



## CERTIFICATE OF ANALYSIS

<b>Work Order</b>	: <b>FC2301151</b>	Page	: 1 of 8
Client	: <b>Regional Municipality of Wood Buffalo</b>	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 16:00
PO	: 4500049712	Date Analysis Commenced	: 10-May-2023
C-O-C number	: ----	Issue Date	: 12-May-2023 13:54
Sampler	: Darwin McDonald		
Site	: Schedule 4: Fort Chip		
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.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Andrew Fox		Metals, Calgary, Alberta
Anthony Calero	Supervisor - Inorganic	Metals, Calgary, Alberta
Cynthia Bauer	Organic Supervisor	Organics, Calgary, Alberta
Geoff Berg	Lab Analyst	Organics, Edmonton, Alberta
George Huang	Supervisor - Inorganic	Inorganics, Calgary, Alberta
Harpreet Chawla	Team Leader - Inorganics	Inorganics, Calgary, Alberta
Jyotsnarani Devi	Laboratory Analyst	Organics, Calgary, Alberta
Katarzyna Glinka	Analyst	Inorganics, Calgary, Alberta
Kevin Baxter	Team Leader - Inorganics	Inorganics, Calgary, Alberta
Nguyen Tran	Laboratory Analyst	Organics, Calgary, Alberta
Sorina Motea	Laboratory Analyst	Organics, Calgary, Alberta
Tracy Harley	Supervisor - Water Quality Instrumentation	Inorganics, Burnaby, British Columbia



## 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	CG Calgary - Environmental	2559 29th Street NE, Calgary, Alberta
B	CALA ISO/IEC 17025:2017	VA Vancouver - Environmental	8081 Lougheed Highway, Burnaby, British Columbia
C	CALA ISO/IEC 17025:2017	EO Edmonton - Environmental	9450 - 17 Avenue NW, Edmonton, Alberta

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



## Analytical Results

Sub-Matrix: Water					Client sample ID	Treated Water	Raw Water Chamber Tap	130 Lucas Ave.	104 Paquette St.	120 Stewart Dr.
(Matrix: Water)					Client sampling date / time	09-May-2023 09:15	09-May-2023 09:00	09-May-2023 09:15	09-May-2023 13:40	09-May-2023 14:00
Analyte	CAS Number	Method/Lab	LOR	Unit	FC2301151-001	FC2301151-002	FC2301151-003	FC2301151-004	FC2301151-005	
					Result	Result	Result	Result	Result	
<b>Physical Tests</b>										
Hardness (as CaCO <sub>3</sub> ), dissolved	----	EC100/CG	0.50	mg/L	28.8	26.1	29.7	31.7	28.1	
Hardness (as CaCO <sub>3</sub> ), from total Ca/Mg	----	EC100A/CG	0.50	mg/L	30.0	27.3	30.2	30.7	30.0	
Salinity	----	EC100S/VA	1.0	psu	<1.0	<1.0	<1.0	<1.0	<1.0	
Conductivity	----	E100/CG	A	2.0	μS/cm	120	69.2	122	133	120
pH	----	E108/CG	A	0.10	pH units	8.31	7.44	8.00	8.83	8.13
Alkalinity, bicarbonate (as HCO <sub>3</sub> )	71-52-3	E290/CG	A	1.0	mg/L	46.6	32.0	48.7	50.0	47.3
Alkalinity, carbonate (as CO <sub>3</sub> )	3812-32-6	E290/CG	A	1.0	mg/L	<1.0	<1.0	<1.0	2.9	<1.0
Alkalinity, hydroxide (as OH)	14280-30-9	E290/CG	A	1.0	mg/L	<1.0	<1.0	<1.0	<1.0	
Alkalinity, total (as CaCO <sub>3</sub> )	----	E290/CG	A	2.0	mg/L	38.2	26.2	39.9	45.8	38.8
Solids, total dissolved [TDS], calculated	----	EC103/CG		1.0	mg/L	63.8	38.4	65.8	72.6	63.6
<b>Anions and Nutrients</b>										
Chloride	16887-00-6	E235.Cl/CG	A	0.50	mg/L	11.2	2.93	11.2	11.1	11.2
Fluoride	16984-48-8	E235.F/CG	A	0.020	mg/L	0.020	0.050	0.021	0.022	0.021
Nitrate (as N)	14797-55-8	E235.NO <sub>3</sub> /CG	A	0.020	mg/L	<0.020	<0.020	<0.020	<0.020	<0.020
Nitrite (as N)	14797-65-0	E235.NO <sub>2</sub> /CG	A	0.010	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010
Sulfate (as SO <sub>4</sub> )	14808-79-8	E235.SO <sub>4</sub> /CG	A	0.30	mg/L	3.16	3.45	3.00	3.22	3.08
Nitrate + Nitrite (as N)	----	EC235.N+N/C G		0.0500	mg/L	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
<b>Total Sulfides</b>										
Sulfide, total (as S)	18496-25-8	E395/VA	B	0.0015	mg/L	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015
<b>Ion Balance</b>										
Anion sum	----	EC101/CG		0.10	meq/L	1.15	0.68	1.18	1.30	1.16
Cation sum	----	EC101/CG		0.10	meq/L	1.11	0.65	1.15	1.28	1.07
Ion balance (APHA)	----	EC101/CG		0.01	%	-1.77	-2.26	-1.29	-0.78	-4.04
Ion balance (cations/anions)	----	EC101/CG		0.010	%	96.5	95.6	97.4	98.5	92.2
<b>Total Metals</b>										
Aluminum, total	7429-90-5	E420/CG	A	0.0030	mg/L	0.0172	0.105	0.0271	0.0262	0.0194
Antimony, total	7440-36-0	E420/CG	A	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic, total	7440-38-2	E420/CG	A	0.00010	mg/L	0.00015	0.00023	0.00015	0.00017	0.00014



## Analytical Results

Sub-Matrix: Water (Matrix: Water)						Client sample ID	Treated Water	Raw Water Chamber Tap	130 Lucas Ave.	104 Paquette St.	120 Stewart Dr.
Client sampling date / time						09-May-2023 09:15	09-May-2023 09:00	09-May-2023 09:15	09-May-2023 13:40	09-May-2023 14:00	
Analyte	CAS Number	Method/Lab	LOR	Unit	FC2301151-001	FC2301151-002	FC2301151-003	FC2301151-004	FC2301151-005		
					Result	Result	Result	Result	Result		
<b>Total Metals</b>											
Barium, total	7440-39-3	E420/CG	A	0.00010	mg/L	0.0152	0.0151	0.0155	0.0144	0.0152	
Beryllium, total	7440-41-7	E420/CG	A	0.000020	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	
Bismuth, total	7440-69-9	E420/CG	A	0.000050	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	
Boron, total	7440-42-8	E420/CG	A	0.010	mg/L	0.013	0.012	0.013	0.013	0.013	
Cadmium, total	7440-43-9	E420/CG	A	0.0000050	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	
Calcium, total	7440-70-2	E420/CG	A	0.050	mg/L	8.49	7.42	8.49	8.60	8.42	
Cesium, total	7440-46-2	E420/CG	A	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
Chromium, total	7440-47-3	E420/CG	A	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Cobalt, total	7440-48-4	E420/CG	A	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Copper, total	7440-50-8	E420/CG	A	0.00050	mg/L	<0.00050	0.00111	<0.00050	0.00420	0.00104	
Iron, total	7439-89-6	E420/CG	A	0.010	mg/L	<0.010	0.149	<0.010	<0.010	<0.010	
Lead, total	7439-92-1	E420/CG	A	0.000050	mg/L	<0.000050	0.000056	<0.000050	<0.000050	<0.000050	
Lithium, total	7439-93-2	E420/CG	A	0.0010	mg/L	0.0025	0.0024	0.0028	0.0027	0.0028	
Magnesium, total	7439-95-4	E420/CG	A	0.0050	mg/L	2.15	2.13	2.19	2.24	2.19	
Manganese, total	7439-96-5	E420/CG	A	0.00010	mg/L	0.00194	0.00507	0.00139	0.00164	0.00169	
Molybdenum, total	7439-98-7	E420/CG	A	0.000050	mg/L	0.000161	0.000193	0.000162	0.000162	0.000161	
Nickel, total	7440-02-0	E420/CG	A	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Phosphorus, total	7723-14-0	E420/CG	A	0.050	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	
Potassium, total	7440-09-7	E420/CG	A	0.050	mg/L	0.893	0.922	0.925	0.941	0.940	
Rubidium, total	7440-17-7	E420/CG	A	0.00020	mg/L	0.00097	0.00111	0.00100	0.00099	0.00097	
Selenium, total	7782-49-2	E420/CG	A	0.000050	mg/L	<0.000050	0.000050	<0.000050	<0.000050	<0.000050	
Silicon, total	7440-21-3	E420/CG	A	0.10	mg/L	1.45	1.71	1.53	1.64	1.52	
Silver, total	7440-22-4	E420/CG	A	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
Sodium, total	7440-23-5	E420/CG	A	0.050	mg/L	11.8	2.31	12.1	14.4	11.5	
Strontium, total	7440-24-6	E420/CG	A	0.00020	mg/L	0.0504	0.0492	0.0526	0.0523	0.0518	
Sulfur, total	7704-34-9	E420/CG	A	0.50	mg/L	1.15	1.25	1.27	1.24	1.23	
Tellurium, total	13494-80-9	E420/CG	A	0.00020	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	
Thallium, total	7440-28-0	E420/CG	A	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
Thorium, total	7440-29-1	E420/CG	A	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Tin, total	7440-31-5	E420/CG	A	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	



## Analytical Results

Sub-Matrix: Water						Client sample ID				
(Matrix: Water)						Treated Water	Raw Water Chamber Tap	130 Lucas Ave.	104 Paquette St.	120 Stewart Dr.
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Analyte	CAS Number	Method/Lab	LOR	Unit	FC2301151-001	FC2301151-002	FC2301151-003	FC2301151-004	FC2301151-005	
					Result	Result	Result	Result	Result	
<b>Total Metals</b>										
Titanium, total	7440-32-6	E420/CG	A	0.00030	mg/L	<0.00030	0.00255	<0.00030	<0.00030	<0.00030
Tungsten, total	7440-33-7	E420/CG	A	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Uranium, total	7440-61-1	E420/CG	A	0.000010	mg/L	<0.000010	0.000086	<0.000010	<0.000010	<0.000010
Vanadium, total	7440-62-2	E420/CG	A	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Zinc, total	7440-66-6	E420/CG	A	0.0030	mg/L	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Zirconium, total	7440-67-7	E420/CG	A	0.00020	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
<b>Dissolved Metals</b>										
Aluminum, dissolved	7429-90-5	E421/CG	A	0.0010	mg/L	0.0152	0.0194	0.0252	0.0246	0.0186
Antimony, dissolved	7440-36-0	E421/CG	A	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Arsenic, dissolved	7440-38-2	E421/CG	A	0.00010	mg/L	0.00016	0.00020	0.00012	0.00014	0.00012
Barium, dissolved	7440-39-3	E421/CG	A	0.00010	mg/L	0.0154	0.0149	0.0162	0.0152	0.0159
Beryllium, dissolved	7440-41-7	E421/CG	A	0.000020	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Bismuth, dissolved	7440-69-9	E421/CG	A	0.000050	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron, dissolved	7440-42-8	E421/CG	A	0.010	mg/L	0.012	0.011	0.013	0.014	0.012
Cadmium, dissolved	7440-43-9	E421/CG	A	0.0000050	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium, dissolved	7440-70-2	E421/CG	A	0.050	mg/L	7.93	6.84	8.17	8.94	7.60
Cesium, dissolved	7440-46-2	E421/CG	A	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Chromium, dissolved	7440-47-3	E421/CG	A	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt, dissolved	7440-48-4	E421/CG	A	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Copper, dissolved	7440-50-8	E421/CG	A	0.00020	mg/L	0.00030	0.00088	0.00042	0.00454	0.00082
Iron, dissolved	7439-89-6	E421/CG	A	0.030	mg/L	<0.030	0.037	<0.030	<0.030	<0.030
Lead, dissolved	7439-92-1	E421/CG	A	0.000050	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Lithium, dissolved	7439-93-2	E421/CG	A	0.0010	mg/L	0.0023	0.0019	0.0028	0.0032	0.0024
Magnesium, dissolved	7439-95-4	E421/CG	A	0.0050	mg/L	2.19	2.19	2.26	2.27	2.21
Manganese, dissolved	7439-96-5	E421/CG	A	0.00500	mg/L	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
Molybdenum, dissolved	7439-98-7	E421/CG	A	0.000050	mg/L	0.000187	0.000198	0.000169	0.000181	0.000157
Nickel, dissolved	7440-02-0	E421/CG	A	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Phosphorus, dissolved	7723-14-0	E421/CG	A	0.050	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050
Potassium, dissolved	7440-09-7	E421/CG	A	0.050	mg/L	0.909	0.903	0.918	0.944	0.925
Rubidium, dissolved	7440-17-7	E421/CG	A	0.00020	mg/L	0.00099	0.00088	0.00088	0.00098	0.00096



## Analytical Results

Sub-Matrix: Water (Matrix: Water)						Client sample ID	Treated Water	Raw Water Chamber Tap	130 Lucas Ave.	104 Paquette St.	120 Stewart Dr.
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Analyte	CAS Number	Method/Lab	LOR	Unit	FC2301151-001	FC2301151-002	FC2301151-003	FC2301151-004	FC2301151-005		
					Result	Result	Result	Result	Result		
<b>Dissolved Metals</b>											
Selenium, dissolved	7782-49-2	E421/CG	A	0.000050	mg/L	0.000061	0.000056	<0.000050	<0.000050	<0.000050	
Silicon, dissolved	7440-21-3	E421/CG	A	0.050	mg/L	1.40	1.47	1.50	1.60	1.52	
Silver, dissolved	7440-22-4	E421/CG	A	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
Sodium, dissolved	7440-23-5	E421/CG	A	0.050	mg/L	11.7	2.33	12.2	14.3	11.2	
Strontium, dissolved	7440-24-6	E421/CG	A	0.00020	mg/L	0.0502	0.0501	0.0536	0.0525	0.0517	
Sulfur, dissolved	7704-34-9	E421/CG	A	0.50	mg/L	1.29	1.39	1.26	1.29	1.32	
Tellurium, dissolved	13494-80-9	E421/CG	A	0.00020	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	
Thallium, dissolved	7440-28-0	E421/CG	A	0.000010	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	
Thorium, dissolved	7440-29-1	E421/CG	A	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Tin, dissolved	7440-31-5	E421/CG	A	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Titanium, dissolved	7440-32-6	E421/CG	A	0.00030	mg/L	<0.00030	0.00058	<0.00030	<0.00030	<0.00030	
Tungsten, dissolved	7440-33-7	E421/CG	A	0.00010	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	
Uranium, dissolved	7440-61-1	E421/CG	A	0.000010	mg/L	<0.000010	0.000075	<0.000010	<0.000010	<0.000010	
Vanadium, dissolved	7440-62-2	E421/CG	A	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	
Zinc, dissolved	7440-66-6	E421/CG	A	0.0010	mg/L	<0.0010	<0.0010	<0.0010	0.0013	<0.0010	
Zirconium, dissolved	7440-67-7	E421/CG	A	0.00030	mg/L	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	
Dissolved metals filtration location	----	EP421/CG		-	-	Laboratory	Laboratory	Laboratory	Laboratory	Laboratory	
<b>Aggregate Organics</b>											
Naphthenic acids	----	E565-L/EO	C	0.10	mg/L	<0.10	<0.10	<0.10	<0.10	<0.10	
<b>Volatile Organic Compounds [BTEXS+MTBE]</b>											
Benzene	71-43-2	E611A/CG	A	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50	
Ethylbenzene	100-41-4	E611A/CG	A	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50	
Toluene	108-88-3	E611A/CG	A	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50	
Xylene, m+p-	179601-23-1	E611A/CG	A	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50	
Xylene, o-	95-47-6	E611A/CG	A	0.50	µg/L	<0.50	<0.50	<0.50	<0.50	<0.50	
Xylenes, total	1330-20-7	E611A/CG	A	0.75	µg/L	<0.75	<0.75	<0.75	<0.75	<0.75	
BTEX, total	----	E611A/CG	A	1.2	µg/L	<1.2	<1.2	<1.2	<1.2	<1.2	
<b>Hydrocarbons</b>											
F1 (C6-C10)	----	E581.F1/CG	A	100	µg/L	<100	<100	<100	<100	<100	
F1-BTEX	----	EC580/CG		100	µg/L	<100	<100	<100	<100	<100	



## Analytical Results

Sub-Matrix: Water						Client sample ID				
(Matrix: Water)						Treated Water	Raw Water Chamber Tap	130 Lucas Ave.	104 Paquette St.	120 Stewart Dr.
Client sampling date / time						09-May-2023 09:15	09-May-2023 09:00	09-May-2023 09:15	09-May-2023 13:40	09-May-2023 14:00
Analyte	CAS Number	Method/Lab	LOR	Unit	FC2301151-001	FC2301151-002	FC2301151-003	FC2301151-004	FC2301151-005	
					Result	Result	Result	Result	Result	
<b>Hydrocarbons</b>										
F2 (C10-C16)	---	E601/CG	A	100	µg/L	<100	<100	<100	<100	<100
F3 (C16-C34)	---	E601/CG	A	250	µg/L	<250	<250	<250	<250	<250
F4 (C34-C50)	---	E601/CG	A	250	µg/L	<250	<250	<250	<250	<250
Hydrocarbons, total (C6-C50)	---	EC581/CG		400	µg/L	<400	<400	<400	<400	<400
<b>Hydrocarbons Surrogates</b>										
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	E601/CG	A	1.0	%	88.9	92.0	84.1	86.3	84.8
Dichlorotoluene, 3,4-	95-75-0	E581.F1/CG	A	1.0	%	98.8	99.7	106	107	97.2
<b>Volatile Organic Compounds Surrogates</b>										
Bromofluorobenzene, 4-	460-00-4	E611A/CG	A	1.0	%	95.0	96.5	95.6	96.5	92.5
Difluorobenzene, 1,4-	540-36-3	E611A/CG	A	1.0	%	101	101	101	102	100
<b>Polycyclic Aromatic Hydrocarbons</b>										
Acenaphthene	83-32-9	E641A/CG	A	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	<0.010
Acenaphthylene	208-96-8	E641A/CG	A	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	<0.010
Acridine	260-94-6	E641A/CG	A	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	<0.010
Anthracene	120-12-7	E641A/CG	A	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	<0.010
Benz(a)anthracene	56-55-3	E641A/CG	A	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(a)pyrene	50-32-8	E641A/CG	A	0.0050	µg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Benzo(b+j)fluoranthene	n/a	E641A/CG	A	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(b+j+k)fluoranthene	n/a	E641A/CG	A	0.015	µg/L	<0.015	<0.015	<0.015	<0.015	<0.015
Benzo(g,h,i)perylene	191-24-2	E641A/CG	A	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	<0.010
Benzo(k)fluoranthene	207-08-9	E641A/CG	A	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	<0.010
Chrysene	218-01-9	E641A/CG	A	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	<0.010
Dibenz(a,h)anthracene	53-70-3	E641A/CG	A	0.0050	µg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Fluoranthene	206-44-0	E641A/CG	A	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	<0.010
Fluorene	86-73-7	E641A/CG	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/CG	A	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	<0.010
Methylnaphthalene, 1-	90-12-0	E641A/CG	A	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	<0.010
Methylnaphthalene, 1+2-	---	E641A/CG	A	0.015	µg/L	<0.015	<0.015	<0.015	<0.015	<0.015
Methylnaphthalene, 2-	91-57-6	E641A/CG	A	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	<0.010
Naphthalene	91-20-3	E641A/CG	A	0.050	µg/L	<0.050	<0.050	<0.050	<0.050	<0.050



## Analytical Results

Sub-Matrix: Water (Matrix: Water)						Client sample ID	Treated Water	Raw Water Chamber Tap	130 Lucas Ave.	104 Paquette St.	120 Stewart Dr.
Client sampling date / time						09-May-2023 09:15	09-May-2023 09:00	09-May-2023 09:15	09-May-2023 13:40	09-May-2023 14:00	
Analyte	CAS Number	Method/Lab	LOR	Unit		FC2301151-001	FC2301151-002	FC2301151-003	FC2301151-004	FC2301151-005	
						Result	Result	Result	Result	Result	
<b>Polycyclic Aromatic Hydrocarbons</b>											
Phenanthrene	85-01-8	E641A/CG	A	0.020	µg/L	<0.020	<0.020	<0.020	<0.020	<0.020	
Pyrene	129-00-0	E641A/CG	A	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	<0.010	
Quinoline	91-22-5	E641A/CG	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/CG	A	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	<0.010	
PAHs, high molecular weight (BC AWQ)	n/a	E641A/CG	A	0.030	µg/L	<0.030	<0.030	<0.030	<0.030	<0.030	
PAHs, low molecular weight (BC AWQ)	n/a	E641A/CG	A	0.060	µg/L	<0.060	<0.060	<0.060	<0.060	<0.060	
PAHs, total (CCME sewer 18)	n/a	E641A/CG	A	0.070	µg/L	<0.070	<0.070	<0.070	<0.070	<0.070	
PAHs, total (EPA 16)	n/a	E641A/CG	A	0.065	µg/L	<0.065	<0.065	<0.065	<0.065	<0.065	
<b>Polycyclic Aromatic Hydrocarbons Surrogates</b>											
Chrysene-d12	1719-03-5	E641A/CG	A	0.1	%	88.6	93.8	89.9	91.5	90.5	
Naphthalene-d8	1146-65-2	E641A/CG	A	0.1	%	101	102	96.0	100	98.6	
Phenanthrene-d10	1517-22-2	E641A/CG	A	0.1	%	82.9	84.8	80.6	83.8	82.3	

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

<b>Work Order</b>	: <b>FC2301151</b>	Page	: 1 of 22
<b>Client</b>	: <b>Regional Municipality of Wood Buffalo</b>	<b>Laboratory</b>	: Fort McMurray - Environmental
<b>Contact</b>	: Water Treatment Plant	<b>Account Manager</b>	: Megan Trydal
<b>Address</b>	: 1 Silin Forest Road Fort McMurray AB Canada T9H 5A1	<b>Address</b>	: #4, 340 Macalpine Crescent Fort McMurray AB Canada T9H 4A8
<b>Telephone</b>	: 780-762-5863	<b>Telephone</b>	: +1 780 791 1524
<b>Project</b>	: Fort Chipewyan Imperial Release	<b>Date Samples Received</b>	: 09-May-2023 16:00
<b>PO</b>	: 4500049712	<b>Date Analysis</b>	: 10-May-2023
		<b>Commenced</b>	
<b>C-O-C number</b>	: ----	<b>Issue Date</b>	: 13-May-2023 17:21
<b>Sampler</b>	: Darwin McDonald		
<b>Site</b>	: Schedule 4: Fort Chip		
<b>Quote number</b>	: Q61323 (Fort chip)		
<b>No. of samples received</b>	: 5		
<b>No. of samples analysed</b>	: 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.

<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Andrew Fox	Supervisor - Inorganic	Metals, Calgary, Alberta
Anthony Calero	Organic Supervisor	Metals, Calgary, Alberta
Cynthia Bauer	Lab Analyst	Organics, Calgary, Alberta
Geoff Berg	Supervisor - Inorganic	Organics, Edmonton, Alberta
George Huang	Team Leader - Inorganics	Inorganics, Calgary, Alberta
Harpreet Chawla	Laboratory Analyst	Inorganics, Calgary, Alberta
Jyotsnarani Devi	Analyst	Organics, Calgary, Alberta
Katarzyna Glinka	Team Leader - Inorganics	Inorganics, Calgary, Alberta
Kevin Baxter	Laboratory Analyst	Inorganics, Calgary, Alberta
Nguyen Tran	Laboratory Analyst	Organics, Calgary, Alberta
Sorina Motea	Supervisor - Water Quality Instrumentation	Organics, Calgary, Alberta
Tracy Harley		Inorganics, Burnaby, British Columbia



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 Work Order : FC2301151  
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Date Received : 09-May-2023 16:00  
 Agency :  
 Sampler : Darwin McDonald

## 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	CG Calgary - Environmental	2559 29th Street NE, Calgary, Alberta
B	CALA ISO/IEC 17025:2017	VA Vancouver - Environmental	8081 Lougheed Highway, Burnaby, British Columbia
C	CALA ISO/IEC 17025:2017	EO Edmonton - Environmental	9450 - 17 Avenue NW, Edmonton, Alberta

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

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 Work Order : FC2301151  
 Project Code :  
 Purchase Order : 4500049712

Date Received : 09-May-2023 16:00  
 Agency :  
 Sampler : Darwin McDonald



## Analytical Results

Lab Sample ID : FC2301151-001  
 Station Number :  
 Station Descrip/Name :  
 Sample Frequency :  
 Sample Matrix :

Client Sample ID : Treated Water  
 Sample Type :  
 Collection Code :  
 Date Collected : 09-May-2023 09:15

Analyte	Result	VMV	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
<b>Physical Tests</b>								
Hardness (as CaCO <sub>3</sub> ), dissolved	28.8	10602	0.50	mg/L	EC100/CG	-	11-May-2023	-
Hardness (as CaCO <sub>3</sub> ), from total Ca/Mg	30.0	4099	0.50	mg/L	EC100A/CG	-	11-May-2023	-
Salinity	<1.0	---	1.0	psu	EC100S/VA	-	12-May-2023	-
Conductivity	120	2041	2.0	µS/cm	E100/CG	A	10-May-2023	930246
pH	8.31	10301	0.10	pH units	E108/CG	A	10-May-2023	930245
Alkalinity, bicarbonate (as HCO <sub>3</sub> )	46.6	60152	1.0	mg/L	E290/CG	A	10-May-2023	930247
Alkalinity, carbonate (as CO <sub>3</sub> )	<1.0	60151	1.0	mg/L	E290/CG	A	10-May-2023	930247
Alkalinity, hydroxide (as OH)	<1.0	60150	1.0	mg/L	E290/CG	A	10-May-2023	930247
Alkalinity, total (as CaCO <sub>3</sub> )	38.2	10165	2.0	mg/L	E290/CG	A	10-May-2023	930247
Solids, total dissolved [TDS], calculated	63.8	206	1.0	mg/L	EC103/CG	-	11-May-2023	-
<b>Anions and Nutrients</b>								
Chloride	11.2	8262	0.50	mg/L	E235.Cl/C G	A	10-May-2023	930220
Fluoride	0.020	8261	0.020	mg/L	E235.F/CG	A	10-May-2023	930212
Nitrate (as N)	<0.020	102647	0.020	mg/L	E235.NO3/ CG	A	10-May-2023	930218
Nitrite (as N)	<0.010	102648	0.010	mg/L	E235.NO2/ CG	A	10-May-2023	930219
Sulfate (as SO <sub>4</sub> )	3.16	8265	0.30	mg/L	E235.SO4/ CG	A	10-May-2023	930217
Nitrate + Nitrite (as N)	<0.0500	103392	0.05	mg/L	EC235.N+N/CG	-	11-May-2023	932777
<b>Total Sulfides</b>								
Sulfide, total (as S)	<0.0015	16003	0.0015	mg/L	E395/VA	B	-	11-May-2023 933455
<b>Ion Balance</b>								
Anion sum	1.15	125	0.10	meq/L	EC101/CG	-	11-May-2023	-
Cation sum	1.11	120	0.10	meq/L	EC101/CG	-	11-May-2023	-
Ion balance (APHA)	-1.77	4740	0.01	%	EC101/CG	-	11-May-2023	-
Ion balance (cations/anions)	96.5	58791	0.010	%	EC101/CG	-	11-May-2023	-
<b>Total Metals</b>								
Aluminum, total	0.0172	106560	0.0030	mg/L	E420/CG	A	10-May-2023	929816
Antimony, total	<0.00010	104555	0.00010	mg/L	E420/CG	A	10-May-2023	929816
Arsenic, total	0.00015	104554	0.00010	mg/L	E420/CG	A	10-May-2023	929816
Barium, total	0.0152	104558	0.00010	mg/L	E420/CG	A	10-May-2023	929816
Beryllium, total	<0.000020	104559	0.000020	mg/L	E420/CG	A	10-May-2023	929816
Bismuth, total	<0.000050	104564	0.000050	mg/L	E420/CG	A	10-May-2023	929816
Boron, total	0.013	104562	0.010	mg/L	E420/CG	A	10-May-2023	929816
Cadmium, total	<0.0000050	60008	0.0000050	mg/L	E420/CG	A	10-May-2023	929816
Calcium, total	8.49	104569	0.050	mg/L	E420/CG	A	10-May-2023	929816
Cesium, total	<0.000010	104577	0.000010	mg/L	E420/CG	A	10-May-2023	929816
Chromium, total	<0.00050	104571	0.00050	mg/L	E420/CG	A	10-May-2023	929816
Cobalt, total	<0.00010	104573	0.00010	mg/L	E420/CG	A	10-May-2023	929816
Copper, total	<0.00050	104575	0.00050	mg/L	E420/CG	A	10-May-2023	929816
Iron, total	<0.010	104580	0.010	mg/L	E420/CG	A	10-May-2023	929816

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 Work Order : FC2301151  
 Project Code :  
 Purchase Order : 4500049712

Date Received : 09-May-2023 16:00  
 Agency :  
 Sampler : Darwin McDonald



## Analytical Results

Lab Sample ID : FC2301151-001  
 Station Number :  
 Station Descrip/Name :  
 Sample Frequency :  
 Sample Matrix :

Client Sample ID : Treated Water  
 Sample Type :  
 Collection Code :  
 Date Collected : 09-May-2023 09:15

Analyte	Result	VMV	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
<b>Total Metals</b>								
Lead, total	<0.000050	104582	0.000050	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Lithium, total	0.0025	104585	0.0010	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Magnesium, total	2.15	104588	0.0050	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Manganese, total	0.00194	104591	0.00010	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Molybdenum, total	0.000161	104594	0.000050	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Nickel, total	<0.00050	104596	0.00050	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Phosphorus, total	<0.050	104597	0.050	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Potassium, total	0.893	104601	0.050	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Rubidium, total	0.00097	104603	0.00020	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Selenium, total	<0.000050	60009	0.000050	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Silicon, total	1.45	109310	0.10	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Silver, total	<0.000010	60010	0.000010	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Sodium, total	11.8	104611	0.050	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Strontium, total	0.0504	104613	0.00020	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Sulfur, total	1.15	111263	0.50	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Tellurium, total	<0.00020	3024	0.00020	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Thallium, total	<0.000010	104615	0.000010	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Thorium, total	<0.00010	107816	0.00010	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Tin, total	<0.00010	104616	0.00010	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Titanium, total	<0.00030	104621	0.00030	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Tungsten, total	<0.00010	104627	0.00010	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Uranium, total	<0.000010	104623	0.000010	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Vanadium, total	<0.00050	104624	0.00050	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Zinc, total	<0.0030	104629	0.0030	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Zirconium, total	<0.00020	104631	0.00020	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
<b>Dissolved Metals</b>								
Aluminum, dissolved	0.0152	104552	0.0010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Antimony, dissolved	<0.00010	99788	0.00010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Arsenic, dissolved	0.00016	99789	0.00010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Barium, dissolved	0.0154	99790	0.00010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Beryllium, dissolved	<0.000020	99791	0.000020	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Bismuth, dissolved	<0.000050	99792	0.000050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Boron, dissolved	0.012	99793	0.010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Cadmium, dissolved	<0.0000050	99794	0.0000050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Calcium, dissolved	7.93	104568	0.050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Cesium, dissolved	<0.000010	108414	0.000010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Chromium, dissolved	<0.00050	99795	0.00050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Cobalt, dissolved	<0.00010	99796	0.00010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Copper, dissolved	0.00030	99797	0.00020	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Iron, dissolved	<0.030	104578	0.030	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Lead, dissolved	<0.000050	104583	0.000050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Lithium, dissolved	0.0023	99800	0.0010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814

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 Work Order : FC2301151  
 Project Code :  
 Purchase Order : 4500049712

Date Received : 09-May-2023 16:00  
 Agency :  
 Sampler : Darwin McDonald



## Analytical Results

Lab Sample ID : FC2301151-001  
 Station Number :  
 Station Descrip/Name :  
 Sample Frequency :  
 Sample Matrix :

Client Sample ID : Treated Water  
 Sample Type :  
 Collection Code :  
 Date Collected : 09-May-2023 09:15

Analyte	Result	VMV	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
<b>Dissolved Metals</b>								
Magnesium, dissolved	2.19	104587	0.0050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Manganese, dissolved	<0.00500	104590	0.00500	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Molybdenum, dissolved	0.000187	108418	0.000050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Nickel, dissolved	<0.00050	99803	0.00050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Phosphorus, dissolved	<0.050	108420	0.050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Potassium, dissolved	0.909	104599	0.050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Rubidium, dissolved	0.00099	108421	0.00020	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Selenium, dissolved	0.000061	99804	0.000050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Silicon, dissolved	1.40	102076	0.050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Silver, dissolved	<0.000010	99805	0.000010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Sodium, dissolved	11.7	104609	0.050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Strontium, dissolved	0.0502	99806	0.00020	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Sulfur, dissolved	1.29	111256	0.50	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Tellurium, dissolved	<0.00020	108425	0.00020	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Thallium, dissolved	<0.000010	99807	0.000010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Thorium, dissolved	<0.00010	107815	0.00010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Tin, dissolved	<0.00010	99808	0.00010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Titanium, dissolved	<0.00030	108428	0.00030	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Tungsten, dissolved	<0.00010	108429	0.00010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Uranium, dissolved	<0.000010	99810	0.000010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Vanadium, dissolved	<0.00050	99811	0.00050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Zinc, dissolved	<0.0010	99812	0.0010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Zirconium, dissolved	<0.00030	99813	0.00030	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Dissolved metals filtration location	Laboratory	NA	-	-	EP421/CG	-	10-May-2023	929814
<b>Aggregate Organics</b>								
Naphthenic acids	<0.10	107194	0.10	mg/L	E565-L/EO	C 10-May-2023	11-May-2023	930877
<b>Volatile Organic Compounds [BTEXS+MTBE]</b>								
Benzene	<0.50	109117	0.50	µg/L	E611A/CG	A 10-May-2023	10-May-2023	930026
Ethylbenzene	<0.50	109142	0.50	µg/L	E611A/CG	A 10-May-2023	10-May-2023	930026
Toluene	<0.50	109151	0.50	µg/L	E611A/CG	A 10-May-2023	10-May-2023	930026
Xylene, m+p-	<0.50	109158	0.50	µg/L	E611A/CG	A 10-May-2023	10-May-2023	930026
Xylene, o-	<0.50	109157	0.50	µg/L	E611A/CG	A 10-May-2023	10-May-2023	930026
Xylenes, total	<0.75	109289	0.75	µg/L	E611A/CG	A 10-May-2023	10-May-2023	930026
BTEX, total	<1.2	60884	1.2	µg/L	E611A/CG	A 10-May-2023	10-May-2023	930026
<b>Hydrocarbons</b>								
F1 (C6-C10)	<100	109006	100	µg/L	E581.F1/C G	A 10-May-2023	10-May-2023	930027
F1-BTEX	<100	108456	100	µg/L	EC580/CG	-	11-May-2023	-
F2 (C10-C16)	<100	58651	100	µg/L	E601/CG	A 10-May-2023	10-May-2023	929668
F3 (C16-C34)	<250	58652	250	µg/L	E601/CG	A 10-May-2023	10-May-2023	929668
F4 (C34-C50)	<250	58653	250	µg/L	E601/CG	A 10-May-2023	10-May-2023	929668
Hydrocarbons, total (C6-C50)	<400	---	400	µg/L	EC581/CG	-	10-May-2023	-
<b>Hydrocarbons Surrogates</b>								

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 Work Order : FC2301151  
 Project Code :  
 Purchase Order : 4500049712

Date Received : 09-May-2023 16:00  
 Agency :  
 Sampler : Darwin McDonald



## Analytical Results

Lab Sample ID : FC2301151-001 Client Sample ID : Treated Water  
 Station Number : Sample Type :  
 Station Descrip/Name : Collection Code :  
 Sample Frequency : Date Collected : 09-May-2023 09:15  
 Sample Matrix :

Analyte	Result	VMV	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
<b>Hydrocarbons Surrogates</b>								
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	88.9	NA	1.0	%	E601/CG	A 10-May-2023	10-May-2023	929668
Dichlorotoluene, 3,4-	98.8	NA	1.0	%	E581.F1/C G	A 10-May-2023	10-May-2023	930027
<b>Volatile Organic Compounds Surrogates</b>								
Bromofluorobenzene, 4-	95.0	NA	1.0	%	E611A/CG	A 10-May-2023	10-May-2023	930026
Difluorobenzene, 1,4-	101	NA	1.0	%	E611A/CG	A 10-May-2023	10-May-2023	930026
<b>Polycyclic Aromatic Hydrocarbons</b>								
Acenaphthene	<0.010	60016	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Acenaphthylene	<0.010	60017	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Acridine	<0.010	60018	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Anthracene	<0.010	60019	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Benz(a)anthracene	<0.010	60020	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Benzo(a)pyrene	<0.0050	60021	0.0050	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Benzo(b+j)fluoranthene	<0.010	60022	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Benzo(b+j+k)fluoranthene	<0.015	60023	0.015	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Benzo(g,h,i)perylene	<0.010	60025	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Benzo(k)fluoranthene	<0.010	60026	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Chrysene	<0.010	60056	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Dibenz(a,h)anthracene	<0.0050	60057	0.0050	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Fluoranthene	<0.010	60032	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Fluorene	<0.010	60061	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Indeno(1,2,3-c,d)pyrene	<0.010	60062	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Methylnaphthalene, 1-	<0.010	60014	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Methylnaphthalene, 1+2-	<0.015	---	0.015	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Methylnaphthalene, 2-	<0.010	60015	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Naphthalene	<0.050	60065	0.050	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Phenanthrene	<0.020	---	0.020	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Pyrene	<0.010	60068	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Quinoline	<0.050	60069	0.050	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
B(a)P total potency equivalents [B(a)P TPE]	<0.010	60064	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
PAHs, high molecular weight (BC AWQ)	<0.030	---	0.03	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
PAHs, low molecular weight (BC AWQ)	<0.060	---	0.06	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
PAHs, total (CCME sewer 18)	<0.070	---	0.07	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
PAHs, total (EPA 16)	<0.065	---	0.065	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
<b>Polycyclic Aromatic Hydrocarbons Surrogates</b>								
Chrysene-d12	88.6	NA	0.1	%	E641A/CG	A 10-May-2023	10-May-2023	929670
Naphthalene-d8	101	NA	0.1	%	E641A/CG	A 10-May-2023	10-May-2023	929670
Phenanthrene-d10	82.9	NA	0.1	%	E641A/CG	A 10-May-2023	10-May-2023	929670

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



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 Work Order : FC2301151  
 Project Code :  
 Purchase Order : 4500049712

Date Received : 09-May-2023 16:00  
 Agency :  
 Sampler : Darwin McDonald



## Analytical Results

Lab Sample ID : FC2301151-002  
 Station Number :  
 Station Descrip/Name :  
 Sample Frequency :  
 Sample Matrix :

Client Sample ID : Raw Water Chamber Tap  
 Sample Type :  
 Collection Code :  
 Date Collected : 09-May-2023 09:00

Analyte	Result	VMV	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
<b>Physical Tests</b>								
Hardness (as CaCO <sub>3</sub> ), dissolved	26.1	10602	0.50	mg/L	EC100/CG	-	11-May-2023	-
Hardness (as CaCO <sub>3</sub> ), from total Ca/Mg	27.3	4099	0.50	mg/L	EC100A/CG	-	11-May-2023	-
Salinity	<1.0	---	1.0	psu	EC100S/VA	-	12-May-2023	-
Conductivity	69.2	2041	2.0	µS/cm	E100/CG	A	10-May-2023	930246
pH	7.44	10301	0.10	pH units	E108/CG	A	10-May-2023	930245
Alkalinity, bicarbonate (as HCO <sub>3</sub> )	32.0	60152	1.0	mg/L	E290/CG	A	10-May-2023	930247
Alkalinity, carbonate (as CO <sub>3</sub> )	<1.0	60151	1.0	mg/L	E290/CG	A	10-May-2023	930247
Alkalinity, hydroxide (as OH)	<1.0	60150	1.0	mg/L	E290/CG	A	10-May-2023	930247
Alkalinity, total (as CaCO <sub>3</sub> )	26.2	10165	2.0	mg/L	E290/CG	A	10-May-2023	930247
Solids, total dissolved [TDS], calculated	38.4	206	1.0	mg/L	EC103/CG	-	11-May-2023	-
<b>Anions and Nutrients</b>								
Chloride	2.93	8262	0.50	mg/L	E235.Cl/C	A	10-May-2023	930220
Fluoride	0.050	8261	0.020	mg/L	E235.F/CG	A	10-May-2023	930212
Nitrate (as N)	<0.020	102647	0.020	mg/L	E235.NO3/CG	A	10-May-2023	930218
Nitrite (as N)	<0.010	102648	0.010	mg/L	E235.NO2/CG	A	10-May-2023	930219
Sulfate (as SO <sub>4</sub> )	3.45	8265	0.30	mg/L	E235.SO4/CG	A	10-May-2023	930217
Nitrate + Nitrite (as N)	<0.0500	103392	0.05	mg/L	EC235.N+N/CG	-	11-May-2023	932777
<b>Total Sulfides</b>								
Sulfide, total (as S)	<0.0015	16003	0.0015	mg/L	E395/VA	B	11-May-2023	933455
<b>Ion Balance</b>								
Anion sum	0.68	125	0.10	meq/L	EC101/CG	-	11-May-2023	-
Cation sum	0.65	120	0.10	meq/L	EC101/CG	-	11-May-2023	-
Ion balance (APHA)	-2.26	4740	0.01	%	EC101/CG	-	11-May-2023	-
Ion balance (cations/anions)	95.6	58791	0.010	%	EC101/CG	-	11-May-2023	-
<b>Total Metals</b>								
Aluminum, total	0.105	106560	0.0030	mg/L	E420/CG	A	10-May-2023	929816
Antimony, total	<0.00010	104555	0.00010	mg/L	E420/CG	A	10-May-2023	929816
Arsenic, total	0.00023	104554	0.00010	mg/L	E420/CG	A	10-May-2023	929816
Barium, total	0.0151	104558	0.00010	mg/L	E420/CG	A	10-May-2023	929816
Beryllium, total	<0.000020	104559	0.000020	mg/L	E420/CG	A	10-May-2023	929816
Bismuth, total	<0.000050	104564	0.000050	mg/L	E420/CG	A	10-May-2023	929816
Boron, total	0.012	104562	0.010	mg/L	E420/CG	A	10-May-2023	929816
Cadmium, total	<0.0000050	60008	0.0000050	mg/L	E420/CG	A	10-May-2023	929816
Calcium, total	7.42	104569	0.050	mg/L	E420/CG	A	10-May-2023	929816
Cesium, total	<0.000010	104577	0.000010	mg/L	E420/CG	A	10-May-2023	929816
Chromium, total	<0.00050	104571	0.00050	mg/L	E420/CG	A	10-May-2023	929816
Cobalt, total	<0.00010	104573	0.00010	mg/L	E420/CG	A	10-May-2023	929816
Copper, total	0.00111	104575	0.00050	mg/L	E420/CG	A	10-May-2023	929816
Iron, total	0.149	104580	0.010	mg/L	E420/CG	A	10-May-2023	929816

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 Work Order : FC2301151  
 Project Code :  
 Purchase Order : 4500049712

Date Received : 09-May-2023 16:00  
 Agency :  
 Sampler : Darwin McDonald



## Analytical Results

Lab Sample ID : FC2301151-002  
 Station Number :  
 Station Descrip/Name :  
 Sample Frequency :  
 Sample Matrix :

Client Sample ID : Raw Water Chamber Tap  
 Sample Type :  
 Collection Code :  
 Date Collected : 09-May-2023 09:00

Analyte	Result	VMV	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
<b>Total Metals</b>								
Lead, total	0.000056	104582	0.000050	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Lithium, total	0.0024	104585	0.0010	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Magnesium, total	2.13	104588	0.0050	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Manganese, total	0.00507	104591	0.00010	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Molybdenum, total	0.000193	104594	0.000050	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Nickel, total	<0.00050	104596	0.00050	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Phosphorus, total	<0.050	104597	0.050	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Potassium, total	0.922	104601	0.050	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Rubidium, total	0.00111	104603	0.00020	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Selenium, total	0.000050	60009	0.000050	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Silicon, total	1.71	109310	0.10	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Silver, total	<0.000010	60010	0.000010	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Sodium, total	2.31	104611	0.050	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Strontium, total	0.0492	104613	0.00020	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Sulfur, total	1.25	111263	0.50	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Tellurium, total	<0.00020	3024	0.00020	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Thallium, total	<0.000010	104615	0.000010	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Thorium, total	<0.00010	107816	0.00010	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Tin, total	<0.00010	104616	0.00010	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Titanium, total	0.00255	104621	0.00030	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Tungsten, total	<0.00010	104627	0.00010	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Uranium, total	0.000086	104623	0.000010	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Vanadium, total	<0.00050	104624	0.00050	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Zinc, total	<0.0030	104629	0.0030	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Zirconium, total	<0.00020	104631	0.00020	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
<b>Dissolved Metals</b>								
Aluminum, dissolved	0.0194	104552	0.0010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Antimony, dissolved	<0.00010	99788	0.00010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Arsenic, dissolved	0.00020	99789	0.00010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Barium, dissolved	0.0149	99790	0.00010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Beryllium, dissolved	<0.000020	99791	0.000020	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Bismuth, dissolved	<0.000050	99792	0.000050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Boron, dissolved	0.011	99793	0.010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Cadmium, dissolved	<0.0000050	99794	0.0000050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Calcium, dissolved	6.84	104568	0.050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Cesium, dissolved	<0.000010	108414	0.000010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Chromium, dissolved	<0.00050	99795	0.00050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Cobalt, dissolved	<0.00010	99796	0.00010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Copper, dissolved	0.00088	99797	0.00020	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Iron, dissolved	0.037	104578	0.030	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Lead, dissolved	<0.000050	104583	0.000050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Lithium, dissolved	0.0019	99800	0.0010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814



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 Work Order : FC2301151  
 Project Code :  
 Purchase Order : 4500049712

Date Received : 09-May-2023 16:00  
 Agency :  
 Sampler : Darwin McDonald



## Analytical Results

Lab Sample ID : FC2301151-002  
 Station Number :  
 Station Descrip/Name :  
 Sample Frequency :  
 Sample Matrix :

Client Sample ID : Raw Water Chamber Tap  
 Sample Type :  
 Collection Code :  
 Date Collected : 09-May-2023 09:00

Analyte	Result	VMV	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
<b>Dissolved Metals</b>								
Magnesium, dissolved	2.19	104587	0.0050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Manganese, dissolved	<0.00500	104590	0.00500	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Molybdenum, dissolved	0.000198	108418	0.000050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Nickel, dissolved	<0.00050	99803	0.00050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Phosphorus, dissolved	<0.050	108420	0.050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Potassium, dissolved	0.903	104599	0.050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Rubidium, dissolved	0.00088	108421	0.00020	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Selenium, dissolved	0.000056	99804	0.000050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Silicon, dissolved	1.47	102076	0.050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Silver, dissolved	<0.000010	99805	0.000010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Sodium, dissolved	2.33	104609	0.050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Strontium, dissolved	0.0501	99806	0.00020	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Sulfur, dissolved	1.39	111256	0.50	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Tellurium, dissolved	<0.00020	108425	0.00020	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Thallium, dissolved	<0.000010	99807	0.000010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Thorium, dissolved	<0.00010	107815	0.00010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Tin, dissolved	<0.00010	99808	0.00010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Titanium, dissolved	0.00058	108428	0.00030	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Tungsten, dissolved	<0.00010	108429	0.00010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Uranium, dissolved	0.000075	99810	0.000010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Vanadium, dissolved	<0.00050	99811	0.00050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Zinc, dissolved	<0.0010	99812	0.0010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Zirconium, dissolved	<0.00030	99813	0.00030	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Dissolved metals filtration location	Laboratory	NA	-	-	EP421/CG	-	10-May-2023	929814
<b>Aggregate Organics</b>								
Naphthenic acids	<0.10	107194	0.10	mg/L	E565-L/EO	C 10-May-2023	11-May-2023	930877
<b>Volatile Organic Compounds [BTEXS+MTBE]</b>								
Benzene	<0.50	109117	0.50	µg/L	E611A/CG	A 10-May-2023	10-May-2023	930026
Ethylbenzene	<0.50	109142	0.50	µg/L	E611A/CG	A 10-May-2023	10-May-2023	930026
Toluene	<0.50	109151	0.50	µg/L	E611A/CG	A 10-May-2023	10-May-2023	930026
Xylene, m+p-	<0.50	109158	0.50	µg/L	E611A/CG	A 10-May-2023	10-May-2023	930026
Xylene, o-	<0.50	109157	0.50	µg/L	E611A/CG	A 10-May-2023	10-May-2023	930026
Xylenes, total	<0.75	109289	0.75	µg/L	E611A/CG	A 10-May-2023	10-May-2023	930026
BTEX, total	<1.2	60884	1.2	µg/L	E611A/CG	A 10-May-2023	10-May-2023	930026
<b>Hydrocarbons</b>								
F1 (C6-C10)	<100	109006	100	µg/L	E581.F1/C G	A 10-May-2023	10-May-2023	930027
F1-BTEX	<100	108456	100	µg/L	EC580/CG	-	11-May-2023	-
F2 (C10-C16)	<100	58651	100	µg/L	E601/CG	A 10-May-2023	10-May-2023	929668
F3 (C16-C34)	<250	58652	250	µg/L	E601/CG	A 10-May-2023	10-May-2023	929668
F4 (C34-C50)	<250	58653	250	µg/L	E601/CG	A 10-May-2023	10-May-2023	929668
Hydrocarbons, total (C6-C50)	<400	---	400	µg/L	EC581/CG	-	10-May-2023	-
<b>Hydrocarbons Surrogates</b>								

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 Work Order : FC2301151  
 Project Code :  
 Purchase Order : 4500049712

Date Received : 09-May-2023 16:00  
 Agency :  
 Sampler : Darwin McDonald



## Analytical Results

Lab Sample ID : FC2301151-002 Client Sample ID : Raw Water Chamber Tap  
 Station Number : Sample Type :  
 Station Descrip/Name : Collection Code :  
 Sample Frequency : Date Collected : 09-May-2023 09:00  
 Sample Matrix :

Analyte	Result	VMV	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
<b>Hydrocarbons Surrogates</b>								
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	92.0	NA	1.0	%	E601/CG	A 10-May-2023	10-May-2023	929668
Dichlorotoluene, 3,4-	99.7	NA	1.0	%	E581.F1/C G	A 10-May-2023	10-May-2023	930027
<b>Volatile Organic Compounds Surrogates</b>								
Bromofluorobenzene, 4-	96.5	NA	1.0	%	E611A/CG	A 10-May-2023	10-May-2023	930026
Difluorobenzene, 1,4-	101	NA	1.0	%	E611A/CG	A 10-May-2023	10-May-2023	930026
<b>Polycyclic Aromatic Hydrocarbons</b>								
Acenaphthene	<0.010	60016	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Acenaphthylene	<0.010	60017	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Acridine	<0.010	60018	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Anthracene	<0.010	60019	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Benz(a)anthracene	<0.010	60020	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Benzo(a)pyrene	<0.0050	60021	0.0050	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Benzo(b+j)fluoranthene	<0.010	60022	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Benzo(b+j+k)fluoranthene	<0.015	60023	0.015	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Benzo(g,h,i)perylene	<0.010	60025	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Benzo(k)fluoranthene	<0.010	60026	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Chrysene	<0.010	60056	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Dibenz(a,h)anthracene	<0.0050	60057	0.0050	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Fluoranthene	<0.010	60032	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Fluorene	<0.010	60061	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Indeno(1,2,3-c,d)pyrene	<0.010	60062	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Methylnaphthalene, 1-	<0.010	60014	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Methylnaphthalene, 1+2-	<0.015	---	0.015	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Methylnaphthalene, 2-	<0.010	60015	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Naphthalene	<0.050	60065	0.050	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Phenanthrene	<0.020	---	0.020	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Pyrene	<0.010	60068	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Quinoline	<0.050	60069	0.050	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
B(a)P total potency equivalents [B(a)P TPE]	<0.010	60064	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
PAHs, high molecular weight (BC AWQ)	<0.030	---	0.03	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
PAHs, low molecular weight (BC AWQ)	<0.060	---	0.06	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
PAHs, total (CCME sewer 18)	<0.070	---	0.07	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
PAHs, total (EPA 16)	<0.065	---	0.065	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
<b>Polycyclic Aromatic Hydrocarbons Surrogates</b>								
Chrysene-d12	93.8	NA	0.1	%	E641A/CG	A 10-May-2023	10-May-2023	929670
Naphthalene-d8	102	NA	0.1	%	E641A/CG	A 10-May-2023	10-May-2023	929670
Phenanthrene-d10	84.8	NA	0.1	%	E641A/CG	A 10-May-2023	10-May-2023	929670

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

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 Work Order : FC2301151  
 Project Code :  
 Purchase Order : 4500049712

Date Received : 09-May-2023 16:00  
 Agency :  
 Sampler : Darwin McDonald



## Analytical Results

Lab Sample ID : FC2301151-003  
 Station Number :  
 Station Descrip/Name :  
 Sample Frequency :  
 Sample Matrix :

Client Sample ID : 130 Lucas Ave.  
 Sample Type :  
 Collection Code :  
 Date Collected : 09-May-2023 09:15

Analyte	Result	VMV	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
<b>Physical Tests</b>								
Hardness (as CaCO <sub>3</sub> ), dissolved	29.7	10602	0.50	mg/L	EC100/CG	-	11-May-2023	-
Hardness (as CaCO <sub>3</sub> ), from total Ca/Mg	30.2	4099	0.50	mg/L	EC100A/CG	-	11-May-2023	-
Salinity	<1.0	---	1.0	psu	EC100S/VA	-	12-May-2023	-
Conductivity	122	2041	2.0	µS/cm	E100/CG	A	10-May-2023	930246
pH	8.00	10301	0.10	pH units	E108/CG	A	10-May-2023	930245
Alkalinity, bicarbonate (as HCO <sub>3</sub> )	48.7	60152	1.0	mg/L	E290/CG	A	10-May-2023	930247
Alkalinity, carbonate (as CO <sub>3</sub> )	<1.0	60151	1.0	mg/L	E290/CG	A	10-May-2023	930247
Alkalinity, hydroxide (as OH)	<1.0	60150	1.0	mg/L	E290/CG	A	10-May-2023	930247
Alkalinity, total (as CaCO <sub>3</sub> )	39.9	10165	2.0	mg/L	E290/CG	A	10-May-2023	930247
Solids, total dissolved [TDS], calculated	65.8	206	1.0	mg/L	EC103/CG	-	11-May-2023	-
<b>Anions and Nutrients</b>								
Chloride	11.2	8262	0.50	mg/L	E235.Cl/C	A	10-May-2023	930220
Fluoride	0.021	8261	0.020	mg/L	E235.F/CG	A	10-May-2023	930212
Nitrate (as N)	<0.020	102647	0.020	mg/L	E235.NO3/CG	A	10-May-2023	930218
Nitrite (as N)	<0.010	102648	0.010	mg/L	E235.NO2/CG	A	10-May-2023	930219
Sulfate (as SO <sub>4</sub> )	3.00	8265	0.30	mg/L	E235.SO4/CG	A	10-May-2023	930217
Nitrate + Nitrite (as N)	<0.0500	103392	0.05	mg/L	EC235.N+N/CG	-	11-May-2023	932777
<b>Total Sulfides</b>								
Sulfide, total (as S)	<0.0015	16003	0.0015	mg/L	E395/VA	B	11-May-2023	933455
<b>Ion Balance</b>								
Anion sum	1.18	125	0.10	meq/L	EC101/CG	-	11-May-2023	-
Cation sum	1.15	120	0.10	meq/L	EC101/CG	-	11-May-2023	-
Ion balance (APHA)	-1.29	4740	0.01	%	EC101/CG	-	11-May-2023	-
Ion balance (cations/anions)	97.4	58791	0.010	%	EC101/CG	-	11-May-2023	-
<b>Total Metals</b>								
Aluminum, total	0.0271	106560	0.0030	mg/L	E420/CG	A	10-May-2023	929816
Antimony, total	<0.00010	104555	0.00010	mg/L	E420/CG	A	10-May-2023	929816
Arsenic, total	0.00015	104554	0.00010	mg/L	E420/CG	A	10-May-2023	929816
Barium, total	0.0155	104558	0.00010	mg/L	E420/CG	A	10-May-2023	929816
Beryllium, total	<0.000020	104559	0.000020	mg/L	E420/CG	A	10-May-2023	929816
Bismuth, total	<0.000050	104564	0.000050	mg/L	E420/CG	A	10-May-2023	929816
Boron, total	0.013	104562	0.010	mg/L	E420/CG	A	10-May-2023	929816
Cadmium, total	<0.0000050	60008	0.0000050	mg/L	E420/CG	A	10-May-2023	929816
Calcium, total	8.49	104569	0.050	mg/L	E420/CG	A	10-May-2023	929816
Cesium, total	<0.000010	104577	0.000010	mg/L	E420/CG	A	10-May-2023	929816
Chromium, total	<0.00050	104571	0.00050	mg/L	E420/CG	A	10-May-2023	929816
Cobalt, total	<0.00010	104573	0.00010	mg/L	E420/CG	A	10-May-2023	929816
Copper, total	<0.00050	104575	0.00050	mg/L	E420/CG	A	10-May-2023	929816
Iron, total	<0.010	104580	0.010	mg/L	E420/CG	A	10-May-2023	929816

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 Work Order : FC2301151  
 Project Code :  
 Purchase Order : 4500049712

Date Received : 09-May-2023 16:00  
 Agency :  
 Sampler : Darwin McDonald



## Analytical Results

Lab Sample ID : FC2301151-003  
 Station Number :  
 Station Descrip/Name :  
 Sample Frequency :  
 Sample Matrix :

Client Sample ID : 130 Lucas Ave.  
 Sample Type :  
 Collection Code :  
 Date Collected : 09-May-2023 09:15

Analyte	Result	VMV	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
<b>Total Metals</b>								
Lead, total	<0.000050	104582	0.000050	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Lithium, total	0.0028	104585	0.0010	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Magnesium, total	2.19	104588	0.0050	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Manganese, total	0.00139	104591	0.00010	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Molybdenum, total	0.000162	104594	0.000050	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Nickel, total	<0.000050	104596	0.000050	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Phosphorus, total	<0.050	104597	0.050	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Potassium, total	0.925	104601	0.050	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Rubidium, total	0.00100	104603	0.00020	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Selenium, total	<0.000050	60009	0.000050	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Silicon, total	1.53	109310	0.10	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Silver, total	<0.000010	60010	0.000010	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Sodium, total	12.1	104611	0.050	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Strontium, total	0.0526	104613	0.00020	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Sulfur, total	1.27	111263	0.50	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Tellurium, total	<0.00020	3024	0.00020	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Thallium, total	<0.000010	104615	0.000010	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Thorium, total	<0.00010	107816	0.00010	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Tin, total	<0.00010	104616	0.00010	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Titanium, total	<0.00030	104621	0.00030	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Tungsten, total	<0.00010	104627	0.00010	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Uranium, total	<0.000010	104623	0.000010	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Vanadium, total	<0.000050	104624	0.000050	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Zinc, total	<0.0030	104629	0.0030	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Zirconium, total	<0.00020	104631	0.00020	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
<b>Dissolved Metals</b>								
Aluminum, dissolved	0.0252	104552	0.0010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Antimony, dissolved	<0.00010	99788	0.00010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Arsenic, dissolved	0.00012	99789	0.00010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Barium, dissolved	0.0162	99790	0.00010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Beryllium, dissolved	<0.000020	99791	0.000020	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Bismuth, dissolved	<0.000050	99792	0.000050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Boron, dissolved	0.013	99793	0.010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Cadmium, dissolved	<0.0000050	99794	0.0000050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Calcium, dissolved	8.17	104568	0.050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Cesium, dissolved	<0.000010	108414	0.000010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Chromium, dissolved	<0.000050	99795	0.000050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Cobalt, dissolved	<0.00010	99796	0.00010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Copper, dissolved	0.00042	99797	0.00020	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Iron, dissolved	<0.030	104578	0.030	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Lead, dissolved	<0.000050	104583	0.000050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Lithium, dissolved	0.0028	99800	0.0010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814

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 Work Order : FC2301151  
 Project Code :  
 Purchase Order : 4500049712

Date Received : 09-May-2023 16:00  
 Agency :  
 Sampler : Darwin McDonald



## Analytical Results

Lab Sample ID : FC2301151-003  
 Station Number :  
 Station Descrip/Name :  
 Sample Frequency :  
 Sample Matrix :

Client Sample ID : 130 Lucas Ave.  
 Sample Type :  
 Collection Code :  
 Date Collected : 09-May-2023 09:15

Analyte	Result	VMV	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
<b>Dissolved Metals</b>								
Magnesium, dissolved	2.26	104587	0.0050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Manganese, dissolved	<0.00500	104590	0.00500	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Molybdenum, dissolved	0.000169	108418	0.000050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Nickel, dissolved	<0.00050	99803	0.00050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Phosphorus, dissolved	<0.050	108420	0.050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Potassium, dissolved	0.918	104599	0.050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Rubidium, dissolved	0.00088	108421	0.00020	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Selenium, dissolved	<0.000050	99804	0.000050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Silicon, dissolved	1.50	102076	0.050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Silver, dissolved	<0.000010	99805	0.000010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Sodium, dissolved	12.2	104609	0.050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Strontium, dissolved	0.0536	99806	0.00020	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Sulfur, dissolved	1.26	111256	0.50	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Tellurium, dissolved	<0.00020	108425	0.00020	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Thallium, dissolved	<0.000010	99807	0.000010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Thorium, dissolved	<0.00010	107815	0.00010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Tin, dissolved	<0.00010	99808	0.00010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Titanium, dissolved	<0.00030	108428	0.00030	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Tungsten, dissolved	<0.00010	108429	0.00010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Uranium, dissolved	<0.000010	99810	0.000010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Vanadium, dissolved	<0.00050	99811	0.00050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Zinc, dissolved	<0.0010	99812	0.0010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Zirconium, dissolved	<0.00030	99813	0.00030	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Dissolved metals filtration location	Laboratory	NA	-	-	EP421/CG	-	10-May-2023	929814
<b>Aggregate Organics</b>								
Naphthenic acids	<0.10	107194	0.10	mg/L	E565-L/EO	C 10-May-2023	11-May-2023	930877
<b>Volatile Organic Compounds [BTEXS+MTBE]</b>								
Benzene	<0.50	109117	0.50	µg/L	E611A/CG	A 10-May-2023	10-May-2023	930026
Ethylbenzene	<0.50	109142	0.50	µg/L	E611A/CG	A 10-May-2023	10-May-2023	930026
Toluene	<0.50	109151	0.50	µg/L	E611A/CG	A 10-May-2023	10-May-2023	930026
Xylene, m+p-	<0.50	109158	0.50	µg/L	E611A/CG	A 10-May-2023	10-May-2023	930026
Xylene, o-	<0.50	109157	0.50	µg/L	E611A/CG	A 10-May-2023	10-May-2023	930026
Xylenes, total	<0.75	109289	0.75	µg/L	E611A/CG	A 10-May-2023	10-May-2023	930026
BTEX, total	<1.2	60884	1.2	µg/L	E611A/CG	A 10-May-2023	10-May-2023	930026
<b>Hydrocarbons</b>								
F1 (C6-C10)	<100	109006	100	µg/L	E581.F1/C G	A 10-May-2023	10-May-2023	930027
F1-BTEX	<100	108456	100	µg/L	EC580/CG	-	11-May-2023	-
F2 (C10-C16)	<100	58651	100	µg/L	E601/CG	A 10-May-2023	10-May-2023	929668
F3 (C16-C34)	<250	58652	250	µg/L	E601/CG	A 10-May-2023	10-May-2023	929668
F4 (C34-C50)	<250	58653	250	µg/L	E601/CG	A 10-May-2023	10-May-2023	929668
Hydrocarbons, total (C6-C50)	<400	---	400	µg/L	EC581/CG	-	10-May-2023	-
<b>Hydrocarbons Surrogates</b>								



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 Work Order : FC2301151  
 Project Code :  
 Purchase Order : 4500049712

Date Received : 09-May-2023 16:00  
 Agency :  
 Sampler : Darwin McDonald



## Analytical Results

Lab Sample ID : FC2301151-003  
 Station Number :  
 Station Descrip/Name :  
 Sample Frequency :  
 Sample Matrix :

Client Sample ID : 130 Lucas Ave.  
 Sample Type :  
 Collection Code :  
 Date Collected : 09-May-2023 09:15

Analyte	Result	VMV	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
<b>Hydrocarbons Surrogates</b>								
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	84.1	NA	1.0	%	E601/CG	A 10-May-2023	10-May-2023	929668
Dichlorotoluene, 3,4-	106	NA	1.0	%	E581.F1/C G	A 10-May-2023	10-May-2023	930027
<b>Volatile Organic Compounds Surrogates</b>								
Bromofluorobenzene, 4-	95.6	NA	1.0	%	E611A/CG	A 10-May-2023	10-May-2023	930026
Difluorobenzene, 1,4-	101	NA	1.0	%	E611A/CG	A 10-May-2023	10-May-2023	930026
<b>Polycyclic Aromatic Hydrocarbons</b>								
Acenaphthene	<0.010	60016	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Acenaphthylene	<0.010	60017	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Acridine	<0.010	60018	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Anthracene	<0.010	60019	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Benz(a)anthracene	<0.010	60020	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Benzo(a)pyrene	<0.0050	60021	0.0050	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Benzo(b+j)fluoranthene	<0.010	60022	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Benzo(b+j+k)fluoranthene	<0.015	60023	0.015	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Benzo(g,h,i)perylene	<0.010	60025	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Benzo(k)fluoranthene	<0.010	60026	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Chrysene	<0.010	60056	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Dibenz(a,h)anthracene	<0.0050	60057	0.0050	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Fluoranthene	<0.010	60032	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Fluorene	<0.010	60061	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Indeno(1,2,3-c,d)pyrene	<0.010	60062	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Methylnaphthalene, 1-	<0.010	60014	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Methylnaphthalene, 1+2-	<0.015	---	0.015	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Methylnaphthalene, 2-	<0.010	60015	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Naphthalene	<0.050	60065	0.050	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Phenanthrene	<0.020	---	0.020	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Pyrene	<0.010	60068	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Quinoline	<0.050	60069	0.050	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
B(a)P total potency equivalents [B(a)P TPE]	<0.010	60064	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
PAHs, high molecular weight (BC AWQ)	<0.030	---	0.03	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
PAHs, low molecular weight (BC AWQ)	<0.060	---	0.06	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
PAHs, total (CCME sewer 18)	<0.070	---	0.07	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
PAHs, total (EPA 16)	<0.065	---	0.065	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
<b>Polycyclic Aromatic Hydrocarbons Surrogates</b>								
Chrysene-d12	89.9	NA	0.1	%	E641A/CG	A 10-May-2023	10-May-2023	929670
Naphthalene-d8	96.0	NA	0.1	%	E641A/CG	A 10-May-2023	10-May-2023	929670
Phenanthrene-d10	80.6	NA	0.1	%	E641A/CG	A 10-May-2023	10-May-2023	929670

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

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 Work Order : FC2301151  
 Project Code :  
 Purchase Order : 4500049712

Date Received : 09-May-2023 16:00  
 Agency :  
 Sampler : Darwin McDonald



## Analytical Results

Lab Sample ID : FC2301151-004  
 Station Number :  
 Station Descrip/Name :  
 Sample Frequency :  
 Sample Matrix :

Client Sample ID : 104 Paquette St.  
 Sample Type :  
 Collection Code :  
 Date Collected : 09-May-2023 13:40

Analyte	Result	VMV	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
<b>Physical Tests</b>								
Hardness (as CaCO <sub>3</sub> ), dissolved	31.7	10602	0.50	mg/L	EC100/CG	-	11-May-2023	-
Hardness (as CaCO <sub>3</sub> ), from total Ca/Mg	30.7	4099	0.50	mg/L	EC100A/CG	-	11-May-2023	-
Salinity	<1.0	---	1.0	psu	EC100S/VA	-	12-May-2023	-
Conductivity	133	2041	2.0	µS/cm	E100/CG	A	10-May-2023	10-May-2023 930246
pH	8.83	10301	0.10	pH units	E108/CG	A	10-May-2023	10-May-2023 930245
Alkalinity, bicarbonate (as HCO <sub>3</sub> )	50.0	60152	1.0	mg/L	E290/CG	A	10-May-2023	10-May-2023 930247
Alkalinity, carbonate (as CO <sub>3</sub> )	2.9	60151	1.0	mg/L	E290/CG	A	10-May-2023	10-May-2023 930247
Alkalinity, hydroxide (as OH)	<1.0	60150	1.0	mg/L	E290/CG	A	10-May-2023	10-May-2023 930247
Alkalinity, total (as CaCO <sub>3</sub> )	45.8	10165	2.0	mg/L	E290/CG	A	10-May-2023	10-May-2023 930247
Solids, total dissolved [TDS], calculated	72.6	206	1.0	mg/L	EC103/CG	-	11-May-2023	-
<b>Anions and Nutrients</b>								
Chloride	11.1	8262	0.50	mg/L	E235.Cl/C	A	10-May-2023	10-May-2023 930220
Fluoride	0.022	8261	0.020	mg/L	E235.F/CG	A	10-May-2023	10-May-2023 930212
Nitrate (as N)	<0.020	102647	0.020	mg/L	E235.NO3/CG	A	10-May-2023	10-May-2023 930218
Nitrite (as N)	<0.010	102648	0.010	mg/L	E235.NO2/CG	A	10-May-2023	10-May-2023 930219
Sulfate (as SO <sub>4</sub> )	3.22	8265	0.30	mg/L	E235.SO4/CG	A	10-May-2023	10-May-2023 930217
Nitrate + Nitrite (as N)	<0.0500	103392	0.05	mg/L	EC235.N+N/CG	-	11-May-2023	932777
<b>Total Sulfides</b>								
Sulfide, total (as S)	<0.0015	16003	0.0015	mg/L	E395/VA	B	-	11-May-2023 933455
<b>Ion Balance</b>								
Anion sum	1.30	125	0.10	meq/L	EC101/CG	-	11-May-2023	-
Cation sum	1.28	120	0.10	meq/L	EC101/CG	-	11-May-2023	-
Ion balance (APHA)	-0.78	4740	0.01	%	EC101/CG	-	11-May-2023	-
Ion balance (cations/anions)	98.5	58791	0.010	%	EC101/CG	-	11-May-2023	-
<b>Total Metals</b>								
Aluminum, total	0.0262	106560	0.0030	mg/L	E420/CG	A	10-May-2023	10-May-2023 929816
Antimony, total	<0.00010	104555	0.00010	mg/L	E420/CG	A	10-May-2023	10-May-2023 929816
Arsenic, total	0.00017	104554	0.00010	mg/L	E420/CG	A	10-May-2023	10-May-2023 929816
Barium, total	0.0144	104558	0.00010	mg/L	E420/CG	A	10-May-2023	10-May-2023 929816
Beryllium, total	<0.000020	104559	0.000020	mg/L	E420/CG	A	10-May-2023	10-May-2023 929816
Bismuth, total	<0.000050	104564	0.000050	mg/L	E420/CG	A	10-May-2023	10-May-2023 929816
Boron, total	0.013	104562	0.010	mg/L	E420/CG	A	10-May-2023	10-May-2023 929816
Cadmium, total	<0.0000050	60008	0.0000050	mg/L	E420/CG	A	10-May-2023	10-May-2023 929816
Calcium, total	8.60	104569	0.050	mg/L	E420/CG	A	10-May-2023	10-May-2023 929816
Cesium, total	<0.000010	104577	0.000010	mg/L	E420/CG	A	10-May-2023	10-May-2023 929816
Chromium, total	<0.00050	104571	0.00050	mg/L	E420/CG	A	10-May-2023	10-May-2023 929816
Cobalt, total	<0.00010	104573	0.00010	mg/L	E420/CG	A	10-May-2023	10-May-2023 929816
Copper, total	0.00420	104575	0.00050	mg/L	E420/CG	A	10-May-2023	10-May-2023 929816
Iron, total	<0.010	104580	0.010	mg/L	E420/CG	A	10-May-2023	10-May-2023 929816

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 Work Order : FC2301151  
 Project Code :  
 Purchase Order : 4500049712

Date Received : 09-May-2023 16:00  
 Agency :  
 Sampler : Darwin McDonald



## Analytical Results

Lab Sample ID : FC2301151-004  
 Station Number :  
 Station Descrip/Name :  
 Sample Frequency :  
 Sample Matrix :

Client Sample ID : 104 Paquette St.  
 Sample Type :  
 Collection Code :  
 Date Collected : 09-May-2023 13:40

Analyte	Result	VMV	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
<b>Total Metals</b>								
Lead, total	<0.000050	104582	0.000050	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Lithium, total	0.0027	104585	0.0010	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Magnesium, total	2.24	104588	0.0050	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Manganese, total	0.00164	104591	0.00010	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Molybdenum, total	0.000162	104594	0.000050	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Nickel, total	<0.00050	104596	0.00050	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Phosphorus, total	<0.050	104597	0.050	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Potassium, total	0.941	104601	0.050	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Rubidium, total	0.00099	104603	0.00020	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Selenium, total	<0.000050	60009	0.000050	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Silicon, total	1.64	109310	0.10	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Silver, total	<0.000010	60010	0.000010	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Sodium, total	14.4	104611	0.050	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Strontium, total	0.0523	104613	0.00020	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Sulfur, total	1.24	111263	0.50	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Tellurium, total	<0.00020	3024	0.00020	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Thallium, total	<0.000010	104615	0.000010	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Thorium, total	<0.00010	107816	0.00010	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Tin, total	<0.00010	104616	0.00010	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Titanium, total	<0.00030	104621	0.00030	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Tungsten, total	<0.00010	104627	0.00010	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Uranium, total	<0.000010	104623	0.000010	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Vanadium, total	<0.00050	104624	0.00050	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Zinc, total	<0.0030	104629	0.0030	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Zirconium, total	<0.00020	104631	0.00020	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
<b>Dissolved Metals</b>								
Aluminum, dissolved	0.0246	104552	0.0010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Antimony, dissolved	<0.00010	99788	0.00010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Arsenic, dissolved	0.00014	99789	0.00010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Barium, dissolved	0.0152	99790	0.00010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Beryllium, dissolved	<0.000020	99791	0.000020	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Bismuth, dissolved	<0.000050	99792	0.000050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Boron, dissolved	0.014	99793	0.010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Cadmium, dissolved	<0.0000050	99794	0.0000050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Calcium, dissolved	8.94	104568	0.050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Cesium, dissolved	<0.000010	108414	0.000010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Chromium, dissolved	<0.00050	99795	0.00050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Cobalt, dissolved	<0.00010	99796	0.00010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Copper, dissolved	0.00454	99797	0.00020	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Iron, dissolved	<0.030	104578	0.030	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Lead, dissolved	<0.000050	104583	0.000050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Lithium, dissolved	0.0032	99800	0.0010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814



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 Work Order : FC2301151  
 Project Code :  
 Purchase Order : 4500049712

Date Received : 09-May-2023 16:00  
 Agency :  
 Sampler : Darwin McDonald



## Analytical Results

Lab Sample ID : FC2301151-004  
 Station Number :  
 Station Descrip/Name :  
 Sample Frequency :  
 Sample Matrix :

Client Sample ID : 104 Paquette St.  
 Sample Type :  
 Collection Code :  
 Date Collected : 09-May-2023 13:40

Analyte	Result	VMV	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
<b>Dissolved Metals</b>								
Magnesium, dissolved	2.27	104587	0.0050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Manganese, dissolved	<0.00500	104590	0.00500	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Molybdenum, dissolved	0.000181	108418	0.000050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Nickel, dissolved	<0.00050	99803	0.00050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Phosphorus, dissolved	<0.050	108420	0.050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Potassium, dissolved	0.944	104599	0.050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Rubidium, dissolved	0.00098	108421	0.00020	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Selenium, dissolved	<0.000050	99804	0.000050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Silicon, dissolved	1.60	102076	0.050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Silver, dissolved	<0.000010	99805	0.000010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Sodium, dissolved	14.3	104609	0.050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Strontium, dissolved	0.0525	99806	0.00020	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Sulfur, dissolved	1.29	111256	0.50	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Tellurium, dissolved	<0.00020	108425	0.00020	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Thallium, dissolved	<0.000010	99807	0.000010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Thorium, dissolved	<0.00010	107815	0.00010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Tin, dissolved	<0.00010	99808	0.00010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Titanium, dissolved	<0.00030	108428	0.00030	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Tungsten, dissolved	<0.00010	108429	0.00010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Uranium, dissolved	<0.000010	99810	0.000010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Vanadium, dissolved	<0.00050	99811	0.00050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Zinc, dissolved	0.0013	99812	0.0010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Zirconium, dissolved	<0.00030	99813	0.00030	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Dissolved metals filtration location	Laboratory	NA	-	-	EP421/CG	-	10-May-2023	929814
<b>Aggregate Organics</b>								
Naphthenic acids	<0.10	107194	0.10	mg/L	E565-L/EO	C 10-May-2023	11-May-2023	930877
<b>Volatile Organic Compounds [BTEXS+MTBE]</b>								
Benzene	<0.50	109117	0.50	µg/L	E611A/CG	A 10-May-2023	10-May-2023	930026
Ethylbenzene	<0.50	109142	0.50	µg/L	E611A/CG	A 10-May-2023	10-May-2023	930026
Toluene	<0.50	109151	0.50	µg/L	E611A/CG	A 10-May-2023	10-May-2023	930026
Xylene, m+p-	<0.50	109158	0.50	µg/L	E611A/CG	A 10-May-2023	10-May-2023	930026
Xylene, o-	<0.50	109157	0.50	µg/L	E611A/CG	A 10-May-2023	10-May-2023	930026
Xylenes, total	<0.75	109289	0.75	µg/L	E611A/CG	A 10-May-2023	10-May-2023	930026
BTEX, total	<1.2	60884	1.2	µg/L	E611A/CG	A 10-May-2023	10-May-2023	930026
<b>Hydrocarbons</b>								
F1 (C6-C10)	<100	109006	100	µg/L	E581.F1/C G	A 10-May-2023	10-May-2023	930027
F1-BTEX	<100	108456	100	µg/L	EC580/CG	-	11-May-2023	-
F2 (C10-C16)	<100	58651	100	µg/L	E601/CG	A 10-May-2023	10-May-2023	929668
F3 (C16-C34)	<250	58652	250	µg/L	E601/CG	A 10-May-2023	10-May-2023	929668
F4 (C34-C50)	<250	58653	250	µg/L	E601/CG	A 10-May-2023	10-May-2023	929668
Hydrocarbons, total (C6-C50)	<400	---	400	µg/L	EC581/CG	-	10-May-2023	-
<b>Hydrocarbons Surrogates</b>								

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 Work Order : FC2301151  
 Project Code :  
 Purchase Order : 4500049712

Date Received : 09-May-2023 16:00  
 Agency :  
 Sampler : Darwin McDonald



## Analytical Results

Lab Sample ID : FC2301151-004  
 Station Number :  
 Station Descrip/Name :  
 Sample Frequency :  
 Sample Matrix :

Client Sample ID : 104 Paquette St.  
 Sample Type :  
 Collection Code :  
 Date Collected : 09-May-2023 13:40

Analyte	Result	VMV	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
<b>Hydrocarbons Surrogates</b>								
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	86.3	NA	1.0	%	E601/CG	A 10-May-2023	10-May-2023	929668
Dichlorotoluene, 3,4-	107	NA	1.0	%	E581.F1/C G	A 10-May-2023	10-May-2023	930027
<b>Volatile Organic Compounds Surrogates</b>								
Bromofluorobenzene, 4-	96.5	NA	1.0	%	E611A/CG	A 10-May-2023	10-May-2023	930026
Difluorobenzene, 1,4-	102	NA	1.0	%	E611A/CG	A 10-May-2023	10-May-2023	930026
<b>Polycyclic Aromatic Hydrocarbons</b>								
Acenaphthene	<0.010	60016	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Acenaphthylene	<0.010	60017	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Acridine	<0.010	60018	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Anthracene	<0.010	60019	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Benz(a)anthracene	<0.010	60020	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Benzo(a)pyrene	<0.0050	60021	0.0050	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Benzo(b+j)fluoranthene	<0.010	60022	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Benzo(b+j+k)fluoranthene	<0.015	60023	0.015	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Benzo(g,h,i)perylene	<0.010	60025	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Benzo(k)fluoranthene	<0.010	60026	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Chrysene	<0.010	60056	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Dibenz(a,h)anthracene	<0.0050	60057	0.0050	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Fluoranthene	<0.010	60032	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Fluorene	<0.010	60061	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Indeno(1,2,3-c,d)pyrene	<0.010	60062	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Methylnaphthalene, 1-	<0.010	60014	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Methylnaphthalene, 1+2-	<0.015	---	0.015	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Methylnaphthalene, 2-	<0.010	60015	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Naphthalene	<0.050	60065	0.050	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Phenanthrene	<0.020	---	0.020	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Pyrene	<0.010	60068	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Quinoline	<0.050	60069	0.050	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
B(a)P total potency equivalents [B(a)P TPE]	<0.010	60064	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
PAHs, high molecular weight (BC AWQ)	<0.030	---	0.03	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
PAHs, low molecular weight (BC AWQ)	<0.060	---	0.06	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
PAHs, total (CCME sewer 18)	<0.070	---	0.07	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
PAHs, total (EPA 16)	<0.065	---	0.065	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
<b>Polycyclic Aromatic Hydrocarbons Surrogates</b>								
Chrysene-d12	91.5	NA	0.1	%	E641A/CG	A 10-May-2023	10-May-2023	929670
Naphthalene-d8	100	NA	0.1	%	E641A/CG	A 10-May-2023	10-May-2023	929670
Phenanthrene-d10	83.8	NA	0.1	%	E641A/CG	A 10-May-2023	10-May-2023	929670

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

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 Work Order : FC2301151  
 Project Code :  
 Purchase Order : 4500049712

Date Received : 09-May-2023 16:00  
 Agency :  
 Sampler : Darwin McDonald



## Analytical Results

Lab Sample ID : FC2301151-005  
 Station Number :  
 Station Descrip/Name :  
 Sample Frequency :  
 Sample Matrix :

Client Sample ID : 120 Stewart Dr.  
 Sample Type :  
 Collection Code :  
 Date Collected : 09-May-2023 14:00

Analyte	Result	VMV	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
<b>Physical Tests</b>								
Hardness (as CaCO <sub>3</sub> ), dissolved	28.1	10602	0.50	mg/L	EC100/CG	-	11-May-2023	-
Hardness (as CaCO <sub>3</sub> ), from total Ca/Mg	30.0	4099	0.50	mg/L	EC100A/CG	-	11-May-2023	-
Salinity	<1.0	---	1.0	psu	EC100S/VA	-	12-May-2023	-
Conductivity	120	2041	2.0	µS/cm	E100/CG	A	10-May-2023	930246
pH	8.13	10301	0.10	pH units	E108/CG	A	10-May-2023	930245
Alkalinity, bicarbonate (as HCO <sub>3</sub> )	47.3	60152	1.0	mg/L	E290/CG	A	10-May-2023	930247
Alkalinity, carbonate (as CO <sub>3</sub> )	<1.0	60151	1.0	mg/L	E290/CG	A	10-May-2023	930247
Alkalinity, hydroxide (as OH)	<1.0	60150	1.0	mg/L	E290/CG	A	10-May-2023	930247
Alkalinity, total (as CaCO <sub>3</sub> )	38.8	10165	2.0	mg/L	E290/CG	A	10-May-2023	930247
Solids, total dissolved [TDS], calculated	63.6	206	1.0	mg/L	EC103/CG	-	11-May-2023	-
<b>Anions and Nutrients</b>								
Chloride	11.2	8262	0.50	mg/L	E235.Cl/C	A	10-May-2023	930220
Fluoride	0.021	8261	0.020	mg/L	E235.F/CG	A	10-May-2023	930212
Nitrate (as N)	<0.020	102647	0.020	mg/L	E235.NO3/CG	A	10-May-2023	930218
Nitrite (as N)	<0.010	102648	0.010	mg/L	E235.NO2/CG	A	10-May-2023	930219
Sulfate (as SO <sub>4</sub> )	3.08	8265	0.30	mg/L	E235.SO4/CG	A	10-May-2023	930217
Nitrate + Nitrite (as N)	<0.0500	103392	0.05	mg/L	EC235.N+N/CG	-	11-May-2023	932777
<b>Total Sulfides</b>								
Sulfide, total (as S)	<0.0015	16003	0.0015	mg/L	E395/VA	B	11-May-2023	933455
<b>Ion Balance</b>								
Anion sum	1.16	125	0.10	meq/L	EC101/CG	-	11-May-2023	-
Cation sum	1.07	120	0.10	meq/L	EC101/CG	-	11-May-2023	-
Ion balance (APHA)	-4.04	4740	0.01	%	EC101/CG	-	11-May-2023	-
Ion balance (cations/anions)	92.2	58791	0.010	%	EC101/CG	-	11-May-2023	-
<b>Total Metals</b>								
Aluminum, total	0.0194	106560	0.0030	mg/L	E420/CG	A	10-May-2023	929816
Antimony, total	<0.00010	104555	0.00010	mg/L	E420/CG	A	10-May-2023	929816
Arsenic, total	0.00014	104554	0.00010	mg/L	E420/CG	A	10-May-2023	929816
Barium, total	0.0152	104558	0.00010	mg/L	E420/CG	A	10-May-2023	929816
Beryllium, total	<0.000020	104559	0.000020	mg/L	E420/CG	A	10-May-2023	929816
Bismuth, total	<0.000050	104564	0.000050	mg/L	E420/CG	A	10-May-2023	929816
Boron, total	0.013	104562	0.010	mg/L	E420/CG	A	10-May-2023	929816
Cadmium, total	<0.0000050	60008	0.0000050	mg/L	E420/CG	A	10-May-2023	929816
Calcium, total	8.42	104569	0.050	mg/L	E420/CG	A	10-May-2023	929816
Cesium, total	<0.000010	104577	0.000010	mg/L	E420/CG	A	10-May-2023	929816
Chromium, total	<0.00050	104571	0.00050	mg/L	E420/CG	A	10-May-2023	929816
Cobalt, total	<0.00010	104573	0.00010	mg/L	E420/CG	A	10-May-2023	929816
Copper, total	0.00104	104575	0.00050	mg/L	E420/CG	A	10-May-2023	929816
Iron, total	<0.010	104580	0.010	mg/L	E420/CG	A	10-May-2023	929816

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 Work Order : FC2301151  
 Project Code :  
 Purchase Order : 4500049712

Date Received : 09-May-2023 16:00  
 Agency :  
 Sampler : Darwin McDonald



## Analytical Results

Lab Sample ID : FC2301151-005  
 Station Number :  
 Station Descrip/Name :  
 Sample Frequency :  
 Sample Matrix :

Client Sample ID : 120 Stewart Dr.  
 Sample Type :  
 Collection Code :  
 Date Collected : 09-May-2023 14:00

Analyte	Result	VMV	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
<b>Total Metals</b>								
Lead, total	<0.000050	104582	0.000050	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Lithium, total	0.0028	104585	0.0010	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Magnesium, total	2.19	104588	0.0050	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Manganese, total	0.00169	104591	0.00010	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Molybdenum, total	0.000161	104594	0.000050	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Nickel, total	<0.00050	104596	0.00050	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Phosphorus, total	<0.050	104597	0.050	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Potassium, total	0.940	104601	0.050	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Rubidium, total	0.00097	104603	0.00020	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Selenium, total	<0.000050	60009	0.000050	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Silicon, total	1.52	109310	0.10	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Silver, total	<0.000010	60010	0.000010	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Sodium, total	11.5	104611	0.050	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Strontium, total	0.0518	104613	0.00020	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Sulfur, total	1.23	111263	0.50	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Tellurium, total	<0.00020	3024	0.00020	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Thallium, total	<0.000010	104615	0.000010	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Thorium, total	<0.00010	107816	0.00010	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Tin, total	<0.00010	104616	0.00010	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Titanium, total	<0.00030	104621	0.00030	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Tungsten, total	<0.00010	104627	0.00010	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Uranium, total	<0.000010	104623	0.000010	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Vanadium, total	<0.00050	104624	0.00050	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Zinc, total	<0.0030	104629	0.0030	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
Zirconium, total	<0.00020	104631	0.00020	mg/L	E420/CG	A 10-May-2023	10-May-2023	929816
<b>Dissolved Metals</b>								
Aluminum, dissolved	0.0186	104552	0.0010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Antimony, dissolved	<0.00010	99788	0.00010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Arsenic, dissolved	0.00012	99789	0.00010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Barium, dissolved	0.0159	99790	0.00010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Beryllium, dissolved	<0.000020	99791	0.000020	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Bismuth, dissolved	<0.000050	99792	0.000050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Boron, dissolved	0.012	99793	0.010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Cadmium, dissolved	<0.0000050	99794	0.0000050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Calcium, dissolved	7.60	104568	0.050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Cesium, dissolved	<0.000010	108414	0.000010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Chromium, dissolved	<0.00050	99795	0.00050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Cobalt, dissolved	<0.00010	99796	0.00010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Copper, dissolved	0.00082	99797	0.00020	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Iron, dissolved	<0.030	104578	0.030	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Lead, dissolved	<0.000050	104583	0.000050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Lithium, dissolved	0.0024	99800	0.0010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814

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 Work Order : FC2301151  
 Project Code :  
 Purchase Order : 4500049712

Date Received : 09-May-2023 16:00  
 Agency :  
 Sampler : Darwin McDonald



## Analytical Results

Lab Sample ID : FC2301151-005  
 Station Number :  
 Station Descrip/Name :  
 Sample Frequency :  
 Sample Matrix :

Client Sample ID : 120 Stewart Dr.  
 Sample Type :  
 Collection Code :  
 Date Collected : 09-May-2023 14:00

Analyte	Result	VMV	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
<b>Dissolved Metals</b>								
Magnesium, dissolved	2.21	104587	0.0050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Manganese, dissolved	<0.00500	104590	0.00500	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Molybdenum, dissolved	0.000157	108418	0.000050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Nickel, dissolved	<0.00050	99803	0.00050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Phosphorus, dissolved	<0.050	108420	0.050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Potassium, dissolved	0.925	104599	0.050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Rubidium, dissolved	0.00096	108421	0.00020	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Selenium, dissolved	<0.000050	99804	0.000050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Silicon, dissolved	1.52	102076	0.050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Silver, dissolved	<0.000010	99805	0.000010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Sodium, dissolved	11.2	104609	0.050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Strontium, dissolved	0.0517	99806	0.00020	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Sulfur, dissolved	1.32	111256	0.50	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Tellurium, dissolved	<0.00020	108425	0.00020	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Thallium, dissolved	<0.000010	99807	0.000010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Thorium, dissolved	<0.00010	107815	0.00010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Tin, dissolved	<0.00010	99808	0.00010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Titanium, dissolved	<0.00030	108428	0.00030	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Tungsten, dissolved	<0.00010	108429	0.00010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Uranium, dissolved	<0.000010	99810	0.000010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Vanadium, dissolved	<0.00050	99811	0.00050	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Zinc, dissolved	<0.0010	99812	0.0010	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Zirconium, dissolved	<0.00030	99813	0.00030	mg/L	E421/CG	A 10-May-2023	10-May-2023	929814
Dissolved metals filtration location	Laboratory	NA	-	-	EP421/CG	-	10-May-2023	929814
<b>Aggregate Organics</b>								
Naphthenic acids	<0.10	107194	0.10	mg/L	E565-L/EO	C 10-May-2023	11-May-2023	930877
<b>Volatile Organic Compounds [BTEXS+MTBE]</b>								
Benzene	<0.50	109117	0.50	µg/L	E611A/CG	A 10-May-2023	10-May-2023	930026
Ethylbenzene	<0.50	109142	0.50	µg/L	E611A/CG	A 10-May-2023	10-May-2023	930026
Toluene	<0.50	109151	0.50	µg/L	E611A/CG	A 10-May-2023	10-May-2023	930026
Xylene, m+p-	<0.50	109158	0.50	µg/L	E611A/CG	A 10-May-2023	10-May-2023	930026
Xylene, o-	<0.50	109157	0.50	µg/L	E611A/CG	A 10-May-2023	10-May-2023	930026
Xylenes, total	<0.75	109289	0.75	µg/L	E611A/CG	A 10-May-2023	10-May-2023	930026
BTEX, total	<1.2	60884	1.2	µg/L	E611A/CG	A 10-May-2023	10-May-2023	930026
<b>Hydrocarbons</b>								
F1 (C6-C10)	<100	109006	100	µg/L	E581.F1/C G	A 10-May-2023	10-May-2023	930027
F1-BTEX	<100	108456	100	µg/L	EC580/CG	-	11-May-2023	-
F2 (C10-C16)	<100	58651	100	µg/L	E601/CG	A 10-May-2023	10-May-2023	929668
F3 (C16-C34)	<250	58652	250	µg/L	E601/CG	A 10-May-2023	10-May-2023	929668
F4 (C34-C50)	<250	58653	250	µg/L	E601/CG	A 10-May-2023	10-May-2023	929668
Hydrocarbons, total (C6-C50)	<400	---	400	µg/L	EC581/CG	-	10-May-2023	-
<b>Hydrocarbons Surrogates</b>								



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 Work Order : FC2301151  
 Project Code :  
 Purchase Order : 4500049712

Date Received : 09-May-2023 16:00  
 Agency :  
 Sampler : Darwin McDonald



## Analytical Results

Lab Sample ID : FC2301151-005  
 Station Number :  
 Station Descrip/Name :  
 Sample Frequency :  
 Sample Matrix :

Client Sample ID : 120 Stewart Dr.  
 Sample Type :  
 Collection Code :  
 Date Collected : 09-May-2023 14:00

Analyte	Result	VMV	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
<b>Hydrocarbons Surrogates</b>								
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	84.8	NA	1.0	%	E601/CG	A 10-May-2023	10-May-2023	929668
Dichlorotoluene, 3,4-	97.2	NA	1.0	%	E581.F1/C G	A 10-May-2023	10-May-2023	930027
<b>Volatile Organic Compounds Surrogates</b>								
Bromofluorobenzene, 4-	92.5	NA	1.0	%	E611A/CG	A 10-May-2023	10-May-2023	930026
Difluorobenzene, 1,4-	100	NA	1.0	%	E611A/CG	A 10-May-2023	10-May-2023	930026
<b>Polycyclic Aromatic Hydrocarbons</b>								
Acenaphthene	<0.010	60016	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Acenaphthylene	<0.010	60017	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Acridine	<0.010	60018	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Anthracene	<0.010	60019	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Benz(a)anthracene	<0.010	60020	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Benzo(a)pyrene	<0.0050	60021	0.0050	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Benzo(b+j)fluoranthene	<0.010	60022	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Benzo(b+j+k)fluoranthene	<0.015	60023	0.015	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Benzo(g,h,i)perylene	<0.010	60025	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Benzo(k)fluoranthene	<0.010	60026	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Chrysene	<0.010	60056	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Dibenz(a,h)anthracene	<0.0050	60057	0.0050	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Fluoranthene	<0.010	60032	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Fluorene	<0.010	60061	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Indeno(1,2,3-c,d)pyrene	<0.010	60062	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Methylnaphthalene, 1-	<0.010	60014	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Methylnaphthalene, 1+2-	<0.015	---	0.015	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Methylnaphthalene, 2-	<0.010	60015	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Naphthalene	<0.050	60065	0.050	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Phenanthrene	<0.020	---	0.020	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Pyrene	<0.010	60068	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
Quinoline	<0.050	60069	0.050	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
B(a)P total potency equivalents [B(a)P TPE]	<0.010	60064	0.010	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
PAHs, high molecular weight (BC AWQ)	<0.030	---	0.03	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
PAHs, low molecular weight (BC AWQ)	<0.060	---	0.06	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
PAHs, total (CCME sewer 18)	<0.070	---	0.07	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
PAHs, total (EPA 16)	<0.065	---	0.065	µg/L	E641A/CG	A 10-May-2023	10-May-2023	929670
<b>Polycyclic Aromatic Hydrocarbons Surrogates</b>								
Chrysene-d12	90.5	NA	0.1	%	E641A/CG	A 10-May-2023	10-May-2023	929670
Naphthalene-d8	98.6	NA	0.1	%	E641A/CG	A 10-May-2023	10-May-2023	929670
Phenanthrene-d10	82.3	NA	0.1	%	E641A/CG	A 10-May-2023	10-May-2023	929670

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.