03-3 ²	10-04									
Arsenic	7.31	6.47	NA	NA		I	NA	NA	12	20	
MATRIX SPIKES											
Laboratory ID:	03-28	33-03									
	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:	03-3 ²	10-04									
Arsenic	120	123	111	111	7.31	101	104	75-125	3	20	



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DISSOLVED METALS EPA 200.8/200.7 QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

0 (11 /				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	

					Source	Pe	rcent	Recovery		RPD	
Analyte	Re	sult	Spike	Level	Result	Rec	overy	Limits	RPD	Limit	Flags
DUPLICATE											
Laboratory ID:	03-36	61-01									
	ORIG	DUP									
Calcium	6820	6880	NA	NA		1	NA	NA	1	20	
Iron	ND	ND	NA	NA		1	NA	NA	NA	20	
Magnesium	1150	1150	NA	NA		1	NA	NA	0	20	
Manganese	ND	ND	NA	NA		1	NA	NA	NA	20	
Potassium	ND	ND	NA	NA		1	NA	NA	NA	20	
Sodium	ND	ND	NA	NA		1	NA	NA	NA	20	
Laboratory ID:	040	45-02									
Arsenic	9.14	8.76	NA	NA		1	NA	NA	4	20	
MATRIX SPIKES											
Laboratory ID:	03-36	61-01									
	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:	04-04	45-02									
Arsenic	94.8	99.8	80.0	80.0	9.14	107	113	75-125	5	20	



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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.

Ζ-

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



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	ironmental Inc.	Turi (in	naround Requ working day	Jest (s)		Lab	orat	ory	Nu	mb	er:)4	-	01	9									
Company:	E 95th Street • Redmond, WA 98052 425) 883-3881 • www.onsite-env.com	_	(Check One)		1 1							13)						1.7			1			
GeoEngineers		Sam	ne Day [1 Day										_										
Project Number: Mb 6694-002-05	26410-001-01	2 Da	ays [3 Days							81A	04, TD	*	\$	H									
Project Name: Go East		Star	ndard (7 Days)							(lavel)	les 80	33, SC		1										
Project Manager: Garrett Lequ	θ.	(TPH analysis 5 Days)					Number of Containers					PAHs 8270D/SIM (low-level)	Organochlorine Pesticides 8081A	TOC, alk+bicarb, Cl, NO3, SO4, TDS, N	ę	Tatul	D.55							
Sampled by: JDR	(o		(other)		r of Con		Gx	-Dx	Volatiles 8260B	IS/Q0/3	chlorine	lk+bicar	7	1		etals	netals					ure		
.ab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	lumber		NWTPH-Gx	NWTPH-Dx	olatiles	AHs 82	Organo	TOC, a	TOC, 1	OD metals	Tometals	T/D metals	Total metals					% Moisture		
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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	



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PAHs EPA 8270E/SIM

Matrix: Water Units: ug/L

Ū				Date	Date	
Analyte	Result	PQL	Method	Prepared	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				



PAHs EPA 8270E/SIM

Matrix: Water Units: ug/L

Ū				Date	Date	
Analyte	Result	PQL	Method	Prepared	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				



TOTAL ORGANIC CARBON SM 5310B

Matrix: Water Units: mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



TOTAL ALKALINITY SM 2320B

Matrix: Water Units: mg CaCO3/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



BICARBONATE SM 2320B

Matrix: Water Units: mg CaCO3/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



CHLORIDE SM 4500-CI E

Matrix: Water Units: mg/L

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



NITRATE (as Nitrogen) EPA 353.2

Matrix: Water Units: mg/L-N

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
MW-6-20230405					
04-045-01					
ND	0.050	EPA 353.2	4-7-23	4-7-23	
MW-7-20230405					
04-045-02					
0.069	0.050	EPA 353.2	4-7-23	4-7-23	
	MW-6-20230405 04-045-01 ND MW-7-20230405 04-045-02	MW-6-20230405 04-045-01 ND 0.050 MW-7-20230405 04-045-02	MW-6-20230405 04-045-01 ND 0.050 EPA 353.2 MW-7-20230405 04-045-02	Result PQL Method Prepared MW-6-20230405 04-045-01 4-7-23 ND 0.050 EPA 353.2 4-7-23 MW-7-20230405 4-7-20230405 4-7-23	Result PQL Method Prepared Analyzed MW-6-20230405 04-045-01 4-7-23 4-7-23 ND 0.050 EPA 353.2 4-7-23 4-7-23 MW-7-20230405 04-045-02 4-7-23 4-7-23



SULFATE ASTM D516-11

Matrix: Water Units: mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



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TOTAL DISSOLVED SOLIDS SM 2540C

Matrix: Water Units: mg/L

				Date	Date		
Analyte	Result	PQL	Method	Prepared	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		



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AMMONIA (as Nitrogen) SM 4500-NH₃ D

Matrix: Water Units: mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



TOTAL METALS EPA 200.8/200.7

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



DISSOLVED METALS EPA 200.8/200.7

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



PAHs EPA 8270E/SIM QUALITY CONTROL

Matrix: Water Units: ug/L

orina. ug/L				Date	Date	
Analyte	Result	PQL	Method	Prepared	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				



PAHs EPA 8270E/SIM QUALITY CONTROL

Matrix: Water Units: ug/L

					Per	cent	Recovery		RPD	
Analyte	Result		Spike	Level	Rec	Recovery		RPD	Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB04	10W1								
	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			



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TOTAL ORGANIC CARBON SM 5310B QUALITY CONTROL

Matrix: Water Units: mg/L

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
MB0413W1					
ND	1.0	SM 5310B	4-13-23	4-13-23	
	MB0413W1	MB0413W1	MB0413W1	Result PQL Method Prepared MB0413W1	Result PQL Method Prepared Analyzed MB0413W1

				Source	Percent	Recovery		RPD	
Analyte	Result		Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	04-04	45-01							
	ORIG	DUP							
Total Organic Carbon	2.85	2.77	NA	NA	NA	NA	3	12	
MATRIX SPIKE									
Laboratory ID:	04-04	45-01							
	Μ	IS	MS		MS				
Total Organic Carbon	12	2.8	10.0	2.85	100	80-120	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB04	13W1							
	S	В	SB		SB				
Total Organic Carbon	9.9	99	10.0	NA	100	80-118	NA	NA	



TOTAL ALKALINITY SM 2320B QUALITY CONTROL

Matrix: Water Units: mg CaCO3/L

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

	_			Source	Percent	Recovery		RPD	
Analyte	Result		Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	04-08	38-01							
	ORIG	DUP							
Total Alkalinity	122	116	NA	NA	NA	NA	5	10	
SPIKE BLANK									
Laboratory ID:	SB04	10W1							
	S	В	SB		SB				
Total Alkalinity	92	2.0	100	NA	92	89-110	NA	NA	



BICARBONATE SM 2320B QUALITY CONTROL

Matrix: Water Units: mg CaCO3/L

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
MB0410W1					
ND	2.0	SM 2320B	4-10-23	4-10-23	
	MB0410W1	MB0410W1	MB0410W1	Result PQL Method Prepared MB0410W1	Result PQL Method Prepared Analyzed MB0410W1 MB0410W1

Analyte	Res	sult	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE			-					-	
Laboratory ID:	04-08	38-01							
	ORIG	DUP							
Bicarbonate	122	116	NA	NA	NA	NA	5	10	
SPIKE BLANK									
Laboratory ID:	SB04	10W1							
	S	В	SB		SB				
Bicarbonate	92	2.0	100	NA	92	89-110	NA	NA	



CHLORIDE SM 4500-CI E QUALITY CONTROL

Matrix: Water Units: mg/L

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

				Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	04-04	45-01							
	ORIG	DUP							
Chloride	5.20	4.98	NA	NA	NA	NA	4	11	
MATRIX SPIKE									
Laboratory ID:	04-04	15-01							
	Μ	IS	MS		MS				
Chloride	50	.6	50.0	5.20	91	85-121	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB04	17W1							
	S	В	SB		SB				
Chloride	54	.5	50.0	NA	109	90-119	NA	NA	



NITRATE (as Nitrogen) EPA 353.2 QUALITY CONTROL

Matrix: Water Units: mg/L-N

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
B0407W1					
ND	0.050	EPA 353.2	4-7-23	4-7-23	
	B0407W1	B0407W1	B0407W1	B0407W1	B0407W1

				Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	04-07	'9-01							
	ORIG	DUP							
Nitrate	0.0611	ND	NA	NA	NA	NA	NA	10	
MATRIX SPIKE									
Laboratory ID:	04-07	'9-01							
	M	S	MS		MS				
Nitrate	1.9	95	2.00	0.0611	94	88-125	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB040)7W1							
	SI	В	SB		SB				
Nitrate	1.8	39	2.00	NA	95	90-120	NA	NA	



SULFATE ASTM D516-11 QUALITY CONTROL

Matrix: Water Units: mg/L

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

				Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	04-07	79-03							
	ORIG	DUP							
Sulfate	ND	ND	NA	NA	NA	NA	NA	10	
MATRIX SPIKE									
Laboratory ID:	04-07	79-03							
	N	IS	MS		MS				
Sulfate	9.	42	10.0	ND	94	72-128	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB04	10W1							
	S	В	SB		SB				
Sulfate	10).1	10.0	NA	101	85-114	NA	NA	



TOTAL DISSOLVED SOLIDS SM 2540C QUALITY CONTROL

Matrix: Water Units: mg/L

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
MB0407W1					
ND	13	SM 2540C	4-7-23	4-7-23	
	MB0407W1	MB0407W1	MB0407W1	Result PQL Method Prepared MB0407W1	Result PQL Method Prepared Analyzed MB0407W1

				Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	04-01	19-01							
	ORIG	DUP							
Total Dissolved Solids	167	148	NA	NA	NA	NA	12	23	
SPIKE BLANK									
Laboratory ID:	SB04	07W1							
	S	В	SB		SB				
Total Dissolved Solids	49	91	500	NA	98	89-120	NA	NA	



AMMONIA (as Nitrogen) SM 4500-NH₃ D QUALITY CONTROL

Matrix: Water Units: mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0407W2					
Ammonia	ND	0.050	SM 4500-NH3 D	4-7-23	4-7-23	

				Source	Percent	Recovery		RPD	
Analyte	Re	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	04-01	11-21							
	ORIG	DUP							
Ammonia	ND	ND	NA	NA	NA	NA	NA	15	
MATRIX SPIKE									
Laboratory ID:	04-01	11-21							
	Ν	1S	MS		MS				
Ammonia	4.	56	5.00	ND	91	87-110	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB04	07W2							
	S	B	SB		SB				
Ammonia	4.	77	5.00	NA	95	88-110	NA	NA	



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TOTAL METALS EPA 200.8/200.7 QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
MB0406WH1					
ND	50	EPA 200.7	4-6-23	4-6-23	
ND	1000	EPA 200.7	4-6-23	4-6-23	
ND	10	EPA 200.7	4-6-23	4-6-23	
MB0406WM1					
ND	3.3	EPA 200.8	4-6-23	4-6-23	
	MB0406WH1 ND ND ND MB0406WM1	MB0406WH1 ND 50 ND 1000 ND 10 MB0406WM1	MB0406WH1 ND 50 EPA 200.7 ND 1000 EPA 200.7 ND 10 EPA 200.7 MB0406WM1	Result PQL Method Prepared MB0406WH1	Result PQL Method Prepared Analyzed MB0406WH1

					Source	Pe	rcent	Recovery		RPD	
Analyte	Res	sult	Spike	Level	Result	Rec	overy	Limits	RPD	Limit	Flags
DUPLICATE											
Laboratory ID:	03-28	33-03									
	ORIG	DUP									
Iron	ND	ND	NA	NA		1	NA	NA	NA	20	
Magnesium	ND	ND	NA	NA		1	NA	NA	NA	20	
Manganese	ND	ND	NA	NA		1	NA	NA	NA	20	
Laboratory ID:	03-3 ²	10-04									
Arsenic	7.31	6.47	NA	NA		1	NA	NA	12	20	
MATRIX SPIKES											
Laboratory ID:	03-28	33-03									
	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:	03-3 ²	10-04									
Arsenic	120	123	111	111	7.31	101	104	75-125	3	20	



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DISSOLVED METALS EPA 200.8 QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
MB0410D1					
ND	1100	EPA 200.7		4-10-23	
ND	56	EPA 200.7		4-10-23	
ND	1100	EPA 200.7		4-10-23	
ND	11	EPA 200.7		4-10-23	
ND	1100	EPA 200.7		4-10-23	
ND	1100	EPA 200.7		4-10-23	
	3.0	EPA 200.8		1-7-23	
	MB0410D1 ND ND ND ND ND ND	MB0410D1 ND 1100 ND 56 ND 1100 ND 11 ND 1100 ND 1100 ND 1100 MD 1100 MD 1100 ND 1100 ND 1100	MB0410D1 ND 1100 EPA 200.7 ND 56 EPA 200.7 ND 1100 EPA 200.7 ND 1100 EPA 200.7 ND 11 EPA 200.7 ND 1100 EPA 200.7 ND 1100 EPA 200.7 ND 1100 EPA 200.7 MD 1100 EPA 200.7 MD 1100 EPA 200.7	Result PQL Method Prepared MB0410D1	Result PQL Method Prepared Analyzed MB0410D1

					Source	Per	rcent	Recovery		RPD	
Analyte	Re	sult	Spike	Level	Result	Rec	overy	Limits	RPD	Limit	Flags
DUPLICATE											
Laboratory ID:	03-30	61-01									
	ORIG	DUP									
Calcium	6820	6880	NA	NA		1	NA	NA	1	20	
Iron	ND	ND	NA	NA		1	٨٨	NA	NA	20	
Magnesium	1150	1150	NA	NA		1	٨٨	NA	0	20	
Manganese	ND	ND	NA	NA		1	NA	NA	NA	20	
Potassium	ND	ND	NA	NA		1	NA	NA	NA	20	
Sodium	ND	ND	NA	NA		1	NA	NA	NA	20	
Laboratory ID:	040	45-02									
Arsenic	9.14	8.76	NA	NA		1	NA	NA	4	20	
MATRIX SPIKES											
Laboratory ID:	03-30	61-01									
	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:	04-04	45-02									
Arsenic	94.8	99.8	80.0	80.0	9.14	107	113	75-125	5	20	

M

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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.

Ζ-

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



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Environmental Inc. 14648 NE 95th Street • Redmond, WA 98052		round Request rorking days)		Lab	oorat	ory	Nur	nbe	r: 0	04-045										_
Phone: (425) 883-3881 • www.onsite-env.com Company: GeoEngineers Project Number: <u>9594-002-05</u> 26410-001-01 Project Name: Go East Project Manager: Garrett Leque Sampled by: Barrett Augustation AutoEntSout	Same I	s 3 Days	Number of Containers						Organocniorine Pesticides 8081A TOC, alk+bicarb, Cl, NO3, SO4, TDS, NH3)					netals						are
Lab ID Sample Identification	Date Sampled S	Time Sampled Matrix	Number		NWTPH-Gx	NWTPH-Dx	Volatiles 8260B	PAHs 82	TOC, a	TOC, 1	T/D metals	T/D metals	TOmetals	Total metals					_	% Moisture
1 мW-G-20230405 2 мW-7-20230405	4.5-23	1348 GW 1110 GW	R R R					PP	У У У				× V	× A						
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Data Package: Level III 🗌 L	Level IV	Electronic Data	Deliverables	(EDDs)
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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	



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TOTAL ORGANIC CARBON SM 5310B

Matrix:	Water
Units:	mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



TOTAL ALKALINITY SM 2320B

Matrix: Water Units: mg CaCO3/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



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BICARBONATE SM 2320B

Matrix: Water Units: mg CaCO3/L

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



CHLORIDE SM 4500-CI E

Matrix:	Water
Units:	mg/L

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



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NITRATE (as Nitrogen) EPA 353.2

Matrix:	Water		
Units:	mg/L-N		

Analyte		PQL	Method	Date Prepared	Date Analyzed	
	Result					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	



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SULFATE ASTM D516-11

Matrix:	Water
Units:	mg/L

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



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TOTAL DISSOLVED SOLIDS SM 2540C

Matrix: Water Units: mg/L				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



AMMONIA (as Nitrogen) SM 4500-NH₃ D

Matrix: Water Units: mg/L				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



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TOTAL METALS EPA 200.8/200.7

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



DISSOLVED METALS EPA 200.8/200.7

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



TOTAL ORGANIC CARBON SM 5310B QUALITY CONTROL

Matrix: Water Units: mg/L

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
MB0413W1					
ND	1.0	SM 5310B	4-13-23	4-13-23	
	MB0413W1	MB0413W1	MB0413W1	Result PQL Method Prepared MB0413W1	Result PQL Method Prepared Analyzed MB0413W1

				Source	Percent	Recovery		RPD	
Analyte	Re	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	04-04	45-01							
	ORIG	DUP							
Total Organic Carbon	2.85	2.77	NA	NA	NA	NA	3	12	
MATRIX SPIKE									
Laboratory ID:	04-04	45-01							
	N	1S	MS		MS				
Total Organic Carbon	12	2.8	10.0	2.85	100	80-120	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB04	13W1							
	S	B	SB		SB				
Total Organic Carbon	9.	99	10.0	NA	100	80-118	NA	NA	



TOTAL ALKALINITY SM 2320B QUALITY CONTROL

Matrix: Water Units: mg CaCO3/L

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

	_			Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	04-08	38-01							
	ORIG	DUP							
Total Alkalinity	122	116	NA	NA	NA	NA	5	10	
SPIKE BLANK									
Laboratory ID:	SB04	10W1							
	S	В	SB		SB				
Total Alkalinity	92	2.0	100	NA	92	89-110	NA	NA	



BICARBONATE SM 2320B QUALITY CONTROL

Matrix: Water Units: mg CaCO3/L

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
MB0410W1					
ND	2.0	SM 2320B	4-10-23	4-10-23	
	MB0410W1	MB0410W1	MB0410W1	Result PQL Method Prepared MB0410W1	Result PQL Method Prepared Analyzed MB0410W1 MB0410W1

Analyte	Res	sult	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE			•						¥
Laboratory ID:	04-08	38-01							
	ORIG	DUP							
Bicarbonate	122	116	NA	NA	NA	NA	5	10	
SPIKE BLANK									
Laboratory ID:	SB04	10W1							
	S	В	SB		SB				
Bicarbonate	92	2.0	100	NA	92	89-110	NA	NA	



CHLORIDE SM 4500-CI E QUALITY CONTROL

Matrix: Water Units: mg/L

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

				Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	04-04	45-01							
	ORIG	DUP							
Chloride	5.20	4.98	NA	NA	NA	NA	4	11	
MATRIX SPIKE									
Laboratory ID:	04-04	15-01							
	Μ	IS	MS		MS				
Chloride	50).6	50.0	5.20	91	85-121	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB04	17W1							
	S	В	SB		SB				
Chloride	54	.5	50.0	NA	109	90-119	NA	NA	



NITRATE (as Nitrogen) EPA 353.2 QUALITY CONTROL

Matrix: Water Units: mg/L-N

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

				Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	04-07	'9-01							
	ORIG	DUP							
Nitrate	0.0611	ND	NA	NA	NA	NA	NA	10	
MATRIX SPIKE									
Laboratory ID:	04-07	'9-01							
	M	S	MS		MS				
Nitrate	1.9	95	2.00	0.0611	94	88-125	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB040)7W1							
	SI	В	SB		SB				
Nitrate	1.8	39	2.00	NA	95	90-120	NA	NA	



SULFATE ASTM D516-11 QUALITY CONTROL

Matrix: Water Units: mg/L

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

				Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	04-07	79-03							
	ORIG	DUP							
Sulfate	ND	ND	NA	NA	NA	NA	NA	10	
MATRIX SPIKE									
Laboratory ID:	04-07	79-03							
	N	IS	MS		MS				
Sulfate	9.	42	10.0	ND	94	72-128	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB04	10W1							
	S	В	SB		SB				
Sulfate	10).1	10.0	NA	101	85-114	NA	NA	



TOTAL DISSOLVED SOLIDS SM 2540C QUALITY CONTROL

Matrix: Water Units: mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0414W1					
Total Dissolved Solids	ND	13	SM 2540C	4-14-23	4-14-23	

	D			Source	Percent	Recovery		RPD	-
Analyte	Res	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	04-10	08-04							
	ORIG	DUP							
Total Dissolved Solids	119	109	NA	NA	NA	NA	9	23	
SPIKE BLANK									
Laboratory ID:	SB04	14W1							
	S	В	SB		SB				
Total Dissolved Solids	49	95	500	NA	99	89-120	NA	NA	



AMMONIA (as Nitrogen) SM 4500-NH₃ D QUALITY CONTROL

Matrix: Water Units: mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0411W1					
Ammonia	ND	0.050	SM 4500-NH3 D	4-11-23	4-11-23	

				Source	Percent	Recovery		RPD	
Analyte	Re	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	03-30	00-01							
	ORIG	DUP							
Ammonia	ND	ND	NA	NA	NA	NA	NA	15	
MATRIX SPIKE									
Laboratory ID:	03-30	00-01							
	Ν	1S	MS		MS				
Ammonia	4.	58	5.00	ND	92	87-110	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB04	11W1							
	S	B	SB		SB				
Ammonia	4.	80	5.00	NA	96	88-110	NA	NA	



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TOTAL METALS EPA 200.8/200.7 QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	

					Source	urce Percent		Recovery		RPD	
Analyte	Re	sult	Spike	Level	Result	Rec	overy	Limits	RPD	Limit	Flags
DUPLICATE											
Laboratory ID:	04-08	89-01									
	ORIG	DUP									
Iron	576	544	NA	NA		I	NA	NA	6	20	
Magnesium	20300	20400	NA	NA		I	NA	NA	0	20	
Manganese	749	764	NA	NA			NA	NA	2	20	
Laboratory ID:	04-1	50-01									
Arsenic	ND	ND	NA	NA		I	NA	NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	04-08	89-01									
	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:	04-00	66-06									
Arsenic	105	105	111	111	ND	95	95	75-125	0	20	



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DISSOLVED METALS EPA 200.8/200.7 QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

onno. dg/L (ppb)				Date	Date		
Analyte	Result	PQL	Method	Prepared	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		

			So		Source	Per	rcent	Recovery		RPD		
Analyte	Re	sult	Spike	Level	Result	Rec	overy	Limits	RPD	Limit	Flags	
DUPLICATE												
Laboratory ID:	03-36	61-01										
	ORIG	DUP										
Calcium	6820	6880	NA	NA		1	NA	NA	1	20		
Iron	ND	ND	NA	NA		1	٨٨	NA	NA	20		
Magnesium	1150	1150	NA	NA		1	٨٨	NA	0	20		
Manganese	ND	ND	NA	NA		1	٨٨	NA	NA	20		
Potassium	ND	ND	NA	NA		1	٨٨	NA	NA	20		
Sodium	ND	ND	NA	NA		1	NA	NA	NA	20		
Laboratory ID:	04-1	50-01										
Arsenic	ND	ND	NA	NA		1	NA	NA	NA	20		
MATRIX SPIKES												
Laboratory ID:	03-36	61-01										
	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		
	04.44	-0.04										
Laboratory ID:		50-01						75 405				
Arsenic	86.2	90.4	80.0	80.0	ND	108	113	75-125	5	20		



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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.

Ζ-

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



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ConSite	Ch	Chain of Custody							Page of													
Environmental Inc.	Turnaround Ro (in working d	equest days)		Lab	Laboratory Number:						1-	n	8									
Phone: (425) 883-3881 • www.onsite-env.com Company: GeoEngineers	(Check On								-	TDS, NH3)			-									
Project Number: NB 24410-001-01	2 Days										381A	SO4, TDS										
Project Name: Go East Project Manager: Garrett Leque								M (low-level)	Pesticides 8081A	TOC, alk+bicarb, Cl, NO3, SI TOC. TDS. NH3	3, Cl, N03, S	.At	-									
Sampled by: BJ	(othe	(other)			I-Gx	YD-Y	Volatiles 8260B	PAHs 8270D/SIM	Organochlorine	alk+bicar	TOC, TDS, NH3	etals	T/D metals	Total metals						ture		
Lab ID Sample Identification	Date Time Sampled Sample	d Matrix	Number of Containers		NWTPH-Gx	NWTPH-Dx	Volatile	PAHs 8	Organ	TOC, a	TOC,	T/D metals	T/D n	Total						% Moisture		
1 MW-Z-20230407	417(23 1200	SW	6							X	>	$\langle \rangle$										
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Reviewed/Date	Reviewed/I	Reviewed/Date						Chromatograms with final report														

Data Package: Level III 🗌 Level IV 🗌 Electronic Data Deliverables (EDDs)



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	



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GASOLINE RANGE ORGANICS NWTPH-Gx

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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				



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				



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VOLATILE ORGANICS EPA 8260D Page 1 of 2

Matrix: Water Units: ug/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	
lodomethane	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		0.20	EPA 8260D	4-10-23	4-10-23	



VOLATILE ORGANICS EPA 8260D Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
	MW-10-20230407	FQL	Wethod	Flepaleu	Analyzeu	i lays
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 EPA 8260D	4-10-23 4-10-23	4-10-23 4-10-23	
1,3-Dichloropropane	ND	0.20	EPA 8260D EPA 8260D	4-10-23	4-10-23	
2-Hexanone	ND	2.0	EPA 8260D EPA 8260D	4-10-23 4-10-23	4-10-23	
Dibromochloromethane	ND	0.20	EPA 8200D EPA 8260D	4-10-23 4-10-23	4-10-23 4-10-23	
		0.20				
1,2-Dibromoethane	ND		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	e 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				



PAHs EPA 8270E/SIM

Matrix: Water Units: ug/L

0				Date	Date	
Analyte	Result	PQL	Method	Prepared	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				



ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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				



TOTAL ORGANIC CARBON SM 5310B

Matrix: Water Units: mg/L						
·				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



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TOTAL ALKALINITY SM 2320B

Matrix: Water Units: mg CaCO3/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



BICARBONATE SM 2320B

Matrix: Water Units: mg CaCO3/L

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



CHLORIDE SM 4500-CI E

Matrix:	Water
Units:	mg/L

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



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NITRATE (as Nitrogen) EPA 353.2

Matrix:	Water
Units:	mg/L-N

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



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	



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TOTAL DISSOLVED SOLIDS SM 2540C

Matrix: Water Units: mg/L				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



AMMONIA (as Nitrogen) SM 4500-NH₃ D

Matrix:	Water
Units:	mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



TOTAL METALS EPA 200.8/200.7/7470A

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



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DISSOLVED METALS EPA 200.8/200.7/7470A

Matrix: Water Units: ug/L (ppb)

				Date	Date		
Analyte	Result	PQL	Method	Prepared	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		
ron	390	56	EPA 200.7		4-10-23		
_ead	ND	1.0	EPA 200.8		4-13-23		
Vagnesium	20000	1100	EPA 200.7		4-10-23		
Vanganese	760	11	EPA 200.7		4-10-23		
Vercury	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		



GASOLINE RANGE ORGANICS NWTPH-Gx QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

						Date	Date	•	
Analyte	nalyte Result		PQL	Me	ethod	Prepared	Analyzed		Flags
METHOD BLANK									
Laboratory ID:		MB0410W1							
Gasoline		ND	100	NW	TPH-Gx	4-10-23	4-10-2	23	
Surrogate:	Pe	rcent Recover	Control Lim	its					
Fluorobenzene		79	65-122						
				Source	Percen	t Recovery		RPD	
Analyte	Res	sult	Spike Level	Result	Recove	ry Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	04-09	92-01							
	ORIG	DUP							
Gasoline	ND	ND	NA NA		NA	NA	NA	30	
Surrogate:									
Fluorobenzene					83 7	75 65-122			



DIESEL AND HEAVY OIL RANGE ORGANICS NWTPH-Dx QUALITY CONTROL

Matrix: Water Units: mg/L (ppm)

0 (11)				Date	Date	
Analyte	Result	PQL	Method	Prepared	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				

					Source	Perce	nt Recovery		RPD	
Analyte	Res	sult	Spike	Level	Result	Recove	ery Limits	RPD	Limit	Flags
DUPLICATE										
Laboratory ID:	SB04	10W1								
	ORIG	DUP								
Diesel Fuel #2	0.470	0.423	NA	NA		NA	NA	11	NA	
Surrogate:										
o-Terphenyl						120	106 50-150			



VOLATILE ORGANICS EPA 8260D QUALITY CONTROL Page 1 of 2

Matrix: Water Units: ug/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	
lodomethane	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	
(),;;	-					



VOLATILE ORGANICS EPA 8260D QUALITY CONTROL Page 2 of 2

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	
lsopropylbenzene	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				



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VOLATILE ORGANICS EPA 8260D QUALITY CONTROL Page 1 of 2

Water Matrix: Units: ug/L

					Pere	cent	Recovery		RPD	
Res	ult	Spike	Level		Reco	overy	Limits	RPD	Limit	Flags
SB041	10W1									
SB	SBD	SB	SBD		SB	SBD				
9.97	9.57	10.0	10.0		100	96	34-166	4	21	
10.1	10.5	10.0	10.0		101	105	63-138	4	18	
10.5	10.3	10.0	10.0		105	103	71-135	2	20	
12.1		10.0	10.0		121		20-151	3	36	
8.49	8.18	10.0	10.0		85	82	76-125	4	20	
9.50	9.14	10.0	10.0		95	91	75-131	4	19	
9.49	9.44	10.0	10.0		95	94	78-125	1	19	
8.81	9.16	10.0	10.0		88	92	76-125	4	18	
12.4	13.1	10.0	10.0		124	131	10-155	5	40	
9.22	8.88	10.0	10.0		92	89	58-129	4	17	
9.56	9.19	10.0	10.0		96	92	80-120	4	15	
9.96	9.81	10.0	10.0		100	98	80-125	2	17	
9.71	9.43	10.0	10.0		97	94	80-122	3	15	
9.94	9.82	10.0	10.0		99	98	80-125	1	17	
10.0	9.44	10.0	10.0		100	94	80-131	6	15	
10.8	10.7	10.0	10.0		108	107	80-146	1	21	
9.99	9.85	10.0	10.0		100	99	80-129	1	17	
9.11	8.63	10.0	10.0		91	86	80-129	5	16	
11.1	10.7	10.0	10.0		111	107	80-125	4	18	
9.57	9.37	10.0	10.0		96	94	80-123	2	16	
9.44	9.25	10.0	10.0		94	93	80-123	2	18	
9.13	9.25	10.0	10.0		91	93	80-126	1	17	
9.35	9.22	10.0	10.0		94	92	80-126	1	18	
9.87	9.61	10.0	10.0		99	96	80-121	3	16	
9.44	9.19	10.0	10.0		94	92	80-124	3	15	
10.7	10.6	10.0	10.0		107	106	80-122	1	18	
10.4	10.2	10.0	10.0		104	102	80-123	2	15	
11.0	10.6	10.0	10.0		110	106	80-123	4	15	
10.5	10.2	10.0	10.0		105	102	80-125	3	15	
10.9	10.7	10.0	10.0		109	107	80-129	2	15	
10.3	9.97	10.0	10.0		103	100	80-124	3	15	
9.65	9.37	10.0	10.0		97	94	80-120	3	18	
11.0	10.8	10.0	10.0		110	108	80-134	2	17	
	SB04 ⁷ SB 9.97 10.1 10.5 12.1 8.49 9.50 9.49 8.81 12.4 9.22 9.56 9.96 9.71 9.94 10.0 10.8 9.99 9.11 11.1 9.57 9.44 9.13 9.35 9.87 9.44 9.13 9.35 9.87 9.44 10.7 10.4 11.0 10.5 10.9 10.3 9.65	9.97 9.57 10.1 10.5 10.5 10.3 12.1 11.7 8.49 8.18 9.50 9.14 9.49 9.44 8.81 9.16 12.4 13.1 9.22 8.88 9.56 9.19 9.96 9.81 9.71 9.43 9.94 9.82 10.0 9.44 10.8 10.7 9.99 9.85 9.11 8.63 11.1 10.7 9.57 9.37 9.44 9.25 9.13 9.25 9.13 9.25 9.13 9.25 9.35 9.22 9.87 9.61 9.44 9.19 10.7 10.6 10.4 10.2 11.0 10.6 10.5 10.2 10.9 10.7 10.3 9.97 9.65 9.37	SB0410W1 SB SBD SB 9.97 9.57 10.0 10.1 10.5 10.0 10.5 10.3 10.0 12.1 11.7 10.0 8.49 8.18 10.0 9.50 9.14 10.0 9.49 9.44 10.0 9.49 9.44 10.0 9.22 8.88 10.0 9.56 9.19 10.0 9.56 9.19 10.0 9.71 9.43 10.0 9.71 9.43 10.0 9.71 9.43 10.0 9.71 9.43 10.0 9.71 9.43 10.0 9.71 9.43 10.0 9.71 9.43 10.0 9.71 9.43 10.0 9.71 9.43 10.0 9.71 9.43 10.0 9.99 9.85 10.0 9.10 8.63 </td <td>SB0410W1 SB SBD SB SBD 9.97 9.57 10.0 10.0 10.1 10.5 10.0 10.0 10.5 10.3 10.0 10.0 12.1 11.7 10.0 10.0 8.49 8.18 10.0 10.0 9.50 9.14 10.0 10.0 9.49 9.44 10.0 10.0 9.49 9.44 10.0 10.0 9.22 8.88 10.0 10.0 9.56 9.19 10.0 10.0 9.56 9.19 10.0 10.0 9.71 9.43 10.0 10.0 9.71 9.43 10.0 10.0 9.71 9.43 10.0 10.0 9.71 9.43 10.0 10.0 9.71 9.43 10.0 10.0 9.71 9.43 10.0 10.0 9.71 9.82 10.0</td> <td>SB0410W1 SB SBD SB SBD 9.97 9.57 10.0 10.0 10.1 10.5 10.0 10.0 10.5 10.3 10.0 10.0 12.1 11.7 10.0 10.0 8.49 8.18 10.0 10.0 9.50 9.14 10.0 10.0 9.49 9.44 10.0 10.0 9.49 9.44 10.0 10.0 9.49 9.44 10.0 10.0 9.49 9.44 10.0 10.0 9.49 9.44 10.0 10.0 9.22 8.88 10.0 10.0 9.56 9.19 10.0 10.0 9.71 9.43 10.0 10.0 9.71 9.43 10.0 10.0 9.94 9.82 10.0 10.0 10.8 10.7 10.0 10.0 9.94 9.82 10.0</td> <td>Result Spike Level Record SB0410W1 SB SBD SB SBD SB 9.97 9.57 10.0 10.0 100 10.1 10.5 10.0 10.0 101 10.5 10.3 10.0 10.0 101 10.5 10.3 10.0 10.0 105 12.1 11.7 10.0 10.0 95 9.50 9.14 10.0 10.0 95 9.49 9.44 10.0 10.0 95 9.49 9.44 10.0 10.0 124 9.22 8.88 10.0 10.0 92 9.56 9.19 10.0 10.0 100 9.71 9.43 10.0 10.0 100 9.71 9.43 10.0 10.0 100 9.71 9.43 10.0 10.0 100 9.71 9.43 10.0 10.0 100</td> <td>SB0410W1 SB SBD SB SBD SB SBD 9.97 9.57 10.0 10.0 100 96 10.1 10.5 10.0 10.0 101 105 10.5 10.3 10.0 10.0 101 105 10.5 10.3 10.0 10.0 121 117 8.49 8.18 10.0 10.0 85 82 9.50 9.14 10.0 10.0 95 91 9.49 9.44 10.0 10.0 95 94 8.81 9.16 10.0 10.0 88 92 12.4 13.1 10.0 10.0 92 89 9.56 9.19 10.0 10.0 92 89 9.56 9.19 10.0 10.0 97 94 9.94 9.82 10.0 10.0 98 9.71 9.43 10.0 10.0 100</td> <td>Result Spike Level Recovery Limits SB0410W1 SB SBD SB SBD SB SBD 9.97 9.57 10.0 10.0 100 96 34-166 10.1 10.5 10.0 10.0 101 105 63-138 10.5 10.3 10.0 10.0 105 103 71-135 12.1 11.7 10.0 10.0 121 117 20-151 8.49 8.18 10.0 10.0 95 91 75-131 9.49 9.44 10.0 10.0 95 94 78-125 9.49 9.44 10.0 10.0 124 131 10-155 9.22 8.88 10.0 10.0 92 89 58-129 9.56 9.19 10.0 10.0 100 98 80-125 9.71 9.43 10.0 10.0 100 94 80-122 9.94</td> <td>Result Spike Level Recovery Limits RPD SB0410W1 SB SBD SB SBD SB SBD 9.97 9.57 10.0 10.0 100 96 34-166 4 10.1 10.5 10.0 10.0 101 105 63-138 4 10.5 10.3 10.0 10.0 121 117 20-151 3 8.49 8.18 10.0 10.0 85 82 76-125 4 9.50 9.14 10.0 10.0 95 91 75-131 4 9.49 9.44 10.0 10.0 88 92 76-125 4 12.4 13.1 10.0 10.0 92 89 58-129 4 9.56 9.19 10.0 10.0 92 80-125 2 3 9.96 9.81 10.0 10.0 97 94 80-122 3 <</td> <td>Result Spike Level Recovery Limits RPD Limit SB SBD SB SB</td>	SB0410W1 SB SBD SB SBD 9.97 9.57 10.0 10.0 10.1 10.5 10.0 10.0 10.5 10.3 10.0 10.0 12.1 11.7 10.0 10.0 8.49 8.18 10.0 10.0 9.50 9.14 10.0 10.0 9.49 9.44 10.0 10.0 9.49 9.44 10.0 10.0 9.22 8.88 10.0 10.0 9.56 9.19 10.0 10.0 9.56 9.19 10.0 10.0 9.71 9.43 10.0 10.0 9.71 9.43 10.0 10.0 9.71 9.43 10.0 10.0 9.71 9.43 10.0 10.0 9.71 9.43 10.0 10.0 9.71 9.43 10.0 10.0 9.71 9.82 10.0	SB0410W1 SB SBD SB SBD 9.97 9.57 10.0 10.0 10.1 10.5 10.0 10.0 10.5 10.3 10.0 10.0 12.1 11.7 10.0 10.0 8.49 8.18 10.0 10.0 9.50 9.14 10.0 10.0 9.49 9.44 10.0 10.0 9.49 9.44 10.0 10.0 9.49 9.44 10.0 10.0 9.49 9.44 10.0 10.0 9.49 9.44 10.0 10.0 9.22 8.88 10.0 10.0 9.56 9.19 10.0 10.0 9.71 9.43 10.0 10.0 9.71 9.43 10.0 10.0 9.94 9.82 10.0 10.0 10.8 10.7 10.0 10.0 9.94 9.82 10.0	Result Spike Level Record SB0410W1 SB SBD SB SBD SB 9.97 9.57 10.0 10.0 100 10.1 10.5 10.0 10.0 101 10.5 10.3 10.0 10.0 101 10.5 10.3 10.0 10.0 105 12.1 11.7 10.0 10.0 95 9.50 9.14 10.0 10.0 95 9.49 9.44 10.0 10.0 95 9.49 9.44 10.0 10.0 124 9.22 8.88 10.0 10.0 92 9.56 9.19 10.0 10.0 100 9.71 9.43 10.0 10.0 100 9.71 9.43 10.0 10.0 100 9.71 9.43 10.0 10.0 100 9.71 9.43 10.0 10.0 100	SB0410W1 SB SBD SB SBD SB SBD 9.97 9.57 10.0 10.0 100 96 10.1 10.5 10.0 10.0 101 105 10.5 10.3 10.0 10.0 101 105 10.5 10.3 10.0 10.0 121 117 8.49 8.18 10.0 10.0 85 82 9.50 9.14 10.0 10.0 95 91 9.49 9.44 10.0 10.0 95 94 8.81 9.16 10.0 10.0 88 92 12.4 13.1 10.0 10.0 92 89 9.56 9.19 10.0 10.0 92 89 9.56 9.19 10.0 10.0 97 94 9.94 9.82 10.0 10.0 98 9.71 9.43 10.0 10.0 100	Result Spike Level Recovery Limits SB0410W1 SB SBD SB SBD SB SBD 9.97 9.57 10.0 10.0 100 96 34-166 10.1 10.5 10.0 10.0 101 105 63-138 10.5 10.3 10.0 10.0 105 103 71-135 12.1 11.7 10.0 10.0 121 117 20-151 8.49 8.18 10.0 10.0 95 91 75-131 9.49 9.44 10.0 10.0 95 94 78-125 9.49 9.44 10.0 10.0 124 131 10-155 9.22 8.88 10.0 10.0 92 89 58-129 9.56 9.19 10.0 10.0 100 98 80-125 9.71 9.43 10.0 10.0 100 94 80-122 9.94	Result Spike Level Recovery Limits RPD SB0410W1 SB SBD SB SBD SB SBD 9.97 9.57 10.0 10.0 100 96 34-166 4 10.1 10.5 10.0 10.0 101 105 63-138 4 10.5 10.3 10.0 10.0 121 117 20-151 3 8.49 8.18 10.0 10.0 85 82 76-125 4 9.50 9.14 10.0 10.0 95 91 75-131 4 9.49 9.44 10.0 10.0 88 92 76-125 4 12.4 13.1 10.0 10.0 92 89 58-129 4 9.56 9.19 10.0 10.0 92 80-125 2 3 9.96 9.81 10.0 10.0 97 94 80-122 3 <	Result Spike Level Recovery Limits RPD Limit SB SBD SB SB



VOLATILE ORGANICS EPA 8260D QUALITY CONTROL Page 2 of 2

					Per	cent	Recovery		RPD	
Analyte	Res	ult	Spike	Level	Rec	overy	Limits	RPD	Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB041	10W1								
	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:			. 0.0					5		
Dibromofluoromethane					96	96	75-127			
Toluene-d8					90 100	90 99	80-127			
4-Bromofluorobenzene					100	103	78-125			



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

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PAHs EPA 8270E/SIM QUALITY CONTROL

Matrix: Water Units: ug/L

onna. ug/L				Date	Date	
Analyte	Result	PQL	Method	Prepared	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				



PAHs EPA 8270E/SIM QUALITY CONTROL

Matrix: Water Units: ug/L

					Per	cent	Recovery		RPD	
Analyte	Re	sult	Spike	Level	Rec	overy	Limits	RPD	Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB04	10W1								
	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			



ORGANOCHLORINE PESTICIDES EPA 8081B QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

onita. ug/L (ppb)				Date	Date	
Analyte	Result	PQL	Method	Prepared	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				



ORGANOCHLORINE PESTICIDES EPA 8081B QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

					Source	Per	cent	Recovery		RPD	
Analyte	Re	sult	Spike	Level	Result	Reco	overy	Limits	RPD	Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB04	11W2									
	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			



TOTAL ORGANIC CARBON SM 5310B QUALITY CONTROL

Matrix: Water Units: mg/L

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
MB0413W1					
ND	1.0	SM 5310B	4-13-23	4-13-23	
	MB0413W1	MB0413W1	MB0413W1	Result PQL Method Prepared MB0413W1	Result PQL Method Prepared Analyzed MB0413W1

				Source	Percent	Recovery		RPD	
Analyte	Re	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	04-04	45-01							
	ORIG	DUP							
Total Organic Carbon	2.85	2.77	NA	NA	NA	NA	3	12	
MATRIX SPIKE									
Laboratory ID:	04-04	45-01							
	Ν	1S	MS		MS				
Total Organic Carbon	12	2.8	10.0	2.85	100	80-120	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB04	13W1							
	S	B	SB		SB				
Total Organic Carbon	9.	99	10.0	NA	100	80-118	NA	NA	



TOTAL ALKALINITY SM 2320B QUALITY CONTROL

Matrix: Water Units: mg CaCO3/L

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

				Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	04-08	38-01							
	ORIG	DUP							
Total Alkalinity	122	116	NA	NA	NA	NA	5	10	
SPIKE BLANK									
Laboratory ID:	SB04	10W1							
	S	В	SB		SB				
Total Alkalinity	92	2.0	100	NA	92	89-110	NA	NA	



BICARBONATE SM 2320B QUALITY CONTROL

Matrix: Water Units: mg CaCO3/L

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
MB0410W1					
ND	2.0	SM 2320B	4-10-23	4-10-23	
	MB0410W1	MB0410W1	MB0410W1	Result PQL Method Prepared MB0410W1	Result PQL Method Prepared Analyzed MB0410W1 MB0410W1

				Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike Level	Result	sult Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	04-08	38-01							
	ORIG	DUP							
Bicarbonate	122	116	NA	NA	NA	NA	5	10	
SPIKE BLANK									
Laboratory ID:	SB04	10W1							
	S	В	SB		SB				
Bicarbonate	92	2.0	100	NA	92	89-110	NA	NA	



CHLORIDE SM 4500-CI E QUALITY CONTROL

Matrix: Water Units: mg/L

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

				Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	04-04	45-01							
	ORIG	DUP							
Chloride	5.20	4.98	NA	NA	NA	NA	4	11	
MATRIX SPIKE									
Laboratory ID:	04-04	45-01							
	Μ	IS	MS		MS				
Chloride	50	.6	50.0	5.20	91	85-121	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB04	17W1							
	S	В	SB		SB				
Chloride	54	.5	50.0	NA	109	90-119	NA	NA	



NITRATE (as Nitrogen) EPA 353.2 QUALITY CONTROL

Matrix: Water Units: mg/L-N

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

				Source	Percent	Recovery		RPD	
Analyte	Res	ult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	04-07	'9-01							
	ORIG	DUP							
Nitrate	0.0611	ND	NA	NA	NA	NA	NA	10	
MATRIX SPIKE									
Laboratory ID:	04-07	'9-01							
	M	S	MS		MS				
Nitrate	1.9	95	2.00	0.0611	94	88-125	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB040)7W1							
	SI	В	SB		SB				
Nitrate	1.8	39	2.00	NA	95	90-120	NA	NA	



SULFATE ASTM D516-11 QUALITY CONTROL

Matrix: Water Units: mg/L

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

				Source	Percent	Recovery		RPD	
Analyte	Result		Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	04-07	79-03							
	ORIG	DUP							
Sulfate	ND	ND	NA	NA	NA	NA	NA	10	
MATRIX SPIKE									
Laboratory ID:	04-07	79-03							
	N	IS	MS		MS				
Sulfate	9.	42	10.0	ND	94	72-128	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB04	10W1							
	S	В	SB		SB				
Sulfate	10).1	10.0	NA	101	85-114	NA	NA	



TOTAL DISSOLVED SOLIDS SM 2540C QUALITY CONTROL

Matrix: Water Units: mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0414W1					
Total Dissolved Solids	ND	13	SM 2540C	4-14-23	4-14-23	

				Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	04-10	08-04							
	ORIG	DUP							
Total Dissolved Solids	119	109	NA	NA	NA	NA	9	23	
SPIKE BLANK									
Laboratory ID:	SB04	14W1							
	S	В	SB		SB				
Total Dissolved Solids	49	95	500	NA	99	89-120	NA	NA	



AMMONIA (as Nitrogen) SM 4500-NH₃ D QUALITY CONTROL

Matrix: Water Units: mg/L

onito. http://						Date	Dat	-	
Analyte		Result PQL Method		Prepared	Analyzed		Flags		
METHOD BLANK									
Laboratory ID:		MB0411W1							
Ammonia		ND	0.050	SM 45	00-NH3 D	4-11-23	4-11-	23	
Analyte	Ros	sult	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE	1.0.	Juit		Result	Recovery	Liinto		Linit	Tiugo
Laboratory ID:	03-30	00-01							
	ORIG	DUP							
Ammonia	ND	ND	NA	NA	NA	NA	NA	15	
MATRIX SPIKE									
Laboratory ID:	03-30	00-01							
	Μ	IS	MS		MS				
Ammonia	4.	58	5.00	ND	92	87-110	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB04	11W1							
	S	В	SB		SB				
Ammonia	4.8	80	5.00	NA	96	88-110	NA	NA	



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TOTAL METALS EPA 200.8/200.7/7470A QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



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TOTAL METALS EPA 200.8/200.7/7470A QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

- U					Source	Per	cent	Recovery		RPD	
Analyte	Re	sult	Spike	Level	Result	Rec	overy	Limits	RPD	Limit	Flags
DUPLICATE											
Laboratory ID:	04-08	89-01									
	ORIG	DUP									
Iron	576	544	NA	NA		Ν	A	NA	6	20	
Magnesium	20300	20400	NA	NA		Ν	A	NA	0	20	
Manganese	749	764	NA	NA		Ν	IA	NA	2	20	
Laboratory ID:	04-1	50-01									
Arsenic	ND	ND	NA	NA		Ν	IA	NA	NA	20	
Cadmium	ND	ND	NA	NA			IA	NA	NA	20	
Chromium	ND	ND	NA	NA			IA	NA	NA	20	
Copper	ND	ND	NA	NA			IA	NA	NA	20	
Lead	ND	ND	NA	NA			IA	NA	NA	20	
Nickel	ND	ND	NA	NA			A	NA	NA	20	
Selenium	ND	ND	NA	NA			A	NA	NA	20	
Zinc	ND	ND	NA	NA			IA	NA	NA	20	
Laboratory ID:	04-08	89-01									
Mercury	ND	ND	NA	NA		Ν	IA	NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	04-08	89-01									
i	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	
X											
Laboratory ID:	04-00	66-06									
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:	04-08	89-01									
Mercury	5.68	5.63	6.25	6.25	ND	91	90	75-125	1	20	



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DISSOLVED METALS EPA 200.8/200.7/7470A QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

onna. ug/L (ppb)				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



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DISSOLVED METALS EPA 200.8/200.7/7470A QUALITY CONTROL

					Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike	Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE										
Laboratory ID:	03-36	61-01								
	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:	04-15									
<u> </u>	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:	04-08	38-01								
Mercury	ND	ND	NA	NA		NA	NA	NA	20	



DISSOLVED METALS EPA 200.8/200.7/7470A QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

					Source	Per	cent	Recovery		RPD	
Analyte	Re	sult	Spike	Level	Result	Rec	overy	Limits	RPD	Limit	Flags
MATRIX SPIKES											
Laboratory ID:	03-36	61-01									
	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:	04-15 MS	50-01 MSD	MS	MSD		MS	MSD				
Arsenic	86.2	90.4	80.0	80.0	ND	MS 108	MSD 113	75-125	5	20	
Cadmium	77.0	90.4 78.4	80.0 80.0	80.0 80.0	ND	96	98	75-125	2	20 20	
Chromium	83.4	86.2	80.0	80.0	ND	104	108	75-125	2	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	74.0	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:	04-08	88-01									
Mercury	5.80	5.58	6.25	6.25	ND	93	89	75-125	4	20	



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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.

Ζ-

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



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Environmental Inc. 14648 NE 95th Street • Redmond, WA 98052	Turnaround Re (in working da	quest ays)		Labor	ator	γ Νι	ımb	er:	04	-	08	9						
Phone: (425) 883-3881 • www.onsite-env.com Company: GeoEngineers Project Number: NC	(Check One)		П					TDS, NH3)			10						1
6694-002-05 26410 - 001- 01 Project Name: Go East Project Manager: Garrett Leque	2 Days Standard (7 Day (TPH analysis 5		Number of Containers			B	PAHs 8270D/SIM (low-level)	Organochlorine Pesticides 8081A	CI, NO3, SO4,	NH3	(17	-						
Sampled by: JDE	(other)	ber of C		NWTPH-Dx	Volatiles 8260B	s 8270D/	anochlor	3, alk+bio	TOC, TDS, NH3	T/D metals) metals	Total metals					% Moisture
Lab ID Sample Identification	Date Time Sampled Sampled	Matrix	Num	LIVIN	NWTI	Volati	PAHs	Orge	TOC	Tot Lot	P P	D/T	Tot					% Mc
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Data Package: Level III 🗌 Level IV 🗌 Electronic Data Deliverables (EDDs)



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	



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GASOLINE RANGE ORGANICS NWTPH-Gx

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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				



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DIESEL AND HEAVY OIL RANGE ORGANICS NWTPH-Dx

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				



VOLATILE ORGANICS EPA 8260D Page 1 of 2

Matrix: Water Units: ug/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	
lodomethane	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		0.20	EPA 8260D	4-12-23	4-12-23	



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VOLATILE ORGANICS EPA 8260D Page 2 of 2

A	Desult	DOI		Date	Date	-
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
	MW-10-20230412					
Laboratory ID:	04-150-01	0.00		4.40.00	4.40.00	
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		1.0	EPA 8260D	4-12-23	4-12-23	
1,2,4-Trichlorobenzene	, ND ND	0.20	EPA 8260D EPA 8260D	4-12-23	4-12-23	
	ND					
Hexachlorobutadiene	ND	1.0 1.0	EPA 8260D	4-12-23	4-12-23	
Naphthalene			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				



PAHs EPA 8270E/SIM

Matrix: Water Units: ug/L

ernte: ug/L				Date	Date	
Analyte	Result	PQL	Method	Prepared	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				

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Water Units: ug/L (ppb)

	_			Date	Date	
Analyte	Result	PQL	Method	Prepared	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				



TOTAL ORGANIC CARBON SM 5310B

Matrix: Water Units: mg/L				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



TOTAL ALKALINITY SM 2320B

Matrix: Water Units: mg CaCO3/L

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



BICARBONATE SM 2320B

Matrix: Water Units: mg CaCO3/L

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



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CHLORIDE SM 4500-CI E

Matrix:	Water
Units:	mg/L

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



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NITRATE (as Nitrogen) EPA 353.2

Matrix:	Water
Units:	mg/L-N

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



SULFATE ASTM D516-11

Matrix:	Water
Units:	mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



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TOTAL DISSOLVED SOLIDS SM 2540C

Matrix: Water Units: mg/L				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



TOTAL DISSOLVED SOLIDS SM 2540C

Matrix: Water Units: mg/L

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



AMMONIA (as Nitrogen) SM 4500-NH₃ D

Analyte	Result	PQL	
Matrix: Units:			

Analyte	Result	PQL	Method	Prepared	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

Date

TOTAL METALS EPA 200.8/200.7/7470A

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



DISSOLVED METALS EPA 200.8/200.7/7470A

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	
ron	9500	500	EPA 200.7		4-14-23	
_ead	ND	1.0	EPA 200.8		4-13-23	
Magnesium	25000	10000	EPA 200.7		4-14-23	
Vanganese	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	



GASOLINE RANGE ORGANICS NWTPH-Gx QUALITY CONTROL

Analyte		Result	PQL	M	ethod	Date Prepared	Date Analyz		Flags
METHOD BLANK						-			
Laboratory ID:		MB0413W2							
Gasoline		ND	100	NW	TPH-Gx	4-13-23	4-13-2	23	
Surrogate:	Pe	rcent Recover	y Control Lir	nits					
Fluorobenzene		88	65-122						
Analyte	Ro	sult	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE	ILC.	Suit		Result	Recovery	Liinto		Liiiit	Tiago
Laboratory ID:	04-1	50-01							
	ORIG	DUP							
Gasoline	ND	ND	NA NA		NA	NA	NA	30	
Surrogate:									
Fluorobenzene					95 86	65-122			



DIESEL AND HEAVY OIL RANGE ORGANICS NWTPH-Dx QUALITY CONTROL

Matrix: Water Units: mg/L (ppm)

Analyte		Result	F	PQL	Me	thod	Date Prepared	Date Analyz		Flags
METHOD BLANK Laboratory ID:		MB0418W1								
Diesel Range Organics		ND	C).16	NW	FPH-Dx	4-18-23	4-18-2	23	
Lube Oil Range Organic	s	ND	C	.16	NW	FPH-Dx	4-18-23	4-18-2	23	
Surrogate:	Pe	rcent Recovery	Contr	ol Lim	its					
o-Terphenyl		97	50)-150						
					Source	Percent	Recovery		RPD	
Analyte	Re	sult	Spike L	.evel	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE										
Laboratory ID:	SB04	18W1								
	ORIG	DUP								
Diesel Fuel #2	0.464	0.417	NA	NA		NA	NA	11	NA	
Surrogate:										
o-Terphonyl						122 114	50-150			

o-Terphenyl

122 116 50-150



VOLATILE ORGANICS EPA 8260D QUALITY CONTROL Page 1 of 2

Matrix: Water Units: ug/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	
lodomethane	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	



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				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	
lsopropylbenzene	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		v		
Dibromofluoromethane	99	75-127				
Toluene-d8	98	80-127				
4-Bromofluorobenzene	93	78-125				
	33	10-120				



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

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Matrix: Water Units: ug/L

onna. ug/L					Per	cent	Recovery		RPD	
Analyte	Res	sult	Spike	Level	Rec	overy	Limits	RPD	Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB04	12W1								
	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	
lodomethane	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	
					100			•		



VOLATILE ORGANICS EPA 8260D QUALITY CONTROL Page 2 of 2

SPIKE BLANKS Laboratory ID: SB SBD SB SBD 1,1,2-Trichloroethane 10.5 10.1 10.0 10.0 Tetrachloroethene 10.4 10.3 10.0 10.0 10.0 1,3-Dichloropropane 10.0 9.99 10.0 10.0 10.0 2-Hexanone 10.4 9.54 10.0 10.0 10.0 2-Hexanone 10.8 10.9 10.0 10.0 10.0 10.0 2-Hexanone 10.8 10.8 10.0	Reco SB 105 104 100 104 100 105 105 105 95 105 95 105	SBD 101 103 100 95 109 108 101 105 104 104 104 94 103 96	Limits 77-126 80-124 80-120 80-120 80-128 80-127 80-125 80-125 80-125 80-125 80-125 80-126 80-130 80-100 80	RPD 4 1 0 9 0 1 0 1 0 1 1 2	Limit 20 18 15 16 15 15 17 17 17 18 18 18 18 18 18 17	Flags
Laboratory ID: SB0412W1 SB SBD SB SBD	105 104 100 104 109 108 105 105 105 95 105 95	101 103 100 95 109 108 101 105 104 104 94 103	80-124 80-120 80-130 80-128 80-127 80-120 80-125 80-125 80-125 80-127 80-126 80-130 80-130	1 9 0 1 0 1 0 1 1	18 15 16 15 15 17 17 18 18 18	
SB SBD SB SBD 1,1,2-Trichloroethane 10.5 10.1 10.0 10.0 Tetrachloroethene 10.4 10.3 10.0 10.0 1,3-Dichloropropane 10.0 9.99 10.0 10.0 2-Hexanone 10.4 9.54 10.0 10.0 Dibromochloromethane 10.8 10.8 10.0 10.0 1,2-Dibromoethane 10.5 10.5 10.0 10.0 1,2-Dibromoethane 10.5 10.5 10.0 10.0 1,1,1,2-Tetrachloroethane 10.5 10.5 10.0 10.0 1,1,1,2-Tetrachloroethane 10.5 10.4 10.0 10.0 10.0 1,1,1,2-Tetrachloroethane 10.5 10.4 10.0	105 104 100 104 109 108 105 105 105 95 105 95	101 103 100 95 109 108 101 105 104 104 94 103	80-124 80-120 80-130 80-128 80-127 80-120 80-125 80-125 80-125 80-127 80-126 80-130 80-130	1 9 0 1 0 1 0 1 1	18 15 16 15 15 17 17 18 18 18	
1,1,2-Trichloroethane 10.5 10.1 10.0 10.0 Tetrachloroethene 10.4 10.3 10.0 10.0 1,3-Dichloropropane 10.0 9.99 10.0 10.0 2-Hexanone 10.4 9.54 10.0 10.0 Dibromochloromethane 10.9 10.9 10.0 10.0 1,2-Dibromoethane 10.5 10.5 10.0 10.0 1,1,1,2-Tetrachloroethane 10.5 10.5 10.0 10.0 1,1,1,2-Tetrachloroethane 10.5 10.4 10.0 10.0 1,1,1,2-Tetrachloroethane 10.5 10.4 10.0 10.0 1,1,1,2-Tetrachloroethane 10.5 10.4 10.0 10.0 m,p-Xylene 20.9 20.8 20.0 20.0 o-Xylene 10.5 10.4 10.0 10.0 Styrene 9.48 9.39 10.0 10.0 Bromoform 10.5 10.2 10.0 10.0 1,2,2-Tetrachloroethane 10.4 9.94 10.0 10.0 1,2,3-Trichloropropane	105 104 100 104 109 108 105 105 105 95 105 95	101 103 100 95 109 108 101 105 104 104 94 103	80-124 80-120 80-130 80-128 80-127 80-120 80-125 80-125 80-125 80-127 80-126 80-130 80-130	1 9 0 1 0 1 0 1 1	18 15 16 15 15 17 17 18 18 18	
Tetrachloroethene10.410.310.010.010.01,3-Dichloropropane10.09.9910.010.010.02-Hexanone10.49.5410.010.010.0Dibromochloromethane10.910.910.010.010.01,2-Dibromoethane10.810.810.010.010.01,2-Dibromoethane10.510.110.010.010.01,1,1,2-Tetrachloroethane10.510.410.010.01,1,1,2-Tetrachloroethane10.510.410.010.0m,p-Xylene20.920.820.020.0o-Xylene10.510.410.010.0Styrene9.489.3910.010.0Bromoform10.510.210.010.0Isopropylbenzene9.479.5510.010.01,1,2,2-Tetrachloroethane10.49.9410.010.0Isopropylbenzene9.339.6310.010.01,2,3-Trichloropropane9.939.6310.010.01,2,3-Trichloropropane10.510.410.010.02-Chlorotoluene10.710.610.010.04-Chlorotoluene10.710.710.010.01,3,5-Trimethylbenzene10.810.710.010.01,2,4-Trimethylbenzene10.910.010.0	104 100 104 109 108 100 105 105 105 95 105 95	103 100 95 109 108 101 105 104 104 94 103	80-124 80-120 80-130 80-128 80-127 80-120 80-125 80-125 80-125 80-127 80-126 80-130 80-130	1 9 0 1 0 1 0 1 1	18 15 16 15 15 17 17 18 18 18	
1,3-Dichloropropane10.09.9910.010.010.02-Hexanone10.49.5410.010.010.0Dibromochloromethane10.910.910.010.010.01,2-Dibromoethane10.810.810.010.010.01,2-Dibromoethane10.510.110.010.010.01,1,1,2-Tetrachloroethane10.510.510.010.010.01,1,1,2-Tetrachloroethane10.510.410.010.010.0m,p-Xylene20.920.820.020.010.0o-Xylene10.510.410.010.010.0Styrene9.489.3910.010.010.0Bromoform10.510.310.010.010.0Isopropylbenzene9.479.5510.010.010.01,1,2,2-Tetrachloroethane10.49.9410.010.010.01,2,3-Trichloropropane9.939.6310.010.010.01,2,3-Trichloropropane10.510.410.010.010.02-Chlorotoluene10.710.610.010.010.01,3,5-Trimethylbenzene10.810.710.010.010.01,2,4-Trimethylbenzene10.910.810.010.010.0	100 104 109 108 100 105 105 105 95 105 95	100 95 109 108 101 105 104 104 94 103	80-120 80-130 80-128 80-127 80-120 80-125 80-125 80-125 80-127 80-126 80-130 80-130	0 9 0 1 0 1 0 1	15 16 15 15 17 17 18 18 18	
2-Hexanone10.49.5410.010.010.0Dibromochloromethane10.910.910.010.010.01,2-Dibromoethane10.810.810.010.010.0Chlorobenzene10.010.110.010.010.01,1,1,2-Tetrachloroethane10.510.510.010.01,1,1,2-Tetrachloroethane10.510.410.010.0m,p-Xylene20.920.820.020.0o-Xylene10.510.410.010.0Styrene9.489.3910.010.0Bromoform10.510.310.010.0Isopropylbenzene9.479.5510.010.0Isopropylbenzene10.510.210.010.01,1,2,2-Tetrachloroethane10.49.9410.010.01,2,3-Trichloropropane9.939.6310.010.02-Chlorotoluene10.510.410.010.04-Chlorotoluene10.710.710.010.01,3,5-Trimethylbenzene10.810.710.010.01,2,4-Trimethylbenzene10.910.810.010.0	104 109 108 100 105 105 105 95 105 95	95 109 108 101 105 104 104 94 103	80-130 80-128 80-127 80-120 80-125 80-125 80-125 80-127 80-126 80-130 80-130	9 0 1 0 1 0 1 1	16 15 15 17 17 18 18 18	
Dibromochloromethane10.910.910.010.010.01,2-Dibromoethane10.810.810.010.010.0Chlorobenzene10.010.110.010.010.01,1,1,2-Tetrachloroethane10.510.510.010.0Ethylbenzene10.510.410.010.0m,p-Xylene20.920.820.020.0o-Xylene10.510.410.010.0Styrene9.489.3910.010.0Bromoform10.510.210.010.0Isopropylbenzene9.479.5510.010.0J,1,2,2-Tetrachloroethane10.49.9410.010.01,1,2,2-Tetrachloroethane10.49.9410.010.01,2,3-Trichloropropane9.939.6310.010.02-Chlorotoluene10.510.410.010.04-Chlorotoluene10.710.710.010.01,3,5-Trimethylbenzene10.810.710.010.01,2,4-Trimethylbenzene10.910.810.010.0	109 108 100 105 105 105 105 95 105 95	109 108 101 105 104 104 104 94 103	80-128 80-127 80-120 80-125 80-125 80-125 80-126 80-130 80-130	0 0 1 0 1 0 1	15 15 17 17 18 18 18	
1,2-Dibromoethane10.810.810.010.010.0Chlorobenzene10.010.110.010.010.01,1,1,2-Tetrachloroethane10.510.510.010.0Ethylbenzene10.510.410.010.0m,p-Xylene20.920.820.020.0o-Xylene10.510.410.010.0Styrene9.489.3910.010.0Bromoform10.510.310.010.0Isopropylbenzene9.479.5510.010.0Bromobenzene10.510.210.010.01,1,2,2-Tetrachloroethane10.49.9410.010.01,2,3-Trichloropropane9.939.6310.010.02-Chlorotoluene10.710.410.010.04-Chlorotoluene10.710.710.010.01,3,5-Trimethylbenzene10.810.710.010.01,2,4-Trimethylbenzene10.910.810.010.0	108 100 105 105 105 95 105 95	108 101 105 104 104 104 94 103	80-127 80-120 80-125 80-125 80-127 80-126 80-130 80-130	0 1 0 1 0 1	15 17 17 18 18 18	
Chlorobenzene10.010.110.010.010.01,1,1,2-Tetrachloroethane10.510.510.010.010.0Ethylbenzene10.510.410.010.010.0m,p-Xylene20.920.820.020.010.0o-Xylene10.510.410.010.010.0Styrene9.489.3910.010.010.0Bromoform10.510.310.010.010.0Isopropylbenzene9.479.5510.010.010.0Bromobenzene10.510.210.010.011.1,2,2-Tetrachloroethane10.49.9410.010.01,2,3-Trichloropropane9.939.6310.010.010.010.010.02-Chlorotoluene10.510.410.010.010.011.3,5-Trimethylbenzene10.810.710.010.01,3,5-Trimethylbenzene10.810.710.010.011.011.010.011.0	100 105 105 105 105 95 105 95	101 105 104 104 104 94 103	80-120 80-125 80-125 80-127 80-126 80-130 80-130	1 0 1 0 1	17 17 18 18 18	
1,1,1,2-Tetrachloroethane10.510.510.010.010.0Ethylbenzene10.510.410.010.010.0m,p-Xylene20.920.820.020.010.0o-Xylene10.510.410.010.010.0Styrene9.489.3910.010.010.0Bromoform10.510.310.010.010.0Isopropylbenzene9.479.5510.010.010.0Bromobenzene10.510.210.010.011.1,2,2-Tetrachloroethane10.49.9410.010.01,2,3-Trichloropropane9.939.6310.010.010.010.010.02-Chlorotoluene10.510.410.010.010.011.3,5-Trimethylbenzene10.810.710.010.01,3,5-Trimethylbenzene10.810.710.010.011.011.010.011.0	105 105 105 105 95 105 95	105 104 104 104 94 103	80-125 80-125 80-127 80-126 80-130 80-130	0 1 0 1 1	17 18 18 18	
Ethylbenzene10.510.410.010.0m,p-Xylene20.920.820.020.0o-Xylene10.510.410.010.0Styrene9.489.3910.010.0Bromoform10.510.310.010.0Isopropylbenzene9.479.5510.010.0Bromobenzene10.510.210.010.01,1,2,2-Tetrachloroethane10.49.9410.010.01,2,3-Trichloropropane9.939.6310.010.02-Chlorotoluene10.510.410.010.04-Chlorotoluene10.710.710.010.01,3,5-Trimethylbenzene10.810.710.010.01,2,4-Trimethylbenzene11.010.910.010.0	105 105 105 95 105 95	104 104 104 94 103	80-125 80-127 80-126 80-130 80-130	1 0 1 1	18 18 18	
m,p-Xylene20.920.820.020.01o-Xylene10.510.410.010.01Styrene9.489.3910.010.01Bromoform10.510.310.010.01Isopropylbenzene9.479.5510.010.01Bromobenzene10.510.210.010.011,1,2,2-Tetrachloroethane10.49.9410.010.011,2,3-Trichloropropane9.939.6310.010.012-Chlorotoluene10.510.410.010.014-Chlorotoluene10.710.710.010.011,3,5-Trimethylbenzene10.810.710.010.011,2,4-Trimethylbenzene11.010.910.010.01	105 105 95 105 95	104 104 94 103	80-127 80-126 80-130 80-130	0 1 1	18 18	
o-Xylene10.510.410.010.010.0Styrene9.489.3910.010.0Bromoform10.510.310.010.0Isopropylbenzene9.479.5510.010.0Bromobenzene10.510.210.010.01,1,2,2-Tetrachloroethane10.49.9410.010.01,2,3-Trichloropropane9.939.6310.010.0n-Propylbenzene10.710.610.010.02-Chlorotoluene10.510.410.010.04-Chlorotoluene10.710.710.010.01,3,5-Trimethylbenzene10.810.710.010.01,2,4-Trimethylbenzene11.010.910.010.0	105 95 105 95	104 94 103	80-126 80-130 80-130	1 1	18	
o-Xylene10.510.410.010.010.0Styrene9.489.3910.010.0Bromoform10.510.310.010.0Isopropylbenzene9.479.5510.010.0Bromobenzene10.510.210.010.01,1,2,2-Tetrachloroethane10.49.9410.010.01,2,3-Trichloropropane9.939.6310.010.0n-Propylbenzene10.710.610.010.02-Chlorotoluene10.710.410.010.04-Chlorotoluene10.710.710.010.01,3,5-Trimethylbenzene10.810.710.010.01,2,4-Trimethylbenzene11.010.910.010.0	95 105 95	94 103	80-130 80-130	1		
Bromoform10.510.310.010.010.0Isopropylbenzene9.479.5510.010.0Bromobenzene10.510.210.010.01,1,2,2-Tetrachloroethane10.49.9410.010.01,2,3-Trichloropropane9.939.6310.010.0n-Propylbenzene10.710.610.010.02-Chlorotoluene10.510.410.010.04-Chlorotoluene10.710.710.010.01,3,5-Trimethylbenzene10.810.710.010.01,2,4-Trimethylbenzene11.010.910.010.0	105 95	103	80-130		17	
Isopropylbenzene9.479.5510.010.0Bromobenzene10.510.210.010.011,1,2,2-Tetrachloroethane10.49.9410.010.011,2,3-Trichloropropane9.939.6310.010.010.0n-Propylbenzene10.710.610.010.010.02-Chlorotoluene10.510.410.010.010.04-Chlorotoluene10.710.710.010.010.01,3,5-Trimethylbenzene10.810.710.010.010.01,2,4-Trimethylbenzene11.010.910.010.010.0	95			2		
Brondbenzene10.510.210.010.010.01,1,2,2-Tetrachloroethane10.49.9410.010.01,2,3-Trichloropropane9.939.6310.010.0n-Propylbenzene10.710.610.010.02-Chlorotoluene10.510.410.010.04-Chlorotoluene10.710.710.010.01,3,5-Trimethylbenzene10.810.710.010.01,2,4-Trimethylbenzene11.010.910.010.0		96	00 400	2	15	
1,1,2,2-Tetrachloroethane10.49.9410.010.010.01,2,3-Trichloropropane9.939.6310.010.0n-Propylbenzene10.710.610.010.02-Chlorotoluene10.510.410.010.04-Chlorotoluene10.710.710.010.01,3,5-Trimethylbenzene10.810.710.010.01,2,4-Trimethylbenzene11.010.910.010.0	105		80-129	1	18	
1,2,3-Trichloropropane9.939.6310.010.0n-Propylbenzene10.710.610.010.010.02-Chlorotoluene10.510.410.010.010.04-Chlorotoluene10.710.710.010.010.01,3,5-Trimethylbenzene10.810.710.010.010.01,2,4-Trimethylbenzene11.010.910.010.010.0		102	76-128	3	16	
n-Propylbenzene10.710.610.010.010.02-Chlorotoluene10.510.410.010.010.04-Chlorotoluene10.710.710.010.010.01,3,5-Trimethylbenzene10.810.710.010.010.01,2,4-Trimethylbenzene11.010.910.010.010.0	104	99	74-130	5	15	
2-Chlorotoluene10.510.410.010.010.04-Chlorotoluene10.710.710.010.010.01,3,5-Trimethylbenzene10.810.710.010.010.0tert-Butylbenzene10.910.810.010.010.01,2,4-Trimethylbenzene11.010.910.010.0	99	96	71-129	3	25	
2-Chlorotoluene10.510.410.010.04-Chlorotoluene10.710.710.010.01,3,5-Trimethylbenzene10.810.710.010.0tert-Butylbenzene10.910.810.010.01,2,4-Trimethylbenzene11.010.910.010.0	107	106	80-129	1	19	
1,3,5-Trimethylbenzene10.810.710.010.010.0tert-Butylbenzene10.910.810.010.010.01,2,4-Trimethylbenzene11.010.910.010.0	105	104	80-128	1	18	
tert-Butylbenzene10.910.810.010.010.01,2,4-Trimethylbenzene11.010.910.010.0	107	107	80-130	0	19	
tert-Butylbenzene10.910.810.010.010.01,2,4-Trimethylbenzene11.010.910.010.010.0	108	107	80-131	1	18	
1,2,4-Trimethylbenzene 11.0 10.9 10.0 10.0	109	108	80-130	1	18	
	110	109	80-130	1	18	
•	110	108	80-130	2	18	
1,3-Dichlorobenzene 10.7 10.6 10.0 10.0 1	107	106	80-126	1	17	
	112	110	80-132	2	18	
	102	101	80-121	1	17	
	103	101	79-125	2	15	
	107	108	80-138	1	19	
	102	105	73-133	3	15	
	107	108	80-139	1	18	
	102	104	80-151	2	18	
	85	87	68-144	3	25	
•	101	105	75-146	4	28	
Surrogate:				•	_•	
-	98	96	75-127			
	30 101	101	80-127			
	103	104	78-125			

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

PAHs EPA 8270E/SIM QUALITY CONTROL

Matrix: Water Units: ug/L

- 3				Date	Date	
Analyte	Result	PQL	Method	Prepared	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				



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PAHs EPA 8270E/SIM QUALITY CONTROL

Matrix: Water Units: ug/L

-	Result				Per	Percent		RPD		
Analyte			Spike Level		Recovery		Limits	RPD	Limit	Flags
SPIKE BLANKS										
Laboratory ID:	atory 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			





ORGANOCHLORINE PESTICIDES EPA 8081B QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

onna. ug/c (ppb)				Date	Date	
Analyte	Result	PQL	Method	Prepared	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				



ORGANOCHLORINE PESTICIDES EPA 8081B QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

					Source	Per	cent	Recovery		RPD	
Analyte	Res	sult	Spike	Level	Result	Rec	overy	Limits	RPD	Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB04	17W1									
	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			



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TOTAL ORGANIC CARBON SM 5310B QUALITY CONTROL

Matrix: Water Units: mg/L

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

				Source	Percent	Recovery		RPD	
Analyte	Re	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	04-04	45-01							
	ORIG	DUP							
Total Organic Carbon	2.85	2.77	NA	NA	NA	NA	3	12	
MATRIX SPIKE									
Laboratory ID:	04-04	45-01							
	N	IS	MS		MS				
Total Organic Carbon	12	2.8	10.0	2.85	100	80-120	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB04	13W1							
	S	B	SB		SB				
Total Organic Carbon	9.	99	10.0	NA	100	80-118	NA	NA	



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TOTAL ALKALINITY SM 2320B QUALITY CONTROL

Matrix: Water Units: mg CaCO3/L

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

				Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	04-16	69-01							
	ORIG	DUP							
Total Alkalinity	130	130	NA	NA	NA	NA	0	10	
SPIKE BLANK									
Laboratory ID:	SB04	18W1							
	S	В	SB		SB				
Total Alkalinity	92	2.0	100	NA	92	89-110	NA	NA	



BICARBONATE SM 2320B QUALITY CONTROL

Matrix: Water Units: mg CaCO3/L

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

• • .	-			Source	Percent	Recovery		RPD	-
Analyte	Res	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	04-16	69-01							
	ORIG	DUP							
Bicarbonate	130	130	NA	NA	NA	NA	0	10	
SPIKE BLANK									
Laboratory ID:	SB04	18W1							
	S	В	SB		SB				
Bicarbonate	92	2.0	100	NA	92	89-110	NA	NA	



CHLORIDE SM 4500-CI E QUALITY CONTROL

Matrix: Water Units: mg/L

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

				Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	04-15	50-01							
	ORIG	DUP							
Chloride	5.68	5.76	NA	NA	NA	NA	1	11	
MATRIX SPIKE									
Laboratory ID:	04-15	50-01							
	Μ	IS	MS		MS				
Chloride	54	.2	50.0	5.68	97	85-121	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB04	17W2							
	S	В	SB		SB				
Chloride	46	6.4	50.0	NA	93	90-119	NA	NA	

NITRATE (as Nitrogen) EPA 353.2 QUALITY CONTROL

Matrix: Water Units: mg/L-N

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

				Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	04-01	11-21							
	ORIG	DUP							
Nitrate	2.04	1.96	NA	NA	NA	NA	4	10	
MATRIX SPIKE									
Laboratory ID:	04-01	11-21							
	Μ	IS	MS		MS				
Nitrate	4.	25	2.00	2.04	111	88-125	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB04	12W2							
	S	В	SB		SB				
Nitrate	2.	09	2.00	NA	105	90-120	NA	NA	



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SULFATE ASTM D516-11 QUALITY CONTROL

Matrix: Water Units: mg/L

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

				Source	Percent	Recovery		RPD	
Analyte	Re	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	04-16	60-01							
	ORIG	DUP							
Sulfate	5.89	5.31	NA	NA	NA	NA	10	10	
MATRIX SPIKE									
Laboratory ID:	04-10	60-01							
	N	IS	MS		MS				
Sulfate	16	5.2	10.0	5.89	103	72-128	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB04	20W2							
	S	B	SB		SB				
Sulfate	10).2	10.0	NA	102	85-114	NA	NA	



TOTAL DISSOLVED SOLIDS SM 2540C QUALITY CONTROL

Matrix: Water Units: mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0418W1					
Total Dissolved Solids	28	13	SM 2540C	4-18-23	4-18-23	

Arrahata	D	14	On the Level	Source	Percent	Recovery		RPD	F 1
Analyte	Res	sult	Spike Level	Result	Recovery	Limits	RPD	Limit Fla	Flags
DUPLICATE									
Laboratory ID:	04-12	28-01							
	ORIG	DUP							
Total Dissolved Solids	50.7	37.3	NA	NA	NA	NA	30	23	K
SPIKE BLANK									
Laboratory ID:	SB04	18W1							
	S	В	SB		SB				
Total Dissolved Solids	41	17	500	NA	83	89-120	NA	NA	



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TOTAL DISSOLVED SOLIDS SM 2540C QUALITY CONTROL

Matrix: Water Units: mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0504W1					
Total Dissolved Solids	ND	13	SM 2540C	5-4-23	5-4-23	

				Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	04-12	28-03							
	ORIG	DUP							
Total Dissolved Solids	109	123	NA	NA	NA	NA	12	23	
SPIKE BLANK									
Laboratory ID:	SB05	04W1							
	S	В	SB		SB				
Total Dissolved Solids	48	37	500	NA	97	89-120	NA	NA	



AMMONIA (as Nitrogen) SM 4500-NH₃ D QUALITY CONTROL

Matrix: Water Units: mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0421W1					
Ammonia	ND	0.050	SM 4500-NH3 D	4-21-23	4-21-23	

				Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	04-01	12-03							
	ORIG	DUP							
Ammonia	ND	ND	NA	NA	NA	NA	NA	15	
MATRIX SPIKE									
Laboratory ID:	04-01	12-03							
	Μ	IS	MS		MS				
Ammonia	4.	73	5.00	ND	95	87-110	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB04	21W1							
	S	В	SB		SB				
Ammonia	5.	01	5.00	NA	100	88-110	NA	NA	



TOTAL METALS EPA 200.8/200.7/7470A QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



TOTAL METALS EPA 200.8/200.7/7470A QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

- 3 (11)					Source	Per	cent	Recovery		RPD	
Analyte	Re	sult	Spike	Level	Result	Reco	overy	Limits	RPD	Limit	Flags
DUPLICATE											
Laboratory ID:	04-10	08-01									
	ORIG	DUP									
Iron	150	140	NA	NA		Ν	IA	NA	7	20	
Magnesium	1830	1740	NA	NA		Ν	IA	NA	5	20	
Manganese	ND	ND	NA	NA		Ν	IA	NA	NA	20	
Laboratory ID:	04-04	66-06									
Arsenic	ND	ND	NA	NA		•	IA	NA	NA	20	
Cadmium	ND	ND	NA	NA			IA IA	NA	NA	20	
Chromium	ND	ND	NA	NA			IA IA	NA	NA	20	
	ND	ND	NA	NA			IA IA	NA	NA	20	
Copper Lead	ND	ND	NA	NA			IA IA	NA	NA	20	
Nickel	ND	ND	NA	NA			IA IA	NA	NA	20	
Selenium	ND	ND	NA	NA			IA IA	NA	NA	20	
	ND	ND	NA	NA			IA IA	NA	NA	20	
Zinc	ND	ND	INA	INA				INA	INA	20	
Laboratory ID:	04-1	50-01									
Mercury	ND	ND	NA	NA		Ν	IA	NA	NA	20	
MATRIX SPIKES Laboratory ID:	04-10	08-01									
	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:	04-06	66-06									
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	102	111	111	ND	102	99	75-125	4	20	
Zinc	120	121	111	111	13.8	96	97	75-125	1	20	
	.20				10.0			10 120		20	
Laboratory ID:	04-1	50-01									
Mercury	5.75	5.83	6.25	6.25		92	93				



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DISSOLVED METALS EPA 200.8/200.7/7470A QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

onno: ag/2 (ppb)				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



DISSOLVED METALS EPA 200.8/200.7/7470A QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

Analyte	Res	sult	Spike	Level	Source Result		cent overy	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	04-10	08-01									
	ORIG	DUP									
Calcium	6590	6680	NA	NA		Ν	IA	NA	1	20	
Iron	ND	ND	NA	NA		N	IA	NA	NA	20	
Magnesium	1760	1790	NA	NA		N	IA	NA	1	20	
Manganese	ND	ND	NA	NA		Ν	IA	NA	NA	20	
Potassium	ND	ND	NA	NA			IA	NA	NA	20	
Sodium	3110	3200	NA	NA		Ν	IA	NA	3	20	
Laboratory ID:	04-1	50-01									
Arsenic	ND	ND	NA	NA		Ν	IA	NA	NA	20	
Cadmium	ND	ND	NA	NA			IA	NA	NA	20	
Chromium	ND	ND	NA	NA			IA	NA	NA	20	
Copper	ND	ND	NA	NA			IA	NA	NA	20	
Lead	ND	ND	NA	NA			IA	NA	NA	20	
Nickel	ND	ND	NA	NA			IA	NA	NA	20	
Selenium	ND	ND	NA	NA			IA	NA	NA	20	
Zinc	ND	ND	NA	NA			IA	NA	NA	20	
Laboratory ID: Mercury	04-15 ND	50-01 ND	NA	NA		Ν	JA	NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	04-10	08-01									
	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:	04-1	50-01									
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:	04-1	50-01									
Mercury	5.78	5.08	6.25	6.25	ND	92	81	75-125	13	20	
includiy	5.70	5.00	0.20	0.20	ΠD	JZ	01	10-120	10	20	

Mr

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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.

Ζ-

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



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ConSite	Chain	of	Cus	tody	1							Page	4	of	
Environmental Inc. 14648 NE 95th Street • Redmond, WA 98052	Turnaround Request (in working days)		Lab	orator	v Nu	imb	er:	04	- 1	50)				
Phone: (425) 883-3881 • www.onsite-env.com GeoEngineers	(Check One)			1 1	-			NH3)	1 1					1987	
Project Number: NB 6694-002-05 24410-001-01 Project Name: Go East Project Manager: Garrett Leque Sampled by: TDE	Same Day 1 D Same			-Gx AD	8260B	PAHs 8270D/SIM (low-level)	Organochlorine Pesticides 8081A	TOC, alk+bicarb, Cl, NO3, SO4, TDS, TOC, TDS, NH3	stals X	etals	netals				ere
Lab ID Sample Identification	Date Time Sampled Sampled Mat	Number		NWTPH-GX	Volatiles 8260B	PAHs 82	Organo	TOC, a	The metals	T/D metals	Total metals				% Moisture
1 MW-10-20230412	41,2(23 1230 W	J 18		X	R.	X	$\langle \rangle$	×	X.	$\boldsymbol{\lambda}$					
		_													+
Signature	Company		Dat	te	Time		-	Commen	nts/Spec	ial Instr	ructions				1
Relinquished	- OSE			12/23			5	19	tot.	met	, m	As, H	21 N	Cr.C	n, Fe
Relinquished Received								Ho	di	SSP	6 0	As, C	20,C	ry C	ly,fe,
Relinquished								L SE	12,2	Z'	Kil	VCN,	refe		-1
Reviewed/Date	Reviewed/Date						0	Chromato	grams w	ith final r	report	101		9	

Data Package: Level III 🗌 Level IV 🗌 Electronic Data Deliverables (EDDs) 🗌 ____



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	



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

TOTAL ORGANIC CARBON SM 5310B

Matrix: Water Units: mg/L				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



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

TOTAL ALKALINITY SM 2320B

Matrix: Water Units: mg CaCO3/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



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BICARBONATE SM 2320B

Matrix: Water Units: mg CaCO3/L

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



CHLORIDE SM 4500-CI E

Matrix:	Water
Units:	mg/L

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



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

NITRATE (as Nitrogen) EPA 353.2

Matrix:	Water
Units:	mg/L-N

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



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

SULFATE ASTM D516-11

Matrix:	Water
Units:	mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



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TOTAL DISSOLVED SOLIDS SM 2540C

Matrix: Water Units: mg/L				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	MW-5-20230414					
Laboratory ID:	04-169-01					
Total Dissolved Solid	s 180	9.8	SM 2540C	4-21-23	4-21-23	



TOTAL DISSOLVED SOLIDS SM 2540C

Matrix: Water Units: mg/L				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



AMMONIA (as Nitrogen) SM 4500-NH₃ D

Matrix:	Water
Units:	mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



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

DISSOLVED METALS EPA 200.8/200.7

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



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

TOTAL METALS EPA 200.8/200.7

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



TOTAL ORGANIC CARBON SM 5310B QUALITY CONTROL

Matrix: Water Units: mg/L

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

				Source	Percent	Recovery		RPD	
Analyte	Result		Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	04-10	61-01							
	ORIG	DUP							
Total Organic Carbon	29.3	29.7	NA	NA	NA	NA	1	12	
MATRIX SPIKE									
Laboratory ID:	04-161-01								
	N	IS	MS		MS				
Total Organic Carbon	40).0	10.0	29.3	107	80-120	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB04	19W1							
	S	B	SB		SB				
Total Organic Carbon	10).1	10.0	NA	101	80-118	NA	NA	



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TOTAL ALKALINITY SM 2320B QUALITY CONTROL

Matrix: Water Units: mg CaCO3/L

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

Analyte	Po	sult	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Elage
	Result		Spike Level	Result	Recovery	LIIIIIS	RFD	Linnt	Flags
Laboratory ID:	04-16	59-01							
	ORIG	DUP							
Total Alkalinity	130	130	NA	NA	NA	NA	0	10	
SPIKE BLANK									
Laboratory ID:	SB0418W1								
	S	В	SB		SB				
Total Alkalinity	92.0		100	NA	92	89-110	NA	NA	



BICARBONATE SM 2320B QUALITY CONTROL

Matrix: Water Units: mg CaCO3/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	Roodin		0,000 20101						
Laboratory ID:	04-16	69-01							
	ORIG	DUP							
Bicarbonate	130	130	NA	NA	NA	NA	0	10	
SPIKE BLANK									
Laboratory ID:	SB0418W1								
	S	В	SB		SB				
Bicarbonate	92.0		100	NA	92	89-110	NA	NA	



CHLORIDE SM 4500-CI E QUALITY CONTROL

Matrix: Water Units: mg/L

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
MB0417W2					
ND	2.0	SM 4500-CI E	4-17-23	4-17-23	
	MB0417W2	MB0417W2	MB0417W2	Result PQL Method Prepared MB0417W2 MB0417W2 <td>Result PQL Method Prepared Analyzed MB0417W2 MB0417W2</td>	Result PQL Method Prepared Analyzed MB0417W2 MB0417W2

				Source	Percent	Recovery		RPD	
Analyte	Result		Spike Level	Result	Recovery	Limits	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:	04-15	50-01							
	Μ	IS	MS		MS				
Chloride	54.2		50.0	5.68	97	85-121	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB04	17W2							
	S	В	SB		SB				
Chloride	46	6.4	50.0	NA	93	90-119	NA	NA	

NITRATE (as Nitrogen) EPA 353.2 QUALITY CONTROL

Matrix: Water Units: mg/L-N

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

			Source	Percent	Recovery		RPD	
Analyte	alyte Result		Result	Recovery	Limits	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	



SULFATE ASTM D516-11 QUALITY CONTROL

Matrix: Water Units: mg/L

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

				Source	Percent	Recovery		RPD		
Analyte	Re	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags	
DUPLICATE										
Laboratory ID:	04-16	60-01								
	ORIG	DUP								
Sulfate	5.89	5.31	NA	NA	NA	NA	10	10		
MATRIX SPIKE										
Laboratory ID:	04-10	60-01								
	N	IS	MS		MS					
Sulfate	16	5.2	10.0	5.89	103	72-128	NA	NA		
SPIKE BLANK										
Laboratory ID:	SB04	20W2								
	S	B	SB		SB					
Sulfate	10	10.2		NA	102	85-114	NA	NA		



TOTAL DISSOLVED SOLIDS SM 2540C QUALITY CONTROL

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0421W1					
Total Dissolved Solids	ND	13	SM 2540C	4-21-23	4-21-23	

Analyta	Desult				Source	Percent	Recovery	חחח	RPD Limit	Flage	
Analyte	Res	suit	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags		
DUPLICATE											
Laboratory ID:	01-14	48-01									
	ORIG	DUP									
Total Dissolved Solids	38.7	84.0	NA	NA	NA	NA	74	23	К		
SPIKE BLANK											
Laboratory ID:	SB04	21W1									
	S	В	SB		SB						
Total Dissolved Solids	47	72	500	NA	94	89-120	NA	NA			



TOTAL DISSOLVED SOLIDS SM 2540C QUALITY CONTROL

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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:	04-12	28-03							
	ORIG	DUP							
Total Dissolved Solids	109	123	NA	NA	NA	NA	12	23	
SPIKE BLANK									
Laboratory ID:	SB05	04W1							
	S	В	SB		SB				
Total Dissolved Solids	I Dissolved Solids 487		500	NA	97	89-120	NA	NA	



AMMONIA (as Nitrogen) SM 4500-NH₃ D QUALITY CONTROL

Matrix: Water Units: mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0421W1					
Ammonia	ND	0.050	SM 4500-NH3 D	4-21-23	4-21-23	

				Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	04-01	12-03							
	ORIG	DUP							
Ammonia	ND	ND	NA	NA	NA	NA	NA	15	
MATRIX SPIKE									
Laboratory ID:	04-01	12-03							
	Μ	IS	MS		MS				
Ammonia	4.	73	5.00	ND	95	87-110	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB04	21W1							
	S	B	SB		SB				
Ammonia	5.	01	5.00	NA	100	88-110	NA	NA	



DISSOLVED METALS EPA 200.8/200.7 QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

onno. ug/c (ppb)				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	

					Source	Per	rcent	Recovery		RPD	
Analyte	Res	sult	Spike	Level	Result	Rec	overy	Limits	RPD	Limit	Flags
DUPLICATE											
Laboratory ID:	04-18	30-07									
	ORIG	DUP									
Calcium	12500	12700	NA	NA		1	NA	NA	1	20	
Iron	ND	ND	NA	NA		1	٨٨	NA	NA	20	
Magnesium	4230	4310	NA	NA		1	٨٨	NA	2	20	
Manganese	ND	ND	NA	NA		1	٨٨	NA	NA	20	
Potassium	ND	ND	NA	NA		1	NA	NA	NA	20	
Sodium	5290	5340	NA	NA		1	NA	NA	1	20	
Laboratory ID:	04-1	59-01									
Arsenic	ND	ND	NA	NA		1	NA	NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	04-18	30-07									
	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:	04-1	59-01									
Arsenic	82.0	84.0	80.0	80.0	ND	103	105	75-125	2	20	

M

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TOTAL METALS EPA 200.8/200.7 QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

							Date	Dat	e	
Analyte		Result		PQL	М	ethod	Prepared	Analy	zed	Flags
METHOD BLANK										
Laboratory ID:	Ν	MB0417WH	3							
Iron		ND		50	EP	A 200.7	4-17-23	4-18-23		
Magnesium		ND		1000	EP	A 200.7	4-17-23	4-18-	23	
Manganese		ND		10 EPA 200.7		4-17-23	4-18-	23		
Laboratory ID:	Ν	MB0418WM	1							
Arsenic		ND		3.3	EP	A 200.8	4-18-23	4-18-	23	
					Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike	e Level	Result	Recovery	Limits	RPD	Limit	Flage
DUPLICATE										
Laboratory ID:	04-16	67-02								
	ORIG	DUP								
	ORIG 606	DUP 518	NA	NA		NA	NA	16	20	
Iron Magnesium		_	NA NA	NA NA		NA NA	NA NA	16 8	20 20	
Iron	606	518								
Iron Magnesium	606 2640 20.3	518 2430	NA	NA		NA	NA	8	20	

Laboratory ID:	04-16	67-02									
	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:	04-10	08-07									
Arsenic	106	108	111	111	ND	95	97	75-125	2	20	



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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.

Ζ-

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



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Environmental Inc.	Turnaround Request (in working days) (Check One) Same Day 1 Day 2 Days 3 Days Standard (7 Days)			Lal	borat	tory	Nu	umb	er:	0	4		16	<u>;9</u>								
Phone: (425) 883-3881 • www.onsite-env.com Company: GeoEngineers Project Number: <u>6694-992-05</u> Project Name:			Same Day 1 Day			() 8081A		s 8081A	S04, TDS, NH3)													
Go East Project Manager: Garrett Leque Samples by: SATTAN ANDENSON		dard (7 Days) I analysis 5 D (other)		Number of Containers		H-Gx	H-Dx	Volatiles 8260B	PAHs 8270D/SIM (low-level)	Organochlorine Pesticides 8081A	TOC, alk+bicarb, Cl, NO3,	TOC, TDS, NH3	T/D metals	1/D metals		Total metals						sture
Lab ID Sample Identification	Date Sampled	Time Sampled	Matrix	Numb		NWTPH-Gx	NWTPH-Dx	Volatile	PAHs	Orgar	TOC,	TOC	T/D n		2	Tota						% Moisture
MW-5-20230414	4-14-23	1100	GW	6		+					X	-	-	-	42			_				
															-						-	
																					_	
Signature	Co	mpany	51.5		Da	ate		Time			Comn	nents	/Spec	ial In:	struct	ions						
Relinquished Received	_6	ÉOEN O	GINE 8E	SAS	- 4	1-4-2	23	12	25	80 80	To	TA .	L. Fe	NE , N	19	LS'	In					
Relinquished											Di	ss Fe	01 2, 1	Ma	0	MET UD;	Ais	K,	Na			
Relinquished							_				Die	c .	100	Aie		FI	=> 1	F	117	ENI	=0)
Reviewed/Date		Reviewed/Da	te								Chrom	-					- 20				- 1	

Data Package: Level III 🗌 Level IV 🗌 Electronic Data Deliverables (EDDs)



Data Validation Report

1101 Fawcett Aver	1101 Fawcett Avenue, Suite 200, Tacoma, Washington 98402, Telephone: 253.383.4940, Fax: 253.383.4923							
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.

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

TABLE 1: SUMMARY OF VALIDATED SAMPLE DELIVERY GROUP

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.



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	



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TOTAL METALS EPA 200.8/200.7/7470A

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



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DISSOLVED METALS EPA 200.8/200.7/7470A

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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



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DISSOLVED METALS EPA 200.8/200.7/7470A

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



AMMONIA (as Nitrogen) SM 4500-NH₃ D

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



TOTAL ORGANIC CARBON SM 5310B

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



TOTAL DISSOLVED SOLIDS SM 2540C

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



TOTAL ALKALINITY SM 2320B

Matrix: Water Units: mg CaCO3/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



BICARBONATE SM 2320B

Matrix: Water Units: mg CaCO3/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



CHLORIDE SM 4500-CI E

Matrix:	Water
Units:	mg/L

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



NITRATE (as Nitrogen) EPA 353.2

Matrix:	Water
Units:	mg/L-N

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



SULFATE ASTM D516-11

Matrix: Water Units: mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



TOTAL METALS EPA 200.8/200.7/7470A QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



TOTAL METALS EPA 200.8/200.7/7470A QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

• • • • •					Source	Per	cent	Recovery		RPD	
Analyte	Re	sult	Spike	Level	Result	Rec	overy	Limits	RPD	Limit	Flags
DUPLICATE											
Laboratory ID:	10-04	43-01									
	ORIG	DUP									
Iron	4810	5080	NA	NA		Ν	IA	NA	5	20	
Magnesium	33200	31900	NA	NA		Ν	IA	NA	4	20	
Manganese	508	490	NA	NA		Ν	IA	NA	4	20	
Laboratory ID:	09-2	53-11									
Arsenic	ND	ND	NA	NA		Ν	IA	NA	NA	20	
Cadmium	ND	ND	NA	NA		Ν	IA	NA	NA	20	
Chromium	ND	ND	NA	NA		Ν	IA	NA	NA	20	
Copper	ND	ND	NA	NA		Ν	JA	NA	NA	20	
Lead	1.50	1.50	NA	NA		Ν	IA	NA	0	20	
Nickel	ND	ND	NA	NA		Ν	IA	NA	NA	20	
Selenium	ND	ND	NA	NA		Ν	IA	NA	NA	20	
Laboratory ID:	10-1 ⁻	17-01									
Mercury	ND	ND	NA	NA		Ν	A	NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	10-04	43-01									
	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:	09-2	53-11									
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:	10-1	17-01									



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DISSOLVED METALS EPA 200.8/200.7/7470A QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

ormo: dg/2 (ppb)				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



DISSOLVED METALS EPA 200.8/200.7/7470A QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

					Source	Percent	Recovery		RPD	
Analyte	Re	sult	Spike	Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE										
Laboratory ID:	10-08	87-01								
	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:	10-02	25-01								
Mercury	ND	ND	NA	NA		NA	NA	NA	20	
Laboratory ID:	10-08	87-01								
,	ORIG	DUP								
Sodium	3930	3640	NA	NA		NA	NA	8	20	



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DISSOLVED METALS EPA 200.8/200.7/7470A QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

onits. ug/L (ppb)					Source	Per	cent	Recovery		RPD	
Analyte	Re	sult	Spike	Level	Result	Rec	overy	Limits	RPD	Limit	Flags
MATRIX SPIKES											
Laboratory ID:	10-0	87-01									
	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:	10-0-	49-01									
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:	10-0	25-01									
Mercury	6.13	6.18	6.25	6.25	ND	98	99	75-125	1	20	
Laboratory ID:		87-01									
	MS	MSD	MS	MSD		MS	MSD				
Sodium	27100	27100	22200	22200	3930	104	104	75-125	0	20	



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AMMONIA (as Nitrogen) SM 4500-NH₃ D QUALITY CONTROL

Matrix: Water Units: mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1011W1					
Ammonia	ND	0.050	SM 4500-NH3 D	10-11-23	10-11-23	

				Source	Percent	Recovery		RPD	
Analyte	Re	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	10-04	43-01							
	ORIG	DUP							
Ammonia	ND	ND	NA	NA	NA	NA	NA	27	
MATRIX SPIKE									
Laboratory ID:	10-043-01								
	Ν	IS	MS		MS				
Ammonia	5.	45	5.00	ND	109	78-118	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB10	11W1							
	S	B	SB		SB				
Ammonia	4.	67	5.00	NA	93	85-114	NA	NA	



TOTAL ORGANIC CARBON SM 5310B QUALITY CONTROL

Matrix: Water Units: mg/L

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

				Source	Percent	Recovery		RPD	
Analyte	Re	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	09-2	54-01							
	ORIG	DUP							
Total Organic Carbon	ND	ND	NA	NA	NA	NA	NA	13	
MATRIX SPIKE									
Laboratory ID:	09-2	54-01							
	Ν	1S	MS		MS				
Total Organic Carbon	9.	17	10.0	ND	92	86-127	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB10	06W1							
	S	B	SB		SB				
Total Organic Carbon	9.	20	10.0	NA	92	90-122	NA	NA	



TOTAL DISSOLVED SOLIDS SM 2540C QUALITY CONTROL

Matrix: Water Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK				•	3	
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	

				Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	10-04	46-01							
	ORIG	DUP							
Total Dissolved Solids	428	423	NA	NA	NA	NA	1	30	
Laboratory ID:	10-16	68-01							
	ORIG	DUP							
Total Dissolved Solids	357	357	NA	NA	NA	NA	0	30	
SPIKE BLANK									
Laboratory ID:	SB10	06W1							
	S	B	SB		SB				
Total Dissolved Solids	47	75	500	NA	95	80-120	NA	NA	
Laboratory ID:	SB10	17W1							
	S	B	SB		SB				
Total Dissolved Solids	48	87	500	NA	97	80-120	NA	NA	



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TOTAL ALKALINITY SM 2320B QUALITY CONTROL

Matrix: Water Units: mg CaCO3/L

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

Analyte	Pos	sult	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
	Net	Suit	Spike Level	Result	Recovery	Liiiits	RFD	Liiiiit	Flays
Laboratory ID:	10-05	57-01							
	ORIG	DUP							
Total Alkalinity	102	100	NA	NA	NA	NA	2	10	
SPIKE BLANK									
Laboratory ID:	SB10	09W1							
	S	В	SB		SB				
Total Alkalinity	86	86.0		NA	86	82-112	NA	NA	



BICARBONATE SM 2320B QUALITY CONTROL

Matrix: Water Units: mg CaCO3/L

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

Analyte	Res	sult	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE			-					-	J
Laboratory ID:	10-05	57-01							
	ORIG	DUP							
Bicarbonate	102	100	NA	NA	NA	NA	2	10	
SPIKE BLANK									
Laboratory ID:	SB10	09W1							
	S	В	SB		SB				
Bicarbonate	86	5.0	100	NA	86	82-112	NA	NA	



CHLORIDE SM 4500-CI E QUALITY CONTROL

Matrix: Water Units: mg/L

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

				Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	10-08	87-01							
	ORIG	DUP							
Chloride	3.47	3.40	NA	NA	NA	NA	2	12	
MATRIX SPIKE									
Laboratory ID:	10-08	87-01							
	Μ	IS	MS		MS				
Chloride	51	1.6	50.0	3.47	96	83-120	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB10	09W1							
	S	B	SB		SB				
Chloride	46	6.7	50.0	NA	93	83-119	NA	NA	



NITRATE (as Nitrogen) EPA 353.2 QUALITY CONTROL

Matrix: Water Units: mg/L-N

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

			Source	Percent	Recovery		RPD	
Analyte	Result	Spike Level	Result	Recovery	Limits	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	



SULFATE ASTM D516-11 QUALITY CONTROL

Matrix: Water Units: mg/L

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

				Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	10-04	43-03							
	ORIG	DUP							
Sulfate	6.97	6.57	NA	NA	NA	NA	6	10	
MATRIX SPIKE									
Laboratory ID:	10-04	43-03							
	Μ	S	MS		MS				
Sulfate	16	5.7	10.0	6.97	97	73-127	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB10	12W1							
	S	В	SB		SB				
Sulfate	9.4	49	10.0	NA	95	85-114	NA	NA	



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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.

Ζ-

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



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

	Environmental Inc. Analytical Laboratory Testing Services 14648 NE 95th Street • Redmond, WA 98052	Turi (ir	naround Req 1 working da	uest ys)		La	aboi	rato	ry I	Num	ber:	1	0	- () 4	3							
Company:	Phone: (425) 883-3881 • www.onsite-env.com	-	(Check One)													M					+	504	いい
Project Number:		_ Same		3 Days			260[])								181	IS 8270/S	1010				1:54	indicators	-1 tot
Project Name: Project Manager Sampled by:	So East Garret Leave	Stand	dard (7 Days) (other)		Number of Containers	HCID	NWTPH-Gx/BTEX (8021 8260)	NWTPH-GX NWTPH-Dx (SG Clean-Ind D)		Volatiles 8260 Halogenated Volatiles 8260	EDB EPA 8011 (Waters Only)	Semivolatiles 8270/SIM (with low-level PAHs)	PAHs 8270/SIM (low-level)	82	Organochlorine Pesticides 8081	Organophosphorus Pesticides 8270/SIM	Uniorinated Actd Herbicides 6151	Total MTCA Metals	tals	HEM (oil and grease) 1664	chals full	date D	als Sl
ab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number	NWTPH-HCID	NWTPH-(NWTPH-Gx		Volatiles 8260 Halogenated V	EDB EPA	Semivola (with low-	PAHs 827	PCBs 8082	Organoch	Organopt		Total MTC	TCLP Metals	HEM (oil a	Me	Lea	Meh
	231003-MW-8	190312	1315	GW		K		2															X
612	234093-MA-51	10/31-3	5	AR	7	2																	
220	231003-MW-5 231004-MW-2	193123	1545	GW	6				_	_	-				_	_	_	-	-		X,	XX	
2 4			1330	GV	6																		
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Received Relinquished		2	\mathcal{O}	8G			101	1412	-5	16	00	T	22		· · · ·		-		-	_		_	
Received						-			-	_	-							Level		Mn,	n. tr	212, K	116



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.



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

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	



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

SEMIVOLATILE ORGANICS EPA 8270E/SIM page 1 of 2

Matrix: Water Units: ug/L

Analita	Decult	DOI	Mathad	Date	Date	F lage
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
	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	4.0 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	0.97	EPA 8270E/SIM	10-9-23		
3-Nitroaniline	ND				10-10-23	
3-INITIOALIIIILIE	UN	0.97	EPA 8270E	10-9-23	10-10-23	



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	
^D yrene	ND	0.097	EPA 8270E/SIM	10-9-23	10-10-23	
Butylbenzylphthalate	ND	0.97	EPA 8270E	10-9-23	10-10-23	
pis-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	
ndeno[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				

TOTAL METALS EPA 200.8/200.7

Matrix: Water Units: ug/L (ppb)

				Date	Date Analyzed	Flags
Analyte	Result	PQL	Method	Prepared		
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	



DISSOLVED METALS EPA 200.8/200.7

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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



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

AMMONIA (as Nitrogen) SM 4500-NH₃ D

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



TOTAL ORGANIC CARBON SM 5310B

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



TOTAL DISSOLVED SOLIDS SM 2540C

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



TOTAL ALKALINITY SM 2320B

Matrix: Water Units: mg CaCO3/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



BICARBONATE SM 2320B

Matrix: Water Units: mg CaCO3/L

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
20231005-MW-7					
10-057-01					
100	2.0	SM 2320B	10-9-23	10-9-23	
20231004-MW-3					
10-057-02					
110	2.0	SM 2320B	10-9-23	10-9-23	
	20231005-MW-7 10-057-01 100 20231004-MW-3 10-057-02	20231005-MW-7 10-057-01 100 2.0 20231004-MW-3 10-057-02	20231005-MW-7 10-057-01 100 2.0 SM 2320B 20231004-MW-3 10-057-02	Result PQL Method Prepared 20231005-MW-7 10-057-01 10-057-01 10-9-23 100 2.0 SM 2320B 10-9-23 20231004-MW-3 10-057-02 10-057-02 10-9-23	Result PQL Method Prepared Analyzed 20231005-MW-7 10-057-01 10-057-01 10-9-23 10-9-23 100 2.0 SM 2320B 10-9-23 10-9-23 20231004-MW-3 10-057-02 10-057-02 10-9-23 10-9-23



12

CHLORIDE SM 4500-CI E

Matrix: Water Units: mg/L

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



NITRATE (as Nitrogen) EPA 353.2

Matrix:	Water
Units:	mg/L-N

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
20231005-MW-7					
10-057-01					
0.12	0.050	EPA 353.2	10-6-23	10-6-23	
20231004-MW-3					
10-057-02					
0.067	0.050	EPA 353.2	10-6-23	10-6-23	
	20231005-MW-7 10-057-01 0.12 20231004-MW-3 10-057-02	20231005-MW-7 10-057-01 0.12 0.050 20231004-MW-3 10-057-02	20231005-MW-7 10-057-01 0.12 0.050 EPA 353.2 20231004-MW-3 10-057-02	Result PQL Method Prepared 20231005-MW-7 10-057-01 10-057-01 10-6-23 0.12 0.050 EPA 353.2 10-6-23 20231004-MW-3 10-057-02 10-057-02 10-057-02	Result PQL Method Prepared Analyzed 20231005-MW-7 10-057-01 10-057-01 10-6-23 10-6-23 0.12 0.050 EPA 353.2 10-6-23 10-6-23 20231004-MW-3 10-057-02 10-057-02 10-6-23 10-6-23



SULFATE ASTM D516-11

Matrix: Water Units: mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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

Analyze Result PQL Method Prepared Analyzed Flags METHOD BLANK Laboratory ID: MB1009W1 . <	Units: ug/L				Date	Date	
Laboratory ID: MB 1009W1 n-Nitrosodimethylamine 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 5.0 EPA 8270E 10-9-23 10-9-23 1,3-Dichiorobenzene ND 1.0 EPA 8270E 10-9-23 10-9-23 1,3-Dichiorobenzene ND 1.0 EPA 8270E 10-9-23 10-9-23 1,3-Dichiorobenzene ND 1.0 EPA 8270E 10-9-23 10-9-23 1,2-Dichiorobenzene ND 1.0 EPA 8270E 10-9-23 10-9-23 1,2-Dichiorobenzene ND 1.0 EPA 8270E 10-9-23 10-9-23 1,2-Dichiorobenzene ND 1.0 EPA 8270E 10-9-23 10-9-23 1,4-Dichiorobenzene ND 1.0 EPA 8270E 10-9-23 10-9-23 2-Methylphenol (n_p-Cresol) ND </th <th>Analyte</th> <th>Result</th> <th>PQL</th> <th>Method</th> <th>Prepared</th> <th>Analyzed</th> <th>Flags</th>	Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
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 Anline ND 1.0 EPA 8270E 10.9-23 10.9-23 Anline 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 1,2-Dichlorobenzene ND 1.0 EPA 8270E 10.9-23 10.9-23 <	METHOD BLANK						
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2,4-DichlorophenolND2.0EPA 8270E10-9-2310-9-231,2,4-TrichlorobenzeneND1.0EPA 8270E10-9-2310-9-23NaphthaleneND0.10EPA 8270E10-9-2310-9-234-ChloroanilineND1.0EPA 8270E10-9-2310-9-23HexachlorobutadieneND1.0EPA 8270E10-9-2310-9-234-Chloro-3-methylphenolND1.0EPA 8270E10-9-2310-9-232-MethylnaphthaleneND0.10EPA 8270E10-9-2310-9-231-MethylnaphthaleneND0.10EPA 8270E10-9-2310-9-231-MethylnaphthaleneND0.10EPA 8270E10-9-2310-9-232-MethylnaphthaleneND0.10EPA 8270E10-9-2310-9-231-MethylnaphthaleneND1.0EPA 8270E10-9-2310-9-232,4,6-TrichlorophenolND1.0EPA 8270E10-9-2310-9-232,4,5-TrichlorophenolND1.0EPA 8270E10-9-2310-9-232,4,5-TrichlorophenolND1.0EPA 8270E10-9-2310-9-232-ChloronaphthaleneND1.0EPA 8270E10-9-2310-9-232-ChloronaphthaleneND1.0EPA 8270E10-9-2310-9-232-ChloronaphthaleneND1.0EPA 8270E10-9-2310-9-231,4-DinitrobenzeneND1.0EPA 8270E10-9-2310-9-231,3-DinitrobenzeneND1.0	2,4-Dimethylphenol	ND	1.0	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 4-Chloro-3-methylphenol ND 1.0 EPA 8270E 10-9-23 10-9-23 2-Methylnaphthalene 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 1-Methylnaphthalene ND 0.10 EPA 8270E 10-9-23 10-9-23 1-Methylnaphthalene ND 0.10 EPA 8270E 10-9-23 10-9-23 1-Methylnaphthalene ND 1.0 EPA 8270E 10-9-23 10-9-23 2,4,6-Trichlorophenol ND 1.0 EPA 8270E 10-9-23 10-9-23 2,4,5-Trichlorophenol ND 1.0 EPA 8270E	bis(2-Chloroethoxy)methane	ND	1.0	EPA 8270E	10-9-23	10-9-23	
NaphthaleneND0.10EPA 8270E/SIM10-9-2310-9-234-ChloroanilineND1.0EPA 8270E10-9-2310-9-23HexachlorobutadieneND1.0EPA 8270E10-9-2310-9-234-Chloro-3-methylphenolND1.0EPA 8270E10-9-2310-9-232-MethylnaphthaleneND0.10EPA 8270E/SIM10-9-2310-9-231-MethylnaphthaleneND0.10EPA 8270E/SIM10-9-2310-9-231-MethylnaphthaleneND0.10EPA 8270E10-9-2310-9-232,4,6-TrichlorophenolND1.0EPA 8270E10-9-2310-9-232,3-DichloroanilineND1.0EPA 8270E10-9-2310-9-232,4,5-TrichlorophenolND1.0EPA 8270E10-9-2310-9-232,4,5-TrichlorophenolND1.0EPA 8270E10-9-2310-9-232,4,5-TrichlorophenolND1.0EPA 8270E10-9-2310-9-232,4,5-TrichlorophenolND1.0EPA 8270E10-9-2310-9-232,4-DinitrobenzeneND1.0EPA 8270E10-9-2310-9-232,4-DinitrobenzeneND1.0EPA 8270E10-9-2310-9-231,3-DinitrobenzeneND1.0EPA 8270E10-9-2310-9-231,3-DinitrobenzeneND1.0EPA 8270E10-9-2310-9-231,2-DinitrobenzeneND1.0EPA 8270E10-9-2310-9-231,2-DinitrobenzeneND <td< td=""><td>2,4-Dichlorophenol</td><td>ND</td><td>2.0</td><td>EPA 8270E</td><td>10-9-23</td><td>10-9-23</td><td></td></td<>	2,4-Dichlorophenol	ND	2.0	EPA 8270E	10-9-23	10-9-23	
4-ChloroanilineND1.0EPA 8270E10-9-2310-9-23HexachlorobutadieneND1.0EPA 8270E10-9-2310-9-234-Chloro-3-methylphenolND1.0EPA 8270E10-9-2310-9-232-MethylnaphthaleneND0.10EPA 8270E/SIM10-9-2310-9-231-MethylnaphthaleneND0.10EPA 8270E/SIM10-9-2310-9-231-MethylnaphthaleneND0.10EPA 8270E10-9-2310-9-232,4,6-TrichlorophenolND1.0EPA 8270E10-9-2310-9-232,3-DichloroanilineND1.0EPA 8270E10-9-2310-9-232,4,5-TrichlorophenolND1.0EPA 8270E10-9-2310-9-232,4,5-TrichlorophenolND1.0EPA 8270E10-9-2310-9-232,4,5-TrichlorophenolND1.0EPA 8270E10-9-2310-9-232,4,5-TrichlorophenolND1.0EPA 8270E10-9-2310-9-232,4,5-TrichlorophenolND1.0EPA 8270E10-9-2310-9-232,4,5-TrichlorophenolND1.0EPA 8270E10-9-2310-9-232,4,5-TrichlorophenolND1.0EPA 8270E10-9-2310-9-232,4,5-TrichlorophenolND1.0EPA 8270E10-9-2310-9-231,4-DinitrobenzeneND1.0EPA 8270E10-9-2310-9-231,3-DinitrobenzeneND1.0EPA 8270E10-9-2310-9-231,2-Dinitrobenzene	1,2,4-Trichlorobenzene	ND	1.0	EPA 8270E	10-9-23	10-9-23	
HexachlorobutadieneND1.0EPA 8270E10-9-2310-9-234-Chloro-3-methylphenolND1.0EPA 8270E10-9-2310-9-232-MethylnaphthaleneND0.10EPA 8270E/SIM10-9-2310-9-231-MethylnaphthaleneND0.10EPA 8270E/SIM10-9-2310-9-231-MethylnaphthaleneND10EPA 8270E10-9-2310-9-232,4,6-TrichlorophenolND1.0EPA 8270E10-9-2310-9-232,3-DichloroanilineND1.0EPA 8270E10-9-2310-9-232,4,5-TrichlorophenolND1.0EPA 8270E10-9-2310-9-232,4,5-TrichlorophenolND1.0EPA 8270E10-9-2310-9-232,4,5-TrichlorophenolND1.0EPA 8270E10-9-2310-9-232,4,6-TrichlorophenolND1.0EPA 8270E10-9-2310-9-232,4,5-TrichlorophenolND1.0EPA 8270E10-9-2310-9-232,4,5-TrichlorophenolND1.0EPA 8270E10-9-2310-9-232,4,5-TrichlorophenolND1.0EPA 8270E10-9-2310-9-231,4-DinitrobenzeneND1.0EPA 8270E10-9-2310-9-231,3-DinitrobenzeneND1.0EPA 8270E10-9-2310-9-231,3-DinitrobenzeneND1.0EPA 8270E10-9-2310-9-231,2-DinitrobenzeneND1.0EPA 8270E10-9-2310-9-231,2-Dinitrobenzene <t< td=""><td>Naphthalene</td><td>ND</td><td>0.10</td><td>EPA 8270E/SIM</td><td>10-9-23</td><td>10-9-23</td><td></td></t<>	Naphthalene	ND	0.10	EPA 8270E/SIM	10-9-23	10-9-23	
4-Chloro-3-methylphenolND1.0EPA 8270E10-9-2310-9-232-MethylnaphthaleneND0.10EPA 8270E/SIM10-9-2310-9-231-MethylnaphthaleneND0.10EPA 8270E/SIM10-9-2310-9-23HexachlorocyclopentadieneND10EPA 8270E10-9-2310-9-232,4,6-TrichlorophenolND1.0EPA 8270E10-9-2310-9-232,3-DichloroanilineND1.0EPA 8270E10-9-2310-9-232,4,5-TrichlorophenolND1.0EPA 8270E10-9-2310-9-232,4,5-TrichlorophenolND1.0EPA 8270E10-9-2310-9-232,4,5-TrichlorophenolND1.0EPA 8270E10-9-2310-9-232,4,6-TrichlorophenolND1.0EPA 8270E10-9-2310-9-232,4,5-TrichlorophenolND1.0EPA 8270E10-9-2310-9-232,-ChloronaphthaleneND1.0EPA 8270E10-9-2310-9-231,4-DinitrobenzeneND1.0EPA 8270E10-9-2310-9-231,3-DinitrobenzeneND1.0EPA 8270E10-9-2310-9-231,3-DinitrobenzeneND1.0EPA 8270E10-9-2310-9-231,2-DinitrobenzeneND1.0EPA 8270E10-9-2310-9-231,2-DinitrobenzeneND1.0EPA 8270E10-9-2310-9-231,2-DinitrobenzeneND1.0EPA 8270E10-9-2310-9-231,2-Dinitrobenzene<	4-Chloroaniline	ND	1.0	EPA 8270E	10-9-23	10-9-23	
2-MethylnaphthaleneND0.10EPA 8270E/SIM10-9-2310-9-231-MethylnaphthaleneND0.10EPA 8270E/SIM10-9-2310-9-23HexachlorocyclopentadieneND10EPA 8270E10-9-2310-9-232,4,6-TrichlorophenolND1.0EPA 8270E10-9-2310-9-232,3-DichloroanilineND1.0EPA 8270E10-9-2310-9-232,4,5-TrichlorophenolND1.0EPA 8270E10-9-2310-9-232,4,5-TrichlorophenolND1.0EPA 8270E10-9-2310-9-232,4,5-TrichlorophenolND1.0EPA 8270E10-9-2310-9-232,4,5-TrichlorophenolND1.0EPA 8270E10-9-2310-9-232,4,5-TrichlorophenolND1.0EPA 8270E10-9-2310-9-232,4,5-TrichlorophenolND1.0EPA 8270E10-9-2310-9-232,-NitroanilineND1.0EPA 8270E10-9-2310-9-231,4-DinitrobenzeneND1.0EPA 8270E10-9-2310-9-231,3-DinitrobenzeneND1.0EPA 8270E10-9-2310-9-231,3-DinitrobenzeneND1.0EPA 8270E10-9-2310-9-232,6-DinitrotolueneND1.0EPA 8270E10-9-2310-9-231,2-DinitrobenzeneND1.0EPA 8270E10-9-2310-9-231,2-DinitrobenzeneND0.10EPA 8270E10-9-2310-9-231,2-DinitrobenzeneND<	Hexachlorobutadiene	ND	1.0	EPA 8270E	10-9-23	10-9-23	
1-MethylaphthaleneND0.10EPA 8270E/SIM10-9-2310-9-23HexachlorocyclopentadieneND10EPA 8270E10-9-2310-9-232,4,6-TrichlorophenolND1.0EPA 8270E10-9-2310-9-232,3-DichloroanilineND1.0EPA 8270E10-9-2310-9-232,4,5-TrichlorophenolND1.0EPA 8270E10-9-2310-9-232,4,5-TrichlorophenolND1.0EPA 8270E10-9-2310-9-232,4,5-TrichlorophenolND1.0EPA 8270E10-9-2310-9-232-ChloronaphthaleneND1.0EPA 8270E10-9-2310-9-232-NitroanilineND1.0EPA 8270E10-9-2310-9-231,4-DinitrobenzeneND1.0EPA 8270E10-9-2310-9-231,3-DinitrobenzeneND5.0EPA 8270E10-9-2310-9-231,3-DinitrobenzeneND1.0EPA 8270E10-9-2310-9-232,6-DinitrotolueneND1.0EPA 8270E10-9-2310-9-231,2-DinitrobenzeneND1.0EPA 8270E10-9-2310-9-231,2-DinitrobenzeneND1.0EPA 8270E10-9-2310-9-231,2-DinitrobenzeneND1.0EPA 8270E10-9-2310-9-231,2-DinitrobenzeneND0.10EPA 8270E/SIM10-9-2310-9-231,2-DinitrobenzeneND0.10EPA 8270E/SIM10-9-2310-9-23	4-Chloro-3-methylphenol	ND	1.0	EPA 8270E		10-9-23	
HexachlorocyclopentadieneND10EPA 8270E10-9-2310-9-232,4,6-TrichlorophenolND1.0EPA 8270E10-9-2310-9-232,3-DichloroanilineND1.0EPA 8270E10-9-2310-9-232,4,5-TrichlorophenolND1.0EPA 8270E10-9-2310-9-232,4,5-TrichlorophenolND1.0EPA 8270E10-9-2310-9-232-ChloronaphthaleneND1.0EPA 8270E10-9-2310-9-232-NitroanilineND1.0EPA 8270E10-9-2310-9-231,4-DinitrobenzeneND1.0EPA 8270E10-9-2310-9-231,3-DinitrobenzeneND5.0EPA 8270E10-9-2310-9-231,3-DinitrobenzeneND1.0EPA 8270E10-9-2310-9-232,6-DinitrotolueneND1.0EPA 8270E10-9-2310-9-231,2-DinitrobenzeneND1.0EPA 8270E10-9-2310-9-231,2-DinitrobenzeneND1.0EPA 8270E10-9-2310-9-231,2-DinitrobenzeneND1.0EPA 8270E10-9-2310-9-231,2-DinitrobenzeneND1.0EPA 8270E10-9-2310-9-231,2-DinitrobenzeneND1.0EPA 8270E10-9-2310-9-231,2-DinitrobenzeneND0.10EPA 8270E/SIM10-9-2310-9-231,2-DinitrobenzeneND0.10EPA 8270E/SIM10-9-2310-9-23	2-Methylnaphthalene	ND	0.10	EPA 8270E/SIM	10-9-23	10-9-23	
2,4,6-TrichlorophenolND1.0EPA 8270E10-9-2310-9-232,3-DichloroanilineND1.0EPA 8270E10-9-2310-9-232,4,5-TrichlorophenolND1.0EPA 8270E10-9-2310-9-232-ChloronaphthaleneND1.0EPA 8270E10-9-2310-9-232-NitroanilineND1.0EPA 8270E10-9-2310-9-232-NitroanilineND1.0EPA 8270E10-9-2310-9-231,4-DinitrobenzeneND1.0EPA 8270E10-9-2310-9-231,3-DinitrobenzeneND5.0EPA 8270E10-9-2310-9-231,3-DinitrobenzeneND1.0EPA 8270E10-9-2310-9-231,2-DinitrobueneND1.0EPA 8270E10-9-2310-9-231,2-DinitrobenzeneND1.0EPA 8270E10-9-2310-9-231,2-DinitrobueneND1.0EPA 8270E10-9-2310-9-231,2-DinitrobenzeneND1.0EPA 8270E10-9-2310-9-231,2-DinitrobueneND1.0EPA 8270E10-9-2310-9-231,2-DinitrobenzeneND0.10EPA 8270E10-9-2310-9-231,2-DinitrobenzeneND1.0EPA 8270E10-9-2310-9-231,2-DinitrobenzeneND0.10EPA 8270E/SIM10-9-2310-9-23	1-Methylnaphthalene	ND	0.10	EPA 8270E/SIM	10-9-23	10-9-23	
2,3-DichloroanilineND1.0EPA 8270E10-9-2310-9-232,4,5-TrichlorophenolND1.0EPA 8270E10-9-2310-9-232-ChloronaphthaleneND1.0EPA 8270E10-9-2310-9-232-NitroanilineND1.0EPA 8270E10-9-2310-9-231,4-DinitrobenzeneND1.0EPA 8270E10-9-2310-9-23DimethylphthalateND5.0EPA 8270E10-9-2310-9-231,3-DinitrobenzeneND1.0EPA 8270E10-9-2310-9-232,6-DinitrotolueneND1.0EPA 8270E10-9-2310-9-231,2-DinitrobenzeneND1.0EPA 8270E10-9-2310-9-23AcenaphthyleneND0.10EPA 8270E10-9-2310-9-23	Hexachlorocyclopentadiene	ND		EPA 8270E	10-9-23		
2,4,5-TrichlorophenolND1.0EPA 8270E10-9-2310-9-232-ChloronaphthaleneND1.0EPA 8270E10-9-2310-9-232-NitroanilineND1.0EPA 8270E10-9-2310-9-231,4-DinitrobenzeneND1.0EPA 8270E10-9-2310-9-23DimethylphthalateND5.0EPA 8270E10-9-2310-9-231,3-DinitrobenzeneND1.0EPA 8270E10-9-2310-9-232,6-DinitrotolueneND1.0EPA 8270E10-9-2310-9-231,2-DinitrobenzeneND1.0EPA 8270E10-9-2310-9-23AcenaphthyleneND0.10EPA 8270E/SIM10-9-2310-9-23	2,4,6-Trichlorophenol	ND		EPA 8270E	10-9-23	10-9-23	
2-ChloronaphthaleneND1.0EPA 8270E10-9-2310-9-232-NitroanilineND1.0EPA 8270E10-9-2310-9-231,4-DinitrobenzeneND1.0EPA 8270E10-9-2310-9-23DimethylphthalateND5.0EPA 8270E10-9-2310-9-231,3-DinitrobenzeneND1.0EPA 8270E10-9-2310-9-232,6-DinitrotolueneND1.0EPA 8270E10-9-2310-9-231,2-DinitrobenzeneND1.0EPA 8270E10-9-2310-9-23AcenaphthyleneND0.10EPA 8270E/SIM10-9-2310-9-23	2,3-Dichloroaniline	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 10-9-23 10-9-23	2,4,5-Trichlorophenol	ND		EPA 8270E	10-9-23	10-9-23	
1,4-DinitrobenzeneND1.0EPA 8270E10-9-2310-9-23DimethylphthalateND5.0EPA 8270E10-9-2310-9-231,3-DinitrobenzeneND1.0EPA 8270E10-9-2310-9-232,6-DinitrotolueneND1.0EPA 8270E10-9-2310-9-231,2-DinitrobenzeneND1.0EPA 8270E10-9-2310-9-23AcenaphthyleneND0.10EPA 8270E/SIM10-9-2310-9-23	2-Chloronaphthalene	ND	1.0	EPA 8270E	10-9-23	10-9-23	
DimethylphthalateND5.0EPA 8270E10-9-2310-9-231,3-DinitrobenzeneND1.0EPA 8270E10-9-2310-9-232,6-DinitrotolueneND1.0EPA 8270E10-9-2310-9-231,2-DinitrobenzeneND1.0EPA 8270E10-9-2310-9-23AcenaphthyleneND0.10EPA 8270E/SIM10-9-2310-9-23	2-Nitroaniline	ND	1.0	EPA 8270E	10-9-23	10-9-23	
1,3-DinitrobenzeneND1.0EPA 8270E10-9-2310-9-232,6-DinitrotolueneND1.0EPA 8270E10-9-2310-9-231,2-DinitrobenzeneND1.0EPA 8270E10-9-2310-9-23AcenaphthyleneND0.10EPA 8270E/SIM10-9-2310-9-23	1,4-Dinitrobenzene	ND	1.0	EPA 8270E	10-9-23	10-9-23	
2,6-DinitrotolueneND1.0EPA 8270E10-9-2310-9-231,2-DinitrobenzeneND1.0EPA 8270E10-9-2310-9-23AcenaphthyleneND0.10EPA 8270E/SIM10-9-2310-9-23	Dimethylphthalate	ND		EPA 8270E		10-9-23	
ND 1.0 EPA 8270E 10-9-23 10-9-23 Acenaphthylene ND 0.10 EPA 8270E/SIM 10-9-23 10-9-23	1,3-Dinitrobenzene	ND	1.0	EPA 8270E			
Acenaphthylene ND 0.10 EPA 8270E/SIM 10-9-23 10-9-23	2,6-Dinitrotoluene	ND					
		ND	1.0	EPA 8270E	10-9-23	10-9-23	
3-Nitroaniline 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	



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

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

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK	Rooun		motirou	Tioparoa	Analyzou	riago
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		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		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				



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Matrix: Water Units: ug/L

Analyte	Re	sult	Spike	Level		cent overy	Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS						2				
Laboratory ID:	SB10	09W1								
	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	101	94	40 - 120	8	30	
2,6-Dinitrotoluene	20.4	18.3	20.0	20.0	102	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 40 - 120	7	30	
	10.7	10.0	20.0	20.0	31	30	T U - 120	1	50	



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SEMIVOLATILE ORGANICS EPA 8270E/SIM QUALITY CONTROL

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Analyte	Ro	sult	Snike	Level		cent overy	Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS		oun	opino			every				i lago
Laboratory ID:	SB10	09W1								
	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	93 50	40 - 120 20 - 100	5	30	
n-Nitrosodiphenylamine	20.6	9.92 19.3	20.0	20.0 20.0	103	97	20 - 100 40 - 120	5 7	30 30	
1,2-Diphenylhydrazine	20.8	19.3	20.0	20.0 20.0	103	97 96	40 - 120 40 - 120	7	30 30	
	20.5	19.1	20.0	20.0	105	90 97	40 - 120 40 - 120		30	
4-Bromophenyl-phenylether	21.2	19.4 19.9					40 - 120 40 - 120	9		
Hexachlorobenzene		13.4	20.0	20.0	105	100		5	30 25	
Pentachlorophenol	11.8		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			
					31	00	54 110			

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TOTAL METALS EPA 200.8/200.7 QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

onno: ug/2 (ppb)				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	

					Source	Pe	rcent	Recovery		RPD	
Analyte	Re	sult	Spike	Level	Result	Rec	overy	Limits	RPD	Limit	Flags
DUPLICATE											
Laboratory ID:	10-04	43-01									
	ORIG	DUP									
Iron	4810	5080	NA	NA			NA	NA	5	20	
Magnesium	33200	31900	NA	NA		I	NA	NA	4	20	
Manganese	508	490	NA	NA			NA	NA	4	20	
Laboratory ID:	09-2	53-11									
Arsenic	ND	ND	NA	NA			NA	NA	NA	20	
Chromium	ND	ND	NA	NA		I	NA	NA	NA	20	
Nickel	ND	ND	NA	NA		ļ	NA	NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	10-04	43-01									
	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:	09-25	53-11									
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	



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DISSOLVED METALS EPA 200.8/200.7 QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



DISSOLVED METALS EPA 200.8/200.7 QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

Units: ug/L (ppb)					Source	Per	cent	Recovery		RPD	
Analyte	Re	sult	Spike	Level	Result		overy	Limits	RPD	Limit	Flags
DUPLICATE											
Laboratory ID:	10-08	87-01									
	ORIG	DUP									
Calcium	18100	17200	NA	NA		Ν	A	NA	5	20	
Iron	ND	ND	NA	NA		Ν	١A	NA	NA	20	
Magnesium	6980	6790	NA	NA		Ν	١A	NA	3	20	
Manganese	186	179	NA	NA		Ν	١A	NA	4	20	
Potassium	1840	1880	NA	NA		Ν	A	NA	2	20	
Laboratory ID:	10-04	49-01									
Arsenic	11.1	11.2	NA	NA		Ν	IA	NA	0	20	
Chromium	ND	ND	NA	NA		Ν	١A	NA	NA	20	
Nickel	ND	ND	NA	NA		Ν	IA	NA	NA	20	
Laboratory ID:	10-08	87-01									
	ORIG	DUP									
Sodium	3930	3640	NA	NA		Ν	IA	NA	8	20	
MATRIX SPIKES											
Laboratory ID:	10-08	87-01									
-	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:	10-04	49-01									
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:	10-09	87-01									
Laboratory ID.	MS	MSD	MS	MSD		MS	MSD				
Sodium	27100	27100	22200	22200	3930	104	104	75-125	0	20	
						-	-		-		



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AMMONIA (as Nitrogen) SM 4500-NH₃ D QUALITY CONTROL

Matrix: Water Units: mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1011W1					
Ammonia	ND	0.050	SM 4500-NH3 D	10-11-23	10-11-23	

				Source	Percent	Recovery		RPD	
Analyte	Re	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	10-04	43-01							
	ORIG	DUP							
Ammonia	ND	ND	NA	NA	NA	NA	NA	27	
MATRIX SPIKE									
Laboratory ID:	10-04	43-01							
	Ν	1S	MS		MS				
Ammonia	5.	45	5.00	ND	109	78-118	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB10	11W1							
	S	B	SB		SB				
Ammonia	4.	67	5.00	NA	93	85-114	NA	NA	



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TOTAL ORGANIC CARBON SM 5310B QUALITY CONTROL

Matrix: Water Units: mg/L

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
MB1006W1					
ND	1.0	SM 5310B	10-6-23	10-6-23	
	MB1006W1	MB1006W1	MB1006W1	Result PQL Method Prepared MB1006W1	Result PQL Method Prepared Analyzed MB1006W1

				Source	Percent	Recovery		RPD	
Analyte	Re	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	09-2	54-01							
	ORIG	DUP							
Total Organic Carbon	ND	ND	NA	NA	NA	NA	NA	13	
MATRIX SPIKE									
Laboratory ID:	09-2	54-01							
	Ν	1S	MS		MS				
Total Organic Carbon	9.	17	10.0	ND	92	86-127	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB10	06W1							
	S	B	SB		SB				
Total Organic Carbon	9.	20	10.0	NA	92	90-122	NA	NA	



TOTAL DISSOLVED SOLIDS SM 2540C QUALITY CONTROL

Matrix: Water Units: mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1006W1					
Total Dissolved Solids	ND	13	SM 2540C	10-6-23	10-6-23	

	_		.	Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	10-04	46-01							
	ORIG	DUP							
Total Dissolved Solids	428	423	NA	NA	NA	NA	1	30	
SPIKE BLANK									
Laboratory ID:	SB10	06W1							
	S	В	SB		SB				
Total Dissolved Solids	47	75	500	NA	95	80-120	NA	NA	



TOTAL ALKALINITY SM 2320B QUALITY CONTROL

Matrix: Water Units: mg CaCO3/L

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
MB1009W1					
ND	2.0	SM 2320B	10-9-23	10-9-23	
	MB1009W1	MB1009W1	MB1009W1	MB1009W1	MB1009W1

Analyte	Res	sult	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE			-					-	
Laboratory ID:	10-05	57-01							
	ORIG	DUP							
Total Alkalinity	102	100	NA	NA	NA	NA	2	10	
SPIKE BLANK									
Laboratory ID:	SB10	09W1							
	S	В	SB		SB				
Total Alkalinity	86	6.0	100	NA	86	82-112	NA	NA	



BICARBONATE SM 2320B QUALITY CONTROL

Matrix: Water Units: mg CaCO3/L

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
MB1009W1					
ND	2.0	SM 2320B	10-9-23	10-9-23	
	MB1009W1	MB1009W1	MB1009W1	MB1009W1	MB1009W1

Analyte	Res	sult	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE			0,						1
Laboratory ID:	10-05	57-01							
	ORIG	DUP							
Bicarbonate	102	100	NA	NA	NA	NA	2	10	
SPIKE BLANK									
Laboratory ID:	SB10	09W1							
	S	В	SB		SB				
Bicarbonate	86	6.0	100	NA	86	82-112	NA	NA	



CHLORIDE SM 4500-CI E QUALITY CONTROL

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
MB1009W1					
ND	2.0	SM 4500-CI E	10-9-23	10-9-23	
	MB1009W1	MB1009W1	MB1009W1	Result PQL Method Prepared MB1009W1	Result PQL Method Prepared Analyzed MB1009W1

				Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	10-08	37-01							
	ORIG	DUP							
Chloride	3.47	3.40	NA	NA	NA	NA	2	12	
MATRIX SPIKE									
Laboratory ID:	10-08	37-01							
	Μ	IS	MS		MS				
Chloride	51	.6	50.0	3.47	96	83-120	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB10	09W1							
	S	В	SB		SB				
Chloride	46	6.7	50.0	NA	93	83-119	NA	NA	



NITRATE (as Nitrogen) EPA 353.2 QUALITY CONTROL

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1006W1					
Nitrate	ND	0.050	EPA 353.2	10-6-23	10-6-23	

			Source	Percent	Recovery		RPD	
Analyte	Result	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE								
Laboratory ID:	10-057-01							
	ORIG DUP							
Nitrate	0.120 0.0809	NA	NA	NA	NA	39	19	С
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	



SULFATE ASTM D516-11 QUALITY CONTROL

Analyte	Result	PQL	Method	Date Prepared	Date Analvzed	Flags
	Nesun	FQL	Wethou	Fiepaleu	Analyzeu	i lays
METHOD BLANK						
Laboratory ID:	MB1012W1					
Sulfate	ND	5.0	ASTM D516-11	10-12-23	10-12-23	

	alyte Result		Spike Level	Source Result	Percent Recovery	Recovery Limits		RPD Limit	Flags
Analyte							RPD		
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:	SB10	12W1							
	S	B	SB		SB				
Sulfate	9.49		10.0	NA	95	85-114	NA	NA	





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.

Ζ-

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



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OnSite Environmental Inc.		Cha	ain o	f	Cu	IS	to	dy										Pa	age _	1	_ of _	١		
Analytical Laboratory Testing Services 14648 NE 95th Street • Redmond, WA 98052		naround Req working da			L	abo	orat	ory	Nur	nbe	er:	1	0 -	0	57	7-								
Phone: (425) 883-3881 · www.onsite-env.com Company: G-ET Project Number: GG94-006-03 Project Name: GB Bast Project Manager: Gamet Leque Sampled by: TDE	_ 🗌 Same] 1 Day] 3 Days	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX (80210 82600)	NWTPH-Gx	NWTPH-Dx (SG Clean-up [])	Volatiles 8260	Halogenated Volatiles 8260	EDB EPA 8011 (Waters Only)	Semivolatiles 8270/SIM (with low-level PAHs) DAHs 8770/SIM /Jow-Joroft	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	eachyte indicated	seachem Params	sture
Lab ID Sample Identification	Date Sampled	Time Sampled	Matrix	Num	NWTF	NWTH	ITWN	NWTF	Volati	Halog	EDB	Semi (with DALIS	PCBs	Orgar	Orgar	Chlor	Total	Total	TCLP	HEM	Me	0	9	% Moisture
1 20231005-MW-7 2 20231004-MW-3	19/5/23	1205		7								X									X	X	X	
2 20231004-MW-3	10/4/23	1705	Gw	6																	X	X	X	
Cimpoturo		ompany				Date			Time		-	Comr	nents/	Gnooi	al Inei	ruotio								
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Relinquished		41 Q				10	15	23	11~	5.2	0	Chi	sche	mer k	tor	crw cry	5:1	414 Su	12	o.co and ate	art	0,0 0,0	-35 1.1	Car
Received												Data	Packa	ige: S	Standa	ard [Le	vel III		Leve	el IV []		- 1
Reviewed/Date		Reviewed/Da	ate	_								Chron	natogr	rams	with fi	nal re	port [Ele	ectron	ic Dat	a Deliv	verable	es (EDI	Ds) 🗌



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	



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SEMIVOLATILE ORGANICS EPA 8270E/SIM page 1 of 2

Matrix: Water Units: ug/L

Client ID: 20231006-MW-6 Laboratory ID: 10-087-02 n-Nitrosodimethylamine ND 0.96 EPA 8270E 10-9-23 Pyridine ND 0.96 EPA 8270E 10-9-23 Phenol ND 0.96 EPA 8270E 10-9-23 Aniline ND 4.8 EPA 8270E 10-9-23 bis(2-Chloroethyl)ether ND 0.96 EPA 8270E 10-9-23 2-Chlorophenol ND 0.96 EPA 8270E 10-9-23 1,3-Dichlorobenzene ND 0.96 EPA 8270E 10-9-23 1,2-Dichlorobenzene ND 0.96 EPA 8270E 10-9-23 1,2-Dichlorobenzene ND 0.96 EPA 8270E 10-9-23 2-Methylphenol (o-Cresol) ND 0.96 EPA 8270E 10-9-23 2-Methylphenol (m,p-Cresol) ND 0.96 EPA 8270E 10-9-23 2-Methylphenol (m,p-Cresol) ND 0.96 EPA 8270E 10-9-23 1/2-Dichlorobenzene ND 0.96 E	Analyzed Flags 10-10-23 10-10-23 10-10-23 10-10-23 10-10-23 10-10-23 10-10-23 10-10-23 10-10-23 10-10-23 10-10-23 10-10-23 10-10-23 10-10-23 10-10-23 10-10-23 10-10-23 10-10-23 10-10-23 10-10-23 10-10-23 10-10-23 10-10-23 10-10-23 10-10-23 10-10-23 10-10-23 10-10-23
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2,4-DichlorophenolND1.9EPA 8270E10-9-231,2,4-TrichlorobenzeneND0.96EPA 8270E10-9-23NaphthaleneND0.096EPA 8270E/SIM10-9-234-ChloroanilineND0.96EPA 8270E10-9-23HexachlorobutadieneND0.96EPA 8270E10-9-23	10-10-23
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Hexachlorobutadiene ND 0.96 EPA 8270E 10-9-23	10-10-23
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3-Nitroaniline ND 0.96 EPA 8270E 10-9-23	10-10-23



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SEMIVOLATILE ORGANICS EPA 8270E/SIM

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	20231006-MW-6				j	
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				



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TOTAL ORGANIC CARBON SM 5310B

Matrix: Water Units: mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



TOTAL ALKALINITY SM 2320B

Matrix: Water Units: mg CaCO3/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



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BICARBONATE SM 2320B

Matrix: Water Units: mg CaCO3/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



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CHLORIDE SM 4500-CI E

Matrix: Water Units: mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	20231005-MW-1					
Laboratory ID:	10-087-01					
Chloride	3.5	2.0	SM 4500-CI E	10-9-23	10-9-23	
Client ID:	20231006-MW-6					
Laboratory ID:	10-087-02					
Chloride	6.0	2.0	SM 4500-CI E	10-9-23	10-9-23	



NITRATE (as Nitrogen) EPA 353.2

Matrix: Water Units: mg/L-N

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



SULFATE ASTM D516-11

Matrix: Water Units: mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



TOTAL DISSOLVED SOLIDS SM 2540C

Matrix: Water Units: mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



AMMONIA (as Nitrogen) SM 4500-NH₃ D

Matrix: Water Units: mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



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TOTAL METALS EPA 200.8/200.7/7470A

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



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DISSOLVED METALS EPA 200.8/200.7/7470A

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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
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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	



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

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK					j	
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				



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

Matrix: Water Units: ug/L

	_		• •		-	cent	Recovery		RPD	
Analyte	Re	sult	Spike	Level	Reco	overy	Limits	RPD	Limit	Flags
SPIKE BLANKS	SP10	09W1								
Laboratory ID:	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 40 - 120	27	30	
Phenol	8.19	6.70	20.0	20.0	41	40 34	40 - 120 20 - 80	20	26	
Aniline	18.4	14.3	20.0	20.0	92	72	40 - 120	20 25	30	
bis(2-Chloroethyl)ether	16.6	14.3	20.0	20.0	83	62	40 - 120 40 - 120	30	30	
2-Chlorophenol	17.1	13.0	20.0	20.0	86	65	40 - 120 45 - 100	27	31	
1,3-Dichlorobenzene	16.4	12.5	20.0	20.0	82	63	43 - 100 40 - 120	27	30	
	15.8	12.3	20.0	20.0	79	61	40 - 120 34 - 100	26	30	
1,4-Dichlorobenzene	16.7	13.8	20.0	20.0	79 84	69	34 - 100 40 - 120	20 19	30	
Benzyl alcohol	16.4	13.6								
1,2-Dichlorobenzene	16.4	12.6	20.0	20.0 20.0	82 84	63	40 - 120	26 22	30 30	
2-Methylphenol (o-Cresol)			20.0			68 65	40 - 120			
bis(2-Chloroisopropyl)ether	17.4	12.9	20.0	20.0	87	65 65	40 - 120	30	30	
(3+4)-Methylphenol (m,p-Cresol)	16.0	12.9	20.0	20.0	80	65 70	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	

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• • • •	_		• "			cent	Recovery		RPD	
Analyte	Re	sult	Spike	Level	Rec	overy	Limits	RPD	Limit	Flags
	0040	0014/4								
Laboratory ID:		09W1	00	000	0.0	000				
2.4 Dinitranhanal	SB	SBD 6.05	SB	SBD	SB 29	SBD	20 - 100	4	20	
2,4-Dinitrophenol	5.80 19.6	6.05 17.6	20.0	20.0		30			30	
Acenaphthene			20.0	20.0	98 59	88 50	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 07	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			
					51	00	0, 110			

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TOTAL ORGANIC CARBON SM 5310B QUALITY CONTROL

Matrix: Water Units: mg/L

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
MB1016D2					
ND	1.0	SM 5310B	10-16-23	10-16-23	
	MB1016D2	MB1016D2	MB1016D2	Result PQL Method Prepared MB1016D2	Result PQL Method Prepared Analyzed MB1016D2 MB1016D2

				Source	Percent	Recovery		RPD	
Analyte	Re	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	10-1	16-01							
	ORIG	DUP							
Total Organic Carbon	5.50	5.08	NA	NA	NA	NA	8	13	
MATRIX SPIKE									
Laboratory ID:	10-1	16-01							
	Ν	1S	MS		MS				
Total Organic Carbon	1	5.8	10.0	5.50	103	86-127	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB10)16D2							
	S	B	SB		SB				
Total Organic Carbon	9.	34	10.0	NA	93	90-122	NA	NA	



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TOTAL ALKALINITY SM 2320B QUALITY CONTROL

Matrix: Water Units: mg CaCO3/L

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

Analyte	Res	sult	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE									
Laboratory ID:	10-05	57-01							
	ORIG	DUP							
Total Alkalinity	102	100	NA	NA	NA	NA	2	10	
SPIKE BLANK									
Laboratory ID:	SB10	09W1							
	S	В	SB		SB				
Total Alkalinity	86	6.0	100	NA	86	82-112	NA	NA	



BICARBONATE SM 2320B QUALITY CONTROL

Matrix: Water Units: mg CaCO3/L

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
MB1009W1					
ND	2.0	SM 2320B	10-9-23	10-9-23	
	MB1009W1	MB1009W1	MB1009W1	Result PQL Method Prepared MB1009W1	Result PQL Method Prepared Analyzed MB1009W1

Analyte	Res	sult	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE			•						
Laboratory ID:	10-05	57-01							
	ORIG	DUP							
Bicarbonate	102	100	NA	NA	NA	NA	2	10	
SPIKE BLANK									
Laboratory ID:	SB10	09W1							
	S	В	SB		SB				
Bicarbonate	86	6.0	100	NA	86	82-112	NA	NA	



CHLORIDE SM 4500-CI E QUALITY CONTROL

Matrix: Water Units: mg/L

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

				Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	10-08	37-01							
	ORIG	DUP							
Chloride	3.47	3.40	NA	NA	NA	NA	2	12	
MATRIX SPIKE									
Laboratory ID:	10-08	37-01							
	Μ	IS	MS		MS				
Chloride	51	.6	50.0	3.47	96	83-120	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB10	09W1							
	S	В	SB		SB				
Chloride	46	6.7	50.0	NA	93	83-119	NA	NA	



NITRATE (as Nitrogen) EPA 353.2 QUALITY CONTROL

Matrix: Water Units: mg/L-N

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1006W1					
Nitrate	ND	0.050	EPA 353.2	10-6-23	10-6-23	

			Source	Percent	Recovery		RPD	
Analyte	Result	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE								
Laboratory ID:	10-057-01							
	ORIG DUP							
Nitrate	0.120 0.0809	NA	NA	NA	NA	39	19	С
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	



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SULFATE ASTM D516-11 QUALITY CONTROL

Matrix: Water Units: mg/L

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

				Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	10-04	43-03							
	ORIG	DUP							
Sulfate	6.97	6.57	NA	NA	NA	NA	6	10	
MATRIX SPIKE									
Laboratory ID:	10-04	43-03							
	М	S	MS		MS				
Sulfate	16	5.7	10.0	6.97	97	73-127	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB10	12W1							
	S	В	SB		SB				
Sulfate	9.4	49	10.0	NA	95	85-114	NA	NA	



TOTAL DISSOLVED SOLIDS SM 2540C QUALITY CONTROL

Matrix: Water Units: mg/L

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
MB1011W1					
ND	13	SM 2540C	10-11-23	10-11-23	
	MB1011W1	MB1011W1	MB1011W1	Result PQL Method Prepared MB1011W1	Result PQL Method Prepared Analyzed MB1011W1

				Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	10-08	87-01							
	ORIG	DUP							
Total Dissolved Solids	68.0	61.3	NA	NA	NA	NA	10	30	
SPIKE BLANK									
Laboratory ID:	SB10	11W1							
	S	В	SB		SB				
Total Dissolved Solids	43	39	500	NA	88	80-120	NA	NA	



AMMONIA (as Nitrogen) SM 4500-NH₃ D QUALITY CONTROL

Matrix: Water Units: mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1011W1					
Ammonia	ND	0.050	SM 4500-NH3 D	10-11-23	10-11-23	

				Source	Percent	Recovery		RPD	
Analyte	Re	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	10-04	43-01							
	ORIG	DUP							
Ammonia	ND	ND	NA	NA	NA	NA	NA	27	
MATRIX SPIKE									
Laboratory ID:	10-04	43-01							
	Ν	IS	MS		MS				
Ammonia	5.	45	5.00	ND	109	78-118	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB10	11W1							
	S	B	SB		SB				
Ammonia	4.	67	5.00	NA	93	85-114	NA	NA	



TOTAL METALS EPA 200.8/200.7/7470A QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



TOTAL METALS EPA 200.8/200.7/7470A QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

						Per	cent	Recovery		RPD			
Analyte	Result		Spike Level		Result	Recovery		Limits	RPD	Limit	Flags		
DUPLICATE													
Laboratory ID:	10-04	43-01											
	ORIG	DUP											
Iron	4810	5080	NA	NA		Ν	١A	NA	5	20			
Magnesium	33200	31900	NA	NA		Ν	A	NA	4	20			
Manganese	508	490	NA	NA		١	A	NA	4	20			
Laboratory ID:	09-2	53-11											
Arsenic	ND	ND	NA	NA		Ν	١A	NA	NA	20			
Cadmium	ND	ND	NA	NA		Ν	ΙA	NA	NA	20			
Chromium	ND	ND	NA	NA		Ν	١A	NA	NA	20			
Copper	ND	ND	NA	NA		Ν	١A	NA	NA	20			
Lead	1.50	1.50	NA	NA		Ν	١A	NA	0	20			
Nickel	ND	ND	NA	NA		Ν	ΝA	NA	NA	20			
Selenium	ND	ND	NA	NA		١	NA	NA	NA	20			
Laboratory ID:	10-04	49-01											
Mercury	ND	ND	NA	NA		NA		NA	NA	20			
MATRIX SPIKES													
Laboratory ID:	10-04	43-01											
	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:	09-2	53-11											
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:		49-01											
Mercury	5.70	5.63	6.25	6.25	ND	91	90	75-125	1	20			



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DISSOLVED METALS EPA 200.8/200.7/7470A QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

				Date	Date				
Analyte	Result	PQL	Method	Prepared	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	0-12-23			
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				10.10.05				
Mercury	ND	0.025	EPA 7470A		10-12-23				
Laboratory ID:	MB1013D1								
Sodium	ND	1100	EPA 200.7		10-13-23				



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DISSOLVED METALS EPA 200.8/200.7/7470A QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

					Source	Percent	Recovery		RPD	
Analyte	Re	sult	Spike	Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE										
Laboratory ID:	10-08	37-01								
	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:	10-04	49-01								
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:	10-08	37-01								
Mercury	ND	ND	NA	NA		NA	NA	NA	20	
Laboratory ID:	10-08	37-01								
	ORIG	DUP								
Sodium	3930	3640	NA	NA		NA	NA	8	20	



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

DISSOLVED METALS EPA 200.8/200.7/7470A QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

onns. ug/L (ppb)					Source	Per	cent	Recovery	RPD						
Analyte	Re	sult	Spike	Level	Result		overy	Limits	RPD	Limit	Flags				
MATRIX SPIKES			•				i								
Laboratory ID:	10-08	87-01													
	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:	10-04	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:	10-0	87-01													
Mercury	5.88	5.83	6.25	6.25	ND	94	93	75-125	1	20					
Laboratory ID:	10-0	87-01													
	MS	MSD	MS	MSD		MS	MSD								
Sodium	27100	27100	22200	22200	3930	104	104	75-125	0	20					



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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.

Ζ-

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



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

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	Environmental Inc.	Turn (in	around Req working day	uest ys)		L	abora	atory		umb	per:	1	0	- 0	8	7						
Comp	Phone: (425) 883-3881 • www.onsite-env.com	-	(Check One)					T			1			-	-		_	1	1		-	
Proje	ct Number: 6694-002-05	🗌 Sam		1 Day						VOC	31A	TOC, alk+bicarb, Cl, NO3, SO4, TDS, NH3)					Ca					
Proje	ct Name: Go East	Stan	dard (7 Days)	s					B270D/SIM (low-level) SVOC	Organochlorine Pesticides 8081A	NO3, SO			t	0	Ner,					
	ct Manager: Garrett Leque		l analysis 5 C	Jays)	Number of Containers				8	SIM (low	ine Pestic	arb, Cl, I	CHN (2-	Shart		VZ					
Samp	led by JDE		(other)		ber of C		NWTPH-Gx	NWTPH-Dx	Volatiles 8260B	8270D/	anochlori	2, alk+bid	TOC, TDS, NH3	T/D metals	T/D metals	Total metals	55.					% Moisture
Lab IC		Date Sampled	Time Sampled	Matrix	-		LMN	ITWN	Volati		Orge	TOC	TO	T/D	m d/1	Tot (Dis		-		_	% Wc
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	WWWWS MW-6	1016123	1320	GW	1												~					
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	eived							-	-		- 1											
Reli	nquished																					
Rec	eived																					
Revi	ewed/Date		Reviewed/Da	ite								Chron	natogr	ams w	ith fina	repor	t 🗆					



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



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.



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	



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DIESEL AND HEAVY OIL RANGE ORGANICS NWTPH-Dx

Matrix: Water Units: mg/L (ppm)

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
MW-9				-	
10-168-01					
ND	0.21	NWTPH-Dx	10-17-23	10-17-23	
ND	0.21	NWTPH-Dx	10-17-23	10-17-23	
Percent Recovery	Control Limits				
80	50-150				
MW-10					
10-168-02					
ND	0.20	NWTPH-Dx	10-17-23	10-17-23	
ND	0.20	NWTPH-Dx	10-17-23	10-17-23	
Percent Recovery	Control Limits				
78	50-150				
SWS-1					
10-168-03					
ND	0.22	NWTPH-Dx	10-17-23	10-17-23	
ND	0.22	NWTPH-Dx	10-17-23	10-17-23	
Percent Recovery	Control Limits				
75	50-150				
	MW-9 10-168-01 ND ND Percent Recovery 80 MW-10 10-168-02 ND Percent Recovery 78 SWS-1 10-168-03 ND Percent Recovery 78	MW-9 10-168-01 ND 0.21 ND 0.21 Percent Recovery Control Limits 80 50-150 MW-10 50-150 10-168-02 0.20 ND 0.20 Percent Recovery Control Limits 78 50-150 SWS-1 50-150 10-168-03 V ND 0.22 ND 0.22 ND 0.22 ND 0.22 ND 0.22 Percent Recovery Control Limits	MW-9 10-168-01 0.21 NWTPH-Dx ND 0.21 NWTPH-Dx Percent Recovery Control Limits NWTPH-Dx 80 50-150 SWS-150 MW-10 0.20 NWTPH-Dx 10-168-02 0.20 NWTPH-Dx Percent Recovery Control Limits NWTPH-Dx Percent Recovery Control Limits SWS-1 10-168-03 50-150 NWTPH-Dx SWS-1 0.22 NWTPH-Dx Percent Recovery Control Limits SWS-150 SWS-1 0.22 NWTPH-Dx Percent Recovery Control Limits NWTPH-Dx Percent Recovery Control Limits SWS-150	Result PQL Method Prepared MW-9 10-168-01 10-17-23 10-17-23 ND 0.21 NWTPH-Dx 10-17-23 ND 0.21 NWTPH-Dx 10-17-23 Percent Recovery Control Limits 10-17-23 10-17-23 80 50-150	Result PQL Method Prepared Analyzed MW-9 10-168-01 10-1768-01 10-17-23 10-17-23 ND 0.21 NWTPH-Dx 10-17-23 10-17-23 Percent Recovery Control Limits 10-17-23 10-17-23 80 50-150 - - - MW-10 - - - - 10-168-02 - - - - ND 0.20 NWTPH-Dx 10-17-23 10-17-23 Percent Recovery Control Limits - 10-17-23 10-17-23 Percent Recovery Control Limits - - - - SWS-1 - - - - - - 10-168-03 - - - - - - ND 0.22 NWTPH-Dx 10-17-23 10-17-23 10-17-23 ND 0.22 NWTPH-Dx 10-17-23 10-17-23 Percent Recovery



SEMIVOLATILE ORGANICS EPA 8270E/SIM page 1 of 2

Matrix: Water Units: ug/L

Units: ug/L	D	501	NA (1) 1	Date	Date	-
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	MW-9					
Laboratory ID:	10-168-01			10.10.00	40.40.00	
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	0.98	EPA 8270E/SIM	10-18-23	10-18-23	
3-Nitroaniline	ND	0.098	EPA 8270E/SIM	10-18-23	10-18-23	
J-INICOALIIIIIE		0.90	EFA 02/UE	10-10-23	10-10-23	



SEMIVOLATILE ORGANICS EPA 8270E/SIM

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A		501		Date	Date	-
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	MW-9					
Laboratory ID:	10-168-01	7.0		40.40.00	10.10.00	
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-phenylethe		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-phenylethe		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				

SEMIVOLATILE ORGANICS EPA 8270E/SIM page 1 of 2

Matrix: Water Units: ug/L

Units: Ug/L				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



SEMIVOLATILE ORGANICS EPA 8270E/SIM

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	MW-10	1 42	motriou	Tiopulou	Analyzou	Tiago
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				



SEMIVOLATILE ORGANICS EPA 8270E/SIM page 1 of 2

Matrix: Water Units: ug/L

	Desult	DOL		Date	Date	F lama
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	SWS-1					
Laboratory ID:	10-168-03	4.0		10.10.00	40.40.00	
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/SIM	10-18-23	10-18-23	
J-INICOALIIIITE		1.1	EFA 02/UE	10-10-23	10-10-23	



Analyte Result PQL Method Prepared Analyzed Flags Client ID: SWS-1 10-168-03 10-168-03 10-18-23 10-18-23 10-18-23 2,4-Dinitrophenol ND 8.3 EPA 8270E 10-18-23 10-18-23 Acenaphthene 0.29 0.11 EPA 8270E 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 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	
Laboratory ID:10-168-032,4-DinitrophenolND8.3EPA 8270E10-18-2310-18-23Acenaphthene0.290.11EPA 8270E/SIM10-18-2310-18-234-NitrophenolND2.3EPA 8270E10-18-2310-18-232,4-DinitrotolueneND1.1EPA 8270E10-18-2310-18-23DibenzofuranND1.1EPA 8270E10-18-2310-18-232,3,5,6-TetrachlorophenolND2.3EPA 8270E10-18-2310-18-232,3,4,6-TetrachlorophenolND2.3EPA 8270E10-18-2310-18-23DiethylphthalateND1.1EPA 8270E10-18-2310-18-23	Analyte
2,4-DinitrophenolND8.3EPA 8270E10-18-2310-18-23Acenaphthene0.290.11EPA 8270E/SIM10-18-2310-18-234-NitrophenolND2.3EPA 8270E10-18-2310-18-232,4-DinitrotolueneND1.1EPA 8270E10-18-2310-18-23DibenzofuranND1.1EPA 8270E10-18-2310-18-232,3,5,6-TetrachlorophenolND2.3EPA 8270E10-18-2310-18-232,3,4,6-TetrachlorophenolND2.3EPA 8270E10-18-2310-18-23DiethylphthalateND1.1EPA 8270E10-18-2310-18-23	Client ID:
Acenaphthene0.290.11EPA 8270E/SIM10-18-2310-18-234-NitrophenolND2.3EPA 8270E10-18-2310-18-232,4-DinitrotolueneND1.1EPA 8270E10-18-2310-18-23DibenzofuranND1.1EPA 8270E10-18-2310-18-232,3,5,6-TetrachlorophenolND2.3EPA 8270E10-18-2310-18-232,3,4,6-TetrachlorophenolND2.3EPA 8270E10-18-2310-18-23DiethylphthalateND1.1EPA 8270E10-18-2310-18-23	Laboratory ID:
4-NitrophenolND2.3EPA 8270E10-18-2310-18-232,4-DinitrotolueneND1.1EPA 8270E10-18-2310-18-23DibenzofuranND1.1EPA 8270E10-18-2310-18-232,3,5,6-TetrachlorophenolND2.3EPA 8270E10-18-2310-18-232,3,4,6-TetrachlorophenolND2.3EPA 8270E10-18-2310-18-23DiethylphthalateND1.1EPA 8270E10-18-2310-18-23	2,4-Dinitrophenol
2,4-DinitrotolueneND1.1EPA 8270E10-18-2310-18-23DibenzofuranND1.1EPA 8270E10-18-2310-18-232,3,5,6-TetrachlorophenolND2.3EPA 8270E10-18-2310-18-232,3,4,6-TetrachlorophenolND2.3EPA 8270E10-18-2310-18-23DiethylphthalateND1.1EPA 8270E10-18-2310-18-23	Acenaphthene
DibenzofuranND1.1EPA 8270E10-18-2310-18-232,3,5,6-TetrachlorophenolND2.3EPA 8270E10-18-2310-18-232,3,4,6-TetrachlorophenolND2.3EPA 8270E10-18-2310-18-23DiethylphthalateND1.1EPA 8270E10-18-2310-18-23	4-Nitrophenol
2,3,5,6-TetrachlorophenolND2.3EPA 8270E10-18-2310-18-232,3,4,6-TetrachlorophenolND2.3EPA 8270E10-18-2310-18-23DiethylphthalateND1.1EPA 8270E10-18-2310-18-23	2,4-Dinitrotoluene
2,3,4,6-TetrachlorophenolND2.3EPA 8270E10-18-2310-18-23DiethylphthalateND1.1EPA 8270E10-18-2310-18-23	Dibenzofuran
Diethylphthalate ND 1.1 EPA 8270E 10-18-23 10-18-23	2,3,5,6-Tetrachlorophenol
	2,3,4,6-Tetrachlorophenol
	Diethylphthalate
4-Chlorophenyl-phenylether ND 1.1 EPA 8270E 10-18-23 10-18-23	4-Chlorophenyl-phenylether
4-Nitroaniline ND 1.1 EPA 8270E 10-18-23 10-18-23	4-Nitroaniline
Fluorene ND 0.11 EPA 8270E/SIM 10-18-23 10-18-23	Fluorene
4,6-Dinitro-2-methylphenol ND 7.0 EPA 8270E 10-18-23 10-18-23	4,6-Dinitro-2-methylphenol
n-Nitrosodiphenylamine ND 1.1 EPA 8270E 10-18-23 10-18-23	n-Nitrosodiphenylamine
1,2-Diphenylhydrazine ND 1.1 EPA 8270E 10-18-23 10-18-23	1,2-Diphenylhydrazine
4-Bromophenyl-phenylether ND 1.1 EPA 8270E 10-18-23 10-18-23	4-Bromophenyl-phenylether
Hexachlorobenzene ND 1.1 EPA 8270E 10-18-23 10-18-23	Hexachlorobenzene
Pentachlorophenol ND 5.6 EPA 8270E 10-18-23 10-18-23	Pentachlorophenol
Phenanthrene ND 0.11 EPA 8270E/SIM 10-18-23 10-18-23	Phenanthrene
Anthracene ND 0.11 EPA 8270E/SIM 10-18-23 10-18-23	Anthracene
Carbazole ND 1.1 EPA 8270E 10-18-23 10-18-23	Carbazole

SEMIVOLATILE ORGANICS EPA 8270E/SIM

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		0.11		10-10-20	10-10-20	
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-phenylethe	r 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				



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ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Water Units: ug/L (ppb)

Analyte Result PQL Method Prepared Analyzed Flags Client ID: MW-9 10-168-01 10-168-01 10-168-01 10-18-23					Date	Date	
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 gamma-Chlordane ND 0.0049 EPA 8081B 10-17-23 10-18-23 gamma-Chlordane ND 0.0049 EPA 8081B 10-17-23 10-18-23 gamba-Chlordane ND 0.0049 EPA 8081B 10-17-23 10-18-23 gamba-Chlordane ND 0.0049 EPA 8081B 10-17-23 10-18-23 gamba-Chlordane ND 0.0049 EPA 8081B 10-17-23 10-18-23 galpha-Chlordane ND 0.004	Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
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 gamma-Chlordane ND 0.0049 EPA 8081B 10-17-23 10-18-2	Client ID:	MW-9					
gamma-BHCND0.0049EPA 8081B10-17-2310-18-23beta-BHCND0.0049EPA 8081B10-17-2310-18-23delta-BHCND0.0049EPA 8081B10-17-2310-18-23HeptachlorND0.0049EPA 8081B10-17-2310-18-23AldrinND0.0049EPA 8081B10-17-2310-18-23Heptachlor epoxideND0.0049EPA 8081B10-17-2310-18-23gamma-ChlordaneND0.0049EPA 8081B10-17-2310-18-23alpha-ChlordaneND0.0049EPA 8081B10-17-2310-18-23alpha-ChlordaneND0.0049EPA 8081B10-17-2310-18-23Endosulfan IND0.0049EPA 8081B10-17-2310-18-23DieldrinND0.0049EPA 8081B10-17-2310-18-23EndrinND0.0049EPA 8081B10-17-2310-18-23A,4'-DDND0.0049EPA 8081B10-17-2310-18-23EndrinND0.0049EPA 8081B10-17-2310-18-23A,4'-DDTND0.0049EPA 8081B10-17-2310-18-23Endosulfan IIND0.0049EPA 8081B10-17-2310-18-23Endrin aldehydeND0.0049EPA 8081B10-17-2310-18-23Endrin aldehydeND0.0049EPA 8081B10-17-2310-18-23Endrin aldehydeND0.0049EPA 8081B10-17-2310-18-23	Laboratory ID:	10-168-01					
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delta-BHCND0.0049EPA 8081B10-17-2310-18-23HeptachlorND0.0049EPA 8081B10-17-2310-18-23AldrinND0.0049EPA 8081B10-17-2310-18-23Heptachlor epoxideND0.0049EPA 8081B10-17-2310-18-23gamma-ChlordaneND0.0049EPA 8081B10-17-2310-18-23alpha-ChlordaneND0.0049EPA 8081B10-17-2310-18-234,4'-DDEND0.0049EPA 8081B10-17-2310-18-23Endosulfan IND0.0049EPA 8081B10-17-2310-18-23DieldrinND0.0049EPA 8081B10-17-2310-18-23EndrinND0.0049EPA 8081B10-17-2310-18-23EndrinND0.0049EPA 8081B10-17-2310-18-23EndrinND0.0049EPA 8081B10-17-2310-18-234,4'-DDTND0.0049EPA 8081B10-17-2310-18-23Endrin aldehydeND0.0049EPA 8081B10-17-2310-18-23Endrin aldehydeND0.0049EPA 8081B10-17-2310-18-23Endrin aldehydeND0.0049EPA 8081B10-17-2310-18-23Endrin aldehydeND0.0049EPA 8081B10-17-2310-18-23Endrin aldehydeND0.0049EPA 8081B10-17-2310-18-23Endrin aldehydeND0.0049EPA 8081B10-17-2310-18-23 </td <td>gamma-BHC</td> <td>ND</td> <td>0.0049</td> <td>EPA 8081B</td> <td>10-17-23</td> <td>10-18-23</td> <td></td>	gamma-BHC	ND	0.0049	EPA 8081B	10-17-23	10-18-23	
HeptachlorND0.0049EPA 8081B10-17-2310-18-23AldrinND0.0049EPA 8081B10-17-2310-18-23Heptachlor epoxideND0.0049EPA 8081B10-17-2310-18-23gamma-ChlordaneND0.0049EPA 8081B10-17-2310-18-23alpha-ChlordaneND0.0049EPA 8081B10-17-2310-18-234,4'-DDEND0.0049EPA 8081B10-17-2310-18-23Endosulfan IND0.0049EPA 8081B10-17-2310-18-23DieldrinND0.0049EPA 8081B10-17-2310-18-23EndrinND0.0049EPA 8081B10-17-2310-18-234,4'-DDDND0.0049EPA 8081B10-17-2310-18-234,4'-DDTND0.0049EPA 8081B10-17-2310-18-234,4'-DDTND0.0049EPA 8081B10-17-2310-18-234,4'-DDTND0.0049EPA 8081B10-17-2310-18-23Endrin aldehydeND0.0049EPA 8081B10-17-2310-18-23Endrin aldehydeND0.0049EPA 8081B10-17-2310-18-23Endosulfan sulfateND0.0049EPA 8081B10-17-2310-18-23Endosulfan sulfateND0.019EPA 8081B10-17-2310-18-23Endosulfan sulfateND0.019EPA 8081B10-17-2310-18-23Endosulfan sulfateND0.049EPA 8081B10-17-2310-	beta-BHC	ND	0.0049	EPA 8081B	10-17-23	10-18-23	
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Heptachlor epoxideND0.0049EPA 8081B10-17-2310-18-23gamma-ChlordaneND0.0049EPA 8081B10-17-2310-18-23alpha-ChlordaneND0.0049EPA 8081B10-17-2310-18-234,4'-DDEND0.0049EPA 8081B10-17-2310-18-23Endosulfan IND0.0049EPA 8081B10-17-2310-18-23DieldrinND0.0049EPA 8081B10-17-2310-18-23EndrinND0.0049EPA 8081B10-17-2310-18-23EndrinND0.0049EPA 8081B10-17-2310-18-234,4'-DDDND0.0049EPA 8081B10-17-2310-18-234,4'-DDTND0.0049EPA 8081B10-17-2310-18-23Endrin aldehydeND0.0049EPA 8081B10-17-2310-18-23Endrin aldehydeND0.0049EPA 8081B10-17-2310-18-23Endrin aldehydeND0.0049EPA 8081B10-17-2310-18-23Endrin aldehydeND0.0097EPA 8081B10-17-2310-18-23Endosulfan sulfateND0.0049EPA 8081B10-17-2310-18-23Endrin ketoneND0.019EPA 8081B10-17-2310-18-23Endrin ketoneND0.049EPA 8081B10-17-2310-18-23Surrogate:Percent RecoveryControl limitsTetrachloro-m-xylene5729-11010-17-2310-18-23	Heptachlor	ND	0.0049	EPA 8081B	10-17-23	10-18-23	
gamma-ChlordaneND0.0049EPA 8081B10-17-2310-18-23alpha-ChlordaneND0.0049EPA 8081B10-17-2310-18-234,4'-DDEND0.0049EPA 8081B10-17-2310-18-23Endosulfan IND0.0049EPA 8081B10-17-2310-18-23DieldrinND0.0049EPA 8081B10-17-2310-18-23EndrinND0.0049EPA 8081B10-17-2310-18-234,4'-DDDND0.0049EPA 8081B10-17-2310-18-234,4'-DDTND0.0049EPA 8081B10-17-2310-18-234,4'-DTND0.0049EPA 8081B10-17-2310-18-234,4'-DTND0.0049EPA 8081B10-17-2310-18-23Endrin aldehydeND0.0049EPA 8081B10-17-2310-18-23Endrin aldehydeND0.0049EPA 8081B10-17-2310-18-23Endosulfan sulfateND0.0049EPA 8081B10-17-2310-18-23Endosulfan sulfateND0.0049EPA 8081B10-17-2310-18-23Endrin ketoneND0.019EPA 8081B10-17-2310-18-23ToxapheneND0.049EPA 8081B10-17-2310-18-23Surrogate:Percent RecoveryControl limitsTetrachloro-m-xylene5729-11010-17-2310-18-23	Aldrin	ND	0.0049	EPA 8081B	10-17-23	10-18-23	
alpha-ChlordaneND0.0049EPA 8081B10-17-2310-18-234,4'-DDEND0.0049EPA 8081B10-17-2310-18-23Endosulfan IND0.0049EPA 8081B10-17-2310-18-23DieldrinND0.0049EPA 8081B10-17-2310-18-23EndrinND0.0049EPA 8081B10-17-2310-18-234,4'-DDDND0.0049EPA 8081B10-17-2310-18-234,4'-DDTND0.0049EPA 8081B10-17-2310-18-234,4'-DDTND0.0049EPA 8081B10-17-2310-18-234,4'-DDTND0.0049EPA 8081B10-17-2310-18-23Endrin aldehydeND0.0049EPA 8081B10-17-2310-18-23Endrin sulfateND0.0049EPA 8081B10-17-2310-18-23Endrin ketoneND0.0049EPA 8081B10-17-2310-18-23Endrin ketoneND0.019EPA 8081B10-17-2310-18-23Surrogate:Percent RecoveryControl limits10-17-2310-18-23Tetrachloro-m-xylene5729-11010-17-2310-18-23	Heptachlor epoxide	ND	0.0049	EPA 8081B	10-17-23	10-18-23	
4,4'-DDEND0.0049EPA 8081B10-17-2310-18-23Endosulfan IND0.0049EPA 8081B10-17-2310-18-23DieldrinND0.0049EPA 8081B10-17-2310-18-23EndrinND0.0049EPA 8081B10-17-2310-18-234,4'-DDDND0.0049EPA 8081B10-17-2310-18-23Endosulfan IIND0.0049EPA 8081B10-17-2310-18-234,4'-DDTND0.0049EPA 8081B10-17-2310-18-23Endrin aldehydeND0.0049EPA 8081B10-17-2310-18-23Endrin aldehydeND0.0049EPA 8081B10-17-2310-18-23Endrin aldehydeND0.0049EPA 8081B10-17-2310-18-23Endrin sulfateND0.0049EPA 8081B10-17-2310-18-23Endrin ketoneND0.019EPA 8081B10-17-2310-18-23Endrin ketoneND0.049EPA 8081B10-17-2310-18-23Surrogate:Percent RecoveryControl limitsTetrachloro-m-xylene5729-110V	gamma-Chlordane	ND	0.0049	EPA 8081B	10-17-23	10-18-23	
Endosulfan IND0.0049EPA 8081B10-17-2310-18-23DieldrinND0.0049EPA 8081B10-17-2310-18-23EndrinND0.0049EPA 8081B10-17-2310-18-234,4'-DDDND0.0049EPA 8081B10-17-2310-18-23Endosulfan IIND0.0049EPA 8081B10-17-2310-18-234,4'-DDTND0.0049EPA 8081B10-17-2310-18-23Endrin aldehydeND0.0049EPA 8081B10-17-2310-18-23MethoxychlorND0.0097EPA 8081B10-17-2310-18-23Endosulfan sulfateND0.0049EPA 8081B10-17-2310-18-23Endrin ketoneND0.019EPA 8081B10-17-2310-18-23Endrin ketoneND0.019EPA 8081B10-17-2310-18-23Surrogate:Percent RecoveryControl limits10-17-2310-18-23Tetrachloro-m-xylene5729-11010-17-2310-18-23	alpha-Chlordane	ND	0.0049	EPA 8081B	10-17-23	10-18-23	
DieldrinND0.0049EPA 8081B10-17-2310-18-23EndrinND0.0049EPA 8081B10-17-2310-18-234,4'-DDDND0.0049EPA 8081B10-17-2310-18-23Endosulfan IIND0.0049EPA 8081B10-17-2310-18-234,4'-DDTND0.0049EPA 8081B10-17-2310-18-234,4'-DDTND0.0049EPA 8081B10-17-2310-18-23Endrin aldehydeND0.0049EPA 8081B10-17-2310-18-23MethoxychlorND0.0097EPA 8081B10-17-2310-18-23Endosulfan sulfateND0.0049EPA 8081B10-17-2310-18-23Endrin ketoneND0.019EPA 8081B10-17-2310-18-23ToxapheneND0.049EPA 8081B10-17-2310-18-23Surrogate:Percent RecoveryControl limitsTetrachloro-m-xylene5729-110	4,4'-DDE	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 4,4'-DDT 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 Endsulfan 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 Surrogate: ND 0.049 EPA 8081B 10-17-23 10-18-23 Surrogate: Percent Recovery Control limits 10-18-23 10-18-23	Endosulfan I	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 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 Endsulfan sulfate ND 0.0049 EPA 8081B 10-17-23 10-18-23 Endrin ketone 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	Dieldrin	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 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 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 10-18-23 10-18-23 Tetrachloro-m-xylene 57 29-110 10-17-23 10-18-23	Endrin	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 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 10-17-23 10-18-23 Tetrachloro-m-xylene 57 29-110 10-17-23 10-18-23	4,4'-DDD	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 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 10-18-23 10-18-23 Tetrachloro-m-xylene 57 29-110 10-17-23 10-18-23	Endosulfan II	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 10-17-23 10-18-23 Tetrachloro-m-xylene 57 29-110 29-110 20-110	4,4'-DDT	ND	0.0049	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 10-18-23 10-18-23 Tetrachloro-m-xylene 57 29-110 29-110 10-17-23 10-18-23	Endrin aldehyde	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 7 29-110	Methoxychlor	ND	0.0097	EPA 8081B	10-17-23	10-18-23	
ToxapheneND0.049EPA 8081B10-17-2310-18-23Surrogate:Percent RecoveryControl limitsTetrachloro-m-xylene5729-110	Endosulfan sulfate	ND	0.0049	EPA 8081B	10-17-23	10-18-23	
Surrogate:Percent RecoveryControl limitsTetrachloro-m-xylene5729-110	Endrin ketone	ND	0.019	EPA 8081B	10-17-23	10-18-23	
Tetrachloro-m-xylene 57 29-110	Toxaphene	ND	0.049	EPA 8081B	10-17-23	10-18-23	
•	Surrogate:	Percent Recovery	Control limits				
Decachlorobiphenyl 86 42-120	Tetrachloro-m-xylene	57	29-110				
	Decachlorobiphenyl	86	42-120				



ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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				



TOTAL METALS EPA 200.8/200.7

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



DISSOLVED METALS EPA 200.8/200.7/7470A

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



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TOTAL ALKALINITY SM 2320B

Matrix: Water Units: mg CaCO3/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



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BICARBONATE SM 2320B

Matrix: Water Units: mg CaCO3/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



CHLORIDE SM 4500-CI E

Matrix: Water Units: mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	MW-9					
Laboratory ID:	10-168-01					
Chloride	6.5	2.0	SM 4500-CI E	10-16-23	10-16-23	
Client ID:	MW-10					
Laboratory ID:	10-168-02					
Chloride	7.3	2.0	SM 4500-CI E	10-16-23	10-16-23	
Client ID:	SWS-1					
Laboratory ID:	10-168-03					
Chloride	7.7	2.0	SM 4500-CI E	10-16-23	10-16-23	



NITRATE (as Nitrogen) EPA 353.2

Matrix: Water Units: mg/L-N

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



SULFATE ASTM D516-11

Matrix: Water Units: mg/L

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
MW-9					
10-168-01					
19	5.0	ASTM D516-11	10-16-23	10-16-23	
MW-10					
10-168-02					
6.4	5.0	ASTM D516-11	10-16-23	10-16-23	
SWS-1					
10-168-03					
8.5	5.0	ASTM D516-11	10-16-23	10-16-23	
	MW-9 10-168-01 19 MW-10 10-168-02 6.4 SWS-1 10-168-03	MW-9 10-168-01 19 5.0 MW-10 10-168-02 6.4 5.0 SWS-1 10-168-03	MW-9 10-168-01 19 5.0 MW-10 10-168-02 6.4 5.0 SWS-1 10-168-03	Result PQL Method Prepared MW-9 10-168-01 10-1623 10-1623 19 5.0 ASTM D516-11 10-16-23 MW-10 10-168-02 10-168-02 10-16-23 SWS-1 10-168-03 10-168-03 10-16-23	Result PQL Method Prepared Analyzed MW-9 10-168-01 10-1623 10-16-23 10-16-23 19 5.0 ASTM D516-11 10-16-23 10-16-23 MW-10 10-168-02 10-16-23 10-16-23 6.4 5.0 ASTM D516-11 10-16-23 10-16-23 SWS-1 10-168-03 10-168-03 10-16-23 10-16-23



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TOTAL DISSOLVED SOLIDS SM 2540C

Matrix: Water Units: mg/L

onits. Ing/L				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



AMMONIA (as Nitrogen) SM 4500-NH₃ D

Matrix: Water Units: mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



TOTAL ORGANIC CARBON SM 5310B

Matrix: Water Units: mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



DIESEL AND HEAVY OIL RANGE ORGANICS NWTPH-Dx QUALITY CONTROL

Matrix: Water Units: mg/L (ppm)

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
MB1017W1					
ND	0.16	NWTPH-Dx	10-17-23	10-17-23	
ND	0.16	NWTPH-Dx	10-17-23	10-17-23	
Percent Recovery	Control Limits				
79	50-150				
	MB1017W1 ND ND Percent Recovery	MB1017W1ND0.16ND0.16Percent RecoveryControl Limits	MB1017W1 ND 0.16 ND 0.16 NU 0.16 NU 0.16 Percent Recovery Control Limits	Result PQL Method Prepared MB1017W1	Result PQL Method Prepared Analyzed MB1017W1

					Source	Perc	ent	Recovery		RPD	
Analyte	Res	sult	Spike	Level	Result	Recov	very	Limits	RPD	Limit	Flags
DUPLICATE											
Laboratory ID:	SB10	17W1									
	ORIG	DUP									
Diesel Fuel #2	0.403	0.368	NA	NA		NA	١	NA	9	40	
Surrogate:											
o-Terphenyl						87	81	50-150			



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

Matrix: Water Units: ug/L

Units: ug/L				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK					/ j _c	
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				



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Matrix: Water Units: ug/L

Analyte	Re	sult	Spike	Level		cent overy	Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB10	18W1								
	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	١,١
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	19.0	20.8	20.0	20.0	95 96	104	40 - 120 40 - 120	5	30	
Dimethylphthalate	17.6	19.4	20.0	20.0	90 88	97	40 - 120 40 - 120	10	30	
	17.8	20.6	20.0	20.0	89	97 103	40 - 120 40 - 120	15	30	
1,3-Dinitrobenzene	18.5	20.8	20.0	20.0	69 93	103	40 - 120 40 - 120		30 30	
2,6-Dinitrotoluene 1,2-Dinitrobenzene	21.6	20.2 21.3	20.0 20.0			101	40 - 120 40 - 120	9 1	30 30	
	21.6 18.3	21.3 19.5		20.0	108			1		
Acenaphthylene			20.0	20.0	92 86	98 00	40 - 120	6 14	30 20	
3-Nitroaniline	17.2	19.7	20.0	20.0	86	99	40 - 120	14	30	



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

Analista	Dev		Cuilto	Loval		rcent	Recovery		RPD	Flore
Analyte SPIKE BLANKS	Re	sult	эріке	Level	Rec	overy	Limits	RPD	Limit	Flags
Laboratory ID:	SB10	10\//1								
	SB	SBD	SB	SBD	SB	SBD				
2,4-Dinitrophenol	18.2	21.7	20.0	20.0	91	109	20 - 100	18	30	
Acenaphthene	15.9	18.5	20.0	20.0	80	93	52 - 100	15	23	1
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			
					-	-	-			



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ORGANOCHLORINE PESTICIDES EPA 8081B QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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				



ORGANOCHLORINE PESTICIDES EPA 8081B QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

			Source	Per	rcent	Recovery		RPD	
Analyte	Result	Spike Level	Result	Rec	overy	Limits	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			



TOTAL METALS EPA 200.8/200.7 QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

onno. dg/E (ppb)				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	

					Source	Pe	rcent	Recovery		RPD	
Analyte	Re	sult	Spike	Level	Result	Rec	overy	Limits	RPD	Limit	Flags
DUPLICATE											
Laboratory ID:	10-16	68-02									
	ORIG	DUP									
Iron	8090	7920	NA	NA		1	٨N	NA	2	20	
Magnesium	28700	28000	NA	NA		1	A	NA	2	20	
Manganese	1650	1600	NA	NA		1	NA	NA	3	20	
Laboratory ID:	10-19	90-05									
Arsenic	ND	ND	NA	NA		1	٨N	NA	NA	20	
Chromium	ND	ND	NA	NA		1	NA	NA	NA	20	
Lead	ND	ND	NA	NA		1	NA	NA	NA	20	
Nickel	ND	ND	NA	NA		1	A	NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	10-16	68-02									
	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:	<u>10-1</u> 9	90-05									
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	



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DISSOLVED METALS EPA 200.8/200.7/7470A QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	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	



DISSOLVED METALS EPA 200.8/200.7/7470A QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

Units: ug/L (ppb)					Source	Per	cent	Recovery		RPD	
Analyte	Re	sult	Spike	Level	Result		overy	Limits	RPD	Limit	Flage
DUPLICATE											Ť
Laboratory ID:	10-19	92-02									
	ORIG	DUP									
Magnesium	5690	5640	NA	NA		Ν	A	NA	1	20	
Manganese	ND	ND	NA	NA		Ν	A	NA	NA	20	
Potassium	ND	ND	NA	NA		Ν	A	NA	NA	20	
Sodium	3660	3600	NA	NA		Ν	IA	NA	2	20	
Laboratory ID:	10-20	06-01									
Cadmium	ND	ND	NA	NA		Ν	A	NA	NA	20	
Copper	ND	ND	NA	NA		Ν	A	NA	NA	20	
Selenium	ND	ND	NA	NA		Ν	IA	NA	NA	20	
Laboratory ID:	10-16	68-01									
Mercury	ND	ND	NA	NA		Ν	IA	NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	10-19	92-02									
	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:	10-20	06-01									
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:	10-16	58-01									
Mercury	5.98	5.95	6.25	6.25	ND	96	95	75-125	0	20	



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TOTAL ALKALINITY SM 2320B QUALITY CONTROL

Matrix: Water Units: mg CaCO3/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1018W1					
Total Alkalinity	ND	2.0	SM 2320B	10-18-23	10-18-23	

Analyte	Res	sult	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE			•						
Laboratory ID:	10-16	68-01							
	ORIG	DUP							
Total Alkalinity	320	318	NA	NA	NA	NA	1	10	
SPIKE BLANK									
Laboratory ID:	SB10	18W1							
	S	В	SB		SB				
Total Alkalinity	88	3.0	100	NA	88	82-112	NA	NA	



BICARBONATE SM 2320B QUALITY CONTROL

Matrix: Water Units: mg CaCO3/L

Analyte Res	ult PQL	Method	Prepared	Analvzed	Flore
				Analyzeu	Flags
METHOD BLANK					
Laboratory ID: MB101	8W1				
Bicarbonate 1.0) 2.0	SM 2320B	10-18-23	10-18-23	

	_			Source	Percent	Recovery		RPD	
Analyte	Result		Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	10-16	68-01							
	ORIG	DUP							
Bicarbonate	320	318	NA	NA	NA	NA	1	10	
SPIKE BLANK									
Laboratory ID:	SB10	18W1							
	S	В	SB		SB				
Bicarbonate	88	3.0	100	NA	88	82-112	NA	NA	



CHLORIDE SM 4500-CI E QUALITY CONTROL

Matrix: Water Units: mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1016W1					
Chloride	ND	2.0	SM 4500-CI E	10-16-23	10-16-23	

				Source	Percent	Recovery		RPD	
Analyte	Result		Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	10-11	17-01							
	ORIG	DUP							
Chloride	20.0	19.3	NA	NA	NA	NA	4	12	
MATRIX SPIKE									
Laboratory ID:	10-1 <i>1</i>	17-01							
	Μ	IS	MS		MS				
Chloride	68	3.4	50.0	20.0	97	83-120	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB10	16W1							
	S	В	SB		SB				
Chloride	47	. 3	50.0	NA	95	83-119	NA	NA	



NITRATE (as Nitrogen) EPA 353.2 QUALITY CONTROL

Matrix: Water Units: mg/L-N

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1013W1					
Nitrate	ND	0.050	EPA 353.2	10-13-23	10-13-23	

				Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	10-16	68-01							
	ORIG	DUP							
Nitrate	0.110	0.174	NA	NA	NA	NA	45	19	С
MATRIX SPIKE									
Laboratory ID:	10-16	68-01							
	Μ	IS	MS		MS				
Nitrate	2.	09	2.00	0.110	99	85-121	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB10	13W1							
	S	В	SB		SB				
Nitrate	2.	07	2.00	NA	104	87-118	NA	NA	



SULFATE ASTM D516-11 QUALITY CONTROL

Matrix: Water Units: mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1016W1					
Sulfate	ND	5.0	ASTM D516-11	10-16-23	10-16-23	

				Source	Percent	Recovery		RPD	
Analyte	lyte Result		Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	10-12	29-05							
	ORIG	DUP							
Sulfate	11.4	11.7	NA	NA	NA	NA	3	10	
MATRIX SPIKE									
Laboratory ID:	10-12	29-05							
	Ν	1S	MS		MS				
Sulfate	20).7	10.0	11.4	93	73-127	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB10	16W1							
	S	B	SB		SB				
Sulfate	9.	56	10.0	NA	96	85-114	NA	NA	



TOTAL DISSOLVED SOLIDS SM 2540C QUALITY CONTROL

Matrix: Water Units: mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1017W1					
Total Dissolved Solids	ND	13	SM 2540C	10-17-23	10-17-23	

				Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	10-16	68-01							
	ORIG	DUP							
Total Dissolved Solids	357	357	NA	NA	NA	NA	0	30	
SPIKE BLANK									
Laboratory ID:	SB10	17W1							
	S	В	SB		SB				
Total Dissolved Solids	48	87	500	NA	97	80-120	NA	NA	



This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

AMMONIA (as Nitrogen) SM 4500-NH₃ D QUALITY CONTROL

Matrix: Water Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analvzed	Flags
METHOD BLANK						
Laboratory ID:	MB1027W1					
Ammonia	ND	0.050	SM 4500-NH3 D	10-27-23	10-27-23	

				Source	Percent	Recovery		RPD	
Analyte	Result		Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	10-19	99-01							
	ORIG	DUP							
Ammonia	ND	ND	NA	NA	NA	NA	NA	27	
MATRIX SPIKE									
Laboratory ID:	10-19	99-01							
	Ν	1S	MS		MS				
Ammonia	4.	71	5.00	ND	94	78-118	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB10	27W1							
	S	B	SB		SB				
Ammonia	4.	82	5.00	NA	96	85-114	NA	NA	



TOTAL ORGANIC CARBON SM 5310B QUALITY CONTROL

Matrix: Water Units: mg/L

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1016D1					
Total Organic Carbon	ND	1.0	SM 5310B	10-16-23	10-16-23	
Ŭ						

				Source	Percent	Recovery		RPD	
Analyte	Re	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE									
Laboratory ID:	10-0	56-01							
	ORIG	DUP							
Total Organic Carbon	4.26	4.60	NA	NA	NA	NA	8	13	
MATRIX SPIKE									
Laboratory ID:	10-0	56-01							
	Ν	IS	MS		MS				
Total Organic Carbon	14	4.9	10.0	4.26	106	86-127	NA	NA	
SPIKE BLANK									
Laboratory ID:	SB10)16D1							
	S	SB	SB		SB				
Total Organic Carbon	9.	46	10.0	NA	95	90-122	NA	NA	



This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.



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.

Ζ-

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



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

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

OnSite Environmental Inc.		Cha	ain o	f	Cı	ist	:00	dy										Pag	le_	ι	of_	۱		
Analytical Laboratory Testing Services 14648 NE 95th Street • Redmond, WA 98052	Turi (ir	naround Rec working da	quest ays)		L	abo	rate	ory	Nun	nbe	r:	10) -	16	8	1			W161					
Phone: (425) 883-3881 • www.onsite-env.com Company: Co	1		1 Day	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX (80210 8260))	H-Gx	NWTPH-Dx (SG Clean-up □)	Volatiles 8260	Halogenated Volatiles 6260	EUB EPA 8011 (Waters Only) Semivolatiles 8270/SIM	(with low-level PAHs)	8082	Organochlorine Pesticides 8081	Organophosphorus Pesticides 8270/SIM	Chlorinated Acid Herbicides 8151			Nert Wieldis & 1550Wed No, K.	HEM (oil and grease) 1664	(UL) US	hosting in to how it		sture
Lab ID Sample Identification	Date Sampled	Time Sampled	Matrix	Numb	NWTP	NWTP	NWTPH-Gx	NWTP	Volatil	Halog	Semiv	(with I	PCBs 8082	Organ	Organ	Chlori	Total	Total T	LICK I	HEM	1 N N	Ē		% Moisture
1 MW-9	10/12/2	1205	420	R			×	X				>	4	×		-	>	X,	X		X	×		
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Sample/Cooler Receipt and Acceptance Checklist

Client Project Name/Number: $\frac{26910 \times 001 \times 01}{10 - 168}$		Initiated by Date Initiat	101	12/23		
1.0 Cooler Verification			3			
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?	res	No	N/A	1 2 3 4		
1.5 Were samples received between 0-6 degrees Celsius?	res	No	N/A	Temperature:	6	
1.6 Have shipping bills (if any) been attached to the back of this form?	Yes	(VA)			1.11	
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?	res	No		1234		_
2.2 Was the COC legible and written in permanent ink?		No		1 2 3 4		
2.3 Have samples been relinquished and accepted by each custodian?	es. es	No		1234		
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		1234		
2.6 Were any of the samples submitted omitted from the COC?	Yes	No		1234		
3.0 Sample Verification						
3.1 Were any sample containers broken or compromised?	Yes	No		1234		
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		1234		
3.4 Have the samples been correctly preserved?	res	No	N/A	1234		
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		1234		
3.7 Have any holding times already expired or will expire in 24 hours?	Yes	No	1.3	1234		
3.8 Was method 5035A used?	Yes	No	NA	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		

1 - Discuss issue in Case Narrative

3 - Client contacted to discuss problem

2 - Process Sample As-is

4 - Sample cannot be analyzed or client does not wish to proceed

//SERVER\OSE\Administration\forms\cooler_checklist.xls



Data Validation Report

1101 Fawcett Aven	ue, Suite 200, Ta	acoma, Washington	98402, Teleph	ione: 253.383.4	4940, Fax: 253.38	3.4923	www.geoengineers.com
	A · ·						

Date:	March 11, 2024
GEI File:	6694-002-05
Project:	October 2023 Groundwater and Surface Water Sampling Results Go East Landfill Site, Everett, Washington

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.

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.

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

TABLE 2: SUMMARY OF QUALIFIED SAMPLES

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.