CERTIFICATE OF ANALYSIS

Work Order	: **FC2301141**	Page	: 1 of 8
Client	: **Regional Municipality of Wood Buffalo**	Laboratory	: Fort McMurray - Environmental
Contact	: Water Treatment Plant	Account Manager	: Megan Trydal
Address	: 1 Silin Forest Road Fort Mcmurray AB Canada T9H 5A1	Address	: #4, 340 Macalpine Crescent Fort McMurray AB Canada T9H 4A8
Telephone	: 780-762-5863	Telephone	: +1 780 791 1524
Project	: Fort Chipewyan Imperial Release	Date Samples Received	: 09-May-2023 08:08
PO	: 4500051416	Date Analysis Commenced	: 09-May-2023
C-O-C number	: ----	Issue Date	: 11-May-2023 17:17
Sampler	: DM		
Site	:		
Quote number	: Q61323 (Fort chip)		
No. of samples received	: 5		
No. of samples analysed	: 5		

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*
Alex Drake	Lab Analyst	Inorganics, Edmonton, Alberta
Alex Drake	Lab Analyst	Metals, Edmonton, Alberta
Brooke Miller	Laboratory Analyst	Inorganics, Edmonton, Alberta
Christian Murera	Lab Analyst	Organics, Edmonton, Alberta
Dan Nguyen	Team Leader - Inorganics	Metals, Edmonton, Alberta
Geoff Berg	Lab Analyst	Organics, Edmonton, Alberta
Miles Gropen	Department Manager - Inorganics	Inorganics, Burnaby, British Columbia
Ping Yeung	Team Leader - Inorganics	Inorganics, Edmonton, Alberta
Remy Gatabazi	Lab Analyst	Organics, Edmonton, Alberta
Yan Zhang	Lab Analyst	Organics, Edmonton, Alberta

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).

Unit	*Description*
-	no units
%	percent
µg/L	micrograms per litre
µS/cm	microsiemens per centimetre
meq/L	milliequivalents per litre
mg/L	milligrams per litre
pH units	pH units
psu	practical salinity units

<: less than.

>: greater than.

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.

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.

Accreditation

Accreditation	*Description*	*Laboratory*	*Address*
A	CALA ISO/IEC 17025:2017	EO Edmonton - Environmental	9450 - 17 Avenue NW, Edmonton, Alberta
B	CALA ISO/IEC 17025:2017	VA Vancouver - Environmental	8081 Lougheed Highway, Burnaby, British Columbia

Applicable accreditations are indicated in the Method/Lab column as superscripts.

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab		LOR	Unit	Client sample ID: Treated Water	Raw Water Chamber Tap	120 Stewart Dr	128 McDonald St	164 Mackenzie Ave
Client sampling date / time						06-May-2023 10:00	06-May-2023 11:00	06-May-2023 10:30	06-May-2023 15:00	06-May-2023 11:00
						FC2301141-001	FC2301141-002	FC2301141-003	FC2301141-004	FC2301141-005
						Result	Result	Result	Result	Result
Physical Tests										
Hardness (as CaCO3), dissolved	----	EC100/EO		0.50	mg/L	29.9	27.4	30.3	29.7	29.6
Salinity	----	EC100S/VA		1.0	psu	<1.0	<1.0	<1.0	<1.0	<1.0
Conductivity	----	E100/EO	A	2.0	µS/cm	124	64.9	122	120	123
pH	----	E108/EO	A	0.10	pH units	8.97	7.34	8.87	8.79	8.90
Alkalinity, bicarbonate (as HCO3)	71-52-3	E290/EO	A	1.0	mg/L	42.9	29.8	44.0	43.8	46.4
Alkalinity, carbonate (as CO3)	3812-32-6	E290/EO	A	1.0	mg/L	4.1	<1.0	3.5	3.1	4.0
Alkalinity, hydroxide (as OH)	14280-30-9	E290/EO	A	1.0	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, total (as CaCO3)	----	E290/EO	A	2.0	mg/L	42.0	24.4	41.9	41.1	44.6
Solids, total dissolved [TDS], calculated	----	EC103/EO		1.0	mg/L	70.1	39.2	70.1	68.6	71.8
Anions and Nutrients										
Chloride	16887-00-6	E235.Cl/EO	A	0.50	mg/L	11.1	2.91	11.2	11.2	11.0
Fluoride	16984-48-8	E235.F/EO	A	0.020	mg/L	0.024	0.054	<0.020	0.020	0.030
Nitrate (as N)	14797-55-8	E235.NO3/EO	A	0.020	mg/L	<0.020	<0.020	<0.020	<0.020	<0.020
Nitrite (as N)	14797-65-0	E235.NO2/EO	A	0.010	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010
Sulfate (as SO4)	14808-79-8	E235.SO4/EO	A	0.30	mg/L	2.41	3.13	2.35	2.37	2.36
Nitrate + Nitrite (as N)	----	EC235.N+N/EO		0.0500	mg/L	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
Total Sulfides										
Sulfide, total (as S)	18496-25-8	E395/VA	B	0.0015	mg/L	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015
Ion Balance										
Anion sum	----	EC101/EO		0.10	meq/L	1.20	0.64	1.20	1.19	1.25
Cation sum	----	EC101/EO		0.10	meq/L	1.30	0.70	1.30	1.26	1.31
Ion balance (APHA)	----	EC101/EO		0.01	%	4.00	4.48	4.00	2.86	2.34
Ion balance (cations/anions)	----	EC101/EO		0.010	%	108	109	108	106	105
Total Metals										
Aluminum, total	7429-90-5	E420/EO	A	0.0030	mg/L	0.0197	0.105	0.0223	0.0195	0.0288
Antimony, total	7440-36-0	E420/EO	A	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic, total	7440-38-2	E420/EO	A	0.00010	mg/L	0.00015	0.00022	0.00016	0.00013	0.00017
Barium, total	7440-39-3	E420/EO	A	0.00010	mg/L	0.0155	0.0156	0.0152	0.0152	0.0139

Analytical Results

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

Analyte	CAS Number	Method/Lab		LOR	Unit	Client sample ID: Treated Water	Raw Water Chamber Tap	120 Stewart Dr	128 McDonald St	164 Mackenzie Ave
						Client sampling date / time: 06-May-2023 10:00	06-May-2023 11:00	06-May-2023 10:30	06-May-2023 15:00	06-May-2023 11:00
						FC2301141-001	FC2301141-002	FC2301141-003	FC2301141-004	FC2301141-005
						Result	Result	Result	Result	Result
Total Metals										
Beryllium, total	7440-41-7	E420/EO	A	0.000020	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Bismuth, total	7440-69-9	E420/EO	A	0.000050	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron, total	7440-42-8	E420/EO	A	0.010	mg/L	0.011	0.011	0.011	0.011	0.011
Cadmium, total	7440-43-9	E420/EO	A	0.0000050	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium, total	7440-70-2	E420/EO	A	0.050	mg/L	8.14	7.13	8.15	8.19	8.03
Cesium, total	7440-46-2	E420/EO	A	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Chromium, total	7440-47-3	E420/EO	A	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt, total	7440-48-4	E420/EO	A	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Copper, total	7440-50-8	E420/EO	A	0.00050	mg/L	<0.00050	0.00086	<0.00050	<0.00050	0.00105
Iron, total	7439-89-6	E420/EO	A	0.010	mg/L	<0.010	0.095	<0.010	<0.010	<0.010
Lead, total	7439-92-1	E420/EO	A	0.000050	mg/L	<0.000050	0.000051	<0.000050	<0.000050	<0.000050
Lithium, total	7439-93-2	E420/EO	A	0.0010	mg/L	0.0026	0.0024	0.0025	0.0025	0.0023
Magnesium, total	7439-95-4	E420/EO	A	0.0050	mg/L	2.29	2.21	2.27	2.25	2.25
Manganese, total	7439-96-5	E420/EO	A	0.00010	mg/L	0.00184	0.00364	0.00160	0.00149	0.00112
Molybdenum, total	7439-98-7	E420/EO	A	0.000050	mg/L	0.000139	0.000175	0.000136	0.000154	0.000161
Nickel, total	7440-02-0	E420/EO	A	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Phosphorus, total	7723-14-0	E420/EO	A	0.050	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050
Potassium, total	7440-09-7	E420/EO	A	0.050	mg/L	0.957	0.928	0.939	0.944	0.943
Rubidium, total	7440-17-7	E420/EO	A	0.00020	mg/L	0.00084	0.00103	0.00095	0.00089	0.00090
Selenium, total	7782-49-2	E420/EO	A	0.000050	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Silicon, total	7440-21-3	E420/EO	A	0.10	mg/L	1.58	1.87	1.56	1.59	1.59
Silver, total	7440-22-4	E420/EO	A	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium, total	7440-23-5	E420/EO	A	0.050	mg/L	15.2	2.56	14.9	14.1	15.1
Strontium, total	7440-24-6	E420/EO	A	0.00020	mg/L	0.0489	0.0478	0.0495	0.0492	0.0477
Sulfur, total	7704-34-9	E420/EO	A	0.50	mg/L	0.94	1.04	1.05	1.05	1.04
Tellurium, total	13494-80-9	E420/EO	A	0.00020	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Thallium, total	7440-28-0	E420/EO	A	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Thorium, total	7440-29-1	E420/EO	A	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin, total	7440-31-5	E420/EO	A	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium, total	7440-32-6	E420/EO	A	0.00030	mg/L	<0.00030	0.00256	<0.00030	<0.00030	<0.00030

Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab		LOR	Unit	Client sample ID: Treated Water	Raw Water Chamber Tap	120 Stewart Dr	128 McDonald St	164 Mackenzie Ave
						Client sampling date / time: 06-May-2023 10:00	06-May-2023 11:00	06-May-2023 10:30	06-May-2023 15:00	06-May-2023 11:00
						FC2301141-001	FC2301141-002	FC2301141-003	FC2301141-004	FC2301141-005
						Result	Result	Result	Result	Result
Total Metals										
Tungsten, total	7440-33-7	E420/EO	A	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium, total	7440-61-1	E420/EO	A	0.000010	mg/L	<0.000010	0.000084	<0.000010	<0.000010	<0.000010
Vanadium, total	7440-62-2	E420/EO	A	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Zinc, total	7440-66-6	E420/EO	A	0.0030	mg/L	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Zirconium, total	7440-67-7	E420/EO	A	0.00020	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421/EO	A	0.0010	mg/L	0.0206	0.110	0.0216	0.0197	0.0299
Antimony, dissolved	7440-36-0	E421/EO	A	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic, dissolved	7440-38-2	E421/EO	A	0.00010	mg/L	0.00014	0.00021	0.00014	0.00013	0.00015
Barium, dissolved	7440-39-3	E421/EO	A	0.00010	mg/L	0.0151	0.0154	0.0149	0.0148	0.0138
Beryllium, dissolved	7440-41-7	E421/EO	A	0.000020	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Bismuth, dissolved	7440-69-9	E421/EO	A	0.000050	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron, dissolved	7440-42-8	E421/EO	A	0.010	mg/L	0.014	0.012	0.013	0.011	0.012
Cadmium, dissolved	7440-43-9	E421/EO	A	0.0000050	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium, dissolved	7440-70-2	E421/EO	A	0.050	mg/L	8.21	7.25	8.35	8.08	8.12
Cesium, dissolved	7440-46-2	E421/EO	A	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Chromium, dissolved	7440-47-3	E421/EO	A	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt, dissolved	7440-48-4	E421/EO	A	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Copper, dissolved	7440-50-8	E421/EO	A	0.00020	mg/L	0.00040	0.00086	0.00044	0.00043	0.00110
Iron, dissolved	7439-89-6	E421/EO	A	0.030	mg/L	<0.030	0.092	<0.030	<0.030	<0.030
Lead, dissolved	7439-92-1	E421/EO	A	0.000050	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Lithium, dissolved	7439-93-2	E421/EO	A	0.0010	mg/L	0.0026	0.0024	0.0026	0.0026	0.0023
Magnesium, dissolved	7439-95-4	E421/EO	A	0.0050	mg/L	2.28	2.25	2.29	2.31	2.27
Manganese, dissolved	7439-96-5	E421/EO	A	0.00500	mg/L	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
Molybdenum, dissolved	7439-98-7	E421/EO	A	0.000050	mg/L	0.000149	0.000159	0.000152	0.000155	0.000170
Nickel, dissolved	7440-02-0	E421/EO	A	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Phosphorus, dissolved	7723-14-0	E421/EO	A	0.050	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050
Potassium, dissolved	7440-09-7	E421/EO	A	0.050	mg/L	0.950	0.945	0.951	0.956	0.953
Rubidium, dissolved	7440-17-7	E421/EO	A	0.00020	mg/L	0.00097	0.00091	0.00088	0.00094	0.00090
Selenium, dissolved	7782-49-2	E421/EO	A	0.000050	mg/L	<0.000050	0.000052	<0.000050	<0.000050	<0.000050

Analytical Results

Sub-Matrix: Water (Matrix: Water)

Analyte	CAS Number	Method/Lab		LOR	Unit	Client sample ID	Treated Water	Raw Water Chamber Tap	120 Stewart Dr	128 McDonald St	164 Mackenzie Ave
						Client sampling date / time	06-May-2023 10:00	06-May-2023 11:00	06-May-2023 10:30	06-May-2023 15:00	06-May-2023 11:00
							FC2301141-001	FC2301141-002	FC2301141-003	FC2301141-004	FC2301141-005
							Result	Result	Result	Result	Result
Dissolved Metals											
Silicon, dissolved	7440-21-3	E421/EO	A	0.050	mg/L		1.58	1.90	1.58	1.56	1.60
Silver, dissolved	7440-22-4	E421/EO	A	0.000010	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Sodium, dissolved	7440-23-5	E421/EO	A	0.050	mg/L		15.6	2.63	15.5	14.8	15.9
Strontium, dissolved	7440-24-6	E421/EO	A	0.00020	mg/L		0.0497	0.0489	0.0512	0.0498	0.0493
Sulfur, dissolved	7704-34-9	E421/EO	A	0.50	mg/L		1.00	1.10	1.02	1.07	1.05
Tellurium, dissolved	13494-80-9	E421/EO	A	0.00020	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Thallium, dissolved	7440-28-0	E421/EO	A	0.000010	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Thorium, dissolved	7440-29-1	E421/EO	A	0.00010	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Tin, dissolved	7440-31-5	E421/EO	A	0.00010	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Titanium, dissolved	7440-32-6	E421/EO	A	0.00030	mg/L		<0.00030	0.00279	<0.00030	<0.00030	<0.00030
Tungsten, dissolved	7440-33-7	E421/EO	A	0.00010	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium, dissolved	7440-61-1	E421/EO	A	0.000010	mg/L		<0.000010	0.000080	<0.000010	<0.000010	<0.000010
Vanadium, dissolved	7440-62-2	E421/EO	A	0.00050	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Zinc, dissolved	7440-66-6	E421/EO	A	0.0010	mg/L		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zirconium, dissolved	7440-67-7	E421/EO	A	0.00030	mg/L		<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
Dissolved metals filtration location	----	EP421/EO		-	-		Field	Field	Field	Field	Field
Aggregate Organics											
Naphthenic acids	----	E565-L/EO	A	0.10	mg/L		<0.10	<0.10	<0.10	<0.10	<0.10
Volatile Organic Compounds [Fuels]											
Benzene	71-43-2	E611A/EO	A	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Ethylbenzene	100-41-4	E611A/EO	A	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Methyl-tert-butyl ether [MTBE]	1634-04-4	E611A/EO		0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Styrene	100-42-5	E611A/EO	A	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Toluene	108-88-3	E611A/EO	A	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
Xylene, m+p-	179601-23-1	E611A/EO	A	0.40	µg/L		<0.40	<0.40	<0.40	<0.40	<0.40
Xylene, o-	95-47-6	E611A/EO	A	0.30	µg/L		<0.30	<0.30	<0.30	<0.30	<0.30
Xylenes, total	1330-20-7	E611A/EO	A	0.50	µg/L		<0.50	<0.50	<0.50	<0.50	<0.50
BTEX, total	----	E611A/EO		1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
BTEX+Styrene, total	n/a	E611A/EO		1.5	µg/L		<1.5	<1.5	<1.5	<1.5	<1.5
Hydrocarbons											

Analytical Results

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

Analyte	CAS Number	Method/Lab		LOR	Unit	Client sample ID: Treated Water	Raw Water Chamber Tap	120 Stewart Dr	128 McDonald St	164 Mackenzie Ave
						Client sampling date / time: 06-May-2023 10:00	06-May-2023 11:00	06-May-2023 10:30	06-May-2023 15:00	06-May-2023 11:00
						FC2301141-001	FC2301141-002	FC2301141-003	FC2301141-004	FC2301141-005
						Result	Result	Result	Result	Result
Hydrocarbons										
F1 (C6-C10)	----	E581.F1/EO	A	100	µg/L	<100	<100	<100	<100	<100
F1-BTEX	----	EC580/EO		100	µg/L	<100	<100	<100	<100	<100
F2 (C10-C16)	----	E601/EO	A	100	µg/L	<100	<100	<100	<100	<100
F3 (C16-C34)	----	E601/EO	A	250	µg/L	<250	<250	<250	<250	<250
F4 (C34-C50)	----	E601/EO	A	250	µg/L	<250	<250	<250	<250	<250
TEH (C10-C50)	n/a	E601/EO		400	µg/L	<400	<400	<400	<400	<400
TEH (C16-C50)	----	E601/EO		400	µg/L	<400	<400	<400	<400	<400
Hydrocarbons Surrogates										
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	E601/EO		1.0	%	92.0	94.3	93.3	93.8	93.6
Dichlorotoluene, 3,4-	95-75-0	E581.F1/EO		1.0	%	111	107	108	107	112
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	460-00-4	E611A/EO		1.0	%	80.7	84.6	80.1	84.6	82.7
Difluorobenzene, 1,4-	540-36-3	E611A/EO		1.0	%	116	93.2	95.6	96.7	94.4
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	83-32-9	E641A/EO	A	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	<0.010
Acenaphthylene	208-96-8	E641A/EO	A	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	<0.010
Acridine	260-94-6	E641A/EO	A	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	<0.010
Anthracene	120-12-7	E641A/EO	A	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	<0.010
Benz(a)anthracene	56-55-3	E641A/EO	A	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(a)pyrene	50-32-8	E641A/EO	A	0.0050	µg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Benzo(b+j)fluoranthene	n/a	E641A/EO	A	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(b+j+k)fluoranthene	n/a	E641A/EO		0.015	µg/L	<0.015	<0.015	<0.015	<0.015	<0.015
Benzo(g,h,i)perylene	191-24-2	E641A/EO	A	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(k)fluoranthene	207-08-9	E641A/EO	A	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	<0.010
Chrysene	218-01-9	E641A/EO	A	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	<0.010
Dibenz(a,h)anthracene	53-70-3	E641A/EO	A	0.0050	µg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Fluoranthene	206-44-0	E641A/EO	A	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	<0.010
Fluorene	86-73-7	E641A/EO	A	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	<0.010
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A/EO	A	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	<0.010
Methylnaphthalene, 1-	90-12-0	E641A/EO	A	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	<0.010

Analytical Results

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

Analyte	CAS Number	Method/Lab		LOR	Unit	Client sample ID: Treated Water	Raw Water Chamber Tap	120 Stewart Dr	128 McDonald St	164 Mackenzie Ave
						Client sampling date / time: 06-May-2023 10:00	06-May-2023 11:00	06-May-2023 10:30	06-May-2023 15:00	06-May-2023 11:00
						FC2301141-001	FC2301141-002	FC2301141-003	FC2301141-004	FC2301141-005
						Result	Result	Result	Result	Result
Polycyclic Aromatic Hydrocarbons										
Methylnaphthalene, 1+2-	----	E641A/EO		0.015	µg/L	<0.015	<0.015	<0.015	<0.015	<0.015
Methylnaphthalene, 2-	91-57-6	E641A/EO	A	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	<0.010
Naphthalene	91-20-3	E641A/EO	A	0.050	µg/L	<0.050	<0.050	<0.050	<0.050	<0.050
Phenanthrene	85-01-8	E641A/EO	A	0.020	µg/L	<0.020	<0.020	<0.020	<0.020	<0.020
Pyrene	129-00-0	E641A/EO	A	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	<0.010
Quinoline	91-22-5	E641A/EO	A	0.050	µg/L	<0.050	<0.050	<0.050	<0.050	<0.050
B(a)P total potency equivalents [B(a)P TPE]	----	E641A/EO		0.010	µg/L	<0.010	<0.010	<0.010	<0.010	<0.010
PAHs, high molecular weight (BC AWQ)	n/a	E641A/EO		0.030	µg/L	<0.030	<0.030	<0.030	<0.030	<0.030
PAHs, low molecular weight (BC AWQ)	n/a	E641A/EO		0.060	µg/L	<0.060	<0.060	<0.060	<0.060	<0.060
PAHs, total (CCME sewer 18)	n/a	E641A/EO		0.070	µg/L	<0.070	<0.070	<0.070	<0.070	<0.070
PAHs, total (EPA 16)	n/a	E641A/EO		0.065	µg/L	<0.065	<0.065	<0.065	<0.065	<0.065
Polycyclic Aromatic Hydrocarbons Surrogates										
Chrysene-d12	1719-03-5	E641A/EO		0.1	%	82.0	83.6	89.6	76.8	86.2
Naphthalene-d8	1146-65-2	E641A/EO		0.1	%	110	107	120	104	109
Phenanthrene-d10	1517-22-2	E641A/EO		0.1	%	105	109	114	104	110

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

Please refer to the Accreditation section for an explanation of analyte accreditations.

CERTIFICATE OF ANALYSIS

Work Order	: **FC2301141**	Page	: 1 of 22
Client	: **Regional Municipality of Wood Buffalo**	Laboratory	: Fort McMurray - Environmental
Contact	: Water Treatment Plant	Account Manager	: Megan Trydal
Address	: 1 Silin Forest Road Fort Mcmurray AB Canada T9H 5A1	Address	: #4, 340 Macalpine Crescent Fort McMurray AB Canada T9H 4A8
Telephone	: 780-762-5863	Telephone	: +1 780 791 1524
Project	: Fort Chipewyan Imperial Release	Date Samples Received	: 09-May-2023 08:08
PO	: 4500051416	Date Analysis Commenced	: 09-May-2023
C-O-C number	: ----	Issue Date	: 11-May-2023 17:19
Sampler	: DM		
Site	:		
Quote number	: Q61323 (Fort chip)		
No. of samples received	: 5		
No. of samples analysed	: 5		

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*
Alex Drake	Lab Analyst	Inorganics, Edmonton, Alberta
Alex Drake	Lab Analyst	Metals, Edmonton, Alberta
Brooke Miller	Laboratory Analyst	Inorganics, Edmonton, Alberta
Christian Murera	Lab Analyst	Organics, Edmonton, Alberta
Dan Nguyen	Team Leader - Inorganics	Metals, Edmonton, Alberta
Geoff Berg	Lab Analyst	Organics, Edmonton, Alberta
Miles Gropen	Department Manager - Inorganics	Inorganics, Burnaby, British Columbia
Ping Yeung	Team Leader - Inorganics	Inorganics, Edmonton, Alberta
Remy Gatabazi	Lab Analyst	Organics, Edmonton, Alberta
Yan Zhang	Lab Analyst	Organics, Edmonton, Alberta

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
%	percent
µg/L	micrograms per litre
µS/cm	microsiemens per centimetre
meq/L	milliequivalents per litre
mg/L	milligrams per litre
pH units	pH units
psu	practical salinity 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.

Accreditation

Accreditation	*Description*	*Laboratory*	*Address*
A	CALA ISO/IEC 17025:2017	EO Edmonton - Environmental	9450 - 17 Avenue NW, Edmonton, Alberta
B	CALA ISO/IEC 17025:2017	VA Vancouver - Environmental	8081 Lougheed Highway, Burnaby, British Columbia

Applicable accreditations are indicated in the Method/Lab column as superscripts.

Analytical Results

FC2301141-001

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

Client sample ID: Treated Water
Client sampling date / time: 06-May-2023 10:00

Analyte	CAS Number	Result	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
Physical Tests								
Hardness (as CaCO3), dissolved	----	29.9	0.50	mg/L	EC100/EO	-	10-May-2023	-
Salinity	----	<1.0	1.0	psu	EC100S/VA	-	11-May-2023	-
Conductivity	----	124	2.0	µS/cm	E100/EO A	10-May-2023	10-May-2023	928503
pH	----	8.97	0.10	pH units	E108/EO A	10-May-2023	10-May-2023	928502
Alkalinity, bicarbonate (as HCO3)	71-52-3	42.9	1.0	mg/L	E290/EO A	10-May-2023	10-May-2023	928504
Alkalinity, carbonate (as CO3)	3812-32-6	4.1	1.0	mg/L	E290/EO A	10-May-2023	10-May-2023	928504
Alkalinity, hydroxide (as OH)	14280-30-9	<1.0	1.0	mg/L	E290/EO A	10-May-2023	10-May-2023	928504
Alkalinity, total (as CaCO3)	----	42.0	2.0	mg/L	E290/EO A	10-May-2023	10-May-2023	928504
Solids, total dissolved [TDS], calculated	----	70.1	1.0	mg/L	EC103/EO	-	10-May-2023	-
Anions and Nutrients								
Chloride	16887-00-6	11.1	0.50	mg/L	E235.Cl/EO A	09-May-2023	09-May-2023	928913
Fluoride	16984-48-8	0.024	0.020	mg/L	E235.F/EO A	09-May-2023	09-May-2023	928910
Nitrate (as N)	14797-55-8	<0.020	0.020	mg/L	E235.NO3/EO A	09-May-2023	09-May-2023	928911
Nitrite (as N)	14797-65-0	<0.010	0.010	mg/L	E235.NO2/EO A	09-May-2023	09-May-2023	928914
Sulfate (as SO4)	14808-79-8	2.41	0.30	mg/L	E235.SO4/EO A	09-May-2023	09-May-2023	928912
Nitrate + Nitrite (as N)	----	<0.0500	0.05	mg/L	EC235.N+N/EO	-	10-May-2023	-
Total Sulfides								
Sulfide, total (as S)	18496-25-8	<0.0015	0.0015	mg/L	E395/VA B	-	10-May-2023	930937
Ion Balance								
Anion sum	----	1.20	0.10	meq/L	EC101/EO	-	10-May-2023	-
Cation sum	----	1.30	0.10	meq/L	EC101/EO	-	10-May-2023	-
Ion balance (APHA)	----	4.00	0.01	%	EC101/EO	-	10-May-2023	-
Ion balance (cations/anions)	----	108	0.010	%	EC101/EO	-	10-May-2023	-
Total Metals								
Aluminum, total	7429-90-5	0.0197	0.0030	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Antimony, total	7440-36-0	<0.00010	0.00010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Arsenic, total	7440-38-2	0.00015	0.00010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Barium, total	7440-39-3	0.0155	0.00010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Beryllium, total	7440-41-7	<0.000020	0.000020	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Bismuth, total	7440-69-9	<0.000050	0.000050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Boron, total	7440-42-8	0.011	0.010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Cadmium, total	7440-43-9	<0.0000050	0.0000050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Calcium, total	7440-70-2	8.14	0.050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Cesium, total	7440-46-2	<0.000010	0.000010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Chromium, total	7440-47-3	<0.00050	0.00050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Cobalt, total	7440-48-4	<0.00010	0.00010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Copper, total	7440-50-8	<0.00050	0.00050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Iron, total	7439-89-6	<0.010	0.010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Lead, total	7439-92-1	<0.000050	0.000050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Lithium, total	7439-93-2	0.0026	0.0010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Magnesium, total	7439-95-4	2.29	0.0050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Manganese, total	7439-96-5	0.00184	0.00010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Molybdenum, total	7439-98-7	0.000139	0.000050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299

Analytical Results

FC2301141-001

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

Client sample ID: Treated Water
Client sampling date / time: 06-May-2023 10:00

Analyte	CAS Number	Result	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
Total Metals								
Nickel, total	7440-02-0	<0.00050	0.00050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Phosphorus, total	7723-14-0	<0.050	0.050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Potassium, total	7440-09-7	0.957	0.050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Rubidium, total	7440-17-7	0.00084	0.00020	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Selenium, total	7782-49-2	<0.000050	0.000050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Silicon, total	7440-21-3	1.58	0.10	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Silver, total	7440-22-4	<0.000010	0.000010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Sodium, total	7440-23-5	15.2	0.050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Strontium, total	7440-24-6	0.0489	0.00020	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Sulfur, total	7704-34-9	0.94	0.50	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Tellurium, total	13494-80-9	<0.00020	0.00020	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Thallium, total	7440-28-0	<0.000010	0.000010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Thorium, total	7440-29-1	<0.00010	0.00010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Tin, total	7440-31-5	<0.00010	0.00010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Titanium, total	7440-32-6	<0.00030	0.00030	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Tungsten, total	7440-33-7	<0.00010	0.00010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Uranium, total	7440-61-1	<0.000010	0.000010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Vanadium, total	7440-62-2	<0.00050	0.00050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Zinc, total	7440-66-6	<0.0030	0.0030	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Zirconium, total	7440-67-7	<0.00020	0.00020	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Dissolved Metals								
Aluminum, dissolved	7429-90-5	0.0206	0.0010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Antimony, dissolved	7440-36-0	<0.00010	0.00010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Arsenic, dissolved	7440-38-2	0.00014	0.00010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Barium, dissolved	7440-39-3	0.0151	0.00010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Beryllium, dissolved	7440-41-7	<0.000020	0.000020	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Bismuth, dissolved	7440-69-9	<0.000050	0.000050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Boron, dissolved	7440-42-8	0.014	0.010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Cadmium, dissolved	7440-43-9	<0.0000050	0.0000050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Calcium, dissolved	7440-70-2	8.21	0.050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Cesium, dissolved	7440-46-2	<0.000010	0.000010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Chromium, dissolved	7440-47-3	<0.00050	0.00050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Cobalt, dissolved	7440-48-4	<0.00010	0.00010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Copper, dissolved	7440-50-8	0.00040	0.00020	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Iron, dissolved	7439-89-6	<0.030	0.030	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Lead, dissolved	7439-92-1	<0.000050	0.000050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Lithium, dissolved	7439-93-2	0.0026	0.0010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Magnesium, dissolved	7439-95-4	2.28	0.0050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Manganese, dissolved	7439-96-5	<0.00500	0.00500	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Molybdenum, dissolved	7439-98-7	0.000149	0.000050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Nickel, dissolved	7440-02-0	<0.00050	0.00050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Phosphorus, dissolved	7723-14-0	<0.050	0.050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Potassium, dissolved	7440-09-7	0.950	0.050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Rubidium, dissolved	7440-17-7	0.00097	0.00020	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Selenium, dissolved	7782-49-2	<0.000050	0.000050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291

Analytical Results

FC2301141-001

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

Client sample ID: Treated Water
Client sampling date / time: 06-May-2023 10:00

Analyte	CAS Number	Result	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
Dissolved Metals								
Silicon, dissolved	7440-21-3	1.58	0.050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Silver, dissolved	7440-22-4	<0.000010	0.000010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Sodium, dissolved	7440-23-5	15.6	0.050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Strontium, dissolved	7440-24-6	0.0497	0.00020	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Sulfur, dissolved	7704-34-9	1.00	0.50	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Tellurium, dissolved	13494-80-9	<0.00020	0.00020	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Thallium, dissolved	7440-28-0	<0.000010	0.000010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Thorium, dissolved	7440-29-1	<0.00010	0.00010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Tin, dissolved	7440-31-5	<0.00010	0.00010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Titanium, dissolved	7440-32-6	<0.00030	0.00030	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Tungsten, dissolved	7440-33-7	<0.00010	0.00010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Uranium, dissolved	7440-61-1	<0.000010	0.000010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Vanadium, dissolved	7440-62-2	<0.00050	0.00050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Zinc, dissolved	7440-66-6	<0.0010	0.0010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Zirconium, dissolved	7440-67-7	<0.00030	0.00030	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Dissolved metals filtration location	----	Field	-	-	EP421/EO	-	09-May-2023	928291
Aggregate Organics								
Naphthenic acids	----	<0.10	0.10	mg/L	E565-L/EO A	09-May-2023	11-May-2023	928407
Volatile Organic Compounds [Fuels]								
Benzene	71-43-2	<0.50	0.50	µg/L	E611A/EO A	09-May-2023	09-May-2023	928552
Ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611A/EO A	09-May-2023	09-May-2023	928552
Methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611A/EO	09-May-2023	09-May-2023	928552
Styrene	100-42-5	<0.50	0.50	µg/L	E611A/EO A	09-May-2023	09-May-2023	928552
Toluene	108-88-3	<0.50	0.50	µg/L	E611A/EO A	09-May-2023	09-May-2023	928552
Xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611A/EO A	09-May-2023	09-May-2023	928552
Xylene, o-	95-47-6	<0.30	0.30	µg/L	E611A/EO A	09-May-2023	09-May-2023	928552
Xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611A/EO A	09-May-2023	09-May-2023	928552
BTEX, total	----	<1.0	1.0	µg/L	E611A/EO	09-May-2023	09-May-2023	928552
BTEX+Styrene, total	n/a	<1.5	1.5	µg/L	E611A/EO	09-May-2023	09-May-2023	928552
Hydrocarbons								
F1 (C6-C10)	----	<100	100	µg/L	E581.F1/EO A	09-May-2023	09-May-2023	928551
F1-BTEX	----	<100	100	µg/L	EC580/EO	-	10-May-2023	-
F2 (C10-C16)	----	<100	100	µg/L	E601/EO A	09-May-2023	09-May-2023	928366
F3 (C16-C34)	----	<250	250	µg/L	E601/EO A	09-May-2023	09-May-2023	928366
F4 (C34-C50)	----	<250	250	µg/L	E601/EO A	09-May-2023	09-May-2023	928366
TEH (C10-C50)	n/a	<400	400	µg/L	E601/EO	09-May-2023	09-May-2023	928366
TEH (C16-C50)	----	<400	400	µg/L	E601/EO	09-May-2023	09-May-2023	928366
Hydrocarbons Surrogates								
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	92.0	1.0	%	E601/EO	09-May-2023	09-May-2023	928366
Dichlorotoluene, 3,4-	95-75-0	111	1.0	%	E581.F1/EO	09-May-2023	09-May-2023	928551
Volatile Organic Compounds Surrogates								
Bromofluorobenzene, 4-	460-00-4	80.7	1.0	%	E611A/EO	09-May-2023	09-May-2023	928552
Difluorobenzene, 1,4-	540-36-3	116	1.0	%	E611A/EO	09-May-2023	09-May-2023	928552
Polycyclic Aromatic Hydrocarbons								
Acenaphthene	83-32-9	<0.010	0.010	µg/L	E641A/EO A	09-May-2023	09-May-2023	928367

Analytical Results

FC2301141-001

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

Client sample ID: Treated Water

Client sampling date / time: 06-May-2023 10:00

Analyte	CAS Number	Result	LOR	Unit	Method/Lab		Prep Date	Analysis Date	QCLot
Polycyclic Aromatic Hydrocarbons									
Acenaphthylene	208-96-8	<0.010	0.010	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
Acridine	260-94-6	<0.010	0.010	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
Anthracene	120-12-7	<0.010	0.010	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
Benz(a)anthracene	56-55-3	<0.010	0.010	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
Benzo(a)pyrene	50-32-8	<0.0050	0.0050	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
Benzo(b+j)fluoranthene	n/a	<0.010	0.010	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
Benzo(b+j+k)fluoranthene	n/a	<0.015	0.015	µg/L	E641A/EO		09-May-2023	09-May-2023	928367
Benzo(g,h,i)perylene	191-24-2	<0.010	0.010	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
Benzo(k)fluoranthene	207-08-9	<0.010	0.010	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
Chrysene	218-01-9	<0.010	0.010	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
Dibenz(a,h)anthracene	53-70-3	<0.0050	0.0050	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
Fluoranthene	206-44-0	<0.010	0.010	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
Fluorene	86-73-7	<0.010	0.010	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
Indeno(1,2,3-c,d)pyrene	193-39-5	<0.010	0.010	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
Methylnaphthalene, 1-	90-12-0	<0.010	0.010	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
Methylnaphthalene, 1+2-	----	<0.015	0.015	µg/L	E641A/EO		09-May-2023	09-May-2023	928367
Methylnaphthalene, 2-	91-57-6	<0.010	0.010	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
Naphthalene	91-20-3	<0.050	0.050	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
Phenanthrene	85-01-8	<0.020	0.020	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
Pyrene	129-00-0	<0.010	0.010	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
Quinoline	91-22-5	<0.050	0.050	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
B(a)P total potency equivalents [B(a)P TPE]	----	<0.010	0.010	µg/L	E641A/EO		09-May-2023	09-May-2023	928367
PAHs, high molecular weight (BC AWQ)	n/a	<0.030	0.03	µg/L	E641A/EO		09-May-2023	09-May-2023	928367
PAHs, low molecular weight (BC AWQ)	n/a	<0.060	0.06	µg/L	E641A/EO		09-May-2023	09-May-2023	928367
PAHs, total (CCME sewer 18)	n/a	<0.070	0.07	µg/L	E641A/EO		09-May-2023	09-May-2023	928367
PAHs, total (EPA 16)	n/a	<0.065	0.065	µg/L	E641A/EO		09-May-2023	09-May-2023	928367
Polycyclic Aromatic Hydrocarbons Surrogates									
Chrysene-d12	1719-03-5	82.0	0.1	%	E641A/EO		09-May-2023	09-May-2023	928367
Naphthalene-d8	1146-65-2	110	0.1	%	E641A/EO		09-May-2023	09-May-2023	928367
Phenanthrene-d10	1517-22-2	105	0.1	%	E641A/EO		09-May-2023	09-May-2023	928367

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

Please refer to the Accreditation section for an explanation of analyte accreditations.

Analytical Results

FC2301141-002

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

Client sample ID: Raw Water Chamber Tap

Client sampling date / time: 06-May-2023 11:00

Analyte	CAS Number	Result	LOR	Unit	Method/Lab		Prep Date	Analysis Date	QCLot
Physical Tests									
Hardness (as CaCO3), dissolved	----	27.4	0.50	mg/L	EC100/EO		-	10-May-2023	-
Salinity	----	<1.0	1.0	psu	EC100S/VA		-	11-May-2023	-
Conductivity	----	64.9	2.0	µS/cm	E100/EO	A	10-May-2023	10-May-2023	928503
pH	----	7.34	0.10	pH units	E108/EO	A	10-May-2023	10-May-2023	928502

Analytical Results

FC2301141-002

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

Client sample ID: Raw Water Chamber Tap
Client sampling date / time: 06-May-2023 11:00

Analyte	CAS Number	Result	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
Physical Tests								
Alkalinity, bicarbonate (as HCO3)	71-52-3	29.8	1.0	mg/L	E290/EO A	10-May-2023	10-May-2023	928504
Alkalinity, carbonate (as CO3)	3812-32-6	<1.0	1.0	mg/L	E290/EO A	10-May-2023	10-May-2023	928504
Alkalinity, hydroxide (as OH)	14280-30-9	<1.0	1.0	mg/L	E290/EO A	10-May-2023	10-May-2023	928504
Alkalinity, total (as CaCO3)	----	24.4	2.0	mg/L	E290/EO A	10-May-2023	10-May-2023	928504
Solids, total dissolved [TDS], calculated	----	39.2	1.0	mg/L	EC103/EO	-	10-May-2023	-
Anions and Nutrients								
Chloride	16887-00-6	2.91	0.50	mg/L	E235.Cl/EO A	09-May-2023	09-May-2023	928913
Fluoride	16984-48-8	0.054	0.020	mg/L	E235.F/EO A	09-May-2023	09-May-2023	928910
Nitrate (as N)	14797-55-8	<0.020	0.020	mg/L	E235.NO3/EO A	09-May-2023	09-May-2023	928911
Nitrite (as N)	14797-65-0	<0.010	0.010	mg/L	E235.NO2/EO A	09-May-2023	09-May-2023	928914
Sulfate (as SO4)	14808-79-8	3.13	0.30	mg/L	E235.SO4/EO A	09-May-2023	09-May-2023	928912
Nitrate + Nitrite (as N)	----	<0.0500	0.05	mg/L	EC235.N+N/EO	-	10-May-2023	-
Total Sulfides								
Sulfide, total (as S)	18496-25-8	<0.0015	0.0015	mg/L	E395/VA B	-	10-May-2023	930937
Ion Balance								
Anion sum	----	0.64	0.10	meq/L	EC101/EO	-	10-May-2023	-
Cation sum	----	0.70	0.10	meq/L	EC101/EO	-	10-May-2023	-
Ion balance (APHA)	----	4.48	0.01	%	EC101/EO	-	10-May-2023	-
Ion balance (cations/anions)	----	109	0.010	%	EC101/EO	-	10-May-2023	-
Total Metals								
Aluminum, total	7429-90-5	0.105	0.0030	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Antimony, total	7440-36-0	<0.00010	0.00010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Arsenic, total	7440-38-2	0.00022	0.00010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Barium, total	7440-39-3	0.0156	0.00010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Beryllium, total	7440-41-7	<0.000020	0.000020	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Bismuth, total	7440-69-9	<0.000050	0.000050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Boron, total	7440-42-8	0.011	0.010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Cadmium, total	7440-43-9	<0.0000050	0.0000050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Calcium, total	7440-70-2	7.13	0.050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Cesium, total	7440-46-2	<0.000010	0.000010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Chromium, total	7440-47-3	<0.00050	0.00050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Cobalt, total	7440-48-4	<0.00010	0.00010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Copper, total	7440-50-8	0.00086	0.00050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Iron, total	7439-89-6	0.095	0.010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Lead, total	7439-92-1	0.000051	0.000050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Lithium, total	7439-93-2	0.0024	0.0010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Magnesium, total	7439-95-4	2.21	0.0050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Manganese, total	7439-96-5	0.00364	0.00010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Molybdenum, total	7439-98-7	0.000175	0.000050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Nickel, total	7440-02-0	<0.00050	0.00050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Phosphorus, total	7723-14-0	<0.050	0.050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Potassium, total	7440-09-7	0.928	0.050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Rubidium, total	7440-17-7	0.00103	0.00020	mg/L	E420/EO A	09-May-2023	09-May-2023	928299

Analytical Results

FC2301141-002

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

Client sample ID: Raw Water Chamber Tap
Client sampling date / time: 06-May-2023 11:00

Analyte	CAS Number	Result	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
Total Metals								
Selenium, total	7782-49-2	<0.000050	0.000050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Silicon, total	7440-21-3	1.87	0.10	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Silver, total	7440-22-4	<0.000010	0.000010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Sodium, total	7440-23-5	2.56	0.050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Strontium, total	7440-24-6	0.0478	0.00020	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Sulfur, total	7704-34-9	1.04	0.50	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Tellurium, total	13494-80-9	<0.00020	0.00020	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Thallium, total	7440-28-0	<0.000010	0.000010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Thorium, total	7440-29-1	<0.00010	0.00010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Tin, total	7440-31-5	<0.00010	0.00010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Titanium, total	7440-32-6	0.00256	0.00030	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Tungsten, total	7440-33-7	<0.00010	0.00010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Uranium, total	7440-61-1	0.000084	0.000010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Vanadium, total	7440-62-2	<0.00050	0.00050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Zinc, total	7440-66-6	<0.0030	0.0030	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Zirconium, total	7440-67-7	<0.00020	0.00020	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Dissolved Metals								
Aluminum, dissolved	7429-90-5	0.110	0.0010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Antimony, dissolved	7440-36-0	<0.00010	0.00010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Arsenic, dissolved	7440-38-2	0.00021	0.00010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Barium, dissolved	7440-39-3	0.0154	0.00010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Beryllium, dissolved	7440-41-7	<0.000020	0.000020	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Bismuth, dissolved	7440-69-9	<0.000050	0.000050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Boron, dissolved	7440-42-8	0.012	0.010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Cadmium, dissolved	7440-43-9	<0.0000050	0.0000050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Calcium, dissolved	7440-70-2	7.25	0.050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Cesium, dissolved	7440-46-2	<0.000010	0.000010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Chromium, dissolved	7440-47-3	<0.00050	0.00050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Cobalt, dissolved	7440-48-4	<0.00010	0.00010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Copper, dissolved	7440-50-8	0.00086	0.00020	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Iron, dissolved	7439-89-6	0.092	0.030	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Lead, dissolved	7439-92-1	<0.000050	0.000050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Lithium, dissolved	7439-93-2	0.0024	0.0010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Magnesium, dissolved	7439-95-4	2.25	0.0050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Manganese, dissolved	7439-96-5	<0.00500	0.00500	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Molybdenum, dissolved	7439-98-7	0.000159	0.000050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Nickel, dissolved	7440-02-0	<0.00050	0.00050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Phosphorus, dissolved	7723-14-0	<0.050	0.050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Potassium, dissolved	7440-09-7	0.945	0.050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Rubidium, dissolved	7440-17-7	0.00091	0.00020	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Selenium, dissolved	7782-49-2	0.000052	0.000050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Silicon, dissolved	7440-21-3	1.90	0.050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Silver, dissolved	7440-22-4	<0.000010	0.000010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Sodium, dissolved	7440-23-5	2.63	0.050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Strontium, dissolved	7440-24-6	0.0489	0.00020	mg/L	E421/EO A	09-May-2023	09-May-2023	928291

Analytical Results

FC2301141-002

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

Client sample ID: Raw Water Chamber Tap
Client sampling date / time: 06-May-2023 11:00

Analyte	CAS Number	Result	LOR	Unit	Method/Lab		Prep Date	Analysis Date	QCLot
Dissolved Metals									
Sulfur, dissolved	7704-34-9	1.10	0.50	mg/L	E421/EO	A	09-May-2023	09-May-2023	928291
Tellurium, dissolved	13494-80-9	<0.00020	0.00020	mg/L	E421/EO	A	09-May-2023	09-May-2023	928291
Thallium, dissolved	7440-28-0	<0.000010	0.000010	mg/L	E421/EO	A	09-May-2023	09-May-2023	928291
Thorium, dissolved	7440-29-1	<0.00010	0.00010	mg/L	E421/EO	A	09-May-2023	09-May-2023	928291
Tin, dissolved	7440-31-5	<0.00010	0.00010	mg/L	E421/EO	A	09-May-2023	09-May-2023	928291
Titanium, dissolved	7440-32-6	0.00279	0.00030	mg/L	E421/EO	A	09-May-2023	09-May-2023	928291
Tungsten, dissolved	7440-33-7	<0.00010	0.00010	mg/L	E421/EO	A	09-May-2023	09-May-2023	928291
Uranium, dissolved	7440-61-1	0.000080	0.000010	mg/L	E421/EO	A	09-May-2023	09-May-2023	928291
Vanadium, dissolved	7440-62-2	<0.00050	0.00050	mg/L	E421/EO	A	09-May-2023	09-May-2023	928291
Zinc, dissolved	7440-66-6	<0.0010	0.0010	mg/L	E421/EO	A	09-May-2023	09-May-2023	928291
Zirconium, dissolved	7440-67-7	<0.00030	0.00030	mg/L	E421/EO	A	09-May-2023	09-May-2023	928291
Dissolved metals filtration location	----	Field	-	-	EP421/EO		-	09-May-2023	928291
Aggregate Organics									
Naphthenic acids	----	<0.10	0.10	mg/L	E565-L/EO	A	09-May-2023	11-May-2023	928407
Volatile Organic Compounds [Fuels]									
Benzene	71-43-2	<0.50	0.50	µg/L	E611A/EO	A	09-May-2023	09-May-2023	928552
Ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611A/EO	A	09-May-2023	09-May-2023	928552
Methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611A/EO		09-May-2023	09-May-2023	928552
Styrene	100-42-5	<0.50	0.50	µg/L	E611A/EO	A	09-May-2023	09-May-2023	928552
Toluene	108-88-3	<0.50	0.50	µg/L	E611A/EO	A	09-May-2023	09-May-2023	928552
Xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611A/EO	A	09-May-2023	09-May-2023	928552
Xylene, o-	95-47-6	<0.30	0.30	µg/L	E611A/EO	A	09-May-2023	09-May-2023	928552
Xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611A/EO	A	09-May-2023	09-May-2023	928552
BTEX, total	----	<1.0	1.0	µg/L	E611A/EO		09-May-2023	09-May-2023	928552
BTEX+Styrene, total	n/a	<1.5	1.5	µg/L	E611A/EO		09-May-2023	09-May-2023	928552
Hydrocarbons									
F1 (C6-C10)	----	<100	100	µg/L	E581.F1/EO	A	09-May-2023	09-May-2023	928551
F1-BTEX	----	<100	100	µg/L	EC580/EO		-	10-May-2023	-
F2 (C10-C16)	----	<100	100	µg/L	E601/EO	A	09-May-2023	09-May-2023	928366
F3 (C16-C34)	----	<250	250	µg/L	E601/EO	A	09-May-2023	09-May-2023	928366
F4 (C34-C50)	----	<250	250	µg/L	E601/EO	A	09-May-2023	09-May-2023	928366
TEH (C10-C50)	n/a	<400	400	µg/L	E601/EO		09-May-2023	09-May-2023	928366
TEH (C16-C50)	----	<400	400	µg/L	E601/EO		09-May-2023	09-May-2023	928366
Hydrocarbons Surrogates									
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	94.3	1.0	%	E601/EO		09-May-2023	09-May-2023	928366
Dichlorotoluene, 3,4-	95-75-0	107	1.0	%	E581.F1/EO		09-May-2023	09-May-2023	928551
Volatile Organic Compounds Surrogates									
Bromofluorobenzene, 4-	460-00-4	84.6	1.0	%	E611A/EO		09-May-2023	09-May-2023	928552
Difluorobenzene, 1,4-	540-36-3	93.2	1.0	%	E611A/EO		09-May-2023	09-May-2023	928552
Polycyclic Aromatic Hydrocarbons									
Acenaphthene	83-32-9	<0.010	0.010	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
Acenaphthylene	208-96-8	<0.010	0.010	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
Acridine	260-94-6	<0.010	0.010	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
Anthracene	120-12-7	<0.010	0.010	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
Benz(a)anthracene	56-55-3	<0.010	0.010	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367

Analytical Results

FC2301141-002

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

Client sample ID: Raw Water Chamber Tap
Client sampling date / time: 06-May-2023 11:00

Analyte	CAS Number	Result	LOR	Unit	Method/Lab		Prep Date	Analysis Date	QCLot
Polycyclic Aromatic Hydrocarbons									
Benzo(a)pyrene	50-32-8	<0.0050	0.0050	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
Benzo(b+j)fluoranthene	n/a	<0.010	0.010	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
Benzo(b+j+k)fluoranthene	n/a	<0.015	0.015	µg/L	E641A/EO		09-May-2023	09-May-2023	928367
Benzo(g,h,i)perylene	191-24-2	<0.010	0.010	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
Benzo(k)fluoranthene	207-08-9	<0.010	0.010	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
Chrysene	218-01-9	<0.010	0.010	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
Dibenz(a,h)anthracene	53-70-3	<0.0050	0.0050	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
Fluoranthene	206-44-0	<0.010	0.010	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
Fluorene	86-73-7	<0.010	0.010	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
Indeno(1,2,3-c,d)pyrene	193-39-5	<0.010	0.010	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
Methylnaphthalene, 1-	90-12-0	<0.010	0.010	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
Methylnaphthalene, 1+2-	----	<0.015	0.015	µg/L	E641A/EO		09-May-2023	09-May-2023	928367
Methylnaphthalene, 2-	91-57-6	<0.010	0.010	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
Naphthalene	91-20-3	<0.050	0.050	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
Phenanthrene	85-01-8	<0.020	0.020	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
Pyrene	129-00-0	<0.010	0.010	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
Quinoline	91-22-5	<0.050	0.050	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
B(a)P total potency equivalents [B(a)P TPE]	----	<0.010	0.010	µg/L	E641A/EO		09-May-2023	09-May-2023	928367
PAHs, high molecular weight (BC AWQ)	n/a	<0.030	0.03	µg/L	E641A/EO		09-May-2023	09-May-2023	928367
PAHs, low molecular weight (BC AWQ)	n/a	<0.060	0.06	µg/L	E641A/EO		09-May-2023	09-May-2023	928367
PAHs, total (CCME sewer 18)	n/a	<0.070	0.07	µg/L	E641A/EO		09-May-2023	09-May-2023	928367
PAHs, total (EPA 16)	n/a	<0.065	0.065	µg/L	E641A/EO		09-May-2023	09-May-2023	928367
Polycyclic Aromatic Hydrocarbons Surrogates									
Chrysene-d12	1719-03-5	83.6	0.1	%	E641A/EO		09-May-2023	09-May-2023	928367
Naphthalene-d8	1146-65-2	107	0.1	%	E641A/EO		09-May-2023	09-May-2023	928367
Phenanthrene-d10	1517-22-2	109	0.1	%	E641A/EO		09-May-2023	09-May-2023	928367

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

Please refer to the Accreditation section for an explanation of analyte accreditations.

Analytical Results

FC2301141-003

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

Client sample ID: 120 Stewart Dr
Client sampling date / time: 06-May-2023 10:30

Analyte	CAS Number	Result	LOR	Unit	Method/Lab		Prep Date	Analysis Date	QCLot
Physical Tests									
Hardness (as CaCO3), dissolved	----	30.3	0.50	mg/L	EC100/EO		-	10-May-2023	-
Salinity	----	<1.0	1.0	psu	EC100S/VA		-	11-May-2023	-
Conductivity	----	122	2.0	µS/cm	E100/EO	A	10-May-2023	10-May-2023	928503
pH	----	8.87	0.10	pH units	E108/EO	A	10-May-2023	10-May-2023	928502
Alkalinity, bicarbonate (as HCO3)	71-52-3	44.0	1.0	mg/L	E290/EO	A	10-May-2023	10-May-2023	928504
Alkalinity, carbonate (as CO3)	3812-32-6	3.5	1.0	mg/L	E290/EO	A	10-May-2023	10-May-2023	928504
Alkalinity, hydroxide (as OH)	14280-30-9	<1.0	1.0	mg/L	E290/EO	A	10-May-2023	10-May-2023	928504
Alkalinity, total (as CaCO3)	----	41.9	2.0	mg/L	E290/EO	A	10-May-2023	10-May-2023	928504

Analytical Results

FC2301141-003

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

Client sample ID: 120 Stewart Dr
Client sampling date / time: 06-May-2023 10:30

Analyte	CAS Number	Result	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
Physical Tests								
Solids, total dissolved [TDS], calculated	----	70.1	1.0	mg/L	EC103/EO	-	10-May-2023	-
Anions and Nutrients								
Chloride	16887-00-6	11.2	0.50	mg/L	E235.Cl/EO A	09-May-2023	09-May-2023	928913
Fluoride	16984-48-8	<0.020	0.020	mg/L	E235.F/EO A	09-May-2023	09-May-2023	928910
Nitrate (as N)	14797-55-8	<0.020	0.020	mg/L	E235.NO3/EO A	09-May-2023	09-May-2023	928911
Nitrite (as N)	14797-65-0	<0.010	0.010	mg/L	E235.NO2/EO A	09-May-2023	09-May-2023	928914
Sulfate (as SO4)	14808-79-8	2.35	0.30	mg/L	E235.SO4/EO A	09-May-2023	09-May-2023	928912
Nitrate + Nitrite (as N)	----	<0.0500	0.05	mg/L	EC235.N+N/EO	-	10-May-2023	-
Total Sulfides								
Sulfide, total (as S)	18496-25-8	<0.0015	0.0015	mg/L	E395/VA B	-	10-May-2023	930937
Ion Balance								
Anion sum	----	1.20	0.10	meq/L	EC101/EO	-	10-May-2023	-
Cation sum	----	1.30	0.10	meq/L	EC101/EO	-	10-May-2023	-
Ion balance (APHA)	----	4.00	0.01	%	EC101/EO	-	10-May-2023	-
Ion balance (cations/anions)	----	108	0.010	%	EC101/EO	-	10-May-2023	-
Total Metals								
Aluminum, total	7429-90-5	0.0223	0.0030	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Antimony, total	7440-36-0	<0.00010	0.00010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Arsenic, total	7440-38-2	0.00016	0.00010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Barium, total	7440-39-3	0.0152	0.00010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Beryllium, total	7440-41-7	<0.000020	0.000020	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Bismuth, total	7440-69-9	<0.000050	0.000050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Boron, total	7440-42-8	0.011	0.010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Cadmium, total	7440-43-9	<0.0000050	0.0000050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Calcium, total	7440-70-2	8.15	0.050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Cesium, total	7440-46-2	<0.000010	0.000010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Chromium, total	7440-47-3	<0.00050	0.00050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Cobalt, total	7440-48-4	<0.00010	0.00010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Copper, total	7440-50-8	<0.00050	0.00050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Iron, total	7439-89-6	<0.010	0.010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Lead, total	7439-92-1	<0.000050	0.000050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Lithium, total	7439-93-2	0.0025	0.0010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Magnesium, total	7439-95-4	2.27	0.0050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Manganese, total	7439-96-5	0.00160	0.00010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Molybdenum, total	7439-98-7	0.000136	0.000050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Nickel, total	7440-02-0	<0.00050	0.00050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Phosphorus, total	7723-14-0	<0.050	0.050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Potassium, total	7440-09-7	0.939	0.050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Rubidium, total	7440-17-7	0.00095	0.00020	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Selenium, total	7782-49-2	<0.000050	0.000050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Silicon, total	7440-21-3	1.56	0.10	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Silver, total	7440-22-4	<0.000010	0.000010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Sodium, total	7440-23-5	14.9	0.050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299

Analytical Results

FC2301141-003

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

Client sample ID: 120 Stewart Dr
Client sampling date / time: 06-May-2023 10:30

Analyte	CAS Number	Result	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
Total Metals								
Strontium, total	7440-24-6	0.0495	0.00020	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Sulfur, total	7704-34-9	1.05	0.50	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Tellurium, total	13494-80-9	<0.00020	0.00020	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Thallium, total	7440-28-0	<0.000010	0.000010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Thorium, total	7440-29-1	<0.00010	0.00010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Tin, total	7440-31-5	<0.00010	0.00010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Titanium, total	7440-32-6	<0.00030	0.00030	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Tungsten, total	7440-33-7	<0.00010	0.00010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Uranium, total	7440-61-1	<0.000010	0.000010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Vanadium, total	7440-62-2	<0.00050	0.00050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Zinc, total	7440-66-6	<0.0030	0.0030	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Zirconium, total	7440-67-7	<0.00020	0.00020	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Dissolved Metals								
Aluminum, dissolved	7429-90-5	0.0216	0.0010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Antimony, dissolved	7440-36-0	<0.00010	0.00010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Arsenic, dissolved	7440-38-2	0.00014	0.00010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Barium, dissolved	7440-39-3	0.0149	0.00010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Beryllium, dissolved	7440-41-7	<0.000020	0.000020	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Bismuth, dissolved	7440-69-9	<0.000050	0.000050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Boron, dissolved	7440-42-8	0.013	0.010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Cadmium, dissolved	7440-43-9	<0.0000050	0.0000050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Calcium, dissolved	7440-70-2	8.35	0.050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Cesium, dissolved	7440-46-2	<0.000010	0.000010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Chromium, dissolved	7440-47-3	<0.00050	0.00050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Cobalt, dissolved	7440-48-4	<0.00010	0.00010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Copper, dissolved	7440-50-8	0.00044	0.00020	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Iron, dissolved	7439-89-6	<0.030	0.030	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Lead, dissolved	7439-92-1	<0.000050	0.000050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Lithium, dissolved	7439-93-2	0.0026	0.0010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Magnesium, dissolved	7439-95-4	2.29	0.0050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Manganese, dissolved	7439-96-5	<0.00500	0.00500	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Molybdenum, dissolved	7439-98-7	0.000152	0.000050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Nickel, dissolved	7440-02-0	<0.00050	0.00050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Phosphorus, dissolved	7723-14-0	<0.050	0.050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Potassium, dissolved	7440-09-7	0.951	0.050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Rubidium, dissolved	7440-17-7	0.00088	0.00020	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Selenium, dissolved	7782-49-2	<0.000050	0.000050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Silicon, dissolved	7440-21-3	1.58	0.050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Silver, dissolved	7440-22-4	<0.000010	0.000010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Sodium, dissolved	7440-23-5	15.5	0.050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Strontium, dissolved	7440-24-6	0.0512	0.00020	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Sulfur, dissolved	7704-34-9	1.02	0.50	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Tellurium, dissolved	13494-80-9	<0.00020	0.00020	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Thallium, dissolved	7440-28-0	<0.000010	0.000010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Thorium, dissolved	7440-29-1	<0.00010	0.00010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291

Analytical Results

FC2301141-003

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

Client sample ID: 120 Stewart Dr
Client sampling date / time: 06-May-2023 10:30

Analyte	CAS Number	Result	LOR	Unit	Method/Lab		Prep Date	Analysis Date	QCLot
Dissolved Metals									
Tin, dissolved	7440-31-5	<0.00010	0.00010	mg/L	E421/EO	A	09-May-2023	09-May-2023	928291
Titanium, dissolved	7440-32-6	<0.00030	0.00030	mg/L	E421/EO	A	09-May-2023	09-May-2023	928291
Tungsten, dissolved	7440-33-7	<0.00010	0.00010	mg/L	E421/EO	A	09-May-2023	09-May-2023	928291
Uranium, dissolved	7440-61-1	<0.000010	0.000010	mg/L	E421/EO	A	09-May-2023	09-May-2023	928291
Vanadium, dissolved	7440-62-2	<0.00050	0.00050	mg/L	E421/EO	A	09-May-2023	09-May-2023	928291
Zinc, dissolved	7440-66-6	<0.0010	0.0010	mg/L	E421/EO	A	09-May-2023	09-May-2023	928291
Zirconium, dissolved	7440-67-7	<0.00030	0.00030	mg/L	E421/EO	A	09-May-2023	09-May-2023	928291
Dissolved metals filtration location	----	Field	-	-	EP421/EO		-	09-May-2023	928291
Aggregate Organics									
Naphthenic acids	----	<0.10	0.10	mg/L	E565-L/EO	A	09-May-2023	11-May-2023	928407
Volatile Organic Compounds [Fuels]									
Benzene	71-43-2	<0.50	0.50	µg/L	E611A/EO	A	09-May-2023	09-May-2023	928552
Ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611A/EO	A	09-May-2023	09-May-2023	928552
Methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611A/EO		09-May-2023	09-May-2023	928552
Styrene	100-42-5	<0.50	0.50	µg/L	E611A/EO	A	09-May-2023	09-May-2023	928552
Toluene	108-88-3	<0.50	0.50	µg/L	E611A/EO	A	09-May-2023	09-May-2023	928552
Xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611A/EO	A	09-May-2023	09-May-2023	928552
Xylene, o-	95-47-6	<0.30	0.30	µg/L	E611A/EO	A	09-May-2023	09-May-2023	928552
Xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611A/EO	A	09-May-2023	09-May-2023	928552
BTEX, total	----	<1.0	1.0	µg/L	E611A/EO		09-May-2023	09-May-2023	928552
BTEX+Styrene, total	n/a	<1.5	1.5	µg/L	E611A/EO		09-May-2023	09-May-2023	928552
Hydrocarbons									
F1 (C6-C10)	----	<100	100	µg/L	E581.F1/EO	A	09-May-2023	09-May-2023	928551
F1-BTEX	----	<100	100	µg/L	EC580/EO		-	10-May-2023	-
F2 (C10-C16)	----	<100	100	µg/L	E601/EO	A	09-May-2023	09-May-2023	928366
F3 (C16-C34)	----	<250	250	µg/L	E601/EO	A	09-May-2023	09-May-2023	928366
F4 (C34-C50)	----	<250	250	µg/L	E601/EO	A	09-May-2023	09-May-2023	928366
TEH (C10-C50)	n/a	<400	400	µg/L	E601/EO		09-May-2023	09-May-2023	928366
TEH (C16-C50)	----	<400	400	µg/L	E601/EO		09-May-2023	09-May-2023	928366
Hydrocarbons Surrogates									
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	93.3	1.0	%	E601/EO		09-May-2023	09-May-2023	928366
Dichlorotoluene, 3,4-	95-75-0	108	1.0	%	E581.F1/EO		09-May-2023	09-May-2023	928551
Volatile Organic Compounds Surrogates									
Bromofluorobenzene, 4-	460-00-4	80.1	1.0	%	E611A/EO		09-May-2023	09-May-2023	928552
Difluorobenzene, 1,4-	540-36-3	95.6	1.0	%	E611A/EO		09-May-2023	09-May-2023	928552
Polycyclic Aromatic Hydrocarbons									
Acenaphthene	83-32-9	<0.010	0.010	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
Acenaphthylene	208-96-8	<0.010	0.010	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
Acridine	260-94-6	<0.010	0.010	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
Anthracene	120-12-7	<0.010	0.010	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
Benz(a)anthracene	56-55-3	<0.010	0.010	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
Benzo(a)pyrene	50-32-8	<0.0050	0.0050	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
Benzo(b+j)fluoranthene	n/a	<0.010	0.010	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
Benzo(b+j+k)fluoranthene	n/a	<0.015	0.015	µg/L	E641A/EO		09-May-2023	09-May-2023	928367
Benzo(g,h,i)perylene	191-24-2	<0.010	0.010	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367

Analytical Results

FC2301141-003

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

Client sample ID: 120 Stewart Dr

Client sampling date / time: 06-May-2023 10:30

Analyte	CAS Number	Result	LOR	Unit	Method/Lab		Prep Date	Analysis Date	QCLot
Polycyclic Aromatic Hydrocarbons									
Benzo(k)fluoranthene	207-08-9	<0.010	0.010	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
Chrysene	218-01-9	<0.010	0.010	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
Dibenz(a,h)anthracene	53-70-3	<0.0050	0.0050	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
Fluoranthene	206-44-0	<0.010	0.010	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
Fluorene	86-73-7	<0.010	0.010	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
Indeno(1,2,3-c,d)pyrene	193-39-5	<0.010	0.010	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
Methylnaphthalene, 1-	90-12-0	<0.010	0.010	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
Methylnaphthalene, 1+2-	----	<0.015	0.015	µg/L	E641A/EO		09-May-2023	09-May-2023	928367
Methylnaphthalene, 2-	91-57-6	<0.010	0.010	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
Naphthalene	91-20-3	<0.050	0.050	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
Phenanthrene	85-01-8	<0.020	0.020	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
Pyrene	129-00-0	<0.010	0.010	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
Quinoline	91-22-5	<0.050	0.050	µg/L	E641A/EO	A	09-May-2023	09-May-2023	928367
B(a)P total potency equivalents [B(a)P TPE]	----	<0.010	0.010	µg/L	E641A/EO		09-May-2023	09-May-2023	928367
PAHs, high molecular weight (BC AWQ)	n/a	<0.030	0.03	µg/L	E641A/EO		09-May-2023	09-May-2023	928367
PAHs, low molecular weight (BC AWQ)	n/a	<0.060	0.06	µg/L	E641A/EO		09-May-2023	09-May-2023	928367
PAHs, total (CCME sewer 18)	n/a	<0.070	0.07	µg/L	E641A/EO		09-May-2023	09-May-2023	928367
PAHs, total (EPA 16)	n/a	<0.065	0.065	µg/L	E641A/EO		09-May-2023	09-May-2023	928367
Polycyclic Aromatic Hydrocarbons Surrogates									
Chrysene-d12	1719-03-5	89.6	0.1	%	E641A/EO		09-May-2023	09-May-2023	928367
Naphthalene-d8	1146-65-2	120	0.1	%	E641A/EO		09-May-2023	09-May-2023	928367
Phenanthrene-d10	1517-22-2	114	0.1	%	E641A/EO		09-May-2023	09-May-2023	928367

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

Please refer to the Accreditation section for an explanation of analyte accreditations.

Analytical Results

FC2301141-004

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

Client sample ID: 128 McDonald St

Client sampling date / time: 06-May-2023 15:00

Analyte	CAS Number	Result	LOR	Unit	Method/Lab		Prep Date	Analysis Date	QCLot
Physical Tests									
Hardness (as CaCO3), dissolved	----	29.7	0.50	mg/L	EC100/EO		-	10-May-2023	-
Salinity	----	<1.0	1.0	psu	EC100S/VA		-	11-May-2023	-
Conductivity	----	120	2.0	µS/cm	E100/EO	A	10-May-2023	10-May-2023	928503
pH	----	8.79	0.10	pH units	E108/EO	A	10-May-2023	10-May-2023	928502
Alkalinity, bicarbonate (as HCO3)	71-52-3	43.8	1.0	mg/L	E290/EO	A	10-May-2023	10-May-2023	928504
Alkalinity, carbonate (as CO3)	3812-32-6	3.1	1.0	mg/L	E290/EO	A	10-May-2023	10-May-2023	928504
Alkalinity, hydroxide (as OH)	14280-30-9	<1.0	1.0	mg/L	E290/EO	A	10-May-2023	10-May-2023	928504
Alkalinity, total (as CaCO3)	----	41.1	2.0	mg/L	E290/EO	A	10-May-2023	10-May-2023	928504
Solids, total dissolved [TDS], calculated	----	68.6	1.0	mg/L	EC103/EO		-	10-May-2023	-
Anions and Nutrients									
Chloride	16887-00-6	11.2	0.50	mg/L	E235.Cl/EO	A	09-May-2023	09-May-2023	928913
Fluoride	16984-48-8	0.020	0.020	mg/L	E235.F/EO	A	09-May-2023	09-May-2023	928910

Analytical Results

FC2301141-004

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

Client sample ID: 128 McDonald St
Client sampling date / time: 06-May-2023 15:00

Analyte	CAS Number	Result	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
Anions and Nutrients								
Nitrate (as N)	14797-55-8	<0.020	0.020	mg/L	E235.NO3/EO A	09-May-2023	09-May-2023	928911
Nitrite (as N)	14797-65-0	<0.010	0.010	mg/L	E235.NO2/EO A	09-May-2023	09-May-2023	928914
Sulfate (as SO4)	14808-79-8	2.37	0.30	mg/L	E235.SO4/EO A	09-May-2023	09-May-2023	928912
Nitrate + Nitrite (as N)	----	<0.0500	0.05	mg/L	EC235.N+N/EO	-	10-May-2023	-
Total Sulfides								
Sulfide, total (as S)	18496-25-8	<0.0015	0.0015	mg/L	E395/VA B	-	10-May-2023	930937
Ion Balance								
Anion sum	----	1.19	0.10	meq/L	EC101/EO	-	10-May-2023	-
Cation sum	----	1.26	0.10	meq/L	EC101/EO	-	10-May-2023	-
Ion balance (APHA)	----	2.86	0.01	%	EC101/EO	-	10-May-2023	-
Ion balance (cations/anions)	----	106	0.010	%	EC101/EO	-	10-May-2023	-
Total Metals								
Aluminum, total	7429-90-5	0.0195	0.0030	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Antimony, total	7440-36-0	<0.00010	0.00010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Arsenic, total	7440-38-2	0.00013	0.00010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Barium, total	7440-39-3	0.0152	0.00010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Beryllium, total	7440-41-7	<0.000020	0.000020	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Bismuth, total	7440-69-9	<0.000050	0.000050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Boron, total	7440-42-8	0.011	0.010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Cadmium, total	7440-43-9	<0.0000050	0.0000050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Calcium, total	7440-70-2	8.19	0.050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Cesium, total	7440-46-2	<0.000010	0.000010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Chromium, total	7440-47-3	<0.00050	0.00050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Cobalt, total	7440-48-4	<0.00010	0.00010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Copper, total	7440-50-8	<0.00050	0.00050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Iron, total	7439-89-6	<0.010	0.010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Lead, total	7439-92-1	<0.000050	0.000050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Lithium, total	7439-93-2	0.0025	0.0010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Magnesium, total	7439-95-4	2.25	0.0050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Manganese, total	7439-96-5	0.00149	0.00010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Molybdenum, total	7439-98-7	0.000154	0.000050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Nickel, total	7440-02-0	<0.00050	0.00050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Phosphorus, total	7723-14-0	<0.050	0.050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Potassium, total	7440-09-7	0.944	0.050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Rubidium, total	7440-17-7	0.00089	0.00020	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Selenium, total	7782-49-2	<0.000050	0.000050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Silicon, total	7440-21-3	1.59	0.10	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Silver, total	7440-22-4	<0.000010	0.000010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Sodium, total	7440-23-5	14.1	0.050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Strontium, total	7440-24-6	0.0492	0.00020	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Sulfur, total	7704-34-9	1.05	0.50	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Tellurium, total	13494-80-9	<0.00020	0.00020	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Thallium, total	7440-28-0	<0.000010	0.000010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299

Analytical Results

FC2301141-004

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

Client sample ID: 128 McDonald St
Client sampling date / time: 06-May-2023 15:00

Analyte	CAS Number	Result	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
Total Metals								
Thorium, total	7440-29-1	<0.00010	0.00010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Tin, total	7440-31-5	<0.00010	0.00010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Titanium, total	7440-32-6	<0.00030	0.00030	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Tungsten, total	7440-33-7	<0.00010	0.00010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Uranium, total	7440-61-1	<0.000010	0.000010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Vanadium, total	7440-62-2	<0.00050	0.00050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Zinc, total	7440-66-6	<0.0030	0.0030	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Zirconium, total	7440-67-7	<0.00020	0.00020	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Dissolved Metals								
Aluminum, dissolved	7429-90-5	0.0197	0.0010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Antimony, dissolved	7440-36-0	<0.00010	0.00010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Arsenic, dissolved	7440-38-2	0.00013	0.00010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Barium, dissolved	7440-39-3	0.0148	0.00010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Beryllium, dissolved	7440-41-7	<0.000020	0.000020	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Bismuth, dissolved	7440-69-9	<0.000050	0.000050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Boron, dissolved	7440-42-8	0.011	0.010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Cadmium, dissolved	7440-43-9	<0.0000050	0.0000050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Calcium, dissolved	7440-70-2	8.08	0.050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Cesium, dissolved	7440-46-2	<0.000010	0.000010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Chromium, dissolved	7440-47-3	<0.00050	0.00050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Cobalt, dissolved	7440-48-4	<0.00010	0.00010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Copper, dissolved	7440-50-8	0.00043	0.00020	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Iron, dissolved	7439-89-6	<0.030	0.030	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Lead, dissolved	7439-92-1	<0.000050	0.000050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Lithium, dissolved	7439-93-2	0.0026	0.0010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Magnesium, dissolved	7439-95-4	2.31	0.0050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Manganese, dissolved	7439-96-5	<0.00500	0.00500	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Molybdenum, dissolved	7439-98-7	0.000155	0.000050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Nickel, dissolved	7440-02-0	<0.00050	0.00050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Phosphorus, dissolved	7723-14-0	<0.050	0.050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Potassium, dissolved	7440-09-7	0.956	0.050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Rubidium, dissolved	7440-17-7	0.00094	0.00020	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Selenium, dissolved	7782-49-2	<0.000050	0.000050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Silicon, dissolved	7440-21-3	1.56	0.050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Silver, dissolved	7440-22-4	<0.000010	0.000010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Sodium, dissolved	7440-23-5	14.8	0.050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Strontium, dissolved	7440-24-6	0.0498	0.00020	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Sulfur, dissolved	7704-34-9	1.07	0.50	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Tellurium, dissolved	13494-80-9	<0.00020	0.00020	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Thallium, dissolved	7440-28-0	<0.000010	0.000010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Thorium, dissolved	7440-29-1	<0.00010	0.00010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Tin, dissolved	7440-31-5	<0.00010	0.00010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Titanium, dissolved	7440-32-6	<0.00030	0.00030	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Tungsten, dissolved	7440-33-7	<0.00010	0.00010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Uranium, dissolved	7440-61-1	<0.000010	0.000010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291

Analytical Results

FC2301141-004

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

Client sample ID: 128 McDonald St
Client sampling date / time: 06-May-2023 15:00

Analyte	CAS Number	Result	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
Dissolved Metals								
Vanadium, dissolved	7440-62-2	<0.00050	0.00050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Zinc, dissolved	7440-66-6	<0.0010	0.0010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Zirconium, dissolved	7440-67-7	<0.00030	0.00030	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Dissolved metals filtration location	----	Field	-	-	EP421/EO	-	09-May-2023	928291
Aggregate Organics								
Naphthenic acids	----	<0.10	0.10	mg/L	E565-L/EO A	09-May-2023	11-May-2023	928407
Volatile Organic Compounds [Fuels]								
Benzene	71-43-2	<0.50	0.50	µg/L	E611A/EO A	09-May-2023	09-May-2023	928552
Ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611A/EO A	09-May-2023	09-May-2023	928552
Methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611A/EO	09-May-2023	09-May-2023	928552
Styrene	100-42-5	<0.50	0.50	µg/L	E611A/EO A	09-May-2023	09-May-2023	928552
Toluene	108-88-3	<0.50	0.50	µg/L	E611A/EO A	09-May-2023	09-May-2023	928552
Xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611A/EO A	09-May-2023	09-May-2023	928552
Xylene, o-	95-47-6	<0.30	0.30	µg/L	E611A/EO A	09-May-2023	09-May-2023	928552
Xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611A/EO A	09-May-2023	09-May-2023	928552
BTEX, total	----	<1.0	1.0	µg/L	E611A/EO	09-May-2023	09-May-2023	928552
BTEX+Styrene, total	n/a	<1.5	1.5	µg/L	E611A/EO	09-May-2023	09-May-2023	928552
Hydrocarbons								
F1 (C6-C10)	----	<100	100	µg/L	E581.F1/EO A	09-May-2023	09-May-2023	928551
F1-BTEX	----	<100	100	µg/L	EC580/EO	-	10-May-2023	-
F2 (C10-C16)	----	<100	100	µg/L	E601/EO A	09-May-2023	09-May-2023	928366
F3 (C16-C34)	----	<250	250	µg/L	E601/EO A	09-May-2023	09-May-2023	928366
F4 (C34-C50)	----	<250	250	µg/L	E601/EO A	09-May-2023	09-May-2023	928366
TEH (C10-C50)	n/a	<400	400	µg/L	E601/EO	09-May-2023	09-May-2023	928366
TEH (C16-C50)	----	<400	400	µg/L	E601/EO	09-May-2023	09-May-2023	928366
Hydrocarbons Surrogates								
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	93.8	1.0	%	E601/EO	09-May-2023	09-May-2023	928366
Dichlorotoluene, 3,4-	95-75-0	107	1.0	%	E581.F1/EO	09-May-2023	09-May-2023	928551
Volatile Organic Compounds Surrogates								
Bromofluorobenzene, 4-	460-00-4	84.6	1.0	%	E611A/EO	09-May-2023	09-May-2023	928552
Difluorobenzene, 1,4-	540-36-3	96.7	1.0	%	E611A/EO	09-May-2023	09-May-2023	928552
Polycyclic Aromatic Hydrocarbons								
Acenaphthene	83-32-9	<0.010	0.010	µg/L	E641A/EO A	09-May-2023	09-May-2023	928367
Acenaphthylene	208-96-8	<0.010	0.010	µg/L	E641A/EO A	09-May-2023	09-May-2023	928367
Acridine	260-94-6	<0.010	0.010	µg/L	E641A/EO A	09-May-2023	09-May-2023	928367
Anthracene	120-12-7	<0.010	0.010	µg/L	E641A/EO A	09-May-2023	09-May-2023	928367
Benz(a)anthracene	56-55-3	<0.010	0.010	µg/L	E641A/EO A	09-May-2023	09-May-2023	928367
Benzo(a)pyrene	50-32-8	<0.0050	0.0050	µg/L	E641A/EO A	09-May-2023	09-May-2023	928367
Benzo(b+j)fluoranthene	n/a	<0.010	0.010	µg/L	E641A/EO A	09-May-2023	09-May-2023	928367
Benzo(b+j+k)fluoranthene	n/a	<0.015	0.015	µg/L	E641A/EO	09-May-2023	09-May-2023	928367
Benzo(g,h,i)perylene	191-24-2	<0.010	0.010	µg/L	E641A/EO A	09-May-2023	09-May-2023	928367
Benzo(k)fluoranthene	207-08-9	<0.010	0.010	µg/L	E641A/EO A	09-May-2023	09-May-2023	928367
Chrysene	218-01-9	<0.010	0.010	µg/L	E641A/EO A	09-May-2023	09-May-2023	928367
Dibenz(a,h)anthracene	53-70-3	<0.0050	0.0050	µg/L	E641A/EO A	09-May-2023	09-May-2023	928367
Fluoranthene	206-44-0	<0.010	0.010	µg/L	E641A/EO A	09-May-2023	09-May-2023	928367

Analytical Results

FC2301141-004

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

Client sample ID: 128 McDonald St

Client sampling date / time: 06-May-2023 15:00

Analyte	CAS Number	Result	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
Polycyclic Aromatic Hydrocarbons								
Fluorene	86-73-7	<0.010	0.010	µg/L	E641A/EO A	09-May-2023	09-May-2023	928367
Indeno(1,2,3-c,d)pyrene	193-39-5	<0.010	0.010	µg/L	E641A/EO A	09-May-2023	09-May-2023	928367
Methylnaphthalene, 1-	90-12-0	<0.010	0.010	µg/L	E641A/EO A	09-May-2023	09-May-2023	928367
Methylnaphthalene, 1+2-	----	<0.015	0.015	µg/L	E641A/EO	09-May-2023	09-May-2023	928367
Methylnaphthalene, 2-	91-57-6	<0.010	0.010	µg/L	E641A/EO A	09-May-2023	09-May-2023	928367
Naphthalene	91-20-3	<0.050	0.050	µg/L	E641A/EO A	09-May-2023	09-May-2023	928367
Phenanthrene	85-01-8	<0.020	0.020	µg/L	E641A/EO A	09-May-2023	09-May-2023	928367
Pyrene	129-00-0	<0.010	0.010	µg/L	E641A/EO A	09-May-2023	09-May-2023	928367
Quinoline	91-22-5	<0.050	0.050	µg/L	E641A/EO A	09-May-2023	09-May-2023	928367
B(a)P total potency equivalents [B(a)P TPE]	----	<0.010	0.010	µg/L	E641A/EO	09-May-2023	09-May-2023	928367
PAHs, high molecular weight (BC AWQ)	n/a	<0.030	0.03	µg/L	E641A/EO	09-May-2023	09-May-2023	928367
PAHs, low molecular weight (BC AWQ)	n/a	<0.060	0.06	µg/L	E641A/EO	09-May-2023	09-May-2023	928367
PAHs, total (CCME sewer 18)	n/a	<0.070	0.07	µg/L	E641A/EO	09-May-2023	09-May-2023	928367
PAHs, total (EPA 16)	n/a	<0.065	0.065	µg/L	E641A/EO	09-May-2023	09-May-2023	928367
Polycyclic Aromatic Hydrocarbons Surrogates								
Chrysene-d12	1719-03-5	76.8	0.1	%	E641A/EO	09-May-2023	09-May-2023	928367
Naphthalene-d8	1146-65-2	104	0.1	%	E641A/EO	09-May-2023	09-May-2023	928367
Phenanthrene-d10	1517-22-2	104	0.1	%	E641A/EO	09-May-2023	09-May-2023	928367

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

Please refer to the Accreditation section for an explanation of analyte accreditations.

Analytical Results

FC2301141-005

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

Client sample ID: 164 Mackenzie Ave

Client sampling date / time: 06-May-2023 11:00

Analyte	CAS Number	Result	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
Physical Tests								
Hardness (as CaCO3), dissolved	----	29.6	0.50	mg/L	EC100/EO	-	10-May-2023	-
Salinity	----	<1.0	1.0	psu	EC100S/VA	-	11-May-2023	-
Conductivity	----	123	2.0	µS/cm	E100/EO A	10-May-2023	10-May-2023	928503
pH	----	8.90	0.10	pH units	E108/EO A	10-May-2023	10-May-2023	928502
Alkalinity, bicarbonate (as HCO3)	71-52-3	46.4	1.0	mg/L	E290/EO A	10-May-2023	10-May-2023	928504
Alkalinity, carbonate (as CO3)	3812-32-6	4.0	1.0	mg/L	E290/EO A	10-May-2023	10-May-2023	928504
Alkalinity, hydroxide (as OH)	14280-30-9	<1.0	1.0	mg/L	E290/EO A	10-May-2023	10-May-2023	928504
Alkalinity, total (as CaCO3)	----	44.6	2.0	mg/L	E290/EO A	10-May-2023	10-May-2023	928504
Solids, total dissolved [TDS], calculated	----	71.8	1.0	mg/L	EC103/EO	-	10-May-2023	-
Anions and Nutrients								
Chloride	16887-00-6	11.0	0.50	mg/L	E235.Cl/EO A	09-May-2023	09-May-2023	928913
Fluoride	16984-48-8	0.030	0.020	mg/L	E235.F/EO A	09-May-2023	09-May-2023	928910
Nitrate (as N)	14797-55-8	<0.020	0.020	mg/L	E235.NO3/EO A	09-May-2023	09-May-2023	928911
Nitrite (as N)	14797-65-0	<0.010	0.010	mg/L	E235.NO2/EO A	09-May-2023	09-May-2023	928914

Analytical Results

FC2301141-005

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

Client sample ID: 164 Mackenzie Ave
Client sampling date / time: 06-May-2023 11:00

Analyte	CAS Number	Result	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
Anions and Nutrients								
Sulfate (as SO4)	14808-79-8	2.36	0.30	mg/L	E235.SO4/EO A	09-May-2023	09-May-2023	928912
Nitrate + Nitrite (as N)	----	<0.0500	0.05	mg/L	EC235.N+N/EO	-	10-May-2023	-
Total Sulfides								
Sulfide, total (as S)	18496-25-8	<0.0015	0.0015	mg/L	E395/VA B	-	10-May-2023	930937
Ion Balance								
Anion sum	----	1.25	0.10	meq/L	EC101/EO	-	10-May-2023	-
Cation sum	----	1.31	0.10	meq/L	EC101/EO	-	10-May-2023	-
Ion balance (APHA)	----	2.34	0.01	%	EC101/EO	-	10-May-2023	-
Ion balance (cations/anions)	----	105	0.010	%	EC101/EO	-	10-May-2023	-
Total Metals								
Aluminum, total	7429-90-5	0.0288	0.0030	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Antimony, total	7440-36-0	<0.00010	0.00010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Arsenic, total	7440-38-2	0.00017	0.00010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Barium, total	7440-39-3	0.0139	0.00010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Beryllium, total	7440-41-7	<0.000020	0.000020	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Bismuth, total	7440-69-9	<0.000050	0.000050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Boron, total	7440-42-8	0.011	0.010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Cadmium, total	7440-43-9	<0.0000050	0.0000050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Calcium, total	7440-70-2	8.03	0.050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Cesium, total	7440-46-2	<0.000010	0.000010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Chromium, total	7440-47-3	<0.00050	0.00050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Cobalt, total	7440-48-4	<0.00010	0.00010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Copper, total	7440-50-8	0.00105	0.00050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Iron, total	7439-89-6	<0.010	0.010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Lead, total	7439-92-1	<0.000050	0.000050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Lithium, total	7439-93-2	0.0023	0.0010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Magnesium, total	7439-95-4	2.25	0.0050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Manganese, total	7439-96-5	0.00112	0.00010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Molybdenum, total	7439-98-7	0.000161	0.000050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Nickel, total	7440-02-0	<0.00050	0.00050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Phosphorus, total	7723-14-0	<0.050	0.050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Potassium, total	7440-09-7	0.943	0.050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Rubidium, total	7440-17-7	0.00090	0.00020	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Selenium, total	7782-49-2	<0.000050	0.000050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Silicon, total	7440-21-3	1.59	0.10	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Silver, total	7440-22-4	<0.000010	0.000010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Sodium, total	7440-23-5	15.1	0.050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Strontium, total	7440-24-6	0.0477	0.00020	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Sulfur, total	7704-34-9	1.04	0.50	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Tellurium, total	13494-80-9	<0.00020	0.00020	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Thallium, total	7440-28-0	<0.000010	0.000010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Thorium, total	7440-29-1	<0.00010	0.00010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Tin, total	7440-31-5	<0.00010	0.00010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Titanium, total	7440-32-6	<0.00030	0.00030	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Tungsten, total	7440-33-7	<0.00010	0.00010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299

Analytical Results

FC2301141-005

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

Client sample ID: 164 Mackenzie Ave
Client sampling date / time: 06-May-2023 11:00

Analyte	CAS Number	Result	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
Total Metals								
Uranium, total	7440-61-1	<0.000010	0.000010	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Vanadium, total	7440-62-2	<0.00050	0.00050	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Zinc, total	7440-66-6	<0.0030	0.0030	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Zirconium, total	7440-67-7	<0.00020	0.00020	mg/L	E420/EO A	09-May-2023	09-May-2023	928299
Dissolved Metals								
Aluminum, dissolved	7429-90-5	0.0299	0.0010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Antimony, dissolved	7440-36-0	<0.00010	0.00010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Arsenic, dissolved	7440-38-2	0.00015	0.00010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Barium, dissolved	7440-39-3	0.0138	0.00010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Beryllium, dissolved	7440-41-7	<0.000020	0.000020	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Bismuth, dissolved	7440-69-9	<0.000050	0.000050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Boron, dissolved	7440-42-8	0.012	0.010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Cadmium, dissolved	7440-43-9	<0.0000050	0.0000050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Calcium, dissolved	7440-70-2	8.12	0.050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Cesium, dissolved	7440-46-2	<0.000010	0.000010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Chromium, dissolved	7440-47-3	<0.00050	0.00050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Cobalt, dissolved	7440-48-4	<0.00010	0.00010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Copper, dissolved	7440-50-8	0.00110	0.00020	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Iron, dissolved	7439-89-6	<0.030	0.030	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Lead, dissolved	7439-92-1	<0.000050	0.000050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Lithium, dissolved	7439-93-2	0.0023	0.0010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Magnesium, dissolved	7439-95-4	2.27	0.0050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Manganese, dissolved	7439-96-5	<0.00500	0.00500	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Molybdenum, dissolved	7439-98-7	0.000170	0.000050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Nickel, dissolved	7440-02-0	<0.00050	0.00050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Phosphorus, dissolved	7723-14-0	<0.050	0.050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Potassium, dissolved	7440-09-7	0.953	0.050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Rubidium, dissolved	7440-17-7	0.00090	0.00020	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Selenium, dissolved	7782-49-2	<0.000050	0.000050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Silicon, dissolved	7440-21-3	1.60	0.050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Silver, dissolved	7440-22-4	<0.000010	0.000010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Sodium, dissolved	7440-23-5	15.9	0.050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Strontium, dissolved	7440-24-6	0.0493	0.00020	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Sulfur, dissolved	7704-34-9	1.05	0.50	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Tellurium, dissolved	13494-80-9	<0.00020	0.00020	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Thallium, dissolved	7440-28-0	<0.000010	0.000010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Thorium, dissolved	7440-29-1	<0.00010	0.00010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Tin, dissolved	7440-31-5	<0.00010	0.00010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Titanium, dissolved	7440-32-6	<0.00030	0.00030	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Tungsten, dissolved	7440-33-7	<0.00010	0.00010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Uranium, dissolved	7440-61-1	<0.000010	0.000010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Vanadium, dissolved	7440-62-2	<0.00050	0.00050	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Zinc, dissolved	7440-66-6	<0.0010	0.0010	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Zirconium, dissolved	7440-67-7	<0.00030	0.00030	mg/L	E421/EO A	09-May-2023	09-May-2023	928291
Dissolved metals filtration location	----	Field	-	-	EP421/EO	-	09-May-2023	928291

Analytical Results

FC2301141-005

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

Client sample ID: 164 Mackenzie Ave
Client sampling date / time: 06-May-2023 11:00

Analyte	CAS Number	Result	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
Aggregate Organics								
Naphthenic acids	----	<0.10	0.10	mg/L	E565-L/EO A	09-May-2023	11-May-2023	928407
Volatile Organic Compounds [Fuels]								
Benzene	71-43-2	<0.50	0.50	µg/L	E611A/EO A	09-May-2023	09-May-2023	928552
Ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611A/EO A	09-May-2023	09-May-2023	928552
Methyl-tert-butyl ether [MTBE]	1634-04-4	<0.50	0.50	µg/L	E611A/EO	09-May-2023	09-May-2023	928552
Styrene	100-42-5	<0.50	0.50	µg/L	E611A/EO A	09-May-2023	09-May-2023	928552
Toluene	108-88-3	<0.50	0.50	µg/L	E611A/EO A	09-May-2023	09-May-2023	928552
Xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611A/EO A	09-May-2023	09-May-2023	928552
Xylene, o-	95-47-6	<0.30	0.30	µg/L	E611A/EO A	09-May-2023	09-May-2023	928552
Xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611A/EO A	09-May-2023	09-May-2023	928552
BTEX, total	----	<1.0	1.0	µg/L	E611A/EO	09-May-2023	09-May-2023	928552
BTEX+Styrene, total	n/a	<1.5	1.5	µg/L	E611A/EO	09-May-2023	09-May-2023	928552
Hydrocarbons								
F1 (C6-C10)	----	<100	100	µg/L	E581.F1/EO A	09-May-2023	09-May-2023	928551
F1-BTEX	----	<100	100	µg/L	EC580/EO	-	10-May-2023	-
F2 (C10-C16)	----	<100	100	µg/L	E601/EO A	09-May-2023	09-May-2023	928366
F3 (C16-C34)	----	<250	250	µg/L	E601/EO A	09-May-2023	09-May-2023	928366
F4 (C34-C50)	----	<250	250	µg/L	E601/EO A	09-May-2023	09-May-2023	928366
TEH (C10-C50)	n/a	<400	400	µg/L	E601/EO	09-May-2023	09-May-2023	928366
TEH (C16-C50)	----	<400	400	µg/L	E601/EO	09-May-2023	09-May-2023	928366
Hydrocarbons Surrogates								
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	93.6	1.0	%	E601/EO	09-May-2023	09-May-2023	928366
Dichlorotoluene, 3,4-	95-75-0	112	1.0	%	E581.F1/EO	09-May-2023	09-May-2023	928551
Volatile Organic Compounds Surrogates								
Bromofluorobenzene, 4-	460-00-4	82.7	1.0	%	E611A/EO	09-May-2023	09-May-2023	928552
Difluorobenzene, 1,4-	540-36-3	94.4	1.0	%	E611A/EO	09-May-2023	09-May-2023	928552
Polycyclic Aromatic Hydrocarbons								
Acenaphthene	83-32-9	<0.010	0.010	µg/L	E641A/EO A	09-May-2023	09-May-2023	928367
Acenaphthylene	208-96-8	<0.010	0.010	µg/L	E641A/EO A	09-May-2023	09-May-2023	928367
Acridine	260-94-6	<0.010	0.010	µg/L	E641A/EO A	09-May-2023	09-May-2023	928367
Anthracene	120-12-7	<0.010	0.010	µg/L	E641A/EO A	09-May-2023	09-May-2023	928367
Benz(a)anthracene	56-55-3	<0.010	0.010	µg/L	E641A/EO A	09-May-2023	09-May-2023	928367
Benzo(a)pyrene	50-32-8	<0.0050	0.0050	µg/L	E641A/EO A	09-May-2023	09-May-2023	928367
Benzo(b+j)fluoranthene	n/a	<0.010	0.010	µg/L	E641A/EO A	09-May-2023	09-May-2023	928367
Benzo(b+j+k)fluoranthene	n/a	<0.015	0.015	µg/L	E641A/EO	09-May-2023	09-May-2023	928367
Benzo(g,h,i)perylene	191-24-2	<0.010	0.010	µg/L	E641A/EO A	09-May-2023	09-May-2023	928367
Benzo(k)fluoranthene	207-08-9	<0.010	0.010	µg/L	E641A/EO A	09-May-2023	09-May-2023	928367
Chrysene	218-01-9	<0.010	0.010	µg/L	E641A/EO A	09-May-2023	09-May-2023	928367
Dibenz(a,h)anthracene	53-70-3	<0.0050	0.0050	µg/L	E641A/EO A	09-May-2023	09-May-2023	928367
Fluoranthene	206-44-0	<0.010	0.010	µg/L	E641A/EO A	09-May-2023	09-May-2023	928367
Fluorene	86-73-7	<0.010	0.010	µg/L	E641A/EO A	09-May-2023	09-May-2023	928367
Indeno(1,2,3-c,d)pyrene	193-39-5	<0.010	0.010	µg/L	E641A/EO A	09-May-2023	09-May-2023	928367
Methylnaphthalene, 1-	90-12-0	<0.010	0.010	µg/L	E641A/EO A	09-May-2023	09-May-2023	928367
Methylnaphthalene, 1+2-	----	<0.015	0.015	µg/L	E641A/EO	09-May-2023	09-May-2023	928367
Methylnaphthalene, 2-	91-57-6	<0.010	0.010	µg/L	E641A/EO A	09-May-2023	09-May-2023	928367

Analytical Results

FC2301141-005

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

Client sample ID: 164 Mackenzie Ave
Client sampling date / time: 06-May-2023 11:00

Analyte	CAS Number	Result	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
Polycyclic Aromatic Hydrocarbons								
Naphthalene	91-20-3	<0.050	0.050	µg/L	E641A/EO A	09-May-2023	09-May-2023	928367
Phenanthrene	85-01-8	<0.020	0.020	µg/L	E641A/EO A	09-May-2023	09-May-2023	928367
Pyrene	129-00-0	<0.010	0.010	µg/L	E641A/EO A	09-May-2023	09-May-2023	928367
Quinoline	91-22-5	<0.050	0.050	µg/L	E641A/EO A	09-May-2023	09-May-2023	928367
B(a)P total potency equivalents [B(a)P TPE]	----	<0.010	0.010	µg/L	E641A/EO	09-May-2023	09-May-2023	928367
PAHs, high molecular weight (BC AWQ)	n/a	<0.030	0.03	µg/L	E641A/EO	09-May-2023	09-May-2023	928367
PAHs, low molecular weight (BC AWQ)	n/a	<0.060	0.06	µg/L	E641A/EO	09-May-2023	09-May-2023	928367
PAHs, total (CCME sewer 18)	n/a	<0.070	0.07	µg/L	E641A/EO	09-May-2023	09-May-2023	928367
PAHs, total (EPA 16)	n/a	<0.065	0.065	µg/L	E641A/EO	09-May-2023	09-May-2023	928367
Polycyclic Aromatic Hydrocarbons Surrogates								
Chrysene-d12	1719-03-5	86.2	0.1	%	E641A/EO	09-May-2023	09-May-2023	928367
Naphthalene-d8	1146-65-2	109	0.1	%	E641A/EO	09-May-2023	09-May-2023	928367
Phenanthrene-d10	1517-22-2	110	0.1	%	E641A/EO	09-May-2023	09-May-2023	928367

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

Please refer to the Accreditation section for an explanation of analyte accreditations.