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Our ref: 12646241

05 September 2024

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Nokia Canada Inc.
600 March Road
Ottawa, Ontario K2K 2T6

Groundwater Sampling Activities, Nokia Property Redevelopment, 600 March Road, Kanata (Ottawa), Ontario

GHD has prepared this letter for Nokia Canada Inc. (Nokia) to present the findings of the groundwater sampling activities completed on April 27th, 2023, in the southern parking lot area of the Nokia Property located at 600 March Road in Kanata (Ottawa), Ontario (Site or Property). GHD previously completed the following environmental assessments at the Site, including:

– Phase One Environmental Site Assessment (ESA), 600 March Road, Kanata (Ottawa), Ontario, dated April 20, 2022.
– Phase Two Environmental Site Assessment (ESA), 600 March Road, Kanata (Ottawa), Ontario, dated July 19, 2022.

These reports were completed for the entire Nokia Property, which includes both the southern parking lot area and northern office campus area. Based on a review of the 2022 groundwater analytical results, all groundwater concentrations from the southern parking lot area were below applicable Ontario Ministry of Environment, Conservation, and Parks (MECP) standards. This letter will focus on current groundwater sampling activities and laboratory analytical results from the southern parking lot area, as part of due diligence and future municipal planning approval purposes.

GHD also completed additional geotechnical and hydrogeological assessments in the southern parking lot of the Site at the time of the current groundwater sampling activities. Details regarding specific Site geology (i.e., stratigraphy, bedrock conditions, etc.) and hydrogeological details (i.e., groundwater depth/elevation, flow direction, hydraulic conductivity, etc.) are addressed in those report(s).

1. Field Program

GHD conducted groundwater sampling activities on April 27, 2023, at six existing groundwater monitoring wells installed in 2022 (BH01-22, BH02-22, BH03-22, BH06-22, BH11-22, and BH12-22) and three new monitoring wells installed in 2023 (BH3-23, BH4-23, and BH6-23). Borehole and monitoring well locations are presented on **Figure 1**. Borehole and monitoring well construction details are presented in above noted ESA documents and 2023 geotechnical and hydrogeological assessment report(s).

In order to ensure that samples representative of on-Site groundwater conditions was obtained, each monitoring well was purged prior to groundwater sample collection using dedicated tubing and peristaltic pump (for low-flow sampling). The following protocol was generally followed at each monitoring well location during well purging activities:

– Groundwater level measurements were collected prior and subsequent to well development activities using a calibrated oil/water interface probe. The depth to water was measured relative to a specific reference point in the monitoring well.
– Where low-flow sampling techniques were used, a minimum of three well volumes of water were purged from the monitoring well. In the event that slow groundwater recharge conditions were encountered, the well was purged until dry and then allowed to recover prior to sample collection. Field measurements of temperature, pH, turbidity, and electrical conductivity were taken using a water quality meter after each purged well volume was removed until consistent field measurements were recorded indicating that water in the well was representative of the actual groundwater conditions.
– Groundwater in the monitoring well was allowed to recover and settle prior to sample collection to reduce sediment agitation and mobilization in volatile and semi-volatile samples.

Groundwater samples were collected from a total of nine monitoring wells (BH01-22, BH02-22, BH03-22, BH06-22, BH11-22, BH12-22, BH3-23, BH4-23, and BH6-23), with one duplicate sample collected from BH3-23 for quality assurance/quality control (QA/QC) purposes.

The groundwater samples were collected and placed directly into laboratory-supplied sample containers specific to the analytical parameters. Groundwater samples were submitted for laboratory analysis of the following parameters: metals/inorganics, petroleum hydrocarbons (PHC F_1 to F_4), volatile organic compounds (VOCs), and polycyclic aromatic hydrocarbons (PAHs). Groundwater samples collected for metals analysis were field filtered using a 0.45-micron filter prior to sample collection. Samples were stored in coolers chilled with ice for sample preservation and submitted to the laboratory for analysis under chain-of-custody protocol. The chain-of-custody forms document the condition and handling of the samples throughout the collection, transportation, and final analysis of the samples.

2. Regulatory Standards

This section presents the regulatory standards that were used to evaluate the analytical results of the groundwater samples collected at the Site. GHD compared the analytical results to the generic Site Condition Standards (SCS) provided in the Ontario Ministry of the Environment[1] (MOE) document entitled, "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act," dated April 15, 2011 (hereafter referred to as the 2011 MECP Standards).

Based on the Site conditions and the definition of area of natural significance provided in Ontario Regulation (O. Reg.) 153/04, the groundwater analytical results on the Site were assessed to the MECP Table 7: Full Depth Generic Site Conditions Standards for Shallow Soils in a Non-Potable Ground Water Condition (MECP Table 7 Standard). The regulatory standards used to evaluate the 2023 analytical results are consistent with those used in the 2022 Phase Two ESA (GHD).

[1] Ministry of the Environment (MOE) was renamed the Ministry of Environment and Climate Change (MECP) on July 3, 2014, and renamed again on July 1, 2018, to Ministry of the Environment, Conservation, and Parks (MECP), and as a result all references to the "Ministry of the Environment", "MOE", and MECP refer to the MECP.

3. Analytical Results

A summary of the groundwater quality results compared to MECP Table 7 Standards is presented in **Table 1**. A copy of the ALS laboratory certificates of analysis is provided in **Attachment 1**. GHD also completed quality assessment and verification of the groundwater analytical data as presented in the technical memorandum provided in **Attachment 2**, with the data summarized as acceptable without qualification.

Based on GHD's review, all parameters were reported below MECP Table 7 Standards for the groundwater samples collected on April 27, 2023. These results are similar to the groundwater analytical results from the 2022 Phase Two ESA.

4. Conclusion

Based on the groundwater analytical results collected as part of the April 27th, 2023, sampling activities, all groundwater parameters were reported below MECP Table 7 Standards. These results are similar to the groundwater analytical results from the 2022 Phase Two ESA. No further groundwater sampling activities are recommended at this time.

We trust this meets your needs at this time.

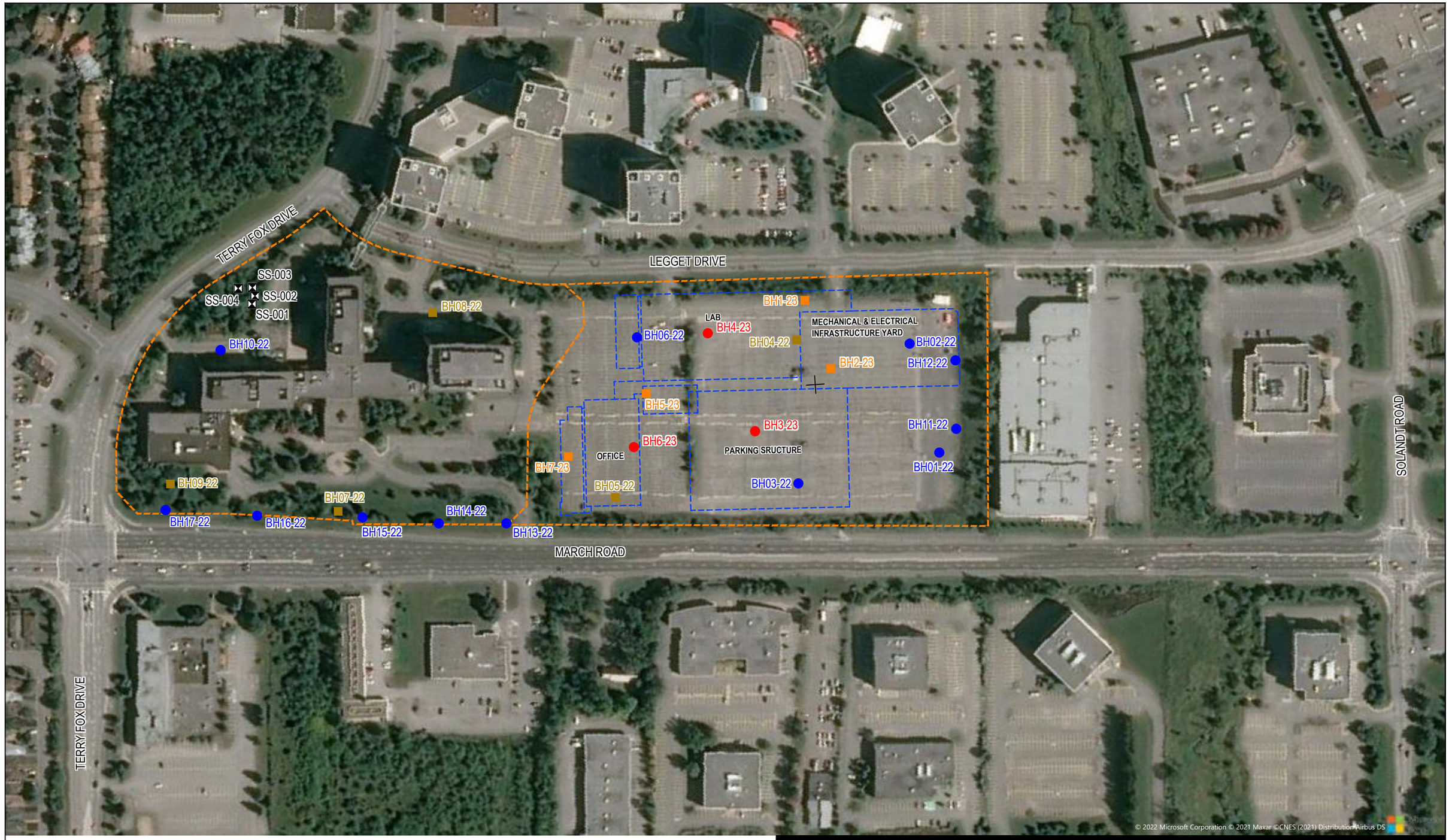
Regards,
GHD

Kevin Emenau, P.Geo.

Warren Croft, P. Eng.

Encl

Figures



LEGEND

- PROPERTY BOUNDARY
- PROPOSED BUILDING OUTLINE
- SOIL SAMPLING LOCATION (GHD, 2022)
- BOREHOLE LOCATION (GHD, 2022)
- BOREHOLE LOCATION (GHD, 2023)
- MONITORING WELL (GHD, 2022)
- MONITORING WELL (GHD, 2023)

0 25 50 75m

1:2500

Coordinate System:
UTM with NAD83 datum,
Zone 18, Meter;

GHD

NOKIA CANADA INC.
NOKIA PROPERTY REDEVELOPMENT
GROUNDWATER SAMPLING ACTIVITIES
600 MARCH ROAD, KANATA (OTTAWA), ON

BOREHOLE/WELL LOCATION PLAN

Project No. **12606873**
Date **May 2023**

FIGURE 1

Filename: \\ghdnet\ghd\CA\Ottawa\Projects\661\12606873\Digital_Design\ACAD\Figures\RPT001-Geotech\12606873-GHD-00-00-RPT-EN-D101_WA-001- Enviro, jm.dwg
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Tables

Table 1

Summary of Groundwater Analysis
Groundwater Sampling Activities
600 March Road, Ottawa, Ontario

Sample Location:			BH01-22	BH02-22	BH03-22	BH06-22	BH11-22	BH12-22	BH3-23	BH3-23	BH4-23	BH6-23
Sample ID (GW-12606873-270423-DA-###):			-BH01-22	-BH02-22	-BH03-22	-BH06-22	-BH11-22	-BH12-22	-BH3-23	-DUP	-BH4-23	-BH6-23
Sample Date:			27-Apr-2023	27-Apr-2023	27-Apr-2023	27-Apr-2023	27-Apr-2023	27-Apr-2023	27-Apr-2023	27-Apr-2023	27-Apr-2023	27-Apr-2023
Sample Type:			Original	Original	Original	Original	Original	Original	Original	Duplicate	Original	Original
Stratigraphy			Overburden	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock
Parameters	**Units**	**MECP Table 7 All Property Types**										
Physical Tests												
Conductivity	mS/cm	--	2.53	3.26	3.12	6.4	3.54	3.81	1.88	1.86	4.92	5.95
pH	-	--	7.88	7.57	7.93	8.04	7.71	7.71	8.16	8.14	7.81	7.74
Anions and Nutrients												
Chloride	ug/L	1800000	564000	695000	555000	1730000	895000	970000	187000	185000	1240000	1390000
Cyanides												
Cyanide	ug/L	52	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Dissolved Metals												
Antimony	ug/L	16000	0.13	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
Arsenic	ug/L	1500	0.2	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	4.53	<1.00
Barium	ug/L	23000	200	185	74.8	65.3	246	226	52.2	43.6	59.1	66.7
Beryllium	ug/L	53	<0.020	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200
Boron	ug/L	36000	24	<100	<100	<100	<100	<100	<100	<100	<100	<100
Cadmium	ug/L	2.1	0.022	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
Chromium	ug/L	640	<0.50	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
Cobalt	ug/L	52	<0.10	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
Copper	ug/L	69	0.95	<2.00	2.31	7.16	<2.00	2.06	16	14.1	<2.00	8.14
Lead	ug/L	20	<0.050	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
Mercury	ug/L	0.1	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Molybdenum	ug/L	7300	1.17	0.717	1.19	7.24	10.8	1.09	3.01	3.03	5.33	6.9
Nickel	ug/L	390	<0.50	<5.00	<5.00	<5.00	6.16	<5.00	11	10	<5.00	<5.00
Selenium	ug/L	50	0.447	<0.500	0.652	<0.500	<0.500	<0.500	0.797	0.846	<0.500	<0.500
Silver	ug/L	1.2	<0.010	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
Sodium	ug/L	1800000	237000	342000	214000	967000	356000	390000	255000	227000	702000	854000
Thallium	ug/L	400	0.019	<0.100	<0.100	<0.100	<0.100	0.141	<0.100	<0.100	<0.100	<0.100
Uranium	ug/L	330	2.67	1.69	3.21	4.42	6.32	4.36	3.8	3.66	45.2	7.48
Vanadium	ug/L	200	<0.50	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
Zinc	ug/L	890	3	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Hexavalent Chromium	ug/L	110	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Hydrocarbons												
F1 (C6-C10)	ug/L	420	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
F1-BTEX	ug/L	420	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
F2 (C10-C16)	ug/L	150	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
F2-naphthalene	ug/L	--	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
F3 (C16-C34)	ug/L	500	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250
F3-PAH	ug/L	--	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250
F4 (C34-C50)	ug/L	500	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250
Total Hydrocarbons (C6-C50)	ug/L	--	<370	<370	<370	<370	<370	<370	<370	<370	<370	<370

Notes:
µg/L - microgram per litre
<0.0068 - Not detected at the associated detection limit
Bold/Border - Detected concentration exceeds the
(1) MECP Table 7: Full Depth Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition.

Table 1

Summary of Groundwater Analysis
Groundwater Sampling Activities
600 March Road, Ottawa, Ontario

Sample Location:			BH01-22	BH02-22	BH03-22	BH06-22	BH11-22	BH12-22	BH3-23	BH3-23	BH4-23	BH6-23
Sample ID (GW-12606873-270423-DA-###):			-BH01-22	-BH02-22	-BH03-22	-BH06-22	-BH11-22	-BH12-22	-BH3-23	-DUP	-BH4-23	-BH6-23
Sample Date:			27-Apr-2023	27-Apr-2023	27-Apr-2023	27-Apr-2023	27-Apr-2023	27-Apr-2023	27-Apr-2023	27-Apr-2023	27-Apr-2023	27-Apr-2023
Sample Type:			Original	Original	Original	Original	Original	Original	Original	Duplicate	Original	Original
Stratigraphy			Overburden	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock
Parameters	**Units**	**MECP Table 7 All Property Types**										
Volatile Organic Compounds												
Acetone	ug/L	100000	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
Benzene	ug/L	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Bromodichloromethane	ug/L	67000	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Bromoform	ug/L	5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Bromomethane	ug/L	0.89	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Carbon Tetrachloride	ug/L	0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chlorobenzene	ug/L	140	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chloroform	ug/L	2	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	1.47
Dibromochloromethane	ug/L	65000	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-Dibromoethane	ug/L	0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichlorobenzene	ug/L	150	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,3-Dichlorobenzene	ug/L	7600	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,4-Dichlorobenzene	ug/L	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dichlorodifluoromethane	ug/L	3500	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethane	ug/L	11	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,2-Dichloroethane	ug/L	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethylene	ug/L	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
cis-1,2-Dichloroethylene	ug/L	1.6	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
trans-1,2-Dichloroethylene	ug/L	1.6	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dichloromethane	ug/L	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichloropropane	ug/L	0.58	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
cis+trans-1,3-Dichloropropylene	ug/L	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
cis-1,3-Dichloropropylene	ug/L	--	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
trans-1,3-Dichloropropylene	ug/L	--	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Ethylbenzene	ug/L	54	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Hexane (n)	ug/L	5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Methyl Ethyl Ketone [MEK]	ug/L	21000	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
Methyl Isobutyl Ketone [MIBK]	ug/L	5200	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
Methyl-Tert-Butyl Ether [MTBE]	ug/L	15	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Styrene	ug/L	43	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,1,2-Tetrachloroethane	ug/L	1.1	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2,2-Tetrachloroethane	ug/L	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Tetrachloroethylene	ug/L	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Toluene	ug/L	320	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,1-Trichloroethane	ug/L	23	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	ug/L	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Trichloroethylene	ug/L	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Trichlorofluoromethane	ug/L	2000	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Vinyl Chloride	ug/L	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
m+p-Xylene	ug/L	--	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
o-Xylene	ug/L	--	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Total Xylenes	ug/L	72	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

Notes:
µg/L - microgram per litre
<0.0068 - Not detected at the associated detection limit
Bold/Border - Detected concentration exceeds the
(1) MECP Table 7: Full Depth Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition.

Table 1

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Groundwater Sampling Activities
600 March Road, Ottawa, Ontario

Sample Location:			BH01-22	BH02-22	BH03-22	BH06-22	BH11-22	BH12-22	BH3-23	BH3-23	BH4-23	BH6-23
Sample ID (GW-12606873-270423-DA-###):			-BH01-22	-BH02-22	-BH03-22	-BH06-22	-BH11-22	-BH12-22	-BH3-23	-DUP	-BH4-23	-BH6-23
Sample Date:			27-Apr-2023	27-Apr-2023	27-Apr-2023	27-Apr-2023	27-Apr-2023	27-Apr-2023	27-Apr-2023	27-Apr-2023	27-Apr-2023	27-Apr-2023
Sample Type:			Original	Original	Original	Original	Original	Original	Original	Duplicate	Original	Original
Stratigraphy			Overburden	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock	Bedrock
Parameters	**Units**	**MECP Table 7 All Property Types**										
Polycyclic Aromatic Hydrocarbons												
Acenaphthene	ug/L	17	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Acenaphthylene	ug/L	1	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Anthracene	ug/L	1	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benz(a)anthracene	ug/L	1.8	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(a)pyrene	ug/L	0.81	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Benzo(b+j)fluoranthene	ug/L	0.75	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(g,h,i)perylene	ug/L	0.2	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(k)fluoranthene	ug/L	0.4	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Chrysene	ug/L	0.7	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Dibenz(a,h)anthracene	ug/L	0.4	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Fluoranthene	ug/L	44	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Fluorene	ug/L	290	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Indeno(1,2,3-c,d)pyrene	ug/L	0.2	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
1+2-Methylnaphthalene	ug/L	1500	<0.015	0.019	<0.015	0.015	<0.015	<0.015	<0.015	<0.015	0.017	<0.015
1-Methylnaphthalene	ug/L	1500	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
2-Methylnaphthalene	ug/L	1500	<0.010	0.019	<0.010	0.015	0.013	0.012	<0.010	<0.010	0.017	0.013
Naphthalene	ug/L	7	<0.050	0.06	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Phenanthrene	ug/L	380	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Pyrene	ug/L	5.7	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010

Notes:
µg/L - microgram per litre
<0.0068 - Not detected at the associated detection limit
Bold/Border - Detected concentration exceeds the
(1) MECP Table 7: Full Depth Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition.

Attachments

Attachment 1

Laboratory Certificates of Analysis

CERTIFICATE OF ANALYSIS

Work Order	: **WT2311250**	Page	: 1 of 29
Client	: **GHD Limited**	Laboratory	: Waterloo - Environmental
Contact	: Pascal Renella	Account Manager	: Rick Hawthorne
Address	: 455 Phillip Street Waterloo ON Canada N2L 3X2	Address	: 60 Northland Road, Unit 1 Waterloo ON Canada N2V 2B8
Telephone	: 519 725 3313	Telephone	: +1 519 886 6910
Project	: 12606873-003.02	Date Samples Received	: 28-Apr-2023 08:25
PO	: 735-006550	Date Analysis Commenced	: 01-May-2023
C-O-C number	: ----	Issue Date	: 05-May-2023 21:27
Sampler	: ----		
Site	: ----		
Quote number	: 12606873-003.02-SSOW-735-006550		
No. of samples received	: 10		
No. of samples analysed	: 10		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
Amaninder Dhillon	Team Lead - Semi-Volatile Instrumentation	Organics, Waterloo, Ontario
Greg Pokocky	Manager - Inorganics	Inorganics, Waterloo, Ontario
Greg Pokocky	Manager - Inorganics	Metals, Waterloo, Ontario
Jocelyn Kennedy	Department Manager - Semi-Volatile Organics	Organics, Waterloo, Ontario
Sarah Birch	VOC Section Supervisor	VOC, Waterloo, Ontario

General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.
Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Please refer to Quality Control Interpretive report (QCI) for information regarding Holding Time compliance.

Key : CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances
LOR: Limit of Reporting (detection limit).
Measurement Uncertainty: The reported uncertainties in this report are expanded uncertainties calculated using a coverage factor of 2, which gives a level of confidence of approximately 95%.
Surrogate: An analyte that is similar in behavior to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

Unit	*Description*
-	no units
µg/L	micrograms per litre
mg/L	milligrams per litre
mS/cm	millisiemens per centimetre
pH units	pH units

>: greater than.
<: less than.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED on SRN or QCI Report, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Qualifiers

Qualifier	*Description*
DLDS	*Detection Limit Raised: Dilution required due to high Dissolved Solids / Electrical Conductivity.*
DLHC	*Detection Limit Raised: Dilution required due to high concentration of test analyte(s).*
OWP	*Organic water sample contained visible sediment (must be included as part of analysis). Measured concentrations of organic substances in water can be biased high due to presence of sediment.*

Analytical Results

WT2311250-001

Sub-Matrix:**Water**
(Matrix: **Water**)

Client sample ID: GW-12606873-270423-DA-BH02-22
Client sampling date / time: 27-Apr-2023 09:30

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Physical Tests								
Conductivity	----	3.26	0.0010	mS/cm	E100	02-May-2023	03-May-2023	919322
pH	----	7.57	0.10	pH units	E108	02-May-2023	03-May-2023	919320
Anions and Nutrients								
Chloride	16887-00-6	695 DLDS	2.50	mg/L	E235.Cl	02-May-2023	03-May-2023	919318
Cyanides								
Cyanide, weak acid dissociable	----	<2.0	2.0	µg/L	E336	03-May-2023	03-May-2023	920319
Dissolved Metals								
Antimony, dissolved	7440-36-0	<1.00 DLHC	1.00	µg/L	E421	01-May-2023	01-May-2023	917817
Arsenic, dissolved	7440-38-2	<1.00 DLHC	1.00	µg/L	E421	01-May-2023	01-May-2023	917817
Barium, dissolved	7440-39-3	185 DLHC	1.00	µg/L	E421	01-May-2023	01-May-2023	917817
Beryllium, dissolved	7440-41-7	<0.200 DLHC	0.200	µg/L	E421	01-May-2023	01-May-2023	917817
Boron, dissolved	7440-42-8	<100 DLHC	100	µg/L	E421	01-May-2023	01-May-2023	917817
Cadmium, dissolved	7440-43-9	<0.0500 DLHC	0.0500	µg/L	E421	01-May-2023	01-May-2023	917817
Chromium, dissolved	7440-47-3	<5.00 DLHC	5.00	µg/L	E421	01-May-2023	01-May-2023	917817
Cobalt, dissolved	7440-48-4	<1.00 DLHC	1.00	µg/L	E421	01-May-2023	01-May-2023	917817
Copper, dissolved	7440-50-8	<2.00 DLHC	2.00	µg/L	E421	01-May-2023	01-May-2023	917817
Lead, dissolved	7439-92-1	<0.500 DLHC	0.500	µg/L	E421	01-May-2023	01-May-2023	917817
Mercury, dissolved	7439-97-6	<0.0050	0.0050	µg/L	E509	02-May-2023	02-May-2023	918531
Molybdenum, dissolved	7439-98-7	0.717 DLHC	0.500	µg/L	E421	01-May-2023	01-May-2023	917817
Nickel, dissolved	7440-02-0	<5.00 DLHC	5.00	µg/L	E421	01-May-2023	01-May-2023	917817
Selenium, dissolved	7782-49-2	<0.500 DLHC	0.500	µg/L	E421	01-May-2023	01-May-2023	917817
Silver, dissolved	7440-22-4	<0.100 DLHC	0.100	µg/L	E421	01-May-2023	01-May-2023	917817
Sodium, dissolved	7440-23-5	342000 DLHC	500	µg/L	E421	01-May-2023	01-May-2023	917817
Thallium, dissolved	7440-28-0	<0.100 DLHC	0.100	µg/L	E421	01-May-2023	01-May-2023	917817
Uranium, dissolved	7440-61-1	1.69 DLHC	0.100	µg/L	E421	01-May-2023	01-May-2023	917817
Vanadium, dissolved	7440-62-2	<5.00 DLHC	5.00	µg/L	E421	01-May-2023	01-May-2023	917817
Zinc, dissolved	7440-66-6	<10.0 DLHC	10.0	µg/L	E421	01-May-2023	01-May-2023	917817
Dissolved mercury filtration location	----	Field	-	-	EP509	-	02-May-2023	918531
Dissolved metals filtration location	----	Field	-	-	EP421	-	01-May-2023	917817
Speciated Metals								
Chromium, hexavalent [Cr VI], dissolved	18540-29-9	<0.50	0.50	µg/L	E532A	-	01-May-2023	917553
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	02-May-2023	02-May-2023	917951
Benzene	71-43-2	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Bromoform	75-25-2	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	02-May-2023	02-May-2023	917951
Chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Chloroform	67-66-3	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951

Analytical Results

WT2311250-001

Sub-Matrix:**Water**
(Matrix: **Water**)

Client sample ID: GW-12606873-270423-DA-BH02-22
Client sampling date / time: 27-Apr-2023 09:30

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	02-May-2023	02-May-2023	917951
Ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	02-May-2023	02-May-2023	917951
Methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	02-May-2023	02-May-2023	917951
Methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Styrene	100-42-5	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Tetrachloroethane, 1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Toluene	108-88-3	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	02-May-2023	02-May-2023	917951
Xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	02-May-2023	02-May-2023	917951
Xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
BTEX, total	----	<1.0	1.0	µg/L	E611D	02-May-2023	02-May-2023	917951
Hydrocarbons								
F1 (C6-C10)	----	<25	25	µg/L	E581.F1-L	02-May-2023	02-May-2023	917952
F2 (C10-C16)	----	<100	100	µg/L	E601.SG	02-May-2023	05-May-2023	918090
F2-Naphthalene	----	<100	100	µg/L	EC600SG	-	05-May-2023	-
F3 (C16-C34)	----	<250	250	µg/L	E601.SG	02-May-2023	05-May-2023	918090
F3-PAH	n/a	<250	250	µg/L	EC600SG	-	05-May-2023	-
F4 (C34-C50)	----	<250	250	µg/L	E601.SG	02-May-2023	05-May-2023	918090
F1-BTEX	----	<25	25	µg/L	EC580	-	03-May-2023	-
Hydrocarbons, total (C6-C50)	----	<370	370	µg/L	EC581SG	-	03-May-2023	-
Chromatogram to baseline at nC50	n/a	YES	-	-	E601.SG	02-May-2023	05-May-2023	918090
Hydrocarbons Surrogates								
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	74.1	1.0	%	E601.SG	02-May-2023	05-May-2023	918090
Dichlorotoluene, 3,4-	95-75-0	83.7	1.0	%	E581.F1-L	02-May-2023	02-May-2023	917952
Volatile Organic Compounds Surrogates								
Bromofluorobenzene, 4-	460-00-4	91.4	1.0	%	E611D	02-May-2023	02-May-2023	917951
Difluorobenzene, 1,4-	540-36-3	97.1	1.0	%	E611D	02-May-2023	02-May-2023	917951
Polycyclic Aromatic Hydrocarbons								

Analytical Results

WT2311250-001

Sub-Matrix:**Water** (Matrix: **Water**)

Client sample ID: GW-12606873-270423-DA-BH02-22

Client sampling date / time: 27-Apr-2023 09:30

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Polycyclic Aromatic Hydrocarbons								
Acenaphthene	83-32-9	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Acenaphthylene	208-96-8	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Anthracene	120-12-7	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Benz(a)anthracene	56-55-3	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Benzo(a)pyrene	50-32-8	<0.0050	0.0050	µg/L	E641A	02-May-2023	05-May-2023	918089
Benzo(b+j)fluoranthene	n/a	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Benzo(g,h,i)perylene	191-24-2	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Benzo(k)fluoranthene	207-08-9	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Chrysene	218-01-9	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Dibenz(a,h)anthracene	53-70-3	<0.0050	0.0050	µg/L	E641A	02-May-2023	05-May-2023	918089
Fluoranthene	206-44-0	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Fluorene	86-73-7	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Indeno(1,2,3-c,d)pyrene	193-39-5	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Methylnaphthalene, 1-	90-12-0	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Methylnaphthalene, 1+2-	----	0.019	0.015	µg/L	E641A	02-May-2023	05-May-2023	918089
Methylnaphthalene, 2-	91-57-6	0.019	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Naphthalene	91-20-3	0.060	0.050	µg/L	E641A	02-May-2023	05-May-2023	918089
Phenanthrene	85-01-8	<0.020	0.020	µg/L	E641A	02-May-2023	05-May-2023	918089
Pyrene	129-00-0	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Polycyclic Aromatic Hydrocarbons Surrogates								
Chrysene-d12	1719-03-5	108	0.1	%	E641A	02-May-2023	05-May-2023	918089
Naphthalene-d8	1146-65-2	98.2	0.1	%	E641A	02-May-2023	05-May-2023	918089
Phenanthrene-d10	1517-22-2	102	0.1	%	E641A	02-May-2023	05-May-2023	918089

Please refer to the General Comments section for an explanation of any qualifiers detected.

Analytical Results

WT2311250-002

Sub-Matrix:**Water** (Matrix: **Water**)

Client sample ID: GW-12606873-270423-DA-BH12-22

Client sampling date / time: 27-Apr-2023 10:20

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Physical Tests								
Conductivity	----	3.81	0.0010	mS/cm	E100	02-May-2023	03-May-2023	919322
pH	----	7.71	0.10	pH units	E108	02-May-2023	03-May-2023	919320
Anions and Nutrients								
Chloride	16887-00-6	970 DLDS	2.50	mg/L	E235.Cl	02-May-2023	03-May-2023	919318
Cyanides								
Cyanide, weak acid dissociable	----	<2.0	2.0	µg/L	E336	03-May-2023	03-May-2023	920319
Dissolved Metals								
Antimony, dissolved	7440-36-0	<1.00 DLHC	1.00	µg/L	E421	01-May-2023	01-May-2023	917817
Arsenic, dissolved	7440-38-2	<1.00 DLHC	1.00	µg/L	E421	01-May-2023	01-May-2023	917817
Barium, dissolved	7440-39-3	226 DLHC	1.00	µg/L	E421	01-May-2023	01-May-2023	917817
Beryllium, dissolved	7440-41-7	<0.200 DLHC	0.200	µg/L	E421	01-May-2023	01-May-2023	917817
Boron, dissolved	7440-42-8	<100 DLHC	100	µg/L	E421	01-May-2023	01-May-2023	917817

Analytical Results

WT2311250-002

Sub-Matrix:**Water**
(Matrix: **Water**)

Client sample ID: GW-12606873-270423-DA-BH12-22
Client sampling date / time: 27-Apr-2023 10:20

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Dissolved Metals								
Cadmium, dissolved	7440-43-9	<0.0500 DLHC,	0.0500	µg/L	E421	01-May-2023	01-May-2023	917817
Chromium, dissolved	7440-47-3	<5.00 DLHC,	5.00	µg/L	E421	01-May-2023	01-May-2023	917817
Cobalt, dissolved	7440-48-4	<1.00 DLHC,	1.00	µg/L	E421	01-May-2023	01-May-2023	917817
Copper, dissolved	7440-50-8	2.06 DLHC,	2.00	µg/L	E421	01-May-2023	01-May-2023	917817
Lead, dissolved	7439-92-1	<0.500 DLHC,	0.500	µg/L	E421	01-May-2023	01-May-2023	917817
Mercury, dissolved	7439-97-6	<0.0050	0.0050	µg/L	E509	02-May-2023	02-May-2023	918531
Molybdenum, dissolved	7439-98-7	1.09 DLHC,	0.500	µg/L	E421	01-May-2023	01-May-2023	917817
Nickel, dissolved	7440-02-0	<5.00 DLHC,	5.00	µg/L	E421	01-May-2023	01-May-2023	917817
Selenium, dissolved	7782-49-2	<0.500 DLHC,	0.500	µg/L	E421	01-May-2023	01-May-2023	917817
Silver, dissolved	7440-22-4	<0.100 DLHC,	0.100	µg/L	E421	01-May-2023	01-May-2023	917817
Sodium, dissolved	7440-23-5	390000 DLHC,	500	µg/L	E421	01-May-2023	01-May-2023	917817
Thallium, dissolved	7440-28-0	0.141 DLHC,	0.100	µg/L	E421	01-May-2023	01-May-2023	917817
Uranium, dissolved	7440-61-1	4.36 DLHC,	0.100	µg/L	E421	01-May-2023	01-May-2023	917817
Vanadium, dissolved	7440-62-2	<5.00 DLHC,	5.00	µg/L	E421	01-May-2023	01-May-2023	917817
Zinc, dissolved	7440-66-6	<10.0 DLHC,	10.0	µg/L	E421	01-May-2023	01-May-2023	917817
Dissolved mercury filtration location	----	Field	-	-	EP509	-	02-May-2023	918531
Dissolved metals filtration location	----	Field	-	-	EP421	-	01-May-2023	917817
Speciated Metals								
Chromium, hexavalent [Cr VI], dissolved	18540-29-9	<0.50	0.50	µg/L	E532A	-	01-May-2023	917553
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	02-May-2023	02-May-2023	917951
Benzene	71-43-2	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Bromoform	75-25-2	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	02-May-2023	02-May-2023	917951
Chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Chloroform	67-66-3	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	02-May-2023	02-May-2023	917951
Ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951

Analytical Results

WT2311250-002

Sub-Matrix:**Water**
(Matrix: **Water**)

Client sample ID: GW-12606873-270423-DA-BH12-22
Client sampling date / time: 27-Apr-2023 10:20

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	02-May-2023	02-May-2023	917951
Methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	02-May-2023	02-May-2023	917951
Methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Styrene	100-42-5	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Tetrachloroethane, 1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Toluene	108-88-3	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	02-May-2023	02-May-2023	917951
Xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	02-May-2023	02-May-2023	917951
Xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
BTEX, total	----	<1.0	1.0	µg/L	E611D	02-May-2023	02-May-2023	917951
Hydrocarbons								
F1 (C6-C10)	----	<25	25	µg/L	E581.F1-L	02-May-2023	02-May-2023	917952
F2 (C10-C16)	----	<100	100	µg/L	E601.SG	02-May-2023	05-May-2023	918090
F2-Naphthalene	----	<100	100	µg/L	EC600SG	-	05-May-2023	-
F3 (C16-C34)	----	<250	250	µg/L	E601.SG	02-May-2023	05-May-2023	918090
F3-PAH	n/a	<250	250	µg/L	EC600SG	-	05-May-2023	-
F4 (C34-C50)	----	<250	250	µg/L	E601.SG	02-May-2023	05-May-2023	918090
F1-BTEX	----	<25	25	µg/L	EC580	-	03-May-2023	-
Hydrocarbons, total (C6-C50)	----	<370	370	µg/L	EC581SG	-	03-May-2023	-
Chromatogram to baseline at nC50	n/a	YES	-	-	E601.SG	02-May-2023	05-May-2023	918090
Hydrocarbons Surrogates								
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	77.1	1.0	%	E601.SG	02-May-2023	05-May-2023	918090
Dichlorotoluene, 3,4-	95-75-0	89.6	1.0	%	E581.F1-L	02-May-2023	02-May-2023	917952
Volatile Organic Compounds Surrogates								
Bromofluorobenzene, 4-	460-00-4	90.7	1.0	%	E611D	02-May-2023	02-May-2023	917951
Difluorobenzene, 1,4-	540-36-3	96.7	1.0	%	E611D	02-May-2023	02-May-2023	917951
Polycyclic Aromatic Hydrocarbons								
Acenaphthene	83-32-9	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Acenaphthylene	208-96-8	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Anthracene	120-12-7	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Benz(a)anthracene	56-55-3	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Benzo(a)pyrene	50-32-8	<0.0050	0.0050	µg/L	E641A	02-May-2023	05-May-2023	918089
Benzo(b+j)fluoranthene	n/a	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Benzo(g,h,i)perylene	191-24-2	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Benzo(k)fluoranthene	207-08-9	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Chrysene	218-01-9	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Dibenz(a,h)anthracene	53-70-3	<0.0050	0.0050	µg/L	E641A	02-May-2023	05-May-2023	918089
Fluoranthene	206-44-0	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Fluorene	86-73-7	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089

Analytical Results

WT2311250-002

Sub-Matrix:**Water** (Matrix: **Water**)

Client sample ID: GW-12606873-270423-DA-BH12-22

Client sampling date / time: 27-Apr-2023 10:20

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Polycyclic Aromatic Hydrocarbons								
Indeno(1,2,3-c,d)pyrene	193-39-5	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Methylnaphthalene, 1-	90-12-0	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Methylnaphthalene, 1+2-	----	<0.015	0.015	µg/L	E641A	02-May-2023	05-May-2023	918089
Methylnaphthalene, 2-	91-57-6	0.012	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Naphthalene	91-20-3	<0.050	0.050	µg/L	E641A	02-May-2023	05-May-2023	918089
Phenanthrene	85-01-8	<0.020	0.020	µg/L	E641A	02-May-2023	05-May-2023	918089
Pyrene	129-00-0	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Polycyclic Aromatic Hydrocarbons Surrogates								
Chrysene-d12	1719-03-5	110	0.1	%	E641A	02-May-2023	05-May-2023	918089
Naphthalene-d8	1146-65-2	102	0.1	%	E641A	02-May-2023	05-May-2023	918089
Phenanthrene-d10	1517-22-2	103	0.1	%	E641A	02-May-2023	05-May-2023	918089

Please refer to the General Comments section for an explanation of any qualifiers detected.

Analytical Results

WT2311250-003

Sub-Matrix:**Water** (Matrix: **Water**)

Client sample ID: GW-12606873-270423-DA-BH01-22

Client sampling date / time: 27-Apr-2023 12:25

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Physical Tests								
Conductivity	----	2.53	0.0010	mS/cm	E100	02-May-2023	03-May-2023	919322
pH	----	7.88	0.10	pH units	E108	02-May-2023	03-May-2023	919320
Anions and Nutrients								
Chloride	16887-00-6	564 DLDS.	2.50	mg/L	E235.Cl	02-May-2023	03-May-2023	919318
Cyanides								
Cyanide, weak acid dissociable	----	<2.0	2.0	µg/L	E336	03-May-2023	03-May-2023	920319
Dissolved Metals								
Antimony, dissolved	7440-36-0	0.13	0.10	µg/L	E421	01-May-2023	01-May-2023	917817
Arsenic, dissolved	7440-38-2	0.20	0.10	µg/L	E421	01-May-2023	01-May-2023	917817
Barium, dissolved	7440-39-3	200	0.10	µg/L	E421	01-May-2023	01-May-2023	917817
Beryllium, dissolved	7440-41-7	<0.020	0.020	µg/L	E421	01-May-2023	01-May-2023	917817
Boron, dissolved	7440-42-8	24	10	µg/L	E421	01-May-2023	01-May-2023	917817
Cadmium, dissolved	7440-43-9	0.0220	0.0050	µg/L	E421	01-May-2023	01-May-2023	917817
Chromium, dissolved	7440-47-3	<0.50	0.50	µg/L	E421	01-May-2023	01-May-2023	917817
Cobalt, dissolved	7440-48-4	<0.10	0.10	µg/L	E421	01-May-2023	01-May-2023	917817
Copper, dissolved	7440-50-8	0.95	0.20	µg/L	E421	01-May-2023	01-May-2023	917817
Lead, dissolved	7439-92-1	<0.050	0.050	µg/L	E421	01-May-2023	01-May-2023	917817
Mercury, dissolved	7439-97-6	<0.0050	0.0050	µg/L	E509	02-May-2023	02-May-2023	918531
Molybdenum, dissolved	7439-98-7	1.17	0.050	µg/L	E421	01-May-2023	01-May-2023	917817
Nickel, dissolved	7440-02-0	<0.50	0.50	µg/L	E421	01-May-2023	01-May-2023	917817
Selenium, dissolved	7782-49-2	0.447	0.050	µg/L	E421	01-May-2023	01-May-2023	917817
Silver, dissolved	7440-22-4	<0.010	0.010	µg/L	E421	01-May-2023	01-May-2023	917817
Sodium, dissolved	7440-23-5	237000	50	µg/L	E421	01-May-2023	01-May-2023	917817
Thallium, dissolved	7440-28-0	0.019	0.010	µg/L	E421	01-May-2023	01-May-2023	917817

Analytical Results

WT2311250-003

Sub-Matrix:**Water**
(Matrix: **Water**)

Client sample ID: GW-12606873-270423-DA-BH01-22
Client sampling date / time: 27-Apr-2023 12:25

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Dissolved Metals								
Uranium, dissolved	7440-61-1	2.67	0.010	µg/L	E421	01-May-2023	01-May-2023	917817
Vanadium, dissolved	7440-62-2	<0.50	0.50	µg/L	E421	01-May-2023	01-May-2023	917817
Zinc, dissolved	7440-66-6	3.0	1.0	µg/L	E421	01-May-2023	01-May-2023	917817
Dissolved mercury filtration location	----	Field	-	-	EP509	-	02-May-2023	918531
Dissolved metals filtration location	----	Field	-	-	EP421	-	01-May-2023	917817
Speciated Metals								
Chromium, hexavalent [Cr VI], dissolved	18540-29-9	<0.50	0.50	µg/L	E532A	-	01-May-2023	917553
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	02-May-2023	02-May-2023	917951
Benzene	71-43-2	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Bromoform	75-25-2	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	02-May-2023	02-May-2023	917951
Chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Chloroform	67-66-3	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	02-May-2023	02-May-2023	917951
Ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	02-May-2023	02-May-2023	917951
Methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	02-May-2023	02-May-2023	917951
Methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Styrene	100-42-5	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Tetrachloroethane, 1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Toluene	108-88-3	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951

Analytical Results

WT2311250-003

Sub-Matrix:**Water**
(Matrix: **Water**)

Client sample ID: GW-12606873-270423-DA-BH01-22
Client sampling date / time: 27-Apr-2023 12:25

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	02-May-2023	02-May-2023	917951
Xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	02-May-2023	02-May-2023	917951
Xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
BTEX, total	----	<1.0	1.0	µg/L	E611D	02-May-2023	02-May-2023	917951
Hydrocarbons								
F1 (C6-C10)	----	<25	25	µg/L	E581.F1-L	02-May-2023	02-May-2023	917952
F2 (C10-C16)	----	<100	100	µg/L	E601.SG	02-May-2023	05-May-2023	918090
F2-Naphthalene	----	<100	100	µg/L	EC600SG	-	05-May-2023	-
F3 (C16-C34)	----	<250	250	µg/L	E601.SG	02-May-2023	05-May-2023	918090
F3-PAH	n/a	<250	250	µg/L	EC600SG	-	05-May-2023	-
F4 (C34-C50)	----	<250	250	µg/L	E601.SG	02-May-2023	05-May-2023	918090
F1-BTEX	----	<25	25	µg/L	EC580	-	03-May-2023	-
Hydrocarbons, total (C6-C50)	----	<370	370	µg/L	EC581SG	-	03-May-2023	-
Chromatogram to baseline at nC50	n/a	YES	-	-	E601.SG	02-May-2023	05-May-2023	918090
Hydrocarbons Surrogates								
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	77.9	1.0	%	E601.SG	02-May-2023	05-May-2023	918090
Dichlorotoluene, 3,4-	95-75-0	93.3	1.0	%	E581.F1-L	02-May-2023	02-May-2023	917952
Volatile Organic Compounds Surrogates								
Bromofluorobenzene, 4-	460-00-4	91.4	1.0	%	E611D	02-May-2023	02-May-2023	917951
Difluorobenzene, 1,4-	540-36-3	96.8	1.0	%	E611D	02-May-2023	02-May-2023	917951
Polycyclic Aromatic Hydrocarbons								
Acenaphthene	83-32-9	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Acenaphthylene	208-96-8	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Anthracene	120-12-7	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Benz(a)anthracene	56-55-3	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Benzo(a)pyrene	50-32-8	<0.0050	0.0050	µg/L	E641A	02-May-2023	05-May-2023	918089
Benzo(b+j)fluoranthene	n/a	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Benzo(g,h,i)perylene	191-24-2	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Benzo(k)fluoranthene	207-08-9	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Chrysene	218-01-9	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Dibenz(a,h)anthracene	53-70-3	<0.0050	0.0050	µg/L	E641A	02-May-2023	05-May-2023	918089
Fluoranthene	206-44-0	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Fluorene	86-73-7	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Indeno(1,2,3-c,d)pyrene	193-39-5	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Methylnaphthalene, 1-	90-12-0	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Methylnaphthalene, 1+2-	----	<0.015	0.015	µg/L	E641A	02-May-2023	05-May-2023	918089
Methylnaphthalene, 2-	91-57-6	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Naphthalene	91-20-3	<0.050	0.050	µg/L	E641A	02-May-2023	05-May-2023	918089
Phenanthrene	85-01-8	<0.020	0.020	µg/L	E641A	02-May-2023	05-May-2023	918089
Pyrene	129-00-0	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Polycyclic Aromatic Hydrocarbons Surrogates								
Chrysene-d12	1719-03-5	110	0.1	%	E641A	02-May-2023	05-May-2023	918089
Naphthalene-d8	1146-65-2	102	0.1	%	E641A	02-May-2023	05-May-2023	918089
Phenanthrene-d10	1517-22-2	104	0.1	%	E641A	02-May-2023	05-May-2023	918089

Please refer to the General Comments section for an explanation of any qualifiers detected.

Analytical Results

WT2311250-004

Sub-Matrix:**Water**
(Matrix: **Water**)

Client sample ID: GW-12606873-270423-DA-BH11-22
Client sampling date / time: 27-Apr-2023 13:45

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Physical Tests								
Conductivity	----	3.54	0.0010	mS/cm	E100	02-May-2023	03-May-2023	919322
pH	----	7.71	0.10	pH units	E108	02-May-2023	03-May-2023	919320
Anions and Nutrients								
Chloride	16887-00-6	895 DLDS,	2.50	mg/L	E235.Cl	02-May-2023	03-May-2023	919318
Cyanides								
Cyanide, weak acid dissociable	----	<2.0	2.0	µg/L	E336	03-May-2023	03-May-2023	920319
Dissolved Metals								
Antimony, dissolved	7440-36-0	<1.00 DLHC,	1.00	µg/L	E421	01-May-2023	01-May-2023	917817
Arsenic, dissolved	7440-38-2	<1.00 DLHC,	1.00	µg/L	E421	01-May-2023	01-May-2023	917817
Barium, dissolved	7440-39-3	246 DLHC,	1.00	µg/L	E421	01-May-2023	01-May-2023	917817
Beryllium, dissolved	7440-41-7	<0.200 DLHC,	0.200	µg/L	E421	01-May-2023	01-May-2023	917817
Boron, dissolved	7440-42-8	<100 DLHC,	100	µg/L	E421	01-May-2023	01-May-2023	917817
Cadmium, dissolved	7440-43-9	<0.0500 DLHC,	0.0500	µg/L	E421	01-May-2023	01-May-2023	917817
Chromium, dissolved	7440-47-3	<5.00 DLHC,	5.00	µg/L	E421	01-May-2023	01-May-2023	917817
Cobalt, dissolved	7440-48-4	<1.00 DLHC,	1.00	µg/L	E421	01-May-2023	01-May-2023	917817
Copper, dissolved	7440-50-8	<2.00 DLHC,	2.00	µg/L	E421	01-May-2023	01-May-2023	917817
Lead, dissolved	7439-92-1	<0.500 DLHC,	0.500	µg/L	E421	01-May-2023	01-May-2023	917817
Mercury, dissolved	7439-97-6	<0.0050	0.0050	µg/L	E509	02-May-2023	02-May-2023	918531
Molybdenum, dissolved	7439-98-7	10.8 DLHC,	0.500	µg/L	E421	01-May-2023	01-May-2023	917817
Nickel, dissolved	7440-02-0	6.16 DLHC,	5.00	µg/L	E421	01-May-2023	01-May-2023	917817
Selenium, dissolved	7782-49-2	<0.500 DLHC,	0.500	µg/L	E421	01-May-2023	01-May-2023	917817
Silver, dissolved	7440-22-4	<0.100 DLHC,	0.100	µg/L	E421	01-May-2023	01-May-2023	917817
Sodium, dissolved	7440-23-5	356000 DLHC,	500	µg/L	E421	01-May-2023	01-May-2023	917817
Thallium, dissolved	7440-28-0	<0.100 DLHC,	0.100	µg/L	E421	01-May-2023	01-May-2023	917817
Uranium, dissolved	7440-61-1	6.32 DLHC,	0.100	µg/L	E421	01-May-2023	01-May-2023	917817
Vanadium, dissolved	7440-62-2	<5.00 DLHC,	5.00	µg/L	E421	01-May-2023	01-May-2023	917817
Zinc, dissolved	7440-66-6	<10.0 DLHC,	10.0	µg/L	E421	01-May-2023	01-May-2023	917817
Dissolved mercury filtration location	----	Field	-	-	EP509	-	02-May-2023	918531
Dissolved metals filtration location	----	Field	-	-	EP421	-	01-May-2023	917817
Speciated Metals								
Chromium, hexavalent [Cr VI], dissolved	18540-29-9	<0.50	0.50	µg/L	E532A	-	01-May-2023	917553
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	02-May-2023	02-May-2023	917951
Benzene	71-43-2	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Bromoform	75-25-2	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	02-May-2023	02-May-2023	917951
Chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Chloroform	67-66-3	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951

Analytical Results

WT2311250-004

Sub-Matrix:**Water**
(Matrix: **Water**)

Client sample ID: GW-12606873-270423-DA-BH11-22
Client sampling date / time: 27-Apr-2023 13:45

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	02-May-2023	02-May-2023	917951
Ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	02-May-2023	02-May-2023	917951
Methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	02-May-2023	02-May-2023	917951
Methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Styrene	100-42-5	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Tetrachloroethane, 1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Toluene	108-88-3	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	02-May-2023	02-May-2023	917951
Xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	02-May-2023	02-May-2023	917951
Xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
BTEX, total	----	<1.0	1.0	µg/L	E611D	02-May-2023	02-May-2023	917951
Hydrocarbons								
F1 (C6-C10)	----	<25	25	µg/L	E581.F1-L	02-May-2023	02-May-2023	917952
F2 (C10-C16)	----	<100	100	µg/L	E601.SG	02-May-2023	05-May-2023	918090
F2-Naphthalene	----	<100	100	µg/L	EC600SG	-	05-May-2023	-
F3 (C16-C34)	----	<250	250	µg/L	E601.SG	02-May-2023	05-May-2023	918090
F3-PAH	n/a	<250	250	µg/L	EC600SG	-	05-May-2023	-
F4 (C34-C50)	----	<250	250	µg/L	E601.SG	02-May-2023	05-May-2023	918090
F1-BTEX	----	<25	25	µg/L	EC580	-	03-May-2023	-
Hydrocarbons, total (C6-C50)	----	<370	370	µg/L	EC581SG	-	03-May-2023	-
Chromatogram to baseline at nC50	n/a	YES	-	-	E601.SG	02-May-2023	05-May-2023	918090
Hydrocarbons Surrogates								
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	80.3	1.0	%	E601.SG	02-May-2023	05-May-2023	918090
Dichlorotoluene, 3,4-	95-75-0	93.2	1.0	%	E581.F1-L	02-May-2023	02-May-2023	917952
Volatile Organic Compounds Surrogates								
Bromofluorobenzene, 4-	460-00-4	92.1	1.0	%	E611D	02-May-2023	02-May-2023	917951
Difluorobenzene, 1,4-	540-36-3	97.0	1.0	%	E611D	02-May-2023	02-May-2023	917951
Polycyclic Aromatic Hydrocarbons								

Analytical Results

WT2311250-004

Sub-Matrix:**Water** (Matrix: **Water**)

Client sample ID: GW-12606873-270423-DA-BH11-22

Client sampling date / time: 27-Apr-2023 13:45

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Polycyclic Aromatic Hydrocarbons								
Acenaphthene	83-32-9	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Acenaphthylene	208-96-8	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Anthracene	120-12-7	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Benz(a)anthracene	56-55-3	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Benzo(a)pyrene	50-32-8	<0.0050	0.0050	µg/L	E641A	02-May-2023	05-May-2023	918089
Benzo(b+j)fluoranthene	n/a	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Benzo(g,h,i)perylene	191-24-2	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Benzo(k)fluoranthene	207-08-9	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Chrysene	218-01-9	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Dibenz(a,h)anthracene	53-70-3	<0.0050	0.0050	µg/L	E641A	02-May-2023	05-May-2023	918089
Fluoranthene	206-44-0	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Fluorene	86-73-7	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Indeno(1,2,3-c,d)pyrene	193-39-5	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Methylnaphthalene, 1-	90-12-0	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Methylnaphthalene, 1+2-	----	<0.015	0.015	µg/L	E641A	02-May-2023	05-May-2023	918089
Methylnaphthalene, 2-	91-57-6	0.013	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Naphthalene	91-20-3	<0.050	0.050	µg/L	E641A	02-May-2023	05-May-2023	918089
Phenanthrene	85-01-8	<0.020	0.020	µg/L	E641A	02-May-2023	05-May-2023	918089
Pyrene	129-00-0	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Polycyclic Aromatic Hydrocarbons Surrogates								
Chrysene-d12	1719-03-5	106	0.1	%	E641A	02-May-2023	05-May-2023	918089
Naphthalene-d8	1146-65-2	101	0.1	%	E641A	02-May-2023	05-May-2023	918089
Phenanthrene-d10	1517-22-2	101	0.1	%	E641A	02-May-2023	05-May-2023	918089

Please refer to the General Comments section for an explanation of any qualifiers detected.

Analytical Results

WT2311250-005

Sub-Matrix:**Water** (Matrix: **Water**)

Client sample ID: GW-12606873-270423-DA-BH03-22

Client sampling date / time: 27-Apr-2023 14:40

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Physical Tests								
Conductivity	----	3.12	0.0010	mS/cm	E100	02-May-2023	03-May-2023	919322
pH	----	7.93	0.10	pH units	E108	02-May-2023	03-May-2023	919320
Anions and Nutrients								
Chloride	16887-00-6	555 DLDS	2.50	mg/L	E235.Cl	02-May-2023	03-May-2023	919318
Cyanides								
Cyanide, weak acid dissociable	----	<2.0	2.0	µg/L	E336	03-May-2023	03-May-2023	920319
Dissolved Metals								
Antimony, dissolved	7440-36-0	<1.00 DLHC	1.00	µg/L	E421	01-May-2023	01-May-2023	917817
Arsenic, dissolved	7440-38-2	<1.00 DLHC	1.00	µg/L	E421	01-May-2023	01-May-2023	917817
Barium, dissolved	7440-39-3	74.8 DLHC	1.00	µg/L	E421	01-May-2023	01-May-2023	917817
Beryllium, dissolved	7440-41-7	<0.200 DLHC	0.200	µg/L	E421	01-May-2023	01-May-2023	917817
Boron, dissolved	7440-42-8	<100 DLHC	100	µg/L	E421	01-May-2023	01-May-2023	917817

Analytical Results

WT2311250-005

Sub-Matrix:**Water**
(Matrix: **Water**)

Client sample ID: GW-12606873-270423-DA-BH03-22
Client sampling date / time: 27-Apr-2023 14:40

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Dissolved Metals								
Cadmium, dissolved	7440-43-9	<0.0500 DLHC	0.0500	µg/L	E421	01-May-2023	01-May-2023	917817
Chromium, dissolved	7440-47-3	<5.00 DLHC	5.00	µg/L	E421	01-May-2023	01-May-2023	917817
Cobalt, dissolved	7440-48-4	<1.00 DLHC	1.00	µg/L	E421	01-May-2023	01-May-2023	917817
Copper, dissolved	7440-50-8	2.31 DLHC	2.00	µg/L	E421	01-May-2023	01-May-2023	917817
Lead, dissolved	7439-92-1	<0.500 DLHC	0.500	µg/L	E421	01-May-2023	01-May-2023	917817
Mercury, dissolved	7439-97-6	<0.0050	0.0050	µg/L	E509	02-May-2023	02-May-2023	918531
Molybdenum, dissolved	7439-98-7	1.19 DLHC	0.500	µg/L	E421	01-May-2023	01-May-2023	917817
Nickel, dissolved	7440-02-0	<5.00 DLHC	5.00	µg/L	E421	01-May-2023	01-May-2023	917817
Selenium, dissolved	7782-49-2	0.652 DLHC	0.500	µg/L	E421	01-May-2023	01-May-2023	917817
Silver, dissolved	7440-22-4	<0.100 DLHC	0.100	µg/L	E421	01-May-2023	01-May-2023	917817
Sodium, dissolved	7440-23-5	214000 DLHC	500	µg/L	E421	01-May-2023	01-May-2023	917817
Thallium, dissolved	7440-28-0	<0.100 DLHC	0.100	µg/L	E421	01-May-2023	01-May-2023	917817
Uranium, dissolved	7440-61-1	3.21 DLHC	0.100	µg/L	E421	01-May-2023	01-May-2023	917817
Vanadium, dissolved	7440-62-2	<5.00 DLHC	5.00	µg/L	E421	01-May-2023	01-May-2023	917817
Zinc, dissolved	7440-66-6	<10.0 DLHC	10.0	µg/L	E421	01-May-2023	01-May-2023	917817
Dissolved mercury filtration location	----	Field	-	-	EP509	-	02-May-2023	918531
Dissolved metals filtration location	----	Field	-	-	EP421	-	01-May-2023	917817
Speciated Metals								
Chromium, hexavalent [Cr VI], dissolved	18540-29-9	<0.50	0.50	µg/L	E532A	-	01-May-2023	917553
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	02-May-2023	02-May-2023	917951
Benzene	71-43-2	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Bromoform	75-25-2	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	02-May-2023	02-May-2023	917951
Chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Chloroform	67-66-3	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	02-May-2023	02-May-2023	917951
Ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951

Analytical Results

WT2311250-005

Sub-Matrix:**Water**
(Matrix: **Water**)

Client sample ID: GW-12606873-270423-DA-BH03-22
Client sampling date / time: 27-Apr-2023 14:40

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	02-May-2023	02-May-2023	917951
Methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	02-May-2023	02-May-2023	917951
Methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Styrene	100-42-5	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Tetrachloroethane, 1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Toluene	108-88-3	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	02-May-2023	02-May-2023	917951
Xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	02-May-2023	02-May-2023	917951
Xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
BTEX, total	----	<1.0	1.0	µg/L	E611D	02-May-2023	02-May-2023	917951
Hydrocarbons								
F1 (C6-C10)	----	<25	25	µg/L	E581.F1-L	02-May-2023	02-May-2023	917952
F2 (C10-C16)	----	<100	100	µg/L	E601.SG	02-May-2023	05-May-2023	918090
F2-Naphthalene	----	<100	100	µg/L	EC600SG	-	05-May-2023	-
F3 (C16-C34)	----	<250	250	µg/L	E601.SG	02-May-2023	05-May-2023	918090
F3-PAH	n/a	<250	250	µg/L	EC600SG	-	05-May-2023	-
F4 (C34-C50)	----	<250	250	µg/L	E601.SG	02-May-2023	05-May-2023	918090
F1-BTEX	----	<25	25	µg/L	EC580	-	03-May-2023	-
Hydrocarbons, total (C6-C50)	----	<370	370	µg/L	EC581SG	-	03-May-2023	-
Chromatogram to baseline at nC50	n/a	YES	-	-	E601.SG	02-May-2023	05-May-2023	918090
Hydrocarbons Surrogates								
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	75.8	1.0	%	E601.SG	02-May-2023	05-May-2023	918090
Dichlorotoluene, 3,4-	95-75-0	81.0	1.0	%	E581.F1-L	02-May-2023	02-May-2023	917952
Volatile Organic Compounds Surrogates								
Bromofluorobenzene, 4-	460-00-4	90.7	1.0	%	E611D	02-May-2023	02-May-2023	917951
Difluorobenzene, 1,4-	540-36-3	97.5	1.0	%	E611D	02-May-2023	02-May-2023	917951
Polycyclic Aromatic Hydrocarbons								
Acenaphthene	83-32-9	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Acenaphthylene	208-96-8	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Anthracene	120-12-7	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Benz(a)anthracene	56-55-3	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Benzo(a)pyrene	50-32-8	<0.0050	0.0050	µg/L	E641A	02-May-2023	05-May-2023	918089
Benzo(b+j)fluoranthene	n/a	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Benzo(g,h,i)perylene	191-24-2	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Benzo(k)fluoranthene	207-08-9	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Chrysene	218-01-9	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Dibenz(a,h)anthracene	53-70-3	<0.0050	0.0050	µg/L	E641A	02-May-2023	05-May-2023	918089
Fluoranthene	206-44-0	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Fluorene	86-73-7	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089

Analytical Results

WT2311250-005

Sub-Matrix:**Water** (Matrix: **Water**)

Client sample ID: GW-12606873-270423-DA-BH03-22

Client sampling date / time: 27-Apr-2023 14:40

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Polycyclic Aromatic Hydrocarbons								
Indeno(1,2,3-c,d)pyrene	193-39-5	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Methylnaphthalene, 1-	90-12-0	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Methylnaphthalene, 1+2-	----	<0.015	0.015	µg/L	E641A	02-May-2023	05-May-2023	918089
Methylnaphthalene, 2-	91-57-6	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Naphthalene	91-20-3	<0.050	0.050	µg/L	E641A	02-May-2023	05-May-2023	918089
Phenanthrene	85-01-8	<0.020	0.020	µg/L	E641A	02-May-2023	05-May-2023	918089
Pyrene	129-00-0	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Polycyclic Aromatic Hydrocarbons Surrogates								
Chrysene-d12	1719-03-5	106	0.1	%	E641A	02-May-2023	05-May-2023	918089
Naphthalene-d8	1146-65-2	100	0.1	%	E641A	02-May-2023	05-May-2023	918089
Phenanthrene-d10	1517-22-2	103	0.1	%	E641A	02-May-2023	05-May-2023	918089

Please refer to the General Comments section for an explanation of any qualifiers detected.

Analytical Results

WT2311250-006

Sub-Matrix:**Water** (Matrix: **Water**)

Client sample ID: GW-12606873-270423-DA-BH3-23

Client sampling date / time: 27-Apr-2023 15:40

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Physical Tests								
Conductivity	----	1.88	0.0010	mS/cm	E100	02-May-2023	03-May-2023	919322
pH	----	8.16	0.10	pH units	E108	02-May-2023	03-May-2023	919320
Anions and Nutrients								
Chloride	16887-00-6	187 DLDS.	2.50	mg/L	E235.Cl	02-May-2023	03-May-2023	919318
Cyanides								
Cyanide, weak acid dissociable	----	<2.0	2.0	µg/L	E336	03-May-2023	03-May-2023	920319
Dissolved Metals								
Antimony, dissolved	7440-36-0	<1.00 DLHC.	1.00	µg/L	E421	01-May-2023	01-May-2023	917817
Arsenic, dissolved	7440-38-2	<1.00 DLHC.	1.00	µg/L	E421	01-May-2023	01-May-2023	917817
Barium, dissolved	7440-39-3	52.2 DLHC.	1.00	µg/L	E421	01-May-2023	01-May-2023	917817
Beryllium, dissolved	7440-41-7	<0.200 DLHC.	0.200	µg/L	E421	01-May-2023	01-May-2023	917817
Boron, dissolved	7440-42-8	<100 DLHC.	100	µg/L	E421	01-May-2023	01-May-2023	917817
Cadmium, dissolved	7440-43-9	<0.0500 DLHC.	0.0500	µg/L	E421	01-May-2023	01-May-2023	917817
Chromium, dissolved	7440-47-3	<5.00 DLHC.	5.00	µg/L	E421	01-May-2023	01-May-2023	917817
Cobalt, dissolved	7440-48-4	<1.00 DLHC.	1.00	µg/L	E421	01-May-2023	01-May-2023	917817
Copper, dissolved	7440-50-8	16.0 DLHC.	2.00	µg/L	E421	01-May-2023	01-May-2023	917817
Lead, dissolved	7439-92-1	<0.500 DLHC.	0.500	µg/L	E421	01-May-2023	01-May-2023	917817
Mercury, dissolved	7439-97-6	<0.0050	0.0050	µg/L	E509	02-May-2023	02-May-2023	918531
Molybdenum, dissolved	7439-98-7	3.01 DLHC.	0.500	µg/L	E421	01-May-2023	01-May-2023	917817
Nickel, dissolved	7440-02-0	11.0 DLHC.	5.00	µg/L	E421	01-May-2023	01-May-2023	917817
Selenium, dissolved	7782-49-2	0.797 DLHC.	0.500	µg/L	E421	01-May-2023	01-May-2023	917817
Silver, dissolved	7440-22-4	<0.100 DLHC.	0.100	µg/L	E421	01-May-2023	01-May-2023	917817
Sodium, dissolved	7440-23-5	255000 DLHC.	500	µg/L	E421	01-May-2023	01-May-2023	917817
Thallium, dissolved	7440-28-0	<0.100 DLHC.	0.100	µg/L	E421	01-May-2023	01-May-2023	917817

Analytical Results

WT2311250-006

Sub-Matrix:**Water**
(Matrix: **Water**)

Client sample ID: GW-12606873-270423-DA-BH3-23
Client sampling date / time: 27-Apr-2023 15:40

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Dissolved Metals								
Uranium, dissolved	7440-61-1	3.80 DLHC,	0.100	µg/L	E421	01-May-2023	01-May-2023	917817
Vanadium, dissolved	7440-62-2	<5.00 DLHC,	5.00	µg/L	E421	01-May-2023	01-May-2023	917817
Zinc, dissolved	7440-66-6	<10.0 DLHC,	10.0	µg/L	E421	01-May-2023	01-May-2023	917817
Dissolved mercury filtration location	----	Field	-	-	EP509	-	02-May-2023	918531
Dissolved metals filtration location	----	Field	-	-	EP421	-	01-May-2023	917817
Speciated Metals								
Chromium, hexavalent [Cr VI], dissolved	18540-29-9	<0.50	0.50	µg/L	E532A	-	01-May-2023	917553
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	02-May-2023	02-May-2023	917951
Benzene	71-43-2	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Bromoform	75-25-2	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	02-May-2023	02-May-2023	917951
Chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Chloroform	67-66-3	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	02-May-2023	02-May-2023	917951
Ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	02-May-2023	02-May-2023	917951
Methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	02-May-2023	02-May-2023	917951
Methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Styrene	100-42-5	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Tetrachloroethane, 1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Toluene	108-88-3	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951

Analytical Results

WT2311250-006

Sub-Matrix:**Water**
(Matrix: **Water**)

Client sample ID: GW-12606873-270423-DA-BH3-23
Client sampling date / time: 27-Apr-2023 15:40

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	02-May-2023	02-May-2023	917951
Xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	02-May-2023	02-May-2023	917951
Xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
BTEX, total	----	<1.0	1.0	µg/L	E611D	02-May-2023	02-May-2023	917951
Hydrocarbons								
F1 (C6-C10)	----	<25	25	µg/L	E581.F1-L	02-May-2023	02-May-2023	917952
F2 (C10-C16)	----	<100	100	µg/L	E601.SG	02-May-2023	05-May-2023	918090
F2-Naphthalene	----	<100	100	µg/L	EC600SG	-	05-May-2023	-
F3 (C16-C34)	----	<250	250	µg/L	E601.SG	02-May-2023	05-May-2023	918090
F3-PAH	n/a	<250	250	µg/L	EC600SG	-	05-May-2023	-
F4 (C34-C50)	----	<250	250	µg/L	E601.SG	02-May-2023	05-May-2023	918090
F1-BTEX	----	<25	25	µg/L	EC580	-	03-May-2023	-
Hydrocarbons, total (C6-C50)	----	<370	370	µg/L	EC581SG	-	03-May-2023	-
Chromatogram to baseline at nC50	n/a	YES	-	-	E601.SG	02-May-2023	05-May-2023	918090
Hydrocarbons Surrogates								
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	83.7	1.0	%	E601.SG	02-May-2023	05-May-2023	918090
Dichlorotoluene, 3,4-	95-75-0	102	1.0	%	E581.F1-L	02-May-2023	02-May-2023	917952
Volatile Organic Compounds Surrogates								
Bromofluorobenzene, 4-	460-00-4	92.0	1.0	%	E611D	02-May-2023	02-May-2023	917951
Difluorobenzene, 1,4-	540-36-3	96.7	1.0	%	E611D	02-May-2023	02-May-2023	917951
Polycyclic Aromatic Hydrocarbons								
Acenaphthene	83-32-9	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Acenaphthylene	208-96-8	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Anthracene	120-12-7	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Benz(a)anthracene	56-55-3	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Benzo(a)pyrene	50-32-8	<0.0050	0.0050	µg/L	E641A	02-May-2023	05-May-2023	918089
Benzo(b+j)fluoranthene	n/a	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Benzo(g,h,i)perylene	191-24-2	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Benzo(k)fluoranthene	207-08-9	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Chrysene	218-01-9	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Dibenz(a,h)anthracene	53-70-3	<0.0050	0.0050	µg/L	E641A	02-May-2023	05-May-2023	918089
Fluoranthene	206-44-0	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Fluorene	86-73-7	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Indeno(1,2,3-c,d)pyrene	193-39-5	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Methylnaphthalene, 1-	90-12-0	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Methylnaphthalene, 1+2-	----	<0.015	0.015	µg/L	E641A	02-May-2023	05-May-2023	918089
Methylnaphthalene, 2-	91-57-6	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Naphthalene	91-20-3	<0.050	0.050	µg/L	E641A	02-May-2023	05-May-2023	918089
Phenanthrene	85-01-8	<0.020	0.020	µg/L	E641A	02-May-2023	05-May-2023	918089
Pyrene	129-00-0	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Polycyclic Aromatic Hydrocarbons Surrogates								
Chrysene-d12	1719-03-5	104	0.1	%	E641A	02-May-2023	05-May-2023	918089
Naphthalene-d8	1146-65-2	98.2	0.1	%	E641A	02-May-2023	05-May-2023	918089
Phenanthrene-d10	1517-22-2	100	0.1	%	E641A	02-May-2023	05-May-2023	918089

Please refer to the General Comments section for an explanation of any qualifiers detected.

Analytical Results

WT2311250-007

Sub-Matrix:**Water**
(Matrix: **Water**)

Client sample ID: GW-12606873-270423-DA-DUP
Client sampling date / time: 27-Apr-2023 15:55

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Physical Tests								
Conductivity	----	1.86	0.0010	mS/cm	E100	02-May-2023	03-May-2023	919322
pH	----	8.14	0.10	pH units	E108	02-May-2023	03-May-2023	919320
Anions and Nutrients								
Chloride	16887-00-6	185 DLDS,	2.50	mg/L	E235.Cl	02-May-2023	03-May-2023	919318
Cyanides								
Cyanide, weak acid dissociable	----	<2.0	2.0	µg/L	E336	03-May-2023	03-May-2023	920319
Dissolved Metals								
Antimony, dissolved	7440-36-0	<1.00 DLHC,	1.00	µg/L	E421	01-May-2023	01-May-2023	917817
Arsenic, dissolved	7440-38-2	<1.00 DLHC,	1.00	µg/L	E421	01-May-2023	01-May-2023	917817
Barium, dissolved	7440-39-3	43.6 DLHC,	1.00	µg/L	E421	01-May-2023	01-May-2023	917817
Beryllium, dissolved	7440-41-7	<0.200 DLHC,	0.200	µg/L	E421	01-May-2023	01-May-2023	917817
Boron, dissolved	7440-42-8	<100 DLHC,	100	µg/L	E421	01-May-2023	01-May-2023	917817
Cadmium, dissolved	7440-43-9	<0.0500 DLHC,	0.0500	µg/L	E421	01-May-2023	01-May-2023	917817
Chromium, dissolved	7440-47-3	<5.00 DLHC,	5.00	µg/L	E421	01-May-2023	01-May-2023	917817
Cobalt, dissolved	7440-48-4	<1.00 DLHC,	1.00	µg/L	E421	01-May-2023	01-May-2023	917817
Copper, dissolved	7440-50-8	14.1 DLHC,	2.00	µg/L	E421	01-May-2023	01-May-2023	917817
Lead, dissolved	7439-92-1	<0.500 DLHC,	0.500	µg/L	E421	01-May-2023	01-May-2023	917817
Mercury, dissolved	7439-97-6	<0.0050	0.0050	µg/L	E509	02-May-2023	02-May-2023	918531
Molybdenum, dissolved	7439-98-7	3.03 DLHC,	0.500	µg/L	E421	01-May-2023	01-May-2023	917817
Nickel, dissolved	7440-02-0	10.0 DLHC,	5.00	µg/L	E421	01-May-2023	01-May-2023	917817
Selenium, dissolved	7782-49-2	0.846 DLHC,	0.500	µg/L	E421	01-May-2023	01-May-2023	917817
Silver, dissolved	7440-22-4	<0.100 DLHC,	0.100	µg/L	E421	01-May-2023	01-May-2023	917817
Sodium, dissolved	7440-23-5	227000 DLHC,	500	µg/L	E421	01-May-2023	01-May-2023	917817
Thallium, dissolved	7440-28-0	<0.100 DLHC,	0.100	µg/L	E421	01-May-2023	01-May-2023	917817
Uranium, dissolved	7440-61-1	3.66 DLHC,	0.100	µg/L	E421	01-May-2023	01-May-2023	917817
Vanadium, dissolved	7440-62-2	<5.00 DLHC,	5.00	µg/L	E421	01-May-2023	01-May-2023	917817
Zinc, dissolved	7440-66-6	<10.0 DLHC,	10.0	µg/L	E421	01-May-2023	01-May-2023	917817
Dissolved mercury filtration location	----	Field	-	-	EP509	-	02-May-2023	918531
Dissolved metals filtration location	----	Field	-	-	EP421	-	01-May-2023	917817
Speciated Metals								
Chromium, hexavalent [Cr VI], dissolved	18540-29-9	<0.50	0.50	µg/L	E532A	-	01-May-2023	917553
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	02-May-2023	02-May-2023	917951
Benzene	71-43-2	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Bromoform	75-25-2	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	02-May-2023	02-May-2023	917951
Chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Chloroform	67-66-3	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951

Analytical Results

WT2311250-007

Sub-Matrix:**Water**
(Matrix: **Water**)

Client sample ID: GW-12606873-270423-DA-DUP
Client sampling date / time: 27-Apr-2023 15:55

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	02-May-2023	02-May-2023	917951
Ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	02-May-2023	02-May-2023	917951
Methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	02-May-2023	02-May-2023	917951
Methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Styrene	100-42-5	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Tetrachloroethane, 1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Toluene	108-88-3	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	02-May-2023	02-May-2023	917951
Xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	02-May-2023	02-May-2023	917951
Xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
BTEX, total	----	<1.0	1.0	µg/L	E611D	02-May-2023	02-May-2023	917951
Hydrocarbons								
F1 (C6-C10)	----	<25	25	µg/L	E581.F1-L	02-May-2023	02-May-2023	917952
F2 (C10-C16)	----	<100	100	µg/L	E601.SG	02-May-2023	05-May-2023	918090
F2-Naphthalene	----	<100	100	µg/L	EC600SG	-	05-May-2023	-
F3 (C16-C34)	----	<250	250	µg/L	E601.SG	02-May-2023	05-May-2023	918090
F3-PAH	n/a	<250	250	µg/L	EC600SG	-	05-May-2023	-
F4 (C34-C50)	----	<250	250	µg/L	E601.SG	02-May-2023	05-May-2023	918090
F1-BTEX	----	<25	25	µg/L	EC580	-	03-May-2023	-
Hydrocarbons, total (C6-C50)	----	<370	370	µg/L	EC581SG	-	03-May-2023	-
Chromatogram to baseline at nC50	n/a	YES	-	-	E601.SG	02-May-2023	05-May-2023	918090
Hydrocarbons Surrogates								
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	76.1	1.0	%	E601.SG	02-May-2023	05-May-2023	918090
Dichlorotoluene, 3,4-	95-75-0	90.4	1.0	%	E581.F1-L	02-May-2023	02-May-2023	917952
Volatile Organic Compounds Surrogates								
Bromofluorobenzene, 4-	460-00-4	91.3	1.0	%	E611D	02-May-2023	02-May-2023	917951
Difluorobenzene, 1,4-	540-36-3	96.6	1.0	%	E611D	02-May-2023	02-May-2023	917951
Polycyclic Aromatic Hydrocarbons								

Analytical Results

WT2311250-007

Sub-Matrix:**Water** (Matrix: **Water**)

Client sample ID: GW-12606873-270423-DA-DUP

Client sampling date / time: 27-Apr-2023 15:55

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Polycyclic Aromatic Hydrocarbons								
Acenaphthene	83-32-9	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Acenaphthylene	208-96-8	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Anthracene	120-12-7	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Benz(a)anthracene	56-55-3	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Benzo(a)pyrene	50-32-8	<0.0050	0.0050	µg/L	E641A	02-May-2023	05-May-2023	918089
Benzo(b+j)fluoranthene	n/a	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Benzo(g,h,i)perylene	191-24-2	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Benzo(k)fluoranthene	207-08-9	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Chrysene	218-01-9	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Dibenz(a,h)anthracene	53-70-3	<0.0050	0.0050	µg/L	E641A	02-May-2023	05-May-2023	918089
Fluoranthene	206-44-0	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Fluorene	86-73-7	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Indeno(1,2,3-c,d)pyrene	193-39-5	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Methylnaphthalene, 1-	90-12-0	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Methylnaphthalene, 1+2-	----	<0.015	0.015	µg/L	E641A	02-May-2023	05-May-2023	918089
Methylnaphthalene, 2-	91-57-6	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Naphthalene	91-20-3	<0.050	0.050	µg/L	E641A	02-May-2023	05-May-2023	918089
Phenanthrene	85-01-8	<0.020	0.020	µg/L	E641A	02-May-2023	05-May-2023	918089
Pyrene	129-00-0	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Polycyclic Aromatic Hydrocarbons Surrogates								
Chrysene-d12	1719-03-5	106	0.1	%	E641A	02-May-2023	05-May-2023	918089
Naphthalene-d8	1146-65-2	100	0.1	%	E641A	02-May-2023	05-May-2023	918089
Phenanthrene-d10	1517-22-2	102	0.1	%	E641A	02-May-2023	05-May-2023	918089

Please refer to the General Comments section for an explanation of any qualifiers detected.

Analytical Results

WT2311250-008

Sub-Matrix:**Water** (Matrix: **Water**)

Client sample ID: GW-12606873-270423-DA-BH4-23

Client sampling date / time: 27-Apr-2023 17:10

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Physical Tests								
Conductivity	----	4.92	0.0010	mS/cm	E100	02-May-2023	03-May-2023	919322
pH	----	7.81	0.10	pH units	E108	02-May-2023	03-May-2023	919320
Anions and Nutrients								
Chloride	16887-00-6	1240 DLDS	2.50	mg/L	E235.Cl	02-May-2023	03-May-2023	919318
Cyanides								
Cyanide, weak acid dissociable	----	<2.0	2.0	µg/L	E336	03-May-2023	03-May-2023	920319
Dissolved Metals								
Antimony, dissolved	7440-36-0	<1.00 DLHC	1.00	µg/L	E421	01-May-2023	01-May-2023	917817
Arsenic, dissolved	7440-38-2	4.53 DLHC	1.00	µg/L	E421	01-May-2023	01-May-2023	917817
Barium, dissolved	7440-39-3	59.1 DLHC	1.00	µg/L	E421	01-May-2023	01-May-2023	917817
Beryllium, dissolved	7440-41-7	<0.200 DLHC	0.200	µg/L	E421	01-May-2023	01-May-2023	917817
Boron, dissolved	7440-42-8	<100 DLHC	100	µg/L	E421	01-May-2023	01-May-2023	917817

Analytical Results

WT2311250-008

Sub-Matrix:**Water**
(Matrix: **Water**)

Client sample ID: GW-12606873-270423-DA-BH4-23
Client sampling date / time: 27-Apr-2023 17:10

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Dissolved Metals								
Cadmium, dissolved	7440-43-9	<0.0500 DLHC,	0.0500	µg/L	E421	01-May-2023	01-May-2023	917817
Chromium, dissolved	7440-47-3	<5.00 DLHC,	5.00	µg/L	E421	01-May-2023	01-May-2023	917817
Cobalt, dissolved	7440-48-4	<1.00 DLHC,	1.00	µg/L	E421	01-May-2023	01-May-2023	917817
Copper, dissolved	7440-50-8	<2.00 DLHC,	2.00	µg/L	E421	01-May-2023	01-May-2023	917817
Lead, dissolved	7439-92-1	<0.500 DLHC,	0.500	µg/L	E421	01-May-2023	01-May-2023	917817
Mercury, dissolved	7439-97-6	<0.0050	0.0050	µg/L	E509	02-May-2023	02-May-2023	918531
Molybdenum, dissolved	7439-98-7	5.33 DLHC,	0.500	µg/L	E421	01-May-2023	01-May-2023	917817
Nickel, dissolved	7440-02-0	<5.00 DLHC,	5.00	µg/L	E421	01-May-2023	01-May-2023	917817
Selenium, dissolved	7782-49-2	<0.500 DLHC,	0.500	µg/L	E421	01-May-2023	01-May-2023	917817
Silver, dissolved	7440-22-4	<0.100 DLHC,	0.100	µg/L	E421	01-May-2023	01-May-2023	917817
Sodium, dissolved	7440-23-5	702000 DLHC,	500	µg/L	E421	01-May-2023	01-May-2023	917817
Thallium, dissolved	7440-28-0	<0.100 DLHC,	0.100	µg/L	E421	01-May-2023	01-May-2023	917817
Uranium, dissolved	7440-61-1	45.2 DLHC,	0.100	µg/L	E421	01-May-2023	01-May-2023	917817
Vanadium, dissolved	7440-62-2	<5.00 DLHC,	5.00	µg/L	E421	01-May-2023	01-May-2023	917817
Zinc, dissolved	7440-66-6	<10.0 DLHC,	10.0	µg/L	E421	01-May-2023	01-May-2023	917817
Dissolved mercury filtration location	----	Field	-	-	EP509	-	02-May-2023	918531
Dissolved metals filtration location	----	Field	-	-	EP421	-	01-May-2023	917817
Speciated Metals								
Chromium, hexavalent [Cr VI], dissolved	18540-29-9	<0.50	0.50	µg/L	E532A	-	01-May-2023	917553
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	02-May-2023	02-May-2023	917951
Benzene	71-43-2	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Bromoform	75-25-2	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	02-May-2023	02-May-2023	917951
Chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Chloroform	67-66-3	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	02-May-2023	02-May-2023	917951
Ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951

Analytical Results

WT2311250-008

Sub-Matrix:**Water**
(Matrix: **Water**)

Client sample ID: GW-12606873-270423-DA-BH4-23
Client sampling date / time: 27-Apr-2023 17:10

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	02-May-2023	02-May-2023	917951
Methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	02-May-2023	02-May-2023	917951
Methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Styrene	100-42-5	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Tetrachloroethane, 1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Toluene	108-88-3	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	02-May-2023	02-May-2023	917951
Xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	02-May-2023	02-May-2023	917951
Xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
BTEX, total	----	<1.0	1.0	µg/L	E611D	02-May-2023	02-May-2023	917951
Hydrocarbons								
F1 (C6-C10)	----	<25	25	µg/L	E581.F1-L	02-May-2023	02-May-2023	917952
F2 (C10-C16)	----	<100	100	µg/L	E601.SG	02-May-2023	05-May-2023	918090
F2-Naphthalene	----	<100	100	µg/L	EC600SG	-	05-May-2023	-
F3 (C16-C34)	----	<250	250	µg/L	E601.SG	02-May-2023	05-May-2023	918090
F3-PAH	n/a	<250	250	µg/L	EC600SG	-	05-May-2023	-
F4 (C34-C50)	----	<250	250	µg/L	E601.SG	02-May-2023	05-May-2023	918090
F1-BTEX	----	<25	25	µg/L	EC580	-	03-May-2023	-
Hydrocarbons, total (C6-C50)	----	<370	370	µg/L	EC581SG	-	03-May-2023	-
Chromatogram to baseline at nC50	n/a	YES	-	-	E601.SG	02-May-2023	05-May-2023	918090
Hydrocarbons Surrogates								
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	76.8	1.0	%	E601.SG	02-May-2023	05-May-2023	918090
Dichlorotoluene, 3,4-	95-75-0	95.0	1.0	%	E581.F1-L	02-May-2023	02-May-2023	917952
Volatile Organic Compounds Surrogates								
Bromofluorobenzene, 4-	460-00-4	92.4	1.0	%	E611D	02-May-2023	02-May-2023	917951
Difluorobenzene, 1,4-	540-36-3	96.6	1.0	%	E611D	02-May-2023	02-May-2023	917951
Polycyclic Aromatic Hydrocarbons								
Acenaphthene	83-32-9	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Acenaphthylene	208-96-8	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Anthracene	120-12-7	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Benz(a)anthracene	56-55-3	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Benzo(a)pyrene	50-32-8	<0.0050	0.0050	µg/L	E641A	02-May-2023	05-May-2023	918089
Benzo(b+j)fluoranthene	n/a	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Benzo(g,h,i)perylene	191-24-2	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Benzo(k)fluoranthene	207-08-9	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Chrysene	218-01-9	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Dibenz(a,h)anthracene	53-70-3	<0.0050	0.0050	µg/L	E641A	02-May-2023	05-May-2023	918089
Fluoranthene	206-44-0	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Fluorene	86-73-7	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089

Analytical Results

WT2311250-008

Sub-Matrix:**Water** (Matrix: **Water**)

Client sample ID: GW-12606873-270423-DA-BH4-23

Client sampling date / time: 27-Apr-2023 17:10

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Polycyclic Aromatic Hydrocarbons								
Indeno(1,2,3-c,d)pyrene	193-39-5	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Methylnaphthalene, 1-	90-12-0	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Methylnaphthalene, 1+2-	----	0.017	0.015	µg/L	E641A	02-May-2023	05-May-2023	918089
Methylnaphthalene, 2-	91-57-6	0.017	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Naphthalene	91-20-3	<0.050	0.050	µg/L	E641A	02-May-2023	05-May-2023	918089
Phenanthrene	85-01-8	<0.020	0.020	µg/L	E641A	02-May-2023	05-May-2023	918089
Pyrene	129-00-0	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Polycyclic Aromatic Hydrocarbons Surrogates								
Chrysene-d12	1719-03-5	116	0.1	%	E641A	02-May-2023	05-May-2023	918089
Naphthalene-d8	1146-65-2	102	0.1	%	E641A	02-May-2023	05-May-2023	918089
Phenanthrene-d10	1517-22-2	104	0.1	%	E641A	02-May-2023	05-May-2023	918089

Please refer to the General Comments section for an explanation of any qualifiers detected.

Analytical Results

WT2311250-009

Sub-Matrix:**Water** (Matrix: **Water**)

Client sample ID: GW-12606873-270423-DA-BH06-22

Client sampling date / time: 27-Apr-2023 18:10

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Physical Tests								
Conductivity	----	6.40	0.0010	mS/cm	E100	02-May-2023	03-May-2023	919322
pH	----	8.04	0.10	pH units	E108	02-May-2023	03-May-2023	919320
Anions and Nutrients								
Chloride	16887-00-6	1730 DLDS.	5.00	mg/L	E235.Cl	02-May-2023	03-May-2023	919318
Cyanides								
Cyanide, weak acid dissociable	----	<2.0	2.0	µg/L	E336	03-May-2023	03-May-2023	920319
Dissolved Metals								
Antimony, dissolved	7440-36-0	<1.00 DLHC.	1.00	µg/L	E421	01-May-2023	01-May-2023	917817
Arsenic, dissolved	7440-38-2	<1.00 DLHC.	1.00	µg/L	E421	01-May-2023	01-May-2023	917817
Barium, dissolved	7440-39-3	65.3 DLHC.	1.00	µg/L	E421	01-May-2023	01-May-2023	917817
Beryllium, dissolved	7440-41-7	<0.200 DLHC.	0.200	µg/L	E421	01-May-2023	01-May-2023	917817
Boron, dissolved	7440-42-8	<100 DLHC.	100	µg/L	E421	01-May-2023	01-May-2023	917817
Cadmium, dissolved	7440-43-9	<0.0500 DLHC.	0.0500	µg/L	E421	01-May-2023	01-May-2023	917817
Chromium, dissolved	7440-47-3	<5.00 DLHC.	5.00	µg/L	E421	01-May-2023	01-May-2023	917817
Cobalt, dissolved	7440-48-4	<1.00 DLHC.	1.00	µg/L	E421	01-May-2023	01-May-2023	917817
Copper, dissolved	7440-50-8	7.16 DLHC.	2.00	µg/L	E421	01-May-2023	01-May-2023	917817
Lead, dissolved	7439-92-1	<0.500 DLHC.	0.500	µg/L	E421	01-May-2023	01-May-2023	917817
Mercury, dissolved	7439-97-6	<0.0050	0.0050	µg/L	E509	02-May-2023	02-May-2023	918531
Molybdenum, dissolved	7439-98-7	7.24 DLHC.	0.500	µg/L	E421	01-May-2023	01-May-2023	917817
Nickel, dissolved	7440-02-0	<5.00 DLHC.	5.00	µg/L	E421	01-May-2023	01-May-2023	917817
Selenium, dissolved	7782-49-2	<0.500 DLHC.	0.500	µg/L	E421	01-May-2023	01-May-2023	917817
Silver, dissolved	7440-22-4	<0.100 DLHC.	0.100	µg/L	E421	01-May-2023	01-May-2023	917817
Sodium, dissolved	7440-23-5	967000 DLHC.	500	µg/L	E421	01-May-2023	01-May-2023	917817
Thallium, dissolved	7440-28-0	<0.100 DLHC.	0.100	µg/L	E421	01-May-2023	01-May-2023	917817

Analytical Results

WT2311250-009

Sub-Matrix:**Water**
(Matrix: **Water**)

Client sample ID: GW-12606873-270423-DA-BH06-22
Client sampling date / time: 27-Apr-2023 18:10

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Dissolved Metals								
Uranium, dissolved	7440-61-1	4.42 DLHC.	0.100	µg/L	E421	01-May-2023	01-May-2023	917817
Vanadium, dissolved	7440-62-2	<5.00 DLHC.	5.00	µg/L	E421	01-May-2023	01-May-2023	917817
Zinc, dissolved	7440-66-6	<10.0 DLHC.	10.0	µg/L	E421	01-May-2023	01-May-2023	917817
Dissolved mercury filtration location	----	Field	-	-	EP509	-	02-May-2023	918531
Dissolved metals filtration location	----	Field	-	-	EP421	-	01-May-2023	917817
Speciated Metals								
Chromium, hexavalent [Cr VI], dissolved	18540-29-9	<0.50	0.50	µg/L	E532A	-	01-May-2023	917553
Volatile Organic Compounds								
Acetone	67-64-1	<20 OWP.	20	µg/L	E611D	02-May-2023	02-May-2023	917951
Benzene	71-43-2	<0.50 OWP.	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Bromodichloromethane	75-27-4	<0.50 OWP.	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Bromoform	75-25-2	<0.50 OWP.	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Bromomethane	74-83-9	<0.50 OWP.	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Carbon tetrachloride	56-23-5	<0.20 OWP.	0.20	µg/L	E611D	02-May-2023	02-May-2023	917951
Chlorobenzene	108-90-7	<0.50 OWP.	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Chloroform	67-66-3	<0.50 OWP.	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dibromochloromethane	124-48-1	<0.50 OWP.	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dibromoethane, 1,2-	106-93-4	<0.20 OWP.	0.20	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichlorobenzene, 1,2-	95-50-1	<0.50 OWP.	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichlorobenzene, 1,3-	541-73-1	<0.50 OWP.	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichlorobenzene, 1,4-	106-46-7	<0.50 OWP.	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichlorodifluoromethane	75-71-8	<0.50 OWP.	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloroethane, 1,1-	75-34-3	<0.50 OWP.	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloroethane, 1,2-	107-06-2	<0.50 OWP.	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloroethylene, 1,1-	75-35-4	<0.50 OWP.	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloroethylene, cis-1,2-	156-59-2	<0.50 OWP.	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloroethylene, trans-1,2-	156-60-5	<0.50 OWP.	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloromethane	75-09-2	<1.0 OWP.	1.0	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloropropane, 1,2-	78-87-5	<0.50 OWP.	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloropropylene, cis+trans-1,3-	542-75-6	<0.50 OWP.	0.5	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloropropylene, cis-1,3-	10061-01-5	<0.30 OWP.	0.30	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloropropylene, trans-1,3-	10061-02-6	<0.30 OWP.	0.30	µg/L	E611D	02-May-2023	02-May-2023	917951
Ethylbenzene	100-41-4	<0.50 OWP.	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Hexane, n-	110-54-3	<0.50 OWP.	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Methyl ethyl ketone [MEK]	78-93-3	<20 OWP.	20	µg/L	E611D	02-May-2023	02-May-2023	917951
Methyl isobutyl ketone [MIBK]	108-10-1	<20 OWP.	20	µg/L	E611D	02-May-2023	02-May-2023	917951
Methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50 OWP.	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Styrene	100-42-5	<0.50 OWP.	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Tetrachloroethane, 1,1,1,2-	630-20-6	<0.50 OWP.	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Tetrachloroethane, 1,1,2,2-	79-34-5	<0.50 OWP.	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Tetrachloroethylene	127-18-4	<0.50 OWP.	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Toluene	108-88-3	<0.50 OWP.	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Trichloroethane, 1,1,1-	71-55-6	<0.50 OWP.	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Trichloroethane, 1,1,2-	79-00-5	<0.50 OWP.	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Trichloroethylene	79-01-6	<0.50 OWP.	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Trichlorofluoromethane	75-69-4	<0.50 OWP.	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951

Analytical Results

WT2311250-009

Sub-Matrix:**Water**
(Matrix: **Water**)

Client sample ID: GW-12606873-270423-DA-BH06-22
Client sampling date / time: 27-Apr-2023 18:10

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Vinyl chloride	75-01-4	<0.50 OWP.	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Xylene, m+p-	179601-23-1	<0.40 OWP.	0.40	µg/L	E611D	02-May-2023	02-May-2023	917951
Xylene, o-	95-47-6	<0.30 OWP.	0.30	µg/L	E611D	02-May-2023	02-May-2023	917951
Xylenes, total	1330-20-7	<0.50 OWP.	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
BTEX, total	----	<1.0 OWP.	1.0	µg/L	E611D	02-May-2023	02-May-2023	917951
Hydrocarbons								
F1 (C6-C10)	----	<25 OWP.	25	µg/L	E581.F1-L	02-May-2023	02-May-2023	917952
F2 (C10-C16)	----	<100	100	µg/L	E601.SG	02-May-2023	05-May-2023	918090
F2-Naphthalene	----	<100	100	µg/L	EC600SG	-	05-May-2023	-
F3 (C16-C34)	----	<250	250	µg/L	E601.SG	02-May-2023	05-May-2023	918090
F3-PAH	n/a	<250	250	µg/L	EC600SG	-	05-May-2023	-
F4 (C34-C50)	----	<250	250	µg/L	E601.SG	02-May-2023	05-May-2023	918090
F1-BTEX	----	<25	25	µg/L	EC580	-	03-May-2023	-
Hydrocarbons, total (C6-C50)	----	<370	370	µg/L	EC581SG	-	03-May-2023	-
Chromatogram to baseline at nC50	n/a	YES	-	-	E601.SG	02-May-2023	05-May-2023	918090
Hydrocarbons Surrogates								
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	75.9	1.0	%	E601.SG	02-May-2023	05-May-2023	918090
Dichlorotoluene, 3,4-	95-75-0	95.1	1.0	%	E581.F1-L	02-May-2023	02-May-2023	917952
Volatile Organic Compounds Surrogates								
Bromofluorobenzene, 4-	460-00-4	91.3	1.0	%	E611D	02-May-2023	02-May-2023	917951
Difluorobenzene, 1,4-	540-36-3	96.5	1.0	%	E611D	02-May-2023	02-May-2023	917951
Polycyclic Aromatic Hydrocarbons								
Acenaphthene	83-32-9	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Acenaphthylene	208-96-8	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Anthracene	120-12-7	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Benz(a)anthracene	56-55-3	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Benzo(a)pyrene	50-32-8	<0.0050	0.0050	µg/L	E641A	02-May-2023	05-May-2023	918089
Benzo(b+j)fluoranthene	n/a	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Benzo(g,h,i)perylene	191-24-2	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Benzo(k)fluoranthene	207-08-9	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Chrysene	218-01-9	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Dibenz(a,h)anthracene	53-70-3	<0.0050	0.0050	µg/L	E641A	02-May-2023	05-May-2023	918089
Fluoranthene	206-44-0	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Fluorene	86-73-7	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Indeno(1,2,3-c,d)pyrene	193-39-5	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Methylnaphthalene, 1-	90-12-0	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Methylnaphthalene, 1+2-	----	0.015	0.015	µg/L	E641A	02-May-2023	05-May-2023	918089
Methylnaphthalene, 2-	91-57-6	0.015	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Naphthalene	91-20-3	<0.050	0.050	µg/L	E641A	02-May-2023	05-May-2023	918089
Phenanthrene	85-01-8	<0.020	0.020	µg/L	E641A	02-May-2023	05-May-2023	918089
Pyrene	129-00-0	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Polycyclic Aromatic Hydrocarbons Surrogates								
Chrysene-d12	1719-03-5	101	0.1	%	E641A	02-May-2023	05-May-2023	918089
Naphthalene-d8	1146-65-2	99.5	0.1	%	E641A	02-May-2023	05-May-2023	918089
Phenanthrene-d10	1517-22-2	101	0.1	%	E641A	02-May-2023	05-May-2023	918089

Please refer to the General Comments section for an explanation of any qualifiers detected.

Analytical Results

WT2311250-010

Sub-Matrix:**Water**
(Matrix: **Water**)

Client sample ID: GW-12606873-270423-DA-BH6-23
Client sampling date / time: 27-Apr-2023 19:00

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Physical Tests								
Conductivity	----	5.95	0.0010	mS/cm	E100	02-May-2023	03-May-2023	919322
pH	----	7.74	0.10	pH units	E108	02-May-2023	03-May-2023	919320
Anions and Nutrients								
Chloride	16887-00-6	1390 DLDS,	5.00	mg/L	E235.Cl	02-May-2023	03-May-2023	919318
Cyanides								
Cyanide, weak acid dissociable	----	<2.0	2.0	µg/L	E336	03-May-2023	03-May-2023	920319
Dissolved Metals								
Antimony, dissolved	7440-36-0	<1.00 DLHC,	1.00	µg/L	E421	01-May-2023	01-May-2023	917817
Arsenic, dissolved	7440-38-2	<1.00 DLHC,	1.00	µg/L	E421	01-May-2023	01-May-2023	917817
Barium, dissolved	7440-39-3	66.7 DLHC,	1.00	µg/L	E421	01-May-2023	01-May-2023	917817
Beryllium, dissolved	7440-41-7	<0.200 DLHC,	0.200	µg/L	E421	01-May-2023	01-May-2023	917817
Boron, dissolved	7440-42-8	<100 DLHC,	100	µg/L	E421	01-May-2023	01-May-2023	917817
Cadmium, dissolved	7440-43-9	<0.0500 DLHC,	0.0500	µg/L	E421	01-May-2023	01-May-2023	917817
Chromium, dissolved	7440-47-3	<5.00 DLHC,	5.00	µg/L	E421	01-May-2023	01-May-2023	917817
Cobalt, dissolved	7440-48-4	<1.00 DLHC,	1.00	µg/L	E421	01-May-2023	01-May-2023	917817
Copper, dissolved	7440-50-8	8.14 DLHC,	2.00	µg/L	E421	01-May-2023	01-May-2023	917817
Lead, dissolved	7439-92-1	<0.500 DLHC,	0.500	µg/L	E421	01-May-2023	01-May-2023	917817
Mercury, dissolved	7439-97-6	<0.0050	0.0050	µg/L	E509	02-May-2023	02-May-2023	918531
Molybdenum, dissolved	7439-98-7	6.90 DLHC,	0.500	µg/L	E421	01-May-2023	01-May-2023	917817
Nickel, dissolved	7440-02-0	<5.00 DLHC,	5.00	µg/L	E421	01-May-2023	01-May-2023	917817
Selenium, dissolved	7782-49-2	<0.500 DLHC,	0.500	µg/L	E421	01-May-2023	01-May-2023	917817
Silver, dissolved	7440-22-4	<0.100 DLHC,	0.100	µg/L	E421	01-May-2023	01-May-2023	917817
Sodium, dissolved	7440-23-5	854000 DLHC,	500	µg/L	E421	01-May-2023	01-May-2023	917817
Thallium, dissolved	7440-28-0	<0.100 DLHC,	0.100	µg/L	E421	01-May-2023	01-May-2023	917817
Uranium, dissolved	7440-61-1	7.48 DLHC,	0.100	µg/L	E421	01-May-2023	01-May-2023	917817
Vanadium, dissolved	7440-62-2	<5.00 DLHC,	5.00	µg/L	E421	01-May-2023	01-May-2023	917817
Zinc, dissolved	7440-66-6	<10.0 DLHC,	10.0	µg/L	E421	01-May-2023	01-May-2023	917817
Dissolved mercury filtration location	----	Field	-	-	EP509	-	02-May-2023	918531
Dissolved metals filtration location	----	Field	-	-	EP421	-	01-May-2023	917817
Speciated Metals								
Chromium, hexavalent [Cr VI], dissolved	18540-29-9	<0.50	0.50	µg/L	E532A	-	01-May-2023	917553
Volatile Organic Compounds								
Acetone	67-64-1	<20	20	µg/L	E611D	02-May-2023	02-May-2023	917951
Benzene	71-43-2	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Bromodichloromethane	75-27-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Bromoform	75-25-2	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Bromomethane	74-83-9	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Carbon tetrachloride	56-23-5	<0.20	0.20	µg/L	E611D	02-May-2023	02-May-2023	917951
Chlorobenzene	108-90-7	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Chloroform	67-66-3	1.47	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dibromochloromethane	124-48-1	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dibromoethane, 1,2-	106-93-4	<0.20	0.20	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichlorobenzene, 1,2-	95-50-1	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichlorobenzene, 1,3-	541-73-1	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichlorobenzene, 1,4-	106-46-7	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichlorodifluoromethane	75-71-8	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951

Analytical Results

WT2311250-010

Sub-Matrix:**Water**
(Matrix: **Water**)

Client sample ID: GW-12606873-270423-DA-BH6-23
Client sampling date / time: 27-Apr-2023 19:00

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Volatile Organic Compounds								
Dichloroethane, 1,1-	75-34-3	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloroethane, 1,2-	107-06-2	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloroethylene, 1,1-	75-35-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloroethylene, cis-1,2-	156-59-2	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloroethylene, trans-1,2-	156-60-5	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloromethane	75-09-2	<1.0	1.0	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloropropane, 1,2-	78-87-5	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloropropylene, cis+trans-1,3-	542-75-6	<0.50	0.5	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloropropylene, cis-1,3-	10061-01-5	<0.30	0.30	µg/L	E611D	02-May-2023	02-May-2023	917951
Dichloropropylene, trans-1,3-	10061-02-6	<0.30	0.30	µg/L	E611D	02-May-2023	02-May-2023	917951
Ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Hexane, n-	110-54-3	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Methyl ethyl ketone [MEK]	78-93-3	<20	20	µg/L	E611D	02-May-2023	02-May-2023	917951
Methyl isobutyl ketone [MIBK]	108-10-1	<20	20	µg/L	E611D	02-May-2023	02-May-2023	917951
Methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Styrene	100-42-5	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Tetrachloroethane, 1,1,1,2-	630-20-6	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Tetrachloroethane, 1,1,2,2-	79-34-5	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Tetrachloroethylene	127-18-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Toluene	108-88-3	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Trichloroethane, 1,1,1-	71-55-6	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Trichloroethane, 1,1,2-	79-00-5	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Trichloroethylene	79-01-6	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Trichlorofluoromethane	75-69-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Vinyl chloride	75-01-4	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
Xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611D	02-May-2023	02-May-2023	917951
Xylene, o-	95-47-6	<0.30	0.30	µg/L	E611D	02-May-2023	02-May-2023	917951
Xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611D	02-May-2023	02-May-2023	917951
BTEX, total	----	<1.0	1.0	µg/L	E611D	02-May-2023	02-May-2023	917951
Hydrocarbons								
F1 (C6-C10)	----	<25	25	µg/L	E581.F1-L	02-May-2023	02-May-2023	917952
F2 (C10-C16)	----	<100	100	µg/L	E601.SG	02-May-2023	05-May-2023	918090
F2-Naphthalene	----	<100	100	µg/L	EC600SG	-	05-May-2023	-
F3 (C16-C34)	----	<250	250	µg/L	E601.SG	02-May-2023	05-May-2023	918090
F3-PAH	n/a	<250	250	µg/L	EC600SG	-	05-May-2023	-
F4 (C34-C50)	----	<250	250	µg/L	E601.SG	02-May-2023	05-May-2023	918090
F1-BTEX	----	<25	25	µg/L	EC580	-	03-May-2023	-
Hydrocarbons, total (C6-C50)	----	<370	370	µg/L	EC581SG	-	03-May-2023	-
Chromatogram to baseline at nC50	n/a	YES	-	-	E601.SG	02-May-2023	05-May-2023	918090
Hydrocarbons Surrogates								
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	84.5	1.0	%	E601.SG	02-May-2023	05-May-2023	918090
Dichlorotoluene, 3,4-	95-75-0	97.2	1.0	%	E581.F1-L	02-May-2023	02-May-2023	917952
Volatile Organic Compounds Surrogates								
Bromofluorobenzene, 4-	460-00-4	91.1	1.0	%	E611D	02-May-2023	02-May-2023	917951
Difluorobenzene, 1,4-	540-36-3	96.5	1.0	%	E611D	02-May-2023	02-May-2023	917951
Polycyclic Aromatic Hydrocarbons								

Analytical Results

WT2311250-010

Sub-Matrix:**Water**
(Matrix: **Water**)

Client sample ID: GW-12606873-270423-DA-BH6-23
Client sampling date / time: 27-Apr-2023 19:00

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Polycyclic Aromatic Hydrocarbons								
Acenaphthene	83-32-9	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Acenaphthylene	208-96-8	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Anthracene	120-12-7	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Benz(a)anthracene	56-55-3	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Benzo(a)pyrene	50-32-8	<0.0050	0.0050	µg/L	E641A	02-May-2023	05-May-2023	918089
Benzo(b+j)fluoranthene	n/a	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Benzo(g,h,i)perylene	191-24-2	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Benzo(k)fluoranthene	207-08-9	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Chrysene	218-01-9	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Dibenz(a,h)anthracene	53-70-3	<0.0050	0.0050	µg/L	E641A	02-May-2023	05-May-2023	918089
Fluoranthene	206-44-0	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Fluorene	86-73-7	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Indeno(1,2,3-c,d)pyrene	193-39-5	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Methylnaphthalene, 1-	90-12-0	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Methylnaphthalene, 1+2-	----	<0.015	0.015	µg/L	E641A	02-May-2023	05-May-2023	918089
Methylnaphthalene, 2-	91-57-6	0.013	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Naphthalene	91-20-3	<0.050	0.050	µg/L	E641A	02-May-2023	05-May-2023	918089
Phenanthrene	85-01-8	<0.020	0.020	µg/L	E641A	02-May-2023	05-May-2023	918089
Pyrene	129-00-0	<0.010	0.010	µg/L	E641A	02-May-2023	05-May-2023	918089
Polycyclic Aromatic Hydrocarbons Surrogates								
Chrysene-d12	1719-03-5	113	0.1	%	E641A	02-May-2023	05-May-2023	918089
Naphthalene-d8	1146-65-2	106	0.1	%	E641A	02-May-2023	05-May-2023	918089
Phenanthrene-d10	1517-22-2	108	0.1	%	E641A	02-May-2023	05-May-2023	918089

Please refer to the General Comments section for an explanation of any qualifiers detected.

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QUALITY CONTROL INTERPRETIVE REPORT

Work Order	: **WT2311250**	Page	: 1 of 19
Client	: **GHD Limited**	Laboratory	: Waterloo - Environmental
Contact	: Pascal Renella	Account Manager	: Rick Hawthorne
Address	: 455 Phillip Street Waterloo ON Canada N2L 3X2	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	: 519 725 3313	Telephone	: +1 519 886 6910
Project	: 12606873-003.02	Date Samples Received	: 28-Apr-2023 08:25
PO	: 735-006550	Issue Date	: 05-May-2023 21:27
C-O-C number	: ----		
Sampler	: ----		
Site	: ----		
Quote number	: 12606873-003.02-SSOW-735-006550		
No. of samples received	: 10		
No. of samples analysed	: 10		

This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

Key

Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
DQO: Data Quality Objective.
LOR: Limit of Reporting (detection limit).
RPD: Relative Percent Difference.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Summary of Outliers

Outliers : Quality Control Samples

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- No Matrix Spike outliers occur.
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- No Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.

Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Chloride in Water by IC										
HDPE [ON MECP]										
GW-12606873-270423-DA-BH01-22	E235.Cl	27-Apr-2023	02-May-2023	----	----		03-May-2023	28 days	6 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE [ON MECP]										
GW-12606873-270423-DA-BH02-22	E235.Cl	27-Apr-2023	02-May-2023	----	----		03-May-2023	28 days	6 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE [ON MECP]										
GW-12606873-270423-DA-BH03-22	E235.Cl	27-Apr-2023	02-May-2023	----	----		03-May-2023	28 days	6 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE [ON MECP]										
GW-12606873-270423-DA-BH06-22	E235.Cl	27-Apr-2023	02-May-2023	----	----		03-May-2023	28 days	6 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE [ON MECP]										
GW-12606873-270423-DA-BH11-22	E235.Cl	27-Apr-2023	02-May-2023	----	----		03-May-2023	28 days	6 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE [ON MECP]										
GW-12606873-270423-DA-BH12-22	E235.Cl	27-Apr-2023	02-May-2023	----	----		03-May-2023	28 days	6 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE [ON MECP]										
GW-12606873-270423-DA-BH3-23	E235.Cl	27-Apr-2023	02-May-2023	----	----		03-May-2023	28 days	6 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Chloride in Water by IC										
HDPE [ON MECP]										
GW-12606873-270423-DA-BH4-23	E235.Cl	27-Apr-2023	02-May-2023	----	----		03-May-2023	28 days	6 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE [ON MECP]										
GW-12606873-270423-DA-BH6-23	E235.Cl	27-Apr-2023	02-May-2023	----	----		03-May-2023	28 days	6 days	✓
Anions and Nutrients : Chloride in Water by IC										
HDPE [ON MECP]										
GW-12606873-270423-DA-DUP	E235.Cl	27-Apr-2023	02-May-2023	----	----		03-May-2023	28 days	6 days	✓
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide)										
GW-12606873-270423-DA-BH01-22	E336	27-Apr-2023	03-May-2023	----	----		03-May-2023	14 days	6 days	✓
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide)										
GW-12606873-270423-DA-BH02-22	E336	27-Apr-2023	03-May-2023	----	----		03-May-2023	14 days	6 days	✓
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide)										
GW-12606873-270423-DA-BH03-22	E336	27-Apr-2023	03-May-2023	----	----		03-May-2023	14 days	6 days	✓
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide)										
GW-12606873-270423-DA-BH06-22	E336	27-Apr-2023	03-May-2023	----	----		03-May-2023	14 days	6 days	✓
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide)										
GW-12606873-270423-DA-BH11-22	E336	27-Apr-2023	03-May-2023	----	----		03-May-2023	14 days	6 days	✓
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide)										
GW-12606873-270423-DA-BH12-22	E336	27-Apr-2023	03-May-2023	----	----		03-May-2023	14 days	6 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) GW-12606873-270423-DA-BH3-23	E336	27-Apr-2023	03-May-2023	----	----		03-May-2023	14 days	6 days	✓
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) GW-12606873-270423-DA-BH4-23	E336	27-Apr-2023	03-May-2023	----	----		03-May-2023	14 days	6 days	✓
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) GW-12606873-270423-DA-BH6-23	E336	27-Apr-2023	03-May-2023	----	----		03-May-2023	14 days	6 days	✓
Cyanides : WAD Cyanide										
UV-inhibited HDPE - total (sodium hydroxide) GW-12606873-270423-DA-DUP	E336	27-Apr-2023	03-May-2023	----	----		03-May-2023	14 days	6 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid) GW-12606873-270423-DA-BH01-22	E509	27-Apr-2023	02-May-2023	----	----		02-May-2023	28 days	5 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid) GW-12606873-270423-DA-BH02-22	E509	27-Apr-2023	02-May-2023	----	----		02-May-2023	28 days	5 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid) GW-12606873-270423-DA-BH03-22	E509	27-Apr-2023	02-May-2023	----	----		02-May-2023	28 days	5 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid) GW-12606873-270423-DA-BH06-22	E509	27-Apr-2023	02-May-2023	----	----		02-May-2023	28 days	5 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid) GW-12606873-270423-DA-BH11-22	E509	27-Apr-2023	02-May-2023	----	----		02-May-2023	28 days	5 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid) GW-12606873-270423-DA-BH12-22	E509	27-Apr-2023	02-May-2023	----	----		02-May-2023	28 days	5 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid) GW-12606873-270423-DA-BH3-23	E509	27-Apr-2023	02-May-2023	----	----		02-May-2023	28 days	5 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid) GW-12606873-270423-DA-BH4-23	E509	27-Apr-2023	02-May-2023	----	----		02-May-2023	28 days	5 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid) GW-12606873-270423-DA-BH6-23	E509	27-Apr-2023	02-May-2023	----	----		02-May-2023	28 days	5 days	✓
Dissolved Metals : Dissolved Mercury in Water by CVAAS										
Glass vial dissolved (hydrochloric acid) GW-12606873-270423-DA-DUP	E509	27-Apr-2023	02-May-2023	----	----		02-May-2023	28 days	5 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) GW-12606873-270423-DA-BH01-22	E421	27-Apr-2023	01-May-2023	----	----		01-May-2023	180 days	4 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) GW-12606873-270423-DA-BH02-22	E421	27-Apr-2023	01-May-2023	----	----		01-May-2023	180 days	4 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) GW-12606873-270423-DA-BH03-22	E421	27-Apr-2023	01-May-2023	----	----		01-May-2023	180 days	4 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) GW-12606873-270423-DA-BH06-22	E421	27-Apr-2023	01-May-2023	----	----		01-May-2023	180 days	4 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) GW-12606873-270423-DA-BH11-22	E421	27-Apr-2023	01-May-2023	----	----		01-May-2023	180 days	4 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) GW-12606873-270423-DA-BH12-22	E421	27-Apr-2023	01-May-2023	----	----		01-May-2023	180 days	4 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) GW-12606873-270423-DA-BH3-23	E421	27-Apr-2023	01-May-2023	----	----		01-May-2023	180 days	4 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) GW-12606873-270423-DA-BH4-23	E421	27-Apr-2023	01-May-2023	----	----		01-May-2023	180 days	4 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) GW-12606873-270423-DA-BH6-23	E421	27-Apr-2023	01-May-2023	----	----		01-May-2023	180 days	4 days	✓
Dissolved Metals : Dissolved Metals in Water by CRC ICPMS										
HDPE dissolved (nitric acid) GW-12606873-270423-DA-DUP	E421	27-Apr-2023	01-May-2023	----	----		01-May-2023	180 days	4 days	✓
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)										
Glass vial (sodium bisulfate) GW-12606873-270423-DA-BH01-22	E581.F1-L	27-Apr-2023	02-May-2023	----	----		02-May-2023	14 days	4 days	✓
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)										
Glass vial (sodium bisulfate) GW-12606873-270423-DA-BH03-22	E581.F1-L	27-Apr-2023	02-May-2023	----	----		02-May-2023	14 days	4 days	✓
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)										
Glass vial (sodium bisulfate) GW-12606873-270423-DA-BH06-22	E581.F1-L	27-Apr-2023	02-May-2023	----	----		02-May-2023	14 days	4 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)										
Glass vial (sodium bisulfate) GW-12606873-270423-DA-BH11-22	E581.F1-L	27-Apr-2023	02-May-2023	----	----		02-May-2023	14 days	4 days	✓
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)										
Glass vial (sodium bisulfate) GW-12606873-270423-DA-BH3-23	E581.F1-L	27-Apr-2023	02-May-2023	----	----		02-May-2023	14 days	4 days	✓
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)										
Glass vial (sodium bisulfate) GW-12606873-270423-DA-BH4-23	E581.F1-L	27-Apr-2023	02-May-2023	----	----		02-May-2023	14 days	4 days	✓
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)										
Glass vial (sodium bisulfate) GW-12606873-270423-DA-BH6-23	E581.F1-L	27-Apr-2023	02-May-2023	----	----		02-May-2023	14 days	4 days	✓
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)										
Glass vial (sodium bisulfate) GW-12606873-270423-DA-DUP	E581.F1-L	27-Apr-2023	02-May-2023	----	----		02-May-2023	14 days	4 days	✓
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)										
Glass vial (sodium bisulfate) GW-12606873-270423-DA-BH02-22	E581.F1-L	27-Apr-2023	02-May-2023	----	----		02-May-2023	14 days	5 days	✓
Hydrocarbons : CCME PHC - F1 by Headspace GC-FID (Low Level)										
Glass vial (sodium bisulfate) GW-12606873-270423-DA-BH12-22	E581.F1-L	27-Apr-2023	02-May-2023	----	----		02-May-2023	14 days	5 days	✓
Hydrocarbons : Silica Gel Treated CCME PHCs - F2-F4sg by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate) GW-12606873-270423-DA-BH01-22	E601.SG	27-Apr-2023	02-May-2023	14 days	5 days	✓	05-May-2023	40 days	3 days	✓
Hydrocarbons : Silica Gel Treated CCME PHCs - F2-F4sg by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate) GW-12606873-270423-DA-BH02-22	E601.SG	27-Apr-2023	02-May-2023	14 days	5 days	✓	05-May-2023	40 days	3 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Hydrocarbons : Silica Gel Treated CCME PHCs - F2-F4sg by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate)										
GW-12606873-270423-DA-BH03-22	E601.SG	27-Apr-2023	02-May-2023	14 days	5 days	✓	05-May-2023	40 days	3 days	✓
Hydrocarbons : Silica Gel Treated CCME PHCs - F2-F4sg by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate)										
GW-12606873-270423-DA-BH06-22	E601.SG	27-Apr-2023	02-May-2023	14 days	5 days	✓	05-May-2023	40 days	3 days	✓
Hydrocarbons : Silica Gel Treated CCME PHCs - F2-F4sg by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate)										
GW-12606873-270423-DA-BH11-22	E601.SG	27-Apr-2023	02-May-2023	14 days	5 days	✓	05-May-2023	40 days	3 days	✓
Hydrocarbons : Silica Gel Treated CCME PHCs - F2-F4sg by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate)										
GW-12606873-270423-DA-BH12-22	E601.SG	27-Apr-2023	02-May-2023	14 days	5 days	✓	05-May-2023	40 days	3 days	✓
Hydrocarbons : Silica Gel Treated CCME PHCs - F2-F4sg by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate)										
GW-12606873-270423-DA-BH3-23	E601.SG	27-Apr-2023	02-May-2023	14 days	5 days	✓	05-May-2023	40 days	3 days	✓
Hydrocarbons : Silica Gel Treated CCME PHCs - F2-F4sg by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate)										
GW-12606873-270423-DA-BH4-23	E601.SG	27-Apr-2023	02-May-2023	14 days	5 days	✓	05-May-2023	40 days	3 days	✓
Hydrocarbons : Silica Gel Treated CCME PHCs - F2-F4sg by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate)										
GW-12606873-270423-DA-BH6-23	E601.SG	27-Apr-2023	02-May-2023	14 days	5 days	✓	05-May-2023	40 days	3 days	✓
Hydrocarbons : Silica Gel Treated CCME PHCs - F2-F4sg by GC-FID										
Amber glass/Teflon lined cap (sodium bisulfate)										
GW-12606873-270423-DA-DUP	E601.SG	27-Apr-2023	02-May-2023	14 days	5 days	✓	05-May-2023	40 days	3 days	✓
Physical Tests : Conductivity in Water										
HDPE [ON MECP]										
GW-12606873-270423-DA-BH01-22	E100	27-Apr-2023	02-May-2023	----	----		03-May-2023	28 days	6 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : Conductivity in Water										
HDPE [ON MECP] GW-12606873-270423-DA-BH02-22	E100	27-Apr-2023	02-May-2023	----	----		03-May-2023	28 days	6 days	✓
Physical Tests : Conductivity in Water										
HDPE [ON MECP] GW-12606873-270423-DA-BH03-22	E100	27-Apr-2023	02-May-2023	----	----		03-May-2023	28 days	6 days	✓
Physical Tests : Conductivity in Water										
HDPE [ON MECP] GW-12606873-270423-DA-BH06-22	E100	27-Apr-2023	02-May-2023	----	----		03-May-2023	28 days	6 days	✓
Physical Tests : Conductivity in Water										
HDPE [ON MECP] GW-12606873-270423-DA-BH11-22	E100	27-Apr-2023	02-May-2023	----	----		03-May-2023	28 days	6 days	✓
Physical Tests : Conductivity in Water										
HDPE [ON MECP] GW-12606873-270423-DA-BH12-22	E100	27-Apr-2023	02-May-2023	----	----		03-May-2023	28 days	6 days	✓
Physical Tests : Conductivity in Water										
HDPE [ON MECP] GW-12606873-270423-DA-BH3-23	E100	27-Apr-2023	02-May-2023	----	----		03-May-2023	28 days	6 days	✓
Physical Tests : Conductivity in Water										
HDPE [ON MECP] GW-12606873-270423-DA-BH4-23	E100	27-Apr-2023	02-May-2023	----	----		03-May-2023	28 days	6 days	✓
Physical Tests : Conductivity in Water										
HDPE [ON MECP] GW-12606873-270423-DA-BH6-23	E100	27-Apr-2023	02-May-2023	----	----		03-May-2023	28 days	6 days	✓
Physical Tests : Conductivity in Water										
HDPE [ON MECP] GW-12606873-270423-DA-DUP	E100	27-Apr-2023	02-May-2023	----	----		03-May-2023	28 days	6 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : pH by Meter										
HDPE [ON MECP] GW-12606873-270423-DA-BH01-22	E108	27-Apr-2023	02-May-2023	----	----		03-May-2023	14 days	6 days	✓
Physical Tests : pH by Meter										
HDPE [ON MECP] GW-12606873-270423-DA-BH02-22	E108	27-Apr-2023	02-May-2023	----	----		03-May-2023	14 days	6 days	✓
Physical Tests : pH by Meter										
HDPE [ON MECP] GW-12606873-270423-DA-BH03-22	E108	27-Apr-2023	02-May-2023	----	----		03-May-2023	14 days	6 days	✓
Physical Tests : pH by Meter										
HDPE [ON MECP] GW-12606873-270423-DA-BH06-22	E108	27-Apr-2023	02-May-2023	----	----		03-May-2023	14 days	6 days	✓
Physical Tests : pH by Meter										
HDPE [ON MECP] GW-12606873-270423-DA-BH11-22	E108	27-Apr-2023	02-May-2023	----	----		03-May-2023	14 days	6 days	✓
Physical Tests : pH by Meter										
HDPE [ON MECP] GW-12606873-270423-DA-BH12-22	E108	27-Apr-2023	02-May-2023	----	----		03-May-2023	14 days	6 days	✓
Physical Tests : pH by Meter										
HDPE [ON MECP] GW-12606873-270423-DA-BH3-23	E108	27-Apr-2023	02-May-2023	----	----		03-May-2023	14 days	6 days	✓
Physical Tests : pH by Meter										
HDPE [ON MECP] GW-12606873-270423-DA-BH4-23	E108	27-Apr-2023	02-May-2023	----	----		03-May-2023	14 days	6 days	✓
Physical Tests : pH by Meter										
HDPE [ON MECP] GW-12606873-270423-DA-BH6-23	E108	27-Apr-2023	02-May-2023	----	----		03-May-2023	14 days	6 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : pH by Meter										
HDPE [ON MECP]										
GW-12606873-270423-DA-DUP	E108	27-Apr-2023	02-May-2023	----	----		03-May-2023	14 days	6 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs by Hexane LVI GC-MS										
Amber glass/Teflon lined cap (sodium bisulfate)										
GW-12606873-270423-DA-BH01-22	E641A	27-Apr-2023	02-May-2023	14 days	5 days	✓	05-May-2023	40 days	3 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs by Hexane LVI GC-MS										
Amber glass/Teflon lined cap (sodium bisulfate)										
GW-12606873-270423-DA-BH02-22	E641A	27-Apr-2023	02-May-2023	14 days	5 days	✓	05-May-2023	40 days	3 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs by Hexane LVI GC-MS										
Amber glass/Teflon lined cap (sodium bisulfate)										
GW-12606873-270423-DA-BH03-22	E641A	27-Apr-2023	02-May-2023	14 days	5 days	✓	05-May-2023	40 days	3 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs by Hexane LVI GC-MS										
Amber glass/Teflon lined cap (sodium bisulfate)										
GW-12606873-270423-DA-BH06-22	E641A	27-Apr-2023	02-May-2023	14 days	5 days	✓	05-May-2023	40 days	3 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs by Hexane LVI GC-MS										
Amber glass/Teflon lined cap (sodium bisulfate)										
GW-12606873-270423-DA-BH11-22	E641A	27-Apr-2023	02-May-2023	14 days	5 days	✓	05-May-2023	40 days	3 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs by Hexane LVI GC-MS										
Amber glass/Teflon lined cap (sodium bisulfate)										
GW-12606873-270423-DA-BH12-22	E641A	27-Apr-2023	02-May-2023	14 days	5 days	✓	05-May-2023	40 days	3 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs by Hexane LVI GC-MS										
Amber glass/Teflon lined cap (sodium bisulfate)										
GW-12606873-270423-DA-BH3-23	E641A	27-Apr-2023	02-May-2023	14 days	5 days	✓	05-May-2023	40 days	3 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs by Hexane LVI GC-MS										
Amber glass/Teflon lined cap (sodium bisulfate)										
GW-12606873-270423-DA-BH4-23	E641A	27-Apr-2023	02-May-2023	14 days	5 days	✓	05-May-2023	40 days	3 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Polycyclic Aromatic Hydrocarbons : PAHs by Hexane LVI GC-MS										
Amber glass/Teflon lined cap (sodium bisulfate)										
GW-12606873-270423-DA-BH6-23	E641A	27-Apr-2023	02-May-2023	14 days	5 days	✓	05-May-2023	40 days	3 days	✓
Polycyclic Aromatic Hydrocarbons : PAHs by Hexane LVI GC-MS										
Amber glass/Teflon lined cap (sodium bisulfate)										
GW-12606873-270423-DA-DUP	E641A	27-Apr-2023	02-May-2023	14 days	5 days	✓	05-May-2023	40 days	3 days	✓
Speciated Metals : Dissolved Hexavalent Chromium (Cr VI) by IC										
HDPE - dissolved (NaOH+Buf) [ON MECP]										
GW-12606873-270423-DA-BH01-22	E532A	27-Apr-2023	----	----	----		01-May-2023	28 days	4 days	✓
Speciated Metals : Dissolved Hexavalent Chromium (Cr VI) by IC										
HDPE - dissolved (NaOH+Buf) [ON MECP]										
GW-12606873-270423-DA-BH02-22	E532A	27-Apr-2023	----	----	----		01-May-2023	28 days	4 days	✓
Speciated Metals : Dissolved Hexavalent Chromium (Cr VI) by IC										
HDPE - dissolved (NaOH+Buf) [ON MECP]										
GW-12606873-270423-DA-BH03-22	E532A	27-Apr-2023	----	----	----		01-May-2023	28 days	4 days	✓
Speciated Metals : Dissolved Hexavalent Chromium (Cr VI) by IC										
HDPE - dissolved (NaOH+Buf) [ON MECP]										
GW-12606873-270423-DA-BH06-22	E532A	27-Apr-2023	----	----	----		01-May-2023	28 days	4 days	✓
Speciated Metals : Dissolved Hexavalent Chromium (Cr VI) by IC										
HDPE - dissolved (NaOH+Buf) [ON MECP]										
GW-12606873-270423-DA-BH11-22	E532A	27-Apr-2023	----	----	----		01-May-2023	28 days	4 days	✓
Speciated Metals : Dissolved Hexavalent Chromium (Cr VI) by IC										
HDPE - dissolved (NaOH+Buf) [ON MECP]										
GW-12606873-270423-DA-BH12-22	E532A	27-Apr-2023	----	----	----		01-May-2023	28 days	4 days	✓
Speciated Metals : Dissolved Hexavalent Chromium (Cr VI) by IC										
HDPE - dissolved (NaOH+Buf) [ON MECP]										
GW-12606873-270423-DA-BH3-23	E532A	27-Apr-2023	----	----	----		01-May-2023	28 days	4 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Speciated Metals : Dissolved Hexavalent Chromium (Cr VI) by IC										
HDPE - dissolved (NaOH+Buf) [ON MECP]										
GW-12606873-270423-DA-BH4-23	E532A	27-Apr-2023	----	----	----		01-May-2023	28 days	4 days	✓
Speciated Metals : Dissolved Hexavalent Chromium (Cr VI) by IC										
HDPE - dissolved (NaOH+Buf) [ON MECP]										
GW-12606873-270423-DA-BH6-23	E532A	27-Apr-2023	----	----	----		01-May-2023	28 days	4 days	✓
Speciated Metals : Dissolved Hexavalent Chromium (Cr VI) by IC										
HDPE - dissolved (NaOH+Buf) [ON MECP]										
GW-12606873-270423-DA-DUP	E532A	27-Apr-2023	----	----	----		01-May-2023	28 days	4 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate)										
GW-12606873-270423-DA-BH01-22	E611D	27-Apr-2023	02-May-2023	----	----		02-May-2023	14 days	4 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate)										
GW-12606873-270423-DA-BH03-22	E611D	27-Apr-2023	02-May-2023	----	----		02-May-2023	14 days	4 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate)										
GW-12606873-270423-DA-BH06-22	E611D	27-Apr-2023	02-May-2023	----	----		02-May-2023	14 days	4 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate)										
GW-12606873-270423-DA-BH11-22	E611D	27-Apr-2023	02-May-2023	----	----		02-May-2023	14 days	4 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate)										
GW-12606873-270423-DA-BH3-23	E611D	27-Apr-2023	02-May-2023	----	----		02-May-2023	14 days	4 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate)										
GW-12606873-270423-DA-BH4-23	E611D	27-Apr-2023	02-May-2023	----	----		02-May-2023	14 days	4 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) GW-12606873-270423-DA-BH6-23	E611D	27-Apr-2023	02-May-2023	----	----		02-May-2023	14 days	4 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) GW-12606873-270423-DA-DUP	E611D	27-Apr-2023	02-May-2023	----	----		02-May-2023	14 days	4 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) GW-12606873-270423-DA-BH02-22	E611D	27-Apr-2023	02-May-2023	----	----		02-May-2023	14 days	5 days	✓
Volatile Organic Compounds : VOCs (Eastern Canada List) by Headspace GC-MS										
Glass vial (sodium bisulfate) GW-12606873-270423-DA-BH12-22	E611D	27-Apr-2023	02-May-2023	----	----		02-May-2023	14 days	5 days	✓

Legend & Qualifier Definitions

Rec. HT: ALS recommended hold time (see units).

Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Water**

Evaluation: × = *QC frequency outside specification*; ✓ = *QC frequency within specification.*

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Duplicates (DUP)							
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	917952	1	10	10.0	5.0	✓
Chloride in Water by IC	E235.Cl	919318	1	19	5.2	5.0	✓
Conductivity in Water	E100	919322	1	18	5.5	5.0	✓
Dissolved Hexavalent Chromium (Cr VI) by IC	E532A	917553	1	14	7.1	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	918531	1	14	7.1	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	917817	1	20	5.0	5.0	✓
pH by Meter	E108	919320	1	19	5.2	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	917951	1	10	10.0	5.0	✓
WAD Cyanide	E336	920319	1	19	5.2	5.0	✓
Laboratory Control Samples (LCS)							
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	917952	1	10	10.0	5.0	✓
Chloride in Water by IC	E235.Cl	919318	1	19	5.2	5.0	✓
Conductivity in Water	E100	919322	1	18	5.5	5.0	✓
Dissolved Hexavalent Chromium (Cr VI) by IC	E532A	917553	1	14	7.1	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	918531	1	14	7.1	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	917817	1	20	5.0	5.0	✓
PAHs by Hexane LVI GC-MS	E641A	918089	1	20	5.0	5.0	✓
pH by Meter	E108	919320	1	19	5.2	5.0	✓
Silica Gel Treated CCME PHCs - F2-F4sg by GC-FID	E601.SG	918090	1	20	5.0	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	917951	1	10	10.0	5.0	✓
WAD Cyanide	E336	920319	1	19	5.2	5.0	✓
Method Blanks (MB)							
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	917952	1	10	10.0	5.0	✓
Chloride in Water by IC	E235.Cl	919318	1	19	5.2	5.0	✓
Conductivity in Water	E100	919322	1	18	5.5	5.0	✓
Dissolved Hexavalent Chromium (Cr VI) by IC	E532A	917553	1	14	7.1	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	918531	1	14	7.1	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	917817	1	20	5.0	5.0	✓
PAHs by Hexane LVI GC-MS	E641A	918089	1	20	5.0	5.0	✓
Silica Gel Treated CCME PHCs - F2-F4sg by GC-FID	E601.SG	918090	1	20	5.0	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	917951	1	10	10.0	5.0	✓
WAD Cyanide	E336	920319	1	19	5.2	5.0	✓
Matrix Spikes (MS)							
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L	917952	1	10	10.0	5.0	✓
Chloride in Water by IC	E235.Cl	919318	1	19	5.2	5.0	✓

Matrix: **Water**

Evaluation: × = *QC frequency outside specification*; ✓ = *QC frequency within specification.*

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Matrix Spikes (MS) - Continued							
Dissolved Hexavalent Chromium (Cr VI) by IC	E532A	917553	1	14	7.1	5.0	✓
Dissolved Mercury in Water by CVAAS	E509	918531	1	14	7.1	5.0	✓
Dissolved Metals in Water by CRC ICPMS	E421	917817	1	20	5.0	5.0	✓
VOCs (Eastern Canada List) by Headspace GC-MS	E611D	917951	1	10	10.0	5.0	✓
WAD Cyanide	E336	920319	1	19	5.2	5.0	✓

Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by "mod").

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Conductivity in Water	E100 Waterloo - Environmental	Water	APHA 2510 (mod)	Conductivity, also known as Electrical Conductivity (EC) or Specific Conductance, is measured by immersion of a conductivity cell with platinum electrodes into a water sample. Conductivity measurements are temperature-compensated to 25°C.
pH by Meter	E108 Waterloo - Environmental	Water	APHA 4500-H (mod)	pH is determined by potentiometric measurement with a pH electrode, and is conducted at ambient laboratory temperature (normally 20 ± 5°C). For high accuracy test results, pH should be measured in the field within the recommended 15 minute hold time.
Chloride in Water by IC	E235.Cl Waterloo - Environmental	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
WAD Cyanide	E336 Waterloo - Environmental	Water	APHA 4500-CN I (mod)	Weak Acid Dissociable (WAD) cyanide is determined by Continuous Flow Analyzer (CFA) with in-line distillation followed by colourmetric analysis.
Dissolved Metals in Water by CRC ICPMS	E421 Waterloo - Environmental	Water	APHA 3030B/EPA 6020B (mod)	Water samples are filtered (0.45 um), preserved with nitric acid, and analyzed by Collision/Reaction Cell ICPMS. Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.
Dissolved Mercury in Water by CVAAS	E509 Waterloo - Environmental	Water	APHA 3030B/EPA 1631E (mod)	Water samples are filtered (0.45 um), preserved with HCl, then undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS.
Dissolved Hexavalent Chromium (Cr VI) by IC	E532A Waterloo - Environmental	Water	APHA 3500-Cr C (Ion Chromatography)	Hexavalent Chromium is measured by Ion chromatography-Post column reaction and UV detection. sample pretreatment involved field or lab filtration following by sample preservation.
CCME PHC - F1 by Headspace GC-FID (Low Level)	E581.F1-L Waterloo - Environmental	Water	CCME PHC in Soil - Tier 1 (mod)	CCME Fraction 1 (F1) is analyzed by static headspace GC-FID. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
Silica Gel Treated CCME PHCs - F2-F4sg by GC-FID	E601.SG Waterloo - Environmental	Water	CCME PHC in Soil - Tier 1 (mod)	Sample extracts are subjected to in-situ silica gel treatment prior to analysis by GC-FID for CCME hydrocarbon fractions (F2-F4). Sample extracts are analyzed by GC-FID for CCME hydrocarbon fractions (F2-F4), as per the CCME Analytical Methods Guidance Manual (2016)

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
VOCs (Eastern Canada List) by Headspace GC-MS	E611D Waterloo - Environmental	Water	EPA 8260D (mod)	Volatile Organic Compounds (VOCs) are analyzed by static headspace GC-MS. Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler, causing VOCs to partition between the aqueous phase and the headspace in accordance with Henry's law.
PAHs by Hexane LVI GC-MS	E641A Waterloo - Environmental	Water	EPA 8270E (mod)	Polycyclic Aromatic Hydrocarbons (PAHs) are analyzed by large volume injection (LVI) GC-MS.
F1-BTEX	EC580 Waterloo - Environmental	Water	CCME PHC in Soil - Tier 1	F1-BTEX is calculated as follows: F1-BTEX = F1 (C6-C10) minus benzene, toluene, ethylbenzene and xylenes (BTEX).
SUM F1 to F4 where F2-F4 is SG treated	EC581SG Waterloo - Environmental	Water	CCME PHC in Soil - Tier 1	Hydrocarbons, total (C6-C50) is the sum of CCME Fraction F1(C6-C10), F2(C10-C16), F3(C16-C34), and F4(C34-C50), where F2-F4 have been treated with silica gel. F4G-sg is not used within this calculation due to overlap with other fractions.
F2-F4 (sg) minus PAH	EC600SG Waterloo - Environmental	Water	CCME PHC in Soil - Tier 1	F2-F4 (sg) minus PAH is calculated as follows: F2-F4 minus PAH = Sum of CCME Fraction 2 (C10-C16), CCME Fraction 3 (C16-C34), and CCME Fraction 4 (C34-C50), minus select Polycyclic Aromatic Hydrocarbons (PAH).

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Dissolved Metals Water Filtration	EP421 Waterloo - Environmental	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HNO3.
Dissolved Mercury Water Filtration	EP509 Waterloo - Environmental	Water	APHA 3030B	Water samples are filtered (0.45 um), and preserved with HCl.
VOCs Preparation for Headspace Analysis	EP581 Waterloo - Environmental	Water	EPA 5021A (mod)	Samples are prepared in headspace vials and are heated and agitated on the headspace autosampler. An aliquot of the headspace is then injected into the GC/MS-FID system.
PHCs and PAHs Hexane Extraction	EP601 Waterloo - Environmental	Water	EPA 3511 (mod)	Petroleum Hydrocarbons (PHCs) and Polycyclic Aromatic Hydrocarbons (PAHs) are extracted using a hexane liquid-liquid extraction.

QUALITY CONTROL REPORT

Work Order	: **WT2311250**	Page	: 1 of 14
Client	: GHD Limited	Laboratory	: Waterloo - Environmental
Contact	: Pascal Renella	Account Manager	: Rick Hawthorne
Address	: 455 Phillip Street Waterloo ON Canada N2L 3X2	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	:	Telephone	: +1 519 886 6910
Project	: 12606873-003.02	Date Samples Received	: 28-Apr-2023 08:25
PO	: 735-006550	Date Analysis Commenced	: 01-May-2023
C-O-C number	: ----	Issue Date	: 05-May-2023 21:27
Sampler	: ---- 519 725 3313		
Site	: ----		
Quote number	: 12606873-003.02-SSOW-735-006550		
No. of samples received	: 10		
No. of samples analysed	: 10		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Matrix Spike (MS) Report; Recovery and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
Amaninder Dhillon	Team Lead - Semi-Volatile Instrumentation	Waterloo Organics, Waterloo, Ontario
Greg Pokocky	Manager - Inorganics	Waterloo Inorganics, Waterloo, Ontario
Greg Pokocky	Manager - Inorganics	Waterloo Metals, Waterloo, Ontario
Jocelyn Kennedy	Department Manager - Semi-Volatile Organics	Waterloo Organics, Waterloo, Ontario
Sarah Birch	VOC Section Supervisor	Waterloo VOC, Waterloo, Ontario

General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
DQO = Data Quality Objective.
LOR = Limit of Reporting (detection limit).
RPD = Relative Percent Difference
# = Indicates a QC result that did not meet the ALS DQO.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Physical Tests (QC Lot: 919320)											
WT2310984-003	Anonymous	pH	----	E108	0.10	pH units	8.26	8.28	0.242%	4%	----
Physical Tests (QC Lot: 919322)											
WT2311088-001	Anonymous	Conductivity	----	E100	1.0	µS/cm	2.73 mS/cm	2730	0.00%	10%	----
Anions and Nutrients (QC Lot: 919318)											
WT2310984-003	Anonymous	Chloride	16887-00-6	E235.Cl	0.50	mg/L	76.8	76.7	0.174%	20%	----
Cyanides (QC Lot: 920319)											
WT2310848-001	Anonymous	Cyanide, weak acid dissociable	----	E336	0.0020	mg/L	<2.0 µg/L	<0.0020	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 917817)											
WT2311250-001	GW-12606873-270423-DA-BH02-22	Antimony, dissolved	7440-36-0	E421	0.00100	mg/L	<1.00 µg/L	<0.00100	0	Diff <2x LOR	----
		Arsenic, dissolved	7440-38-2	E421	0.00100	mg/L	<1.00 µg/L	<0.00100	0	Diff <2x LOR	----
		Barium, dissolved	7440-39-3	E421	0.00100	mg/L	185 µg/L	0.182	1.59%	20%	----
		Beryllium, dissolved	7440-41-7	E421	0.000200	mg/L	<0.200 µg/L	<0.000200	0	Diff <2x LOR	----
		Boron, dissolved	7440-42-8	E421	0.100	mg/L	<100 µg/L	<0.100	0	Diff <2x LOR	----
		Cadmium, dissolved	7440-43-9	E421	0.0000500	mg/L	<0.0500 µg/L	<0.0000500	0	Diff <2x LOR	----
		Chromium, dissolved	7440-47-3	E421	0.00500	mg/L	<5.00 µg/L	<0.00500	0	Diff <2x LOR	----
		Cobalt, dissolved	7440-48-4	E421	0.00100	mg/L	<1.00 µg/L	<0.00100	0	Diff <2x LOR	----
		Copper, dissolved	7440-50-8	E421	0.00200	mg/L	<2.00 µg/L	<0.00200	0	Diff <2x LOR	----
		Lead, dissolved	7439-92-1	E421	0.000500	mg/L	<0.500 µg/L	<0.000500	0	Diff <2x LOR	----
		Molybdenum, dissolved	7439-98-7	E421	0.000500	mg/L	0.717 µg/L	0.000872	0.000154	Diff <2x LOR	----
		Nickel, dissolved	7440-02-0	E421	0.00500	mg/L	<5.00 µg/L	<0.00500	0	Diff <2x LOR	----
		Selenium, dissolved	7782-49-2	E421	0.000500	mg/L	<0.500 µg/L	<0.000500	0	Diff <2x LOR	----
		Silver, dissolved	7440-22-4	E421	0.000100	mg/L	<0.100 µg/L	<0.000100	0	Diff <2x LOR	----
		Sodium, dissolved	7440-23-5	E421	0.500	mg/L	342000 µg/L	341	0.139%	20%	----
		Thallium, dissolved	7440-28-0	E421	0.000100	mg/L	<0.100 µg/L	<0.000100	0	Diff <2x LOR	----
		Uranium, dissolved	7440-61-1	E421	0.000100	mg/L	1.69 µg/L	0.00173	2.54%	20%	----
		Vanadium, dissolved	7440-62-2	E421	0.00500	mg/L	<5.00 µg/L	<0.00500	0	Diff <2x LOR	----
		Zinc, dissolved	7440-66-6	E421	0.0100	mg/L	<10.0 µg/L	<0.0100	0	Diff <2x LOR	----
Dissolved Metals (QC Lot: 918531)											
WT2310848-001	Anonymous	Mercury, dissolved	7439-97-6	E509	0.0000050	mg/L	<0.0050 µg/L	<0.0000050	0	Diff <2x LOR	----
Speciated Metals (QC Lot: 917553)											

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Speciated Metals (QC Lot: 917553) - continued											
WT2311225-001	Anonymous	Chromium, hexavalent [Cr VI], dissolved	18540-29-9	E532A	0.00050	mg/L	<0.50 µg/L	<0.00050	0	Diff <2x LOR	----
Volatile Organic Compounds (QC Lot: 917951)											
WT2311250-001	GW-12606873-270423-DA-BH02-22	Acetone	67-64-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Benzene	71-43-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromodichloromethane	75-27-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromoform	75-25-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Bromomethane	74-83-9	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Carbon tetrachloride	56-23-5	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		Chlorobenzene	108-90-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Chloroform	67-66-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dibromochloromethane	124-48-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dibromoethane, 1,2-	106-93-4	E611D	0.20	µg/L	<0.20	<0.20	0	Diff <2x LOR	----
		Dichlorobenzene, 1,2-	95-50-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,3-	541-73-1	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorobenzene, 1,4-	106-46-7	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichlorodifluoromethane	75-71-8	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethane, 1,1-	75-34-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethane, 1,2-	107-06-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, 1,1-	75-35-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, cis-1,2-	156-59-2	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloroethylene, trans-1,2-	156-60-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloromethane	75-09-2	E611D	1.0	µg/L	<1.0	<1.0	0	Diff <2x LOR	----
		Dichloropropane, 1,2-	78-87-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
		Ethylbenzene	100-41-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Hexane, n-	110-54-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	<20	0	Diff <2x LOR	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Styrene	100-42-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Volatile Organic Compounds (QC Lot: 917951) - continued											
WT2311250-001	GW-12606873-270423-DA-BH02-22	Tetrachloroethylene	127-18-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Toluene	108-88-3	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethane, 1,1,1-	71-55-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethane, 1,1,2-	79-00-5	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichloroethylene	79-01-6	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Trichlorofluoromethane	75-69-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Vinyl chloride	75-01-4	E611D	0.50	µg/L	<0.50	<0.50	0	Diff <2x LOR	----
		Xylene, m+p-	179601-23-1	E611D	0.40	µg/L	<0.40	<0.40	0	Diff <2x LOR	----
		Xylene, o-	95-47-6	E611D	0.30	µg/L	<0.30	<0.30	0	Diff <2x LOR	----
Hydrocarbons (QC Lot: 917952)											
WT2311250-001	GW-12606873-270423-DA-BH02-22	F1 (C6-C10)	----	E581.F1-L	25	µg/L	<25	<25	0	Diff <2x LOR	----

Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests (QCLot: 919322)						
Conductivity	----	E100	1	µS/cm	<1.0	----
Anions and Nutrients (QCLot: 919318)						
Chloride	16887-00-6	E235.Cl	0.5	mg/L	<0.50	----
Cyanides (QCLot: 920319)						
Cyanide, weak acid dissociable	----	E336	0.002	mg/L	<0.0020	----
Dissolved Metals (QCLot: 917817)						
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	<0.00010	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	<0.00010	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	<0.00010	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	<0.000020	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	<0.010	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	<0.0000050	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	<0.00050	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	<0.00010	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	<0.00020	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	<0.000050	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	<0.000050	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	<0.00050	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	<0.000050	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	<0.000010	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	<0.050	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	<0.000010	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	<0.000010	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	<0.00050	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	<0.0010	----
Dissolved Metals (QCLot: 918531)						
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	<0.0000050	----
Speciated Metals (QCLot: 917553)						
Chromium, hexavalent [Cr VI], dissolved	18540-29-9	E532A	0.0005	mg/L	<0.00050	----
Volatile Organic Compounds (QCLot: 917951)						
Acetone	67-64-1	E611D	20	µg/L	<20	----
Benzene	71-43-2	E611D	0.5	µg/L	<0.50	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Volatile Organic Compounds (QCLot: 917951) - continued						
Bromodichloromethane	75-27-4	E611D	0.5	µg/L	<0.50	----
Bromoform	75-25-2	E611D	0.5	µg/L	<0.50	----
Bromomethane	74-83-9	E611D	0.5	µg/L	<0.50	----
Carbon tetrachloride	56-23-5	E611D	0.2	µg/L	<0.20	----
Chlorobenzene	108-90-7	E611D	0.5	µg/L	<0.50	----
Chloroform	67-66-3	E611D	0.5	µg/L	<0.50	----
Dibromochloromethane	124-48-1	E611D	0.5	µg/L	<0.50	----
Dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	<0.20	----
Dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	<0.50	----
Dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	<0.50	----
Dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	<0.50	----
Dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	<0.50	----
Dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	<0.50	----
Dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	<0.50	----
Dichloromethane	75-09-2	E611D	1	µg/L	<1.0	----
Dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	<0.50	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	<0.30	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	<0.30	----
Ethylbenzene	100-41-4	E611D	0.5	µg/L	<0.50	----
Hexane, n-	110-54-3	E611D	0.5	µg/L	<0.50	----
Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	<20	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	<20	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	<0.50	----
Styrene	100-42-5	E611D	0.5	µg/L	<0.50	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	<0.50	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	<0.50	----
Tetrachloroethylene	127-18-4	E611D	0.5	µg/L	<0.50	----
Toluene	108-88-3	E611D	0.5	µg/L	<0.50	----
Trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	<0.50	----
Trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	<0.50	----
Trichloroethylene	79-01-6	E611D	0.5	µg/L	<0.50	----
Trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	<0.50	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Volatile Organic Compounds (QCLot: 917951) - continued						
Vinyl chloride	75-01-4	E611D	0.5	µg/L	<0.50	----
Xylene, m+p-	179601-23-1	E611D	0.4	µg/L	<0.40	----
Xylene, o-	95-47-6	E611D	0.3	µg/L	<0.30	----
Hydrocarbons (QCLot: 917952)						
F1 (C6-C10)	----	E581.F1-L	25	µg/L	<25	----
Hydrocarbons (QCLot: 918090)						
F2 (C10-C16)	----	E601.SG	100	µg/L	<100	----
F3 (C16-C34)	----	E601.SG	250	µg/L	<250	----
F4 (C34-C50)	----	E601.SG	250	µg/L	<250	----
Polycyclic Aromatic Hydrocarbons (QCLot: 918089)						
Acenaphthene	83-32-9	E641A	0.01	µg/L	<0.010	----
Acenaphthylene	208-96-8	E641A	0.01	µg/L	<0.010	----
Anthracene	120-12-7	E641A	0.01	µg/L	<0.010	----
Benz(a)anthracene	56-55-3	E641A	0.01	µg/L	<0.010	----
Benzo(a)pyrene	50-32-8	E641A	0.005	µg/L	<0.0050	----
Benzo(b+j)fluoranthene	n/a	E641A	0.01	µg/L	<0.010	----
Benzo(g,h,i)perylene	191-24-2	E641A	0.01	µg/L	<0.010	----
Benzo(k)fluoranthene	207-08-9	E641A	0.01	µg/L	<0.010	----
Chrysene	218-01-9	E641A	0.01	µg/L	<0.010	----
Dibenz(a,h)anthracene	53-70-3	E641A	0.005	µg/L	<0.0050	----
Fluoranthene	206-44-0	E641A	0.01	µg/L	<0.010	----
Fluorene	86-73-7	E641A	0.01	µg/L	<0.010	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.01	µg/L	<0.010	----
Methylnaphthalene, 1-	90-12-0	E641A	0.01	µg/L	<0.010	----
Methylnaphthalene, 2-	91-57-6	E641A	0.01	µg/L	<0.010	----
Naphthalene	91-20-3	E641A	0.05	µg/L	<0.050	----
Phenanthrene	85-01-8	E641A	0.02	µg/L	<0.020	----
Pyrene	129-00-0	E641A	0.01	µg/L	<0.010	----

Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Concentration	LCS	Low	High	Qualifier
Physical Tests (QCLot: 919320)									
pH	----	E108	----	pH units	7 pH units	100	98.0	102	----
Physical Tests (QCLot: 919322)									
Conductivity	----	E100	1	µS/cm	1409 µS/cm	102	90.0	110	----
Anions and Nutrients (QCLot: 919318)									
Chloride	16887-00-6	E235.Cl	0.5	mg/L	100 mg/L	101	90.0	110	----
Cyanides (QCLot: 920319)									
Cyanide, weak acid dissociable	----	E336	0.002	mg/L	0.125 mg/L	99.2	80.0	120	----
Dissolved Metals (QCLot: 917817)									
Antimony, dissolved	7440-36-0	E421	0.0001	mg/L	0.05 mg/L	100	80.0	120	----
Arsenic, dissolved	7440-38-2	E421	0.0001	mg/L	0.05 mg/L	104	80.0	120	----
Barium, dissolved	7440-39-3	E421	0.0001	mg/L	0.0125 mg/L	102	80.0	120	----
Beryllium, dissolved	7440-41-7	E421	0.00002	mg/L	0.005 mg/L	95.6	80.0	120	----
Boron, dissolved	7440-42-8	E421	0.01	mg/L	0.05 mg/L	93.0	80.0	120	----
Cadmium, dissolved	7440-43-9	E421	0.000005	mg/L	0.005 mg/L	99.3	80.0	120	----
Chromium, dissolved	7440-47-3	E421	0.0005	mg/L	0.0125 mg/L	96.5	80.0	120	----
Cobalt, dissolved	7440-48-4	E421	0.0001	mg/L	0.0125 mg/L	95.9	80.0	120	----
Copper, dissolved	7440-50-8	E421	0.0002	mg/L	0.0125 mg/L	95.7	80.0	120	----
Lead, dissolved	7439-92-1	E421	0.00005	mg/L	0.025 mg/L	101	80.0	120	----
Molybdenum, dissolved	7439-98-7	E421	0.00005	mg/L	0.0125 mg/L	98.4	80.0	120	----
Nickel, dissolved	7440-02-0	E421	0.0005	mg/L	0.025 mg/L	96.9	80.0	120	----
Selenium, dissolved	7782-49-2	E421	0.00005	mg/L	0.05 mg/L	96.9	80.0	120	----
Silver, dissolved	7440-22-4	E421	0.00001	mg/L	0.005 mg/L	91.0	80.0	120	----
Sodium, dissolved	7440-23-5	E421	0.05	mg/L	2.5 mg/L	98.7	80.0	120	----
Thallium, dissolved	7440-28-0	E421	0.00001	mg/L	0.05 mg/L	102	80.0	120	----
Uranium, dissolved	7440-61-1	E421	0.00001	mg/L	0.00025 mg/L	103	80.0	120	----
Vanadium, dissolved	7440-62-2	E421	0.0005	mg/L	0.025 mg/L	98.5	80.0	120	----
Zinc, dissolved	7440-66-6	E421	0.001	mg/L	0.025 mg/L	98.9	80.0	120	----
Mercury, dissolved	7439-97-6	E509	0.000005	mg/L	0.0001 mg/L	97.9	80.0	120	----
Speciated Metals (QCLot: 917553)									

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Laboratory Control Sample (LCS) Report: Spike Concentration	Recovery (%): LCS	Recovery Limits (%): Low	Recovery Limits (%): High	Qualifier
Speciated Metals (QCLot: 917553) - continued									
Chromium, hexavalent [Cr VI], dissolved	18540-29-9	E532A	0.0005	mg/L	0.025 mg/L	97.5	80.0	120	----
Volatile Organic Compounds (QCLot: 917951)									
Acetone	67-64-1	E611D	20	µg/L	100 µg/L	103	70.0	130	----
Benzene	71-43-2	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
Bromodichloromethane	75-27-4	E611D	0.5	µg/L	100 µg/L	96.2	70.0	130	----
Bromoform	75-25-2	E611D	0.5	µg/L	100 µg/L	90.2	70.0	130	----
Bromomethane	74-83-9	E611D	0.5	µg/L	100 µg/L	110	60.0	140	----
Carbon tetrachloride	56-23-5	E611D	0.2	µg/L	100 µg/L	98.7	70.0	130	----
Chlorobenzene	108-90-7	E611D	0.5	µg/L	100 µg/L	97.9	70.0	130	----
Chloroform	67-66-3	E611D	0.5	µg/L	100 µg/L	99.5	70.0	130	----
Dibromochloromethane	124-48-1	E611D	0.5	µg/L	100 µg/L	91.8	70.0	130	----
Dibromoethane, 1,2-	106-93-4	E611D	0.2	µg/L	100 µg/L	93.3	70.0	130	----
Dichlorobenzene, 1,2-	95-50-1	E611D	0.5	µg/L	100 µg/L	94.7	70.0	130	----
Dichlorobenzene, 1,3-	541-73-1	E611D	0.5	µg/L	100 µg/L	97.4	70.0	130	----
Dichlorobenzene, 1,4-	106-46-7	E611D	0.5	µg/L	100 µg/L	97.1	70.0	130	----
Dichlorodifluoromethane	75-71-8	E611D	0.5	µg/L	100 µg/L	104	60.0	140	----
Dichloroethane, 1,1-	75-34-3	E611D	0.5	µg/L	100 µg/L	104	70.0	130	----
Dichloroethane, 1,2-	107-06-2	E611D	0.5	µg/L	100 µg/L	97.3	70.0	130	----
Dichloroethylene, 1,1-	75-35-4	E611D	0.5	µg/L	100 µg/L	103	70.0	130	----
Dichloroethylene, cis-1,2-	156-59-2	E611D	0.5	µg/L	100 µg/L	98.6	70.0	130	----
Dichloroethylene, trans-1,2-	156-60-5	E611D	0.5	µg/L	100 µg/L	106	70.0	130	----
Dichloromethane	75-09-2	E611D	1	µg/L	100 µg/L	101	70.0	130	----
Dichloropropane, 1,2-	78-87-5	E611D	0.5	µg/L	100 µg/L	103	70.0	130	----
Dichloropropylene, cis-1,3-	10061-01-5	E611D	0.3	µg/L	100 µg/L	101	70.0	130	----
Dichloropropylene, trans-1,3-	10061-02-6	E611D	0.3	µg/L	100 µg/L	97.8	70.0	130	----
Ethylbenzene	100-41-4	E611D	0.5	µg/L	100 µg/L	99.5	70.0	130	----
Hexane, n-	110-54-3	E611D	0.5	µg/L	100 µg/L	107	70.0	130	----
Methyl ethyl ketone [MEK]	78-93-3	E611D	20	µg/L	100 µg/L	96.5	70.0	130	----
Methyl isobutyl ketone [MIBK]	108-10-1	E611D	20	µg/L	100 µg/L	92.0	70.0	130	----
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	0.5	µg/L	100 µg/L	103	70.0	130	----
Styrene	100-42-5	E611D	0.5	µg/L	100 µg/L	100	70.0	130	----
Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	0.5	µg/L	100 µg/L	96.7	70.0	130	----
Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	0.5	µg/L	100 µg/L	102	70.0	130	----
Tetrachloroethylene	127-18-4	E611D	0.5	µg/L	100 µg/L	95.2	70.0	130	----
Toluene	108-88-3	E611D	0.5	µg/L	100 µg/L	99.0	70.0	130	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Laboratory Control Sample (LCS) Report: Spike Concentration	LCS Recovery (%)	Recovery Limits (%): Low	Recovery Limits (%): High	Qualifier
Volatile Organic Compounds (QCLot: 917951) - continued									
Trichloroethane, 1,1,1-	71-55-6	E611D	0.5	µg/L	100 µg/L	99.2	70.0	130	----
Trichloroethane, 1,1,2-	79-00-5	E611D	0.5	µg/L	100 µg/L	96.7	70.0	130	----
Trichloroethylene	79-01-6	E611D	0.5	µg/L	100 µg/L	97.0	70.0	130	----
Trichlorofluoromethane	75-69-4	E611D	0.5	µg/L	100 µg/L	100	60.0	140	----
Vinyl chloride	75-01-4	E611D	0.5	µg/L	100 µg/L	109	60.0	140	----
Xylene, m+p-	179601-23-1	E611D	0.4	µg/L	200 µg/L	102	70.0	130	----
Xylene, o-	95-47-6	E611D	0.3	µg/L	100 µg/L	99.7	70.0	130	----
Hydrocarbons (QCLot: 917952)									
F1 (C6-C10)	----	E581.F1-L	25	µg/L	2000 µg/L	112	80.0	120	----
Hydrocarbons (QCLot: 918090)									
F2 (C10-C16)	----	E601.SG	100	µg/L	4613.474 µg/L	91.0	70.0	130	----
F3 (C16-C34)	----	E601.SG	250	µg/L	6464.481 µg/L	91.7	70.0	130	----
F4 (C34-C50)	----	E601.SG	250	µg/L	4040.361 µg/L	95.6	70.0	130	----
Polycyclic Aromatic Hydrocarbons (QCLot: 918089)									
Acenaphthene	83-32-9	E641A	0.01	µg/L	0.5263 µg/L	85.0	50.0	140	----
Acenaphthylene	208-96-8	E641A	0.01	µg/L	0.5263 µg/L	89.8	50.0	140	----
Anthracene	120-12-7	E641A	0.01	µg/L	0.5263 µg/L	91.9	50.0	140	----
Benz(a)anthracene	56-55-3	E641A	0.01	µg/L	0.5263 µg/L	99.6	50.0	140	----
Benzo(a)pyrene	50-32-8	E641A	0.005	µg/L	0.5263 µg/L	92.4	50.0	140	----
Benzo(b+j)fluoranthene	n/a	E641A	0.01	µg/L	0.5263 µg/L	85.0	50.0	140	----
Benzo(g,h,i)perylene	191-24-2	E641A	0.01	µg/L	0.5263 µg/L	118	50.0	140	----
Benzo(k)fluoranthene	207-08-9	E641A	0.01	µg/L	0.5263 µg/L	87.0	50.0	140	----
Chrysene	218-01-9	E641A	0.01	µg/L	0.5263 µg/L	99.6	50.0	140	----
Dibenz(a,h)anthracene	53-70-3	E641A	0.005	µg/L	0.5263 µg/L	102	50.0	140	----
Fluoranthene	206-44-0	E641A	0.01	µg/L	0.5263 µg/L	95.7	50.0	140	----
Fluorene	86-73-7	E641A	0.01	µg/L	0.5263 µg/L	91.8	50.0	140	----
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A	0.01	µg/L	0.5263 µg/L	114	50.0	140	----
Methylnaphthalene, 1-	90-12-0	E641A	0.01	µg/L	0.5263 µg/L	82.6	50.0	140	----
Methylnaphthalene, 2-	91-57-6	E641A	0.01	µg/L	0.5263 µg/L	81.3	50.0	140	----
Naphthalene	91-20-3	E641A	0.05	µg/L	0.5263 µg/L	81.3	50.0	140	----
Phenanthrene	85-01-8	E641A	0.02	µg/L	0.5263 µg/L	91.5	50.0	140	----
Pyrene	129-00-0	E641A	0.01	µg/L	0.5263 µg/L	95.7	50.0	140	----

Matrix Spike (MS) Report

A Matrix Spike (MS) is a randomly selected intra-laboratory replicate sample that has been fortified (spiked) with test analytes at known concentration, and processed in an identical manner to test samples. Matrix Spikes provide information regarding analyte recovery and potential matrix effects. MS DQO exceedances due to sample matrix may sometimes be unavoidable; in such cases, test results for the associated sample (or similar samples) may be subject to bias. ND – Recovery not determined, background level >= 1x spike level.

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Anions and Nutrients (QCLot: 919318)										
WT2310984-003	Anonymous	Chloride	16887-00-6	E235.Cl	97.3 mg/L	100 mg/L	97.3	75.0	125	----
Cyanides (QCLot: 920319)										
WT2310848-001	Anonymous	Cyanide, weak acid dissociable	----	E336	0.127 mg/L	0.125 mg/L	101	75.0	125	----
Dissolved Metals (QCLot: 917817)										
WT2311250-002	GW-12606873-270423-DA-BH12-22	Antimony, dissolved	7440-36-0	E421	0.471 mg/L	0.5 mg/L	94.2	70.0	130	----
		Arsenic, dissolved	7440-38-2	E421	0.511 mg/L	0.5 mg/L	102	70.0	130	----
		Barium, dissolved	7440-39-3	E421	ND mg/L	0.125 mg/L	ND	70.0	130	----
		Beryllium, dissolved	7440-41-7	E421	0.0477 mg/L	0.05 mg/L	95.4	70.0	130	----
		Boron, dissolved	7440-42-8	E421	0.449 mg/L	0.5 mg/L	89.9	70.0	130	----
		Cadmium, dissolved	7440-43-9	E421	0.0468 mg/L	0.05 mg/L	93.5	70.0	130	----
		Chromium, dissolved	7440-47-3	E421	0.116 mg/L	0.125 mg/L	93.2	70.0	130	----
		Cobalt, dissolved	7440-48-4	E421	0.115 mg/L	0.125 mg/L	91.8	70.0	130	----
		Copper, dissolved	7440-50-8	E421	0.112 mg/L	0.125 mg/L	89.4	70.0	130	----
		Lead, dissolved	7439-92-1	E421	0.239 mg/L	0.25 mg/L	95.5	70.0	130	----
		Molybdenum, dissolved	7439-98-7	E421	0.124 mg/L	0.125 mg/L	99.2	70.0	130	----
		Nickel, dissolved	7440-02-0	E421	0.227 mg/L	0.25 mg/L	90.8	70.0	130	----
		Selenium, dissolved	7782-49-2	E421	0.464 mg/L	0.5 mg/L	92.8	70.0	130	----
		Silver, dissolved	7440-22-4	E421	0.0427 mg/L	0.05 mg/L	85.4	70.0	130	----
		Sodium, dissolved	7440-23-5	E421	ND mg/L	25 mg/L	ND	70.0	130	----
		Thallium, dissolved	7440-28-0	E421	0.484 mg/L	0.5 mg/L	96.8	70.0	130	----
		Uranium, dissolved	7440-61-1	E421	ND mg/L	0.0025 mg/L	ND	70.0	130	----
		Vanadium, dissolved	7440-62-2	E421	0.242 mg/L	0.25 mg/L	97.0	70.0	130	----
		Zinc, dissolved	7440-66-6	E421	0.232 mg/L	0.25 mg/L	93.0	70.0	130	----
Dissolved Metals (QCLot: 918531)										
WT2311250-001	GW-12606873-270423-DA-BH02-22	Mercury, dissolved	7439-97-6	E509	0.000102 mg/L	0.0001 mg/L	102	70.0	130	----
Speciated Metals (QCLot: 917553)										
WT2311225-001	Anonymous	Chromium, hexavalent [Cr VI], dissolved	18540-29-9	E532A	0.0396 mg/L	0.04 mg/L	98.9	70.0	130	----
Volatile Organic Compounds (QCLot: 917951)										

Sub-Matrix: **Water**

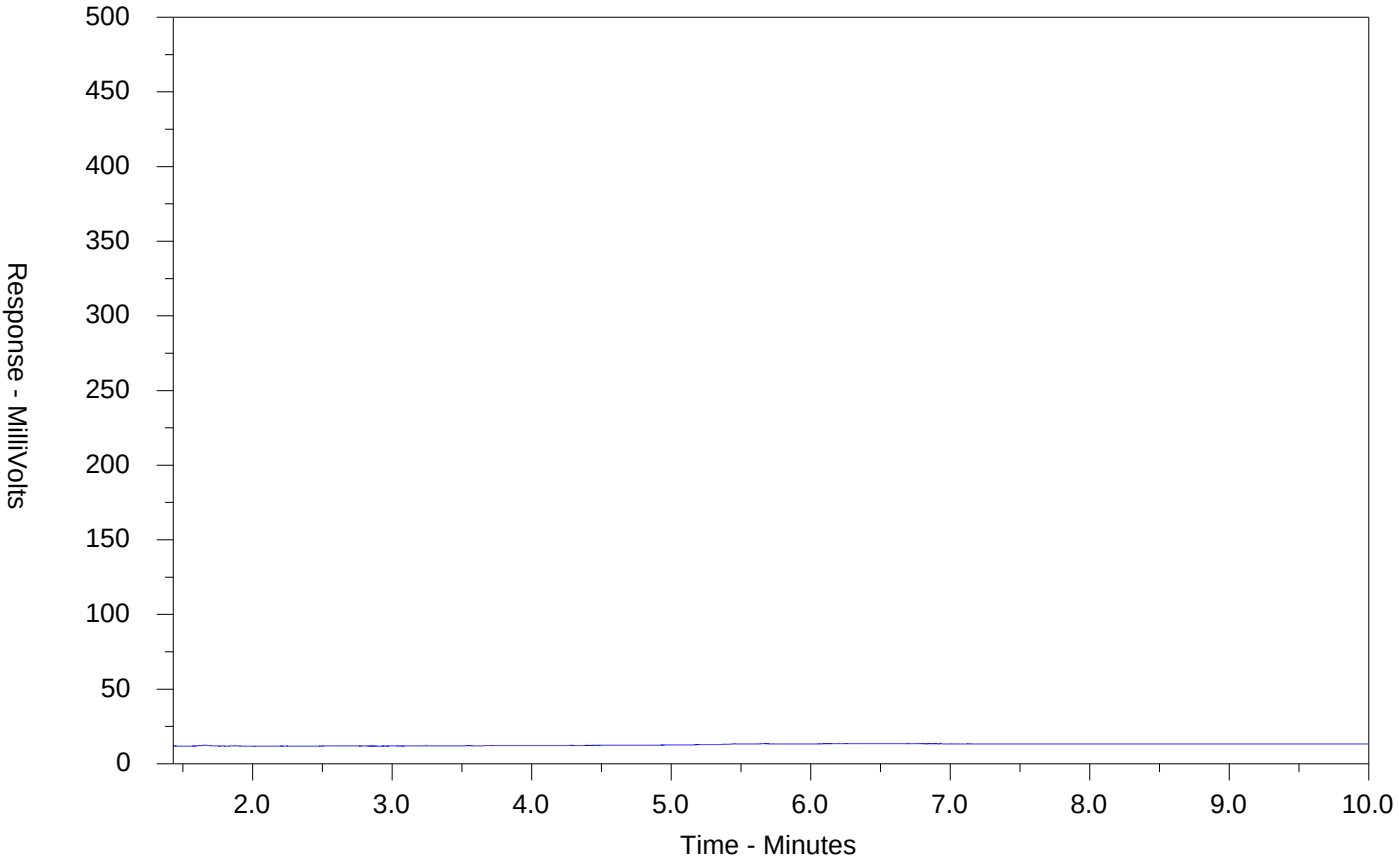
					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 917951) - continued										
WT2311250-001	GW-12606873-270423-DA-BH02-22	Acetone	67-64-1	E611D	108 µg/L	100 µg/L	108	60.0	140	----
		Benzene	71-43-2	E611D	101 µg/L	100 µg/L	101	60.0	140	----
		Bromodichloromethane	75-27-4	E611D	101 µg/L	100 µg/L	101	60.0	140	----
		Bromoform	75-25-2	E611D	95.5 µg/L	100 µg/L	95.5	60.0	140	----
		Bromomethane	74-83-9	E611D	92.8 µg/L	100 µg/L	92.8	60.0	140	----
		Carbon tetrachloride	56-23-5	E611D	97.6 µg/L	100 µg/L	97.6	60.0	140	----
		Chlorobenzene	108-90-7	E611D	98.6 µg/L	100 µg/L	98.6	60.0	140	----
		Chloroform	67-66-3	E611D	102 µg/L	100 µg/L	102	60.0	140	----
		Dibromochloromethane	124-48-1	E611D	97.0 µg/L	100 µg/L	97.0	60.0	140	----
		Dibromoethane, 1,2-	106-93-4	E611D	97.7 µg/L	100 µg/L	97.7	60.0	140	----
		Dichlorobenzene, 1,2-	95-50-1	E611D	97.3 µg/L	100 µg/L	97.3	60.0	140	----
		Dichlorobenzene, 1,3-	541-73-1	E611D	98.2 µg/L	100 µg/L	98.2	60.0	140	----
		Dichlorobenzene, 1,4-	106-46-7	E611D	98.2 µg/L	100 µg/L	98.2	60.0	140	----
		Dichlorodifluoromethane	75-71-8	E611D	61.1 µg/L	100 µg/L	61.1	60.0	140	----
		Dichloroethane, 1,1-	75-34-3	E611D	104 µg/L	100 µg/L	104	60.0	140	----
		Dichloroethane, 1,2-	107-06-2	E611D	103 µg/L	100 µg/L	103	60.0	140	----
		Dichloroethylene, 1,1-	75-35-4	E611D	92.4 µg/L	100 µg/L	92.4	60.0	140	----
		Dichloroethylene, cis-1,2-	156-59-2	E611D	99.1 µg/L	100 µg/L	99.1	60.0	140	----
		Dichloroethylene, trans-1,2-	156-60-5	E611D	101 µg/L	100 µg/L	101	60.0	140	----
		Dichloromethane	75-09-2	E611D	100 µg/L	100 µg/L	100	60.0	140	----
		Dichloropropane, 1,2-	78-87-5	E611D	105 µg/L	100 µg/L	105	60.0	140	----
		Dichloropropylene, cis-1,3-	10061-01-5	E611D	102 µg/L	100 µg/L	102	60.0	140	----
		Dichloropropylene, trans-1,3-	10061-02-6	E611D	97.7 µg/L	100 µg/L	97.7	60.0	140	----
		Ethylbenzene	100-41-4	E611D	97.9 µg/L	100 µg/L	97.9	60.0	140	----
		Hexane, n-	110-54-3	E611D	94.0 µg/L	100 µg/L	94.0	60.0	140	----
		Methyl ethyl ketone [MEK]	78-93-3	E611D	101 µg/L	100 µg/L	101	60.0	140	----
		Methyl isobutyl ketone [MIBK]	108-10-1	E611D	94 µg/L	100 µg/L	94.4	60.0	140	----
		Methyl-tert-butyl ether [MTBE]	1634-04-4	E611D	102 µg/L	100 µg/L	102	60.0	140	----
		Styrene	100-42-5	E611D	100 µg/L	100 µg/L	100	60.0	140	----
		Tetrachloroethane, 1,1,1,2-	630-20-6	E611D	99.3 µg/L	100 µg/L	99.3	60.0	140	----
		Tetrachloroethane, 1,1,2,2-	79-34-5	E611D	107 µg/L	100 µg/L	107	60.0	140	----
		Tetrachloroethylene	127-18-4	E611D	92.5 µg/L	100 µg/L	92.5	60.0	140	----
		Toluene	108-88-3	E611D	97.3 µg/L	100 µg/L	97.3	60.0	140	----
		Trichloroethane, 1,1,1-	71-55-6	E611D	97.2 µg/L	100 µg/L	97.2	60.0	140	----
		Trichloroethane, 1,1,2-	79-00-5	E611D	101 µg/L	100 µg/L	101	60.0	140	----

Sub-Matrix: **Water**

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	Qualifier
Volatile Organic Compounds (QCLot: 917951) - continued										
WT2311250-001	GW-12606873-270423-DA-BH02-22	Trichloroethylene	79-01-6	E611D	97.2 µg/L	100 µg/L	97.2	60.0	140	----
		Trichlorofluoromethane	75-69-4	E611D	87.1 µg/L	100 µg/L	87.1	60.0	140	----
		Vinyl chloride	75-01-4	E611D	82.2 µg/L	100 µg/L	82.2	60.0	140	----
		Xylene, m+p-	179601-23-1	E611D	203 µg/L	200 µg/L	101	60.0	140	----
		Xylene, o-	95-47-6	E611D	99.9 µg/L	100 µg/L	99.9	60.0	140	----
Hydrocarbons (QCLot: 917952)										
WT2311250-001	GW-12606873-270423-DA-BH02-22	F1 (C6-C10)	----	E581.F1-L	1620 µg/L	2000 µg/L	81.2	60.0	140	----

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT

ALS Sample ID: WT2311250-001-E601.SG
Client Sample ID: GW-12606873-270423-DA-BH02-22



←F2→	←F3→	←F4→	
nC10	nC16	nC34	nC50
174°C	287°C	481°C	575°C
346°F	549°F	898°F	1067°F
Gasoline →	← Motor Oils/Lube Oils/Grease →		
← Diesel/Jet Fuels →			

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

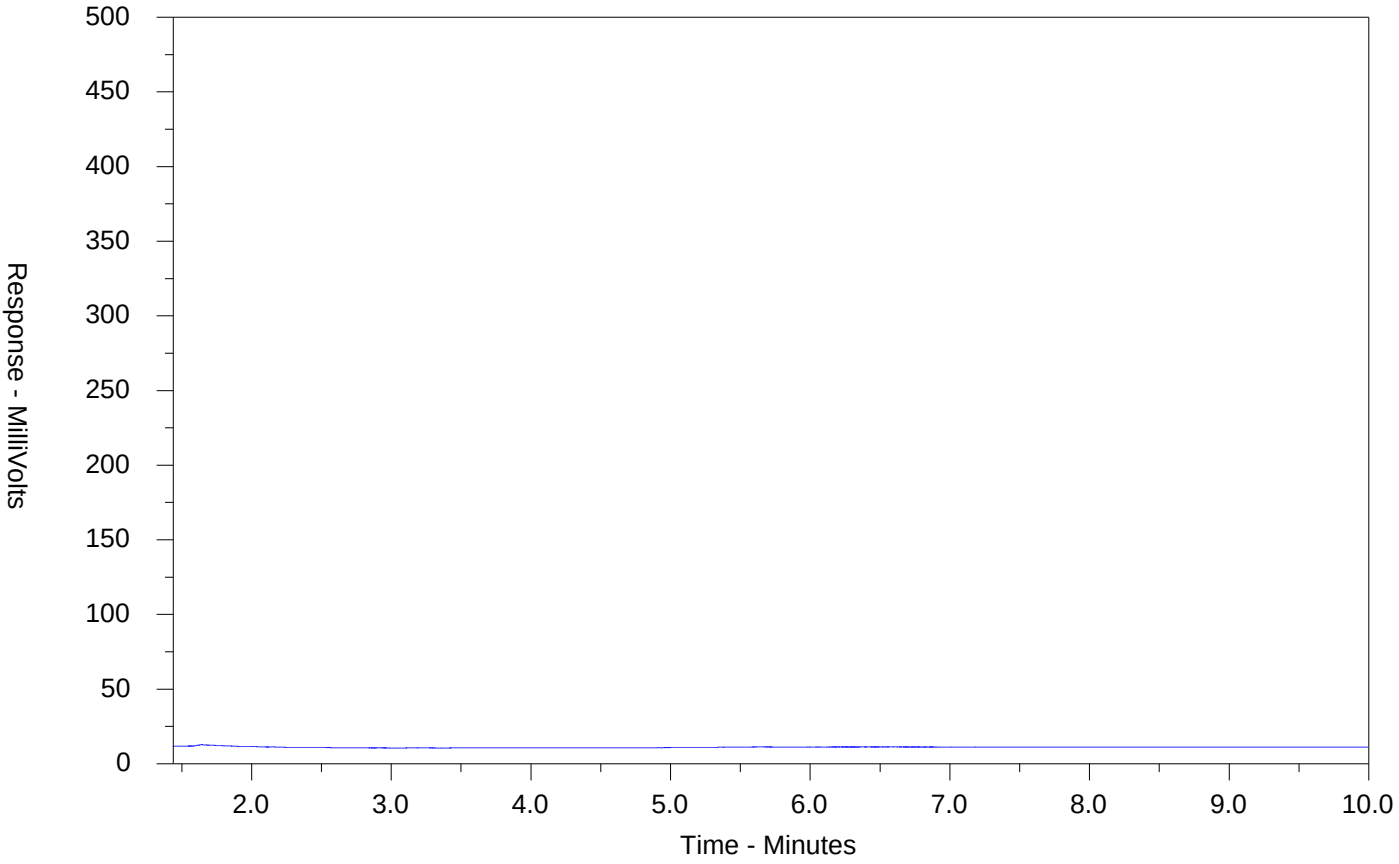
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT

ALS Sample ID: WT2311250-002-E601.SG
Client Sample ID: GW-12606873-270423-DA-BH12-22



←F2→	←F3→	←F4→	
nC10	nC16	nC34	nC50
174°C	287°C	481°C	575°C
346°F	549°F	898°F	1067°F
Gasoline →		← Motor Oils/Lube Oils/Grease →	
← Diesel/Jet Fuels →			

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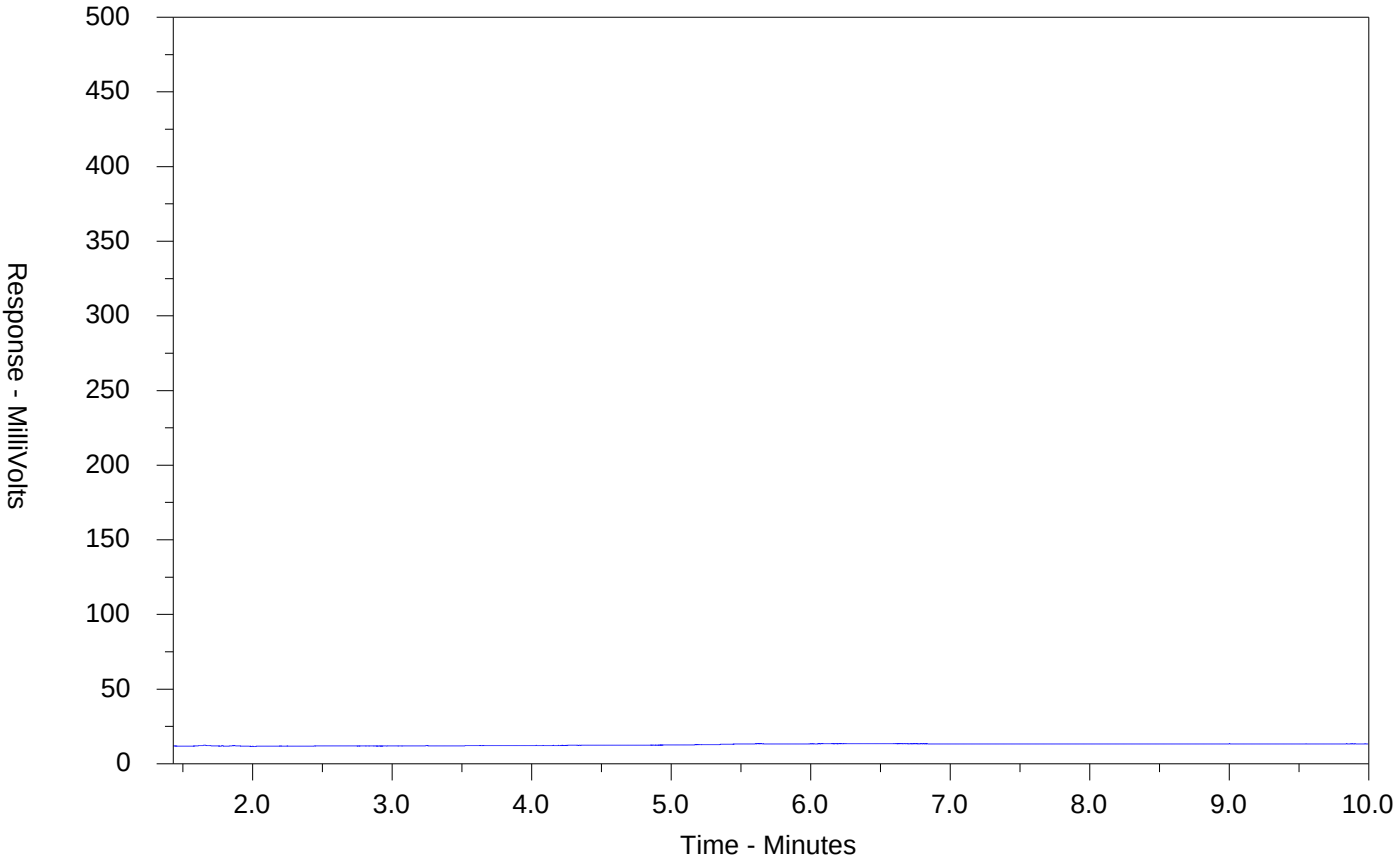
CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT

ALS Sample ID: WT2311250-003-E601.SG
Client Sample ID: GW-12606873-270423-DA-BH01-22



←F2→	←F3→	←F4→	
nC10	nC16	nC34	nC50
174°C	287°C	481°C	575°C
346°F	549°F	898°F	1067°F
Gasoline →		← Motor Oils/Lube Oils/Grease →	
← Diesel/Jet Fuels →			

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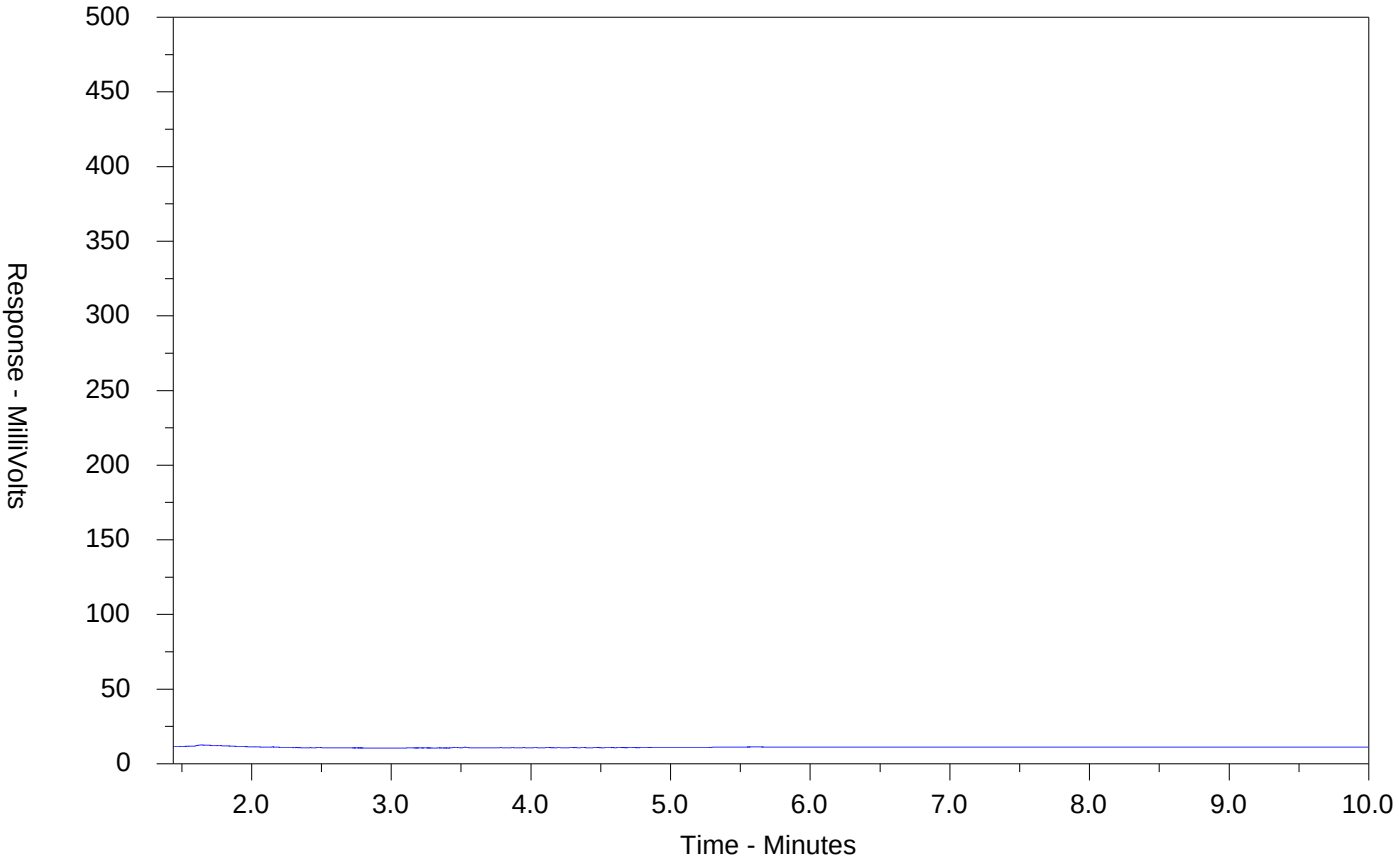
CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT

ALS Sample ID: WT2311250-004-E601.SG
Client Sample ID: GW-12606873-270423-DA-BH11-22



←F2→	←F3→	←F4→	
nC10	nC16	nC34	nC50
174°C	287°C	481°C	575°C
346°F	549°F	898°F	1067°F
Gasoline →	← Motor Oils/Lube Oils/Grease →		
← Diesel/Jet Fuels →			

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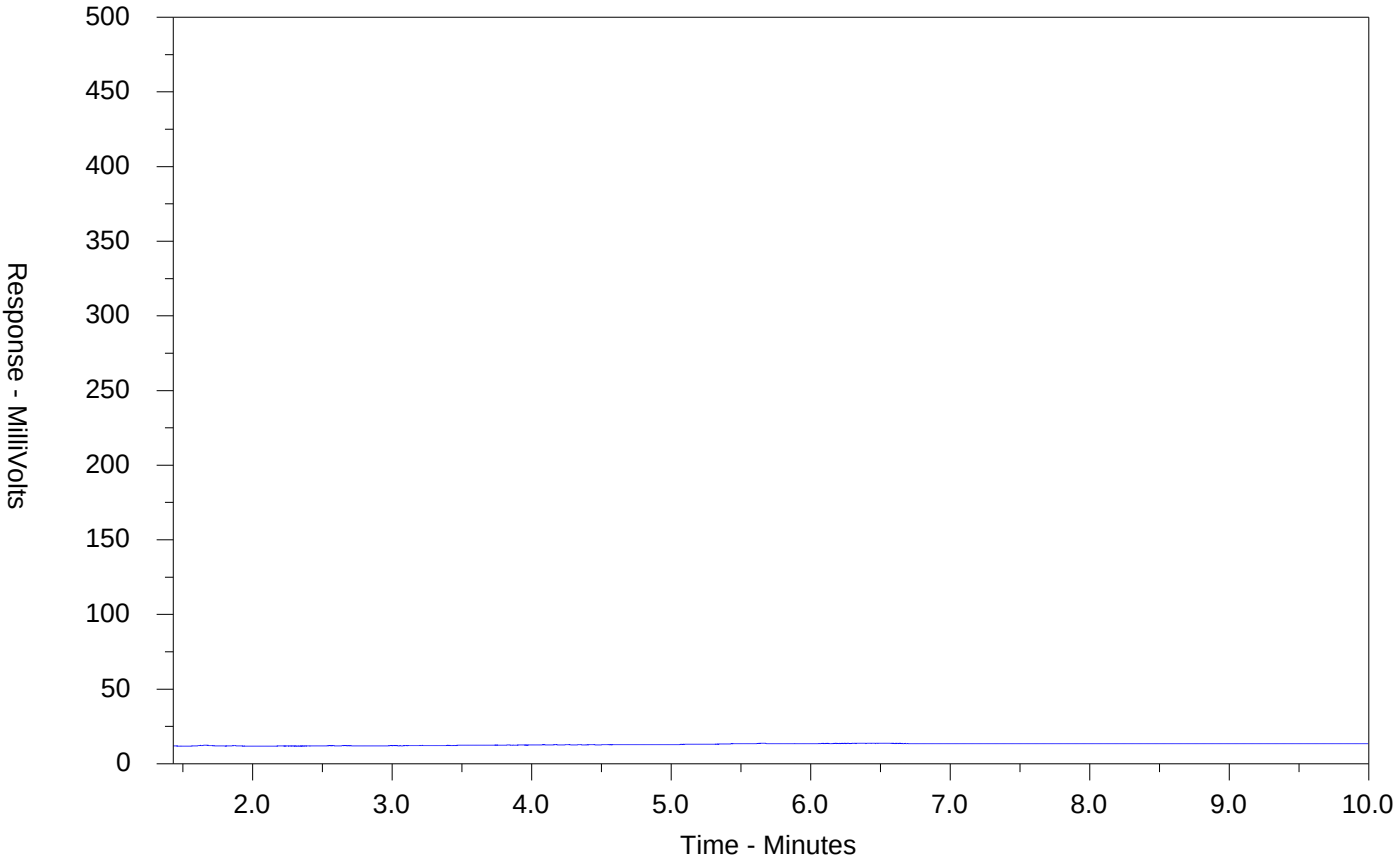
CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT

ALS Sample ID: WT2311250-005-E601.SG
Client Sample ID: GW-12606873-270423-DA-BH03-22



←F2→	←F3→	←F4→	
nC10	nC16	nC34	nC50
174°C	287°C	481°C	575°C
346°F	549°F	898°F	1067°F
Gasoline →	← Motor Oils/Lube Oils/Grease →		
← Diesel/Jet Fuels →			

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

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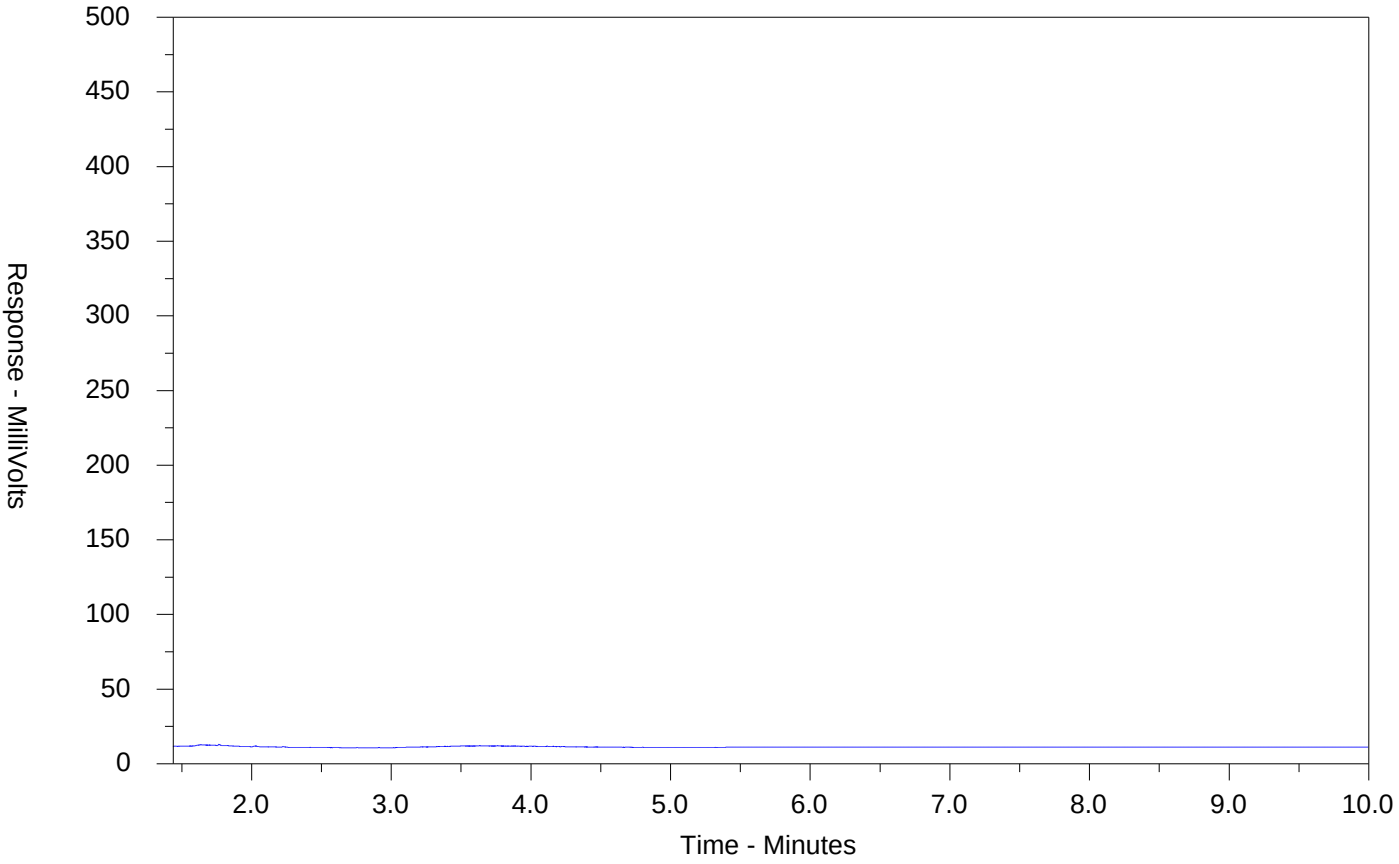
CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT

ALS Sample ID: WT2311250-006-E601.SG
Client Sample ID: GW-12606873-270423-DA-BH3-23



←F2→	←F3→	←F4→	
nC10	nC16	nC34	nC50
174°C	287°C	481°C	575°C
346°F	549°F	898°F	1067°F
Gasoline →		← Motor Oils/Lube Oils/Grease →	
← Diesel/Jet Fuels →			

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

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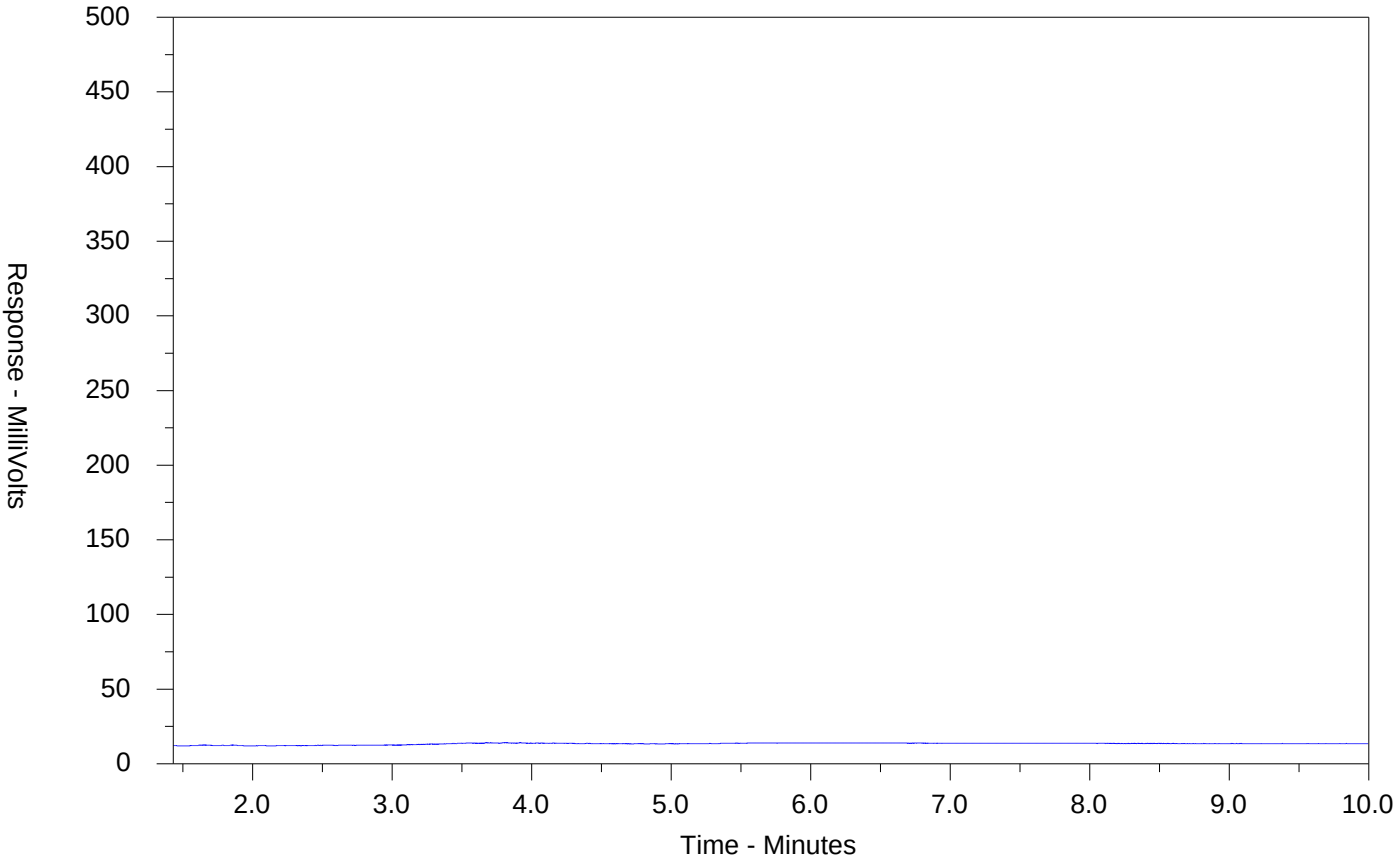
Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT

ALS Sample ID: WT2311250-007-E601.SG
Client Sample ID: GW-12606873-270423-DA-DUP



←F2→	←F3→	←F4→	
nC10	nC16	nC34	nC50
174°C	287°C	481°C	575°C
346°F	549°F	898°F	1067°F
Gasoline →	← Motor Oils/Lube Oils/Grease →		
← Diesel/Jet Fuels →			

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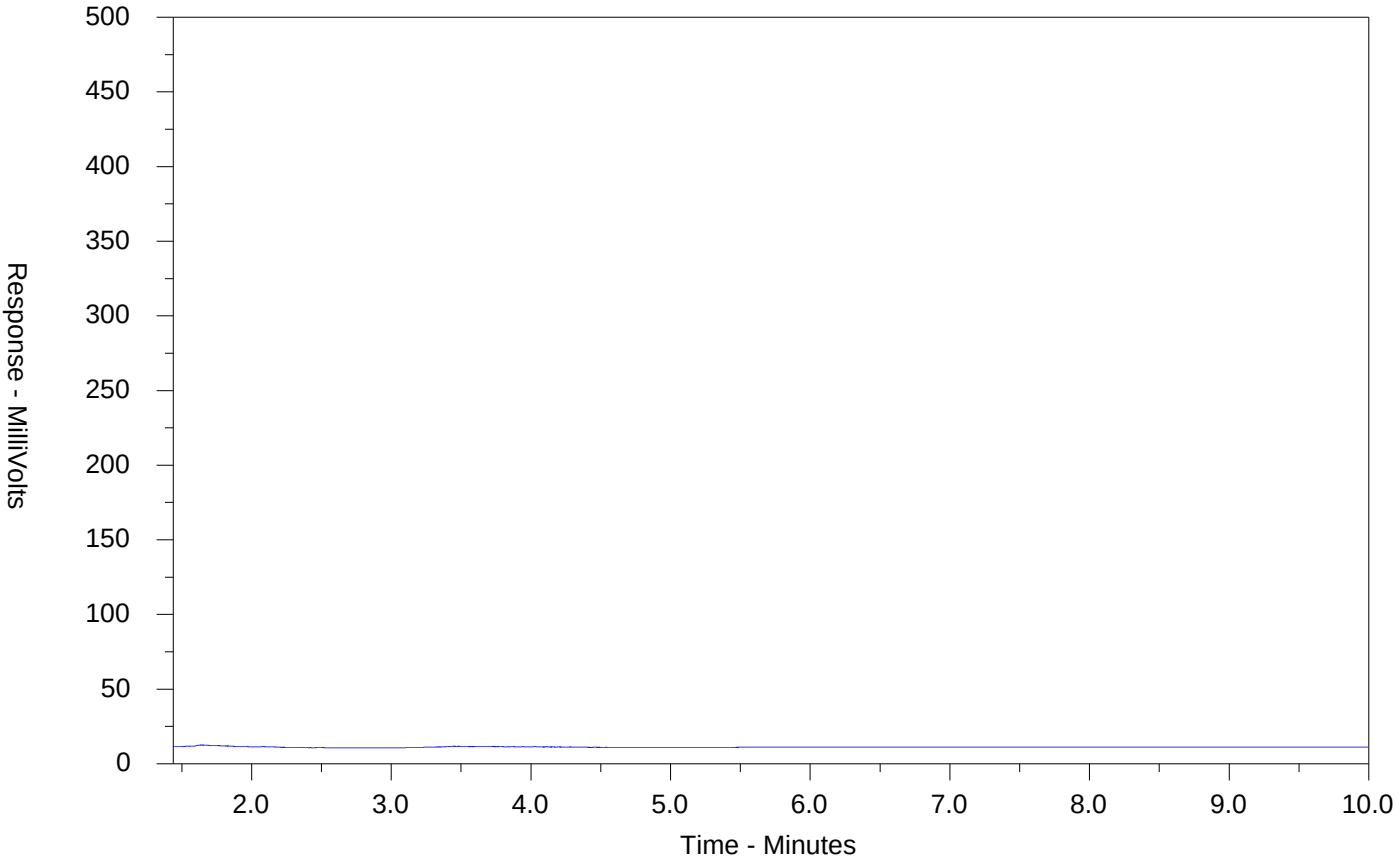
CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT

ALS Sample ID: WT2311250-008-E601.SG
Client Sample ID: GW-12606873-270423-DA-BH4-23



←F2→	←F3→	←F4→	
nC10	nC16	nC34	nC50
174°C	287°C	481°C	575°C
346°F	549°F	898°F	1067°F
Gasoline →	← Motor Oils/Lube Oils/Grease →		
← Diesel/Jet Fuels →			

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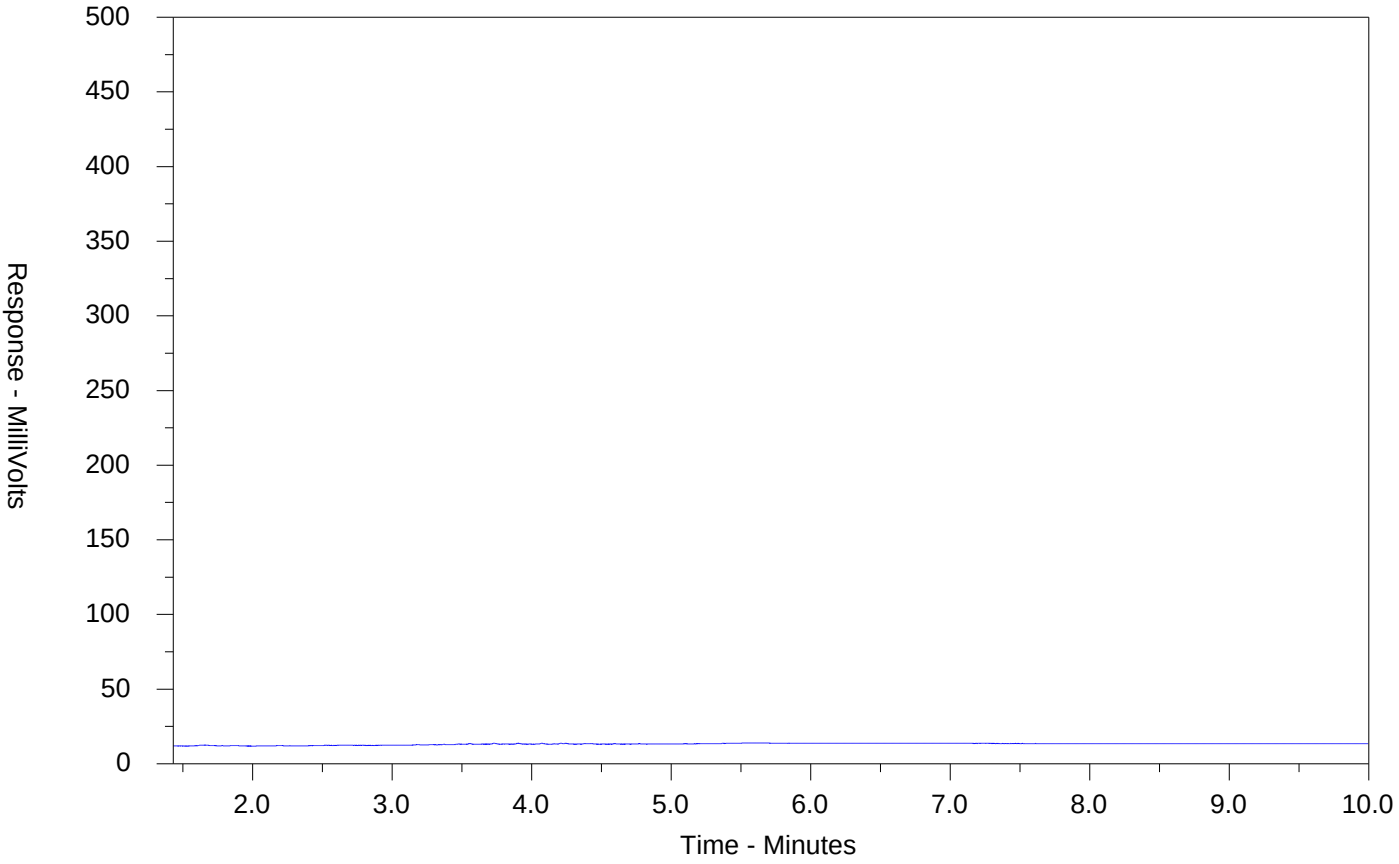
CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT

ALS Sample ID: WT2311250-009-E601.SG
Client Sample ID: GW-12606873-270423-DA-BH06-22



←F2→	←F3→	←F4→	
nC10	nC16	nC34	nC50
174°C	287°C	481°C	575°C
346°F	549°F	898°F	1067°F
Gasoline →	← Motor Oils/Lube Oils/Grease →		
← Diesel/Jet Fuels →			

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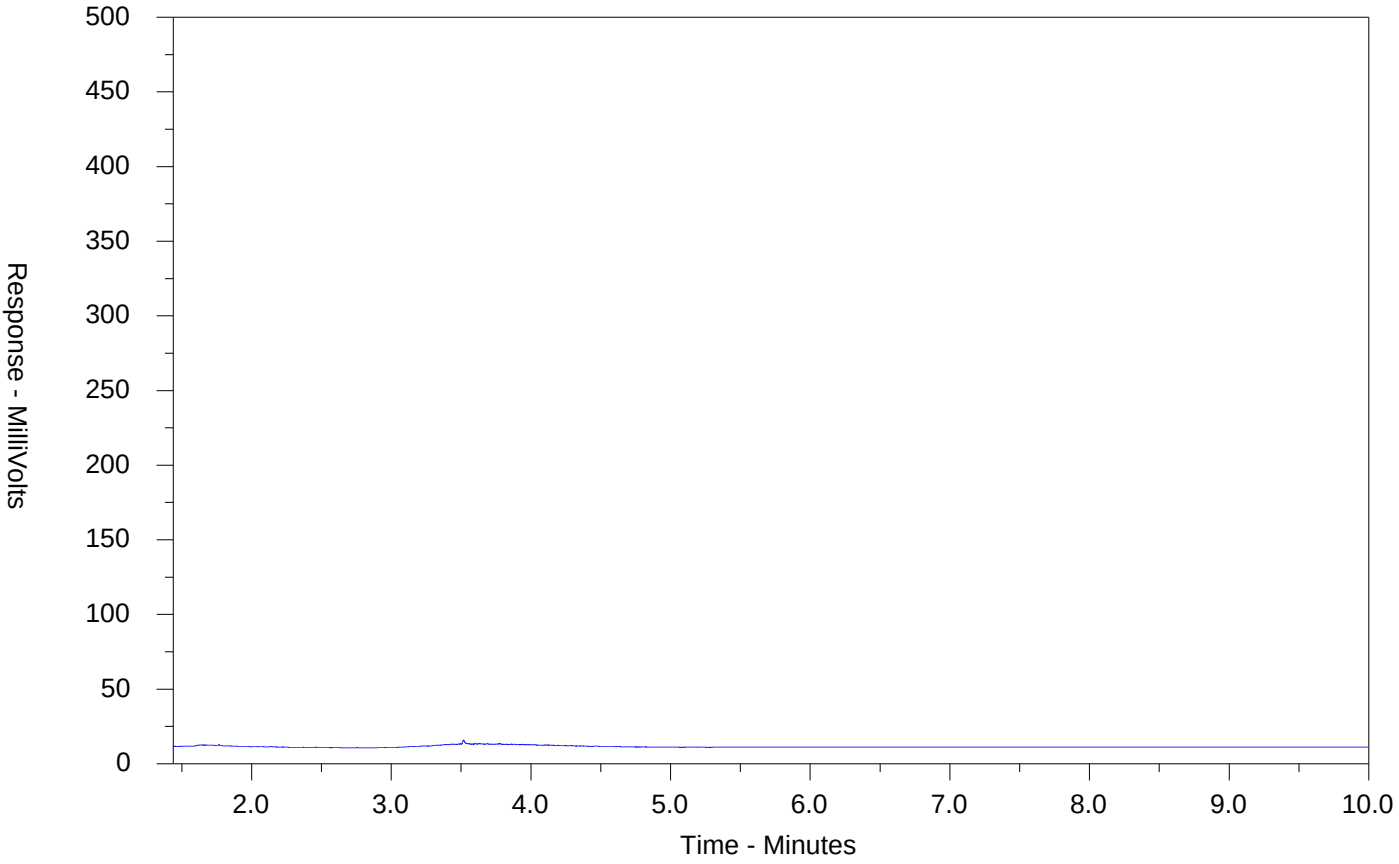
CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT

ALS Sample ID: WT2311250-010-E601.SG
Client Sample ID: GW-12606873-270423-DA-BH6-23



←F2→	←F3→	←F4→	
nC10	nC16	nC34	nC50
174°C	287°C	481°C	575°C
346°F	549°F	898°F	1067°F
Gasoline →		← Motor Oils/Lube Oils/Grease →	
← Diesel/Jet Fuels →			

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VN-020
OR-528
MM-884
GC-761
SC-299
CN-027

Chain of Custody (COC) / Analytical Request Form

COC Number: 20 -

Page

www.alsglobal.com

Canada Toll Free: 1 800 668 9878

Environmental Division Waterloo
Work Order Reference
WT2311250

Telephone : +1 519 886 6910

Report To	Contact and company name below will appear on the final report
Company:	GHD Ltd. (Acct GHDL100)
Contact:	Pascal Renella
Phone:	519-884-0510
	Company address below will appear on the final report
Street:	455 Phillip St.
City/Province:	Waterloo, ON
Postal Code:	N2L 3X2
Invoice To	Same as Report To ☑ YES ☐ NO
	Copy of Invoice with Report ☐ YES ☑ NO
Company:	GHD Ltd. (GHDL100)
Contact:	

Reports / Recipients

Select Report Format: ☑ PDF ☑ EXCEL ☑ EDD (DIGITAL)
Merge QC/QCI Reports with COA ☐ YES ☐ NO ☐ N/A
☐ Compare Results to Criteria on Report - provide details below if box checked
Select Distribution: ☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax: pascal.renella@ghd.com
Email 2: See SSOW/PO
Email 3:

Invoice Recipients

Select Invoice Distribution: ☑ EMAIL ☐ MAIL ☐ FAX
Email 1 or Fax: accountspayableCDN@ghd.com
Email 2:

Turnaround Time (TAT) Requested

☑ Routine [R] if received by 3pm M-F - no surcharges apply
☐ 4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum
☐ 3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum
☐ 2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum
☐ 1 day [E] if received by 3pm M-F - 100% rush surcharge minimum
☐ Same day [E2] if received by 10am M-S - 200% rush surcharge. Additional fees may apply to rush resuests on weekends, statutory holidays and non routine tests

Date and Time Required for all E&P TATs:

For tests that can not be performed according to the TAT requested, you will be contacted.

Project Information

ALS Account # / Quote #: WT2023GHDL1000077
Job #: 12606873-003.02
PO / AFE:
LSD:

Oil and Gas Required Fields (client use)

AFE/Cost Center: PO#
Major/Minor Code: Routing Code:
Requisitioner:
Location:

ALS Lab Work Order # (lab use only): WT2311250 FH

ALS Contact: Rick H Sampler:

Analysis Request

Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	Metals and Inorganics	VOC/PHC F1-F4 and PAHs	VOC, F1 - Trip Blank	SAMPLES ON HOLD	EXTENDED STORAGE REQUIRED	SUSPECTED HAZARD (see notes)
	GW-12606873-270423-DA-BH02-22	27-04-23	09:30	Water	9	X	X				
	GW-12606873-270423-DA-BH12-22		10:20	Water	9	X	X				
	GW-12606873-270423-DA-BH01-22		12:25	Water	9	X	X				
	GW-12606873-270423-DA-BH11-22		13:45	Water	9	X	X				
	GW-12606873-270423-DA-BH03-22		14:40	Water	9	X	X				
	GW-12606873-270423-DA-BH3-23		15:40	Water	9	X	X				
	GW-12606873-270423-DA-DUP		15:55	Water	9	X	X				
	GW-12606873-270423-DA-BH4-23		17:10	Water	9	X	X				
	GW-12606873-270423-DA-BH06-22		18:10	Water	9	X	X				
	GW-12606873-270423-DA-BH6-23		19:00	Water	9	X	X				
	Trip Blank DA			Water	~~9~~	X	X				

Drinking Water (DW) Samples[1] (client use)

Are samples taken from a Regulated DW System?
☐ YES ☑ NO
Are samples for human consumption/ use?
☐ YES ☑ NO

Notes / Specify Limits for result evaluation by selecting from drop-down below (Excel COC only)

2 coolers submitted, Trip Blank not provided.

SAMPLE RECEIPT DETAILS (lab use only)

Cooling Method: ☐ NONE ☑ ICE ☐ ICE PACKS ☐ FROZEN ☐ COOLING INITIATED
Submission Comments identified on Sample Receipt Notification: ☐ YES ☐ NO
Cooler Custody Seals Intact: ☐ YES ☐ N/A Sample Custody Seals Intact: ☐ YES ☐ N/A

INITIAL COOLER TEMPERATURES °C			FINAL COOLER TEMPERATURES °C			
5.3°C			10.1			

SHIPMENT RELEASE (client use)

Released by: Daithan Ash Date: April 27, 2023 Time: 20:10

INITIAL SHIPMENT RECEPTION (lab use only)

Received by: Eric Dobbs Date: 28/04/23 Time: 8:25

FINAL SHIPMENT RECEPTION (lab use only)

Received by: A Date: 1-MAY-23 Time: 9:00

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

AUG 2020 FRONT

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a **Regulated Drinking Water (DW) System**, please submit using an **Authorized DW COC form.**

Attachment 2

Data Quality Assessment and Verification

Technical Memorandum

May 12, 2023

To	Joseph Drader	**Tel**	514-339-0152
Copy to	Rehoboth Mubedi	**Email**	alexandre.lemire@ghd.com
From	Alexandre Lemire/an/01	**Ref. No.**	12606873-003.02
Subject	Data Quality Assessment and Verification Groundwater Sampling 570 March Road, Kanata First Gulf Corp		

Laboratory:	ALS Canada Ltd.
Lab Job No.:	WT2311250
Date(s) Sampled:	April 2023
Media Sampled:	Groundwater

QA/QC	Criteria	Pass	Qualifiers	Fail	N/A
Holding Times	Analyte specific	☒	☐	☐	☐
Temperature	<10ºC at receipt	☒	☐	☐	☐
Sample Preservation	Required container/preservatives	☒	☐	☐	☐
Field Duplicate (blind)	Within 50%/<1xRL (water)	☒	☐	☐	☐
Field Blank (blind)	Non detect	☐	☐	☐	☒
Trip Blank	Non detect	☐	☐	☐	☒
Lab QA/QC	Within standard recoveries	☒	☐	☐	☐

Conclusion:

Based on the assessment detailed in the foregoing, the data summarized are acceptable without qualification.

Notes:

N/A - Not Applicable

QA/QC - Quality Assurance/Quality Control

Data verification reference documents:

1. "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", United States Environmental Protection Agency (USEPA) 540/R-99-008, September 2016.
2. "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review", USEPA 540/R-94-013, September 2016.

3. "British Columbia Environmental Laboratory Manual", Analysis, Reporting & Knowledge Services Knowledge Management Branch Ministry of Environment and Climate Change Strategy Province of British Columbia, April 2020.
4. "Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act", Laboratory Services Branch, Ministry of the Environment, March 9, 2004, amended as of July 1, 2011.

Regards

Alexandre Lemire
Project chemist