



CERTIFICATE OF ANALYSIS

<p>Work Order : FC2300684</p> <p>Client : Regional Municipality of Wood Buffalo</p> <p>Contact : Water Treatment Plant</p> <p>Address : 1 Silin Forest Road Fort McMurray AB Canada T9H 5A1</p> <p>Telephone : 780-762-5863</p> <p>Project : Fort Chipewyan Imperial Release</p> <p>PO : 4500049712</p> <p>C-O-C number : ----</p> <p>Sampler : DM</p> <p>Site : Schedule 4: Fort Chip</p> <p>Quote number : Q61323 (Fort chip)</p> <p>No. of samples received : 3</p> <p>No. of samples analysed : 3</p>	<p>Page : 1 of 7</p> <p>Laboratory : Fort McMurray - Environmental</p> <p>Account Manager : Megan Trydal</p> <p>Address : #4, 340 Macalpine Crescent Fort McMurray AB Canada T9H 4A8</p> <p>Telephone : +1 780 791 1524</p> <p>Date Samples Received : 23-Mar-2023 16:30</p> <p>Date Analysis Commenced : 24-Mar-2023</p> <p>Issue Date : 29-Mar-2023 16:29</p>
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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>
Alex Drake	Lab Analyst	Inorganics, Edmonton, Alberta
Andrew Fox		Metals, Calgary, Alberta
Geoff Berg	Lab Analyst	Organics, Edmonton, Alberta
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Lindsay Gung	Supervisor - Water Chemistry	Inorganics, Burnaby, British Columbia
Miles Gropen	Department Manager - Inorganics	Inorganics, Burnaby, British Columbia
Remy Gatabazi	Lab Analyst	Organics, Edmonton, Alberta
Samantha Mayor	Lab Assistant	Inorganics, Edmonton, Alberta



General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

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

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

Key : CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances
LOR: Limit of Reporting (detection limit).

<i>Unit</i>	<i>Description</i>
-	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.

Workorder Comments

Sulfide analysis was conducted on samples without appropriate preservation. The reported concentrations may have significant negative biases associated with them.

Qualifiers

<i>Qualifier</i>	<i>Description</i>
HTD	Hold time exceeded for re-analysis or dilution, but initial testing was conducted within hold time.
RRR	Refer to report comments for issues regarding this analysis.
RRV	Reported result verified by repeat analysis.



Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	Raw Water-Lake Intake	Raw Water-Chamber WTP	Treated Water-Lab Sink	----	----
Client sampling date / time					23-Mar-2023 09:30	23-Mar-2023 09:50	23-Mar-2023 09:40	----	----	
Analyte	CAS Number	Method	LOR	Unit	FC2300684-001 Result	FC2300684-002 Result	FC2300684-003 Result	-----	-----	
Physical Tests										
Hardness (as CaCO3), dissolved	----	EC100	0.50	mg/L	30.5	34.5	37.1	----	----	
Salinity	----	EC100S	1.0	psu	<1.0	<1.0	<1.0	----	----	
Conductivity	----	E100	2.0	µS/cm	76.8 ^{RRV}	85.7 ^{RRV}	151 ^{RRV}	----	----	
pH	----	E108	0.10	pH units	7.10 ^{RRV}	7.09 ^{RRV}	7.89 ^{RRV}	----	----	
Alkalinity, bicarbonate (as HCO3)	71-52-3	E290	1.0	mg/L	37.1 ^{RRV}	39.9 ^{RRV}	69.5 ^{RRV}	----	----	
Alkalinity, carbonate (as CO3)	3812-32-6	E290	1.0	mg/L	<1.0 ^{RRV}	<1.0 ^{RRV}	<1.0 ^{RRV}	----	----	
Alkalinity, hydroxide (as OH)	14280-30-9	E290	1.0	mg/L	<1.0 ^{RRV}	<1.0 ^{RRV}	<1.0 ^{RRV}	----	----	
Alkalinity, total (as CaCO3)	----	E290	2.0	mg/L	30.4 ^{RRV}	32.7 ^{RRV}	57.0 ^{RRV}	----	----	
Solids, total dissolved [TDS], calculated	----	EC103	1.0	mg/L	45.5	49.4	89.1	----	----	
Anions and Nutrients										
Chloride	16887-00-6	E235.Cl	0.50	mg/L	3.14	3.27	11.9	----	----	
Fluoride	16984-48-8	E235.F	0.020	mg/L	0.032	0.033	0.050	----	----	
Nitrate (as N)	14797-55-8	E235.NO3	0.020	mg/L	0.087 ^{HTD}	0.094 ^{HTD}	0.094 ^{HTD}	----	----	
Nitrite (as N)	14797-65-0	E235.NO2	0.010	mg/L	<0.010 ^{HTD}	<0.010 ^{HTD}	<0.010 ^{HTD}	----	----	
Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	1.95	2.16	1.75	----	----	
Nitrate + Nitrite (as N)	----	EC235.N+N	0.0500	mg/L	0.0870	0.0940	0.0940	----	----	
Total Sulfides										
Sulfide, total (as S)	18496-25-8	E395	0.0015	mg/L	<0.0015 ^{RRR}	<0.0015 ^{RRR}	<0.0015 ^{RRR}	----	----	
Ion Balance										
Anion sum	----	EC101	0.10	meq/L	0.74	0.80	1.52	----	----	
Cation sum	----	EC101	0.10	meq/L	0.77	0.86	1.62	----	----	
Ion balance (APHA)	----	EC101	0.01	%	1.99	3.61	3.18	----	----	
Ion balance (cations/anions)	----	EC101	0.010	%	104	108	106	----	----	
Total Metals										
Aluminum, total	7429-90-5	E420	0.0030	mg/L	0.843	0.0850	0.0124	----	----	
Antimony, total	7440-36-0	E420	0.00010	mg/L	0.00010	<0.00010	<0.00010	----	----	
Arsenic, total	7440-38-2	E420	0.00010	mg/L	0.00105	0.00024	0.00011	----	----	
Barium, total	7440-39-3	E420	0.00010	mg/L	0.0337	0.0197	0.0182	----	----	



Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	Raw Water-Lake Intake	Raw Water-Chamber WTP	Treated Water-Lab Sink	----	----
Client sampling date / time					23-Mar-2023 09:30	23-Mar-2023 09:50	23-Mar-2023 09:40	----	----	
Analyte	CAS Number	Method	LOR	Unit	FC2300684-001 Result	FC2300684-002 Result	FC2300684-003 Result	----- ----	----- ----	
Total Metals										
Beryllium, total	7440-41-7	E420	0.000020	mg/L	0.000063	<0.000020	<0.000020	----	----	
Bismuth, total	7440-69-9	E420	0.000050	mg/L	<0.000050	<0.000050	<0.000050	----	----	
Boron, total	7440-42-8	E420	0.010	mg/L	0.015	0.014	0.012	----	----	
Cadmium, total	7440-43-9	E420	0.0000050	mg/L	0.0000456	<0.0000050	<0.0000050	----	----	
Calcium, total	7440-70-2	E420	0.050	mg/L	8.53	8.24	9.14	----	----	
Cesium, total	7440-46-2	E420	0.000010	mg/L	0.000261	0.000011	<0.000010	----	----	
Chromium, total	7440-47-3	E420	0.000050	mg/L	0.00219	<0.000050	<0.000050	----	----	
Cobalt, total	7440-48-4	E420	0.00010	mg/L	0.00088	<0.00010	<0.00010	----	----	
Copper, total	7440-50-8	E420	0.000050	mg/L	0.00976	0.00113	0.00054	----	----	
Iron, total	7439-89-6	E420	0.010	mg/L	2.28	0.160	<0.010	----	----	
Lead, total	7439-92-1	E420	0.000050	mg/L	0.00264	<0.000050	<0.000050	----	----	
Lithium, total	7439-93-2	E420	0.0010	mg/L	0.0039	0.0024	0.0013	----	----	
Magnesium, total	7439-95-4	E420	0.0050	mg/L	3.05	2.82	2.94	----	----	
Manganese, total	7439-96-5	E420	0.00010	mg/L	0.0659	0.00780	0.00539	----	----	
Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.000324	0.000236	0.000211	----	----	
Nickel, total	7440-02-0	E420	0.000050	mg/L	0.00316	<0.000050	<0.000050	----	----	
Phosphorus, total	7723-14-0	E420	0.050	mg/L	0.063	<0.050	<0.050	----	----	
Potassium, total	7440-09-7	E420	0.050	mg/L	1.29	1.06	1.02	----	----	
Rubidium, total	7440-17-7	E420	0.00020	mg/L	0.00390	0.00117	0.00118	----	----	
Selenium, total	7782-49-2	E420	0.000050	mg/L	0.000083	0.000070	0.000060	----	----	
Silicon, total	7440-21-3	E420	0.10	mg/L	4.18	2.67	2.15	----	----	
Silver, total	7440-22-4	E420	0.000010	mg/L	0.000017	<0.000010	<0.000010	----	----	
Sodium, total	7440-23-5	E420	0.050	mg/L	2.73	2.92	16.7	----	----	
Strontium, total	7440-24-6	E420	0.00020	mg/L	0.0637	0.0645	0.0645	----	----	
Sulfur, total	7704-34-9	E420	0.50	mg/L	0.97	1.09	1.65	----	----	
Tellurium, total	13494-80-9	E420	0.00020	mg/L	<0.00020	<0.00020	<0.00020	----	----	
Thallium, total	7440-28-0	E420	0.000010	mg/L	0.000026	<0.000010	<0.000010	----	----	
Thorium, total	7440-29-1	E420	0.00010	mg/L	0.00026	<0.00010	<0.00010	----	----	
Tin, total	7440-31-5	E420	0.00010	mg/L	0.00048	<0.00010	<0.00010	----	----	



Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	Raw Water-Lake Intake	Raw Water-Chamber WTP	Treated Water-Lab Sink	----	----
Client sampling date / time					23-Mar-2023 09:30	23-Mar-2023 09:50	23-Mar-2023 09:40	----	----	
Analyte	CAS Number	Method	LOR	Unit	FC2300684-001 Result	FC2300684-002 Result	FC2300684-003 Result	----- ----	----- ----	
Total Metals										
Titanium, total	7440-32-6	E420	0.00030	mg/L	0.0193	0.00260	<0.00030	----	----	
Tungsten, total	7440-33-7	E420	0.00010	mg/L	<0.00010	<0.00010	<0.00010	----	----	
Uranium, total	7440-61-1	E420	0.000010	mg/L	0.000200	0.000078	0.000012	----	----	
Vanadium, total	7440-62-2	E420	0.00050	mg/L	0.00298	<0.00050	<0.00050	----	----	
Zinc, total	7440-66-6	E420	0.0030	mg/L	0.0356	<0.0030	<0.0030	----	----	
Zirconium, total	7440-67-7	E420	0.00020	mg/L	0.00020	<0.00020	<0.00020	----	----	
Dissolved Metals										
Aluminum, dissolved	7429-90-5	E421	0.0010	mg/L	0.0053	0.0129	0.0164	----	----	
Antimony, dissolved	7440-36-0	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	----	----	
Arsenic, dissolved	7440-38-2	E421	0.00010	mg/L	0.00019	0.00023	0.00013	----	----	
Barium, dissolved	7440-39-3	E421	0.00010	mg/L	0.0162	0.0196	0.0191	----	----	
Beryllium, dissolved	7440-41-7	E421	0.000020	mg/L	<0.000020	<0.000020	<0.000020	----	----	
Bismuth, dissolved	7440-69-9	E421	0.000050	mg/L	<0.000050	<0.000050	<0.000050	----	----	
Boron, dissolved	7440-42-8	E421	0.010	mg/L	0.015	0.014	0.015	----	----	
Cadmium, dissolved	7440-43-9	E421	0.0000050	mg/L	0.0000163	<0.0000050	<0.0000050	----	----	
Calcium, dissolved	7440-70-2	E421	0.050	mg/L	8.19	9.28	10.2	----	----	
Cesium, dissolved	7440-46-2	E421	0.000010	mg/L	<0.000010	<0.000010	<0.000010	----	----	
Chromium, dissolved	7440-47-3	E421	0.00050	mg/L	<0.00050	<0.00050	<0.00050	----	----	
Cobalt, dissolved	7440-48-4	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	----	----	
Copper, dissolved	7440-50-8	E421	0.00020	mg/L	0.00142	0.00082	0.00042	----	----	
Iron, dissolved	7439-89-6	E421	0.030	mg/L	<0.030	0.040	<0.030	----	----	
Lead, dissolved	7439-92-1	E421	0.000050	mg/L	<0.000050	<0.000050	<0.000050	----	----	
Lithium, dissolved	7439-93-2	E421	0.0010	mg/L	0.0033	0.0033	0.0024	----	----	
Magnesium, dissolved	7439-95-4	E421	0.0050	mg/L	2.45	2.75	2.83	----	----	
Manganese, dissolved	7439-96-5	E421	0.00500	mg/L	<0.00500	<0.00500	<0.00500	----	----	
Molybdenum, dissolved	7439-98-7	E421	0.000050	mg/L	0.000304	0.000240	0.000227	----	----	
Nickel, dissolved	7440-02-0	E421	0.00050	mg/L	0.00070	<0.00050	<0.00050	----	----	
Phosphorus, dissolved	7723-14-0	E421	0.050	mg/L	<0.050	<0.050	<0.050	----	----	
Potassium, dissolved	7440-09-7	E421	0.050	mg/L	1.09	1.14	1.16	----	----	



Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	Raw Water-Lake Intake	Raw Water-Chamber WTP	Treated Water-Lab Sink	----	----
Client sampling date / time					23-Mar-2023 09:30	23-Mar-2023 09:50	23-Mar-2023 09:40	----	----	
Analyte	CAS Number	Method	LOR	Unit	FC2300684-001	FC2300684-002	FC2300684-003	-----	-----	
					Result	Result	Result	----	----	
Dissolved Metals										
Rubidium, dissolved	7440-17-7	E421	0.00020	mg/L	0.00094	0.00087	0.00105	----	----	
Selenium, dissolved	7782-49-2	E421	0.000050	mg/L	0.000058	0.000056	<0.000050	----	----	
Silicon, dissolved	7440-21-3	E421	0.050	mg/L	2.57	2.74	2.60	----	----	
Silver, dissolved	7440-22-4	E421	0.000010	mg/L	<0.000010	<0.000010	<0.000010	----	----	
Sodium, dissolved	7440-23-5	E421	0.050	mg/L	3.03	3.25	19.5	----	----	
Strontium, dissolved	7440-24-6	E421	0.00020	mg/L	0.0607	0.0666	0.0650	----	----	
Sulfur, dissolved	7704-34-9	E421	0.50	mg/L	1.29 ^{RRV}	1.50	1.66	----	----	
Tellurium, dissolved	13494-80-9	E421	0.00020	mg/L	<0.00020	<0.00020	<0.00020	----	----	
Thallium, dissolved	7440-28-0	E421	0.000010	mg/L	<0.000010	<0.000010	<0.000010	----	----	
Thorium, dissolved	7440-29-1	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	----	----	
Tin, dissolved	7440-31-5	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	----	----	
Titanium, dissolved	7440-32-6	E421	0.00030	mg/L	<0.00030	0.00044	<0.00030	----	----	
Tungsten, dissolved	7440-33-7	E421	0.00010	mg/L	<0.00010	<0.00010	<0.00010	----	----	
Uranium, dissolved	7440-61-1	E421	0.000010	mg/L	0.000081	0.000072	<0.000010	----	----	
Vanadium, dissolved	7440-62-2	E421	0.00050	mg/L	<0.00050	<0.00050	<0.00050	----	----	
Zinc, dissolved	7440-66-6	E421	0.0010	mg/L	0.0075	<0.0010	<0.0010	----	----	
Zirconium, dissolved	7440-67-7	E421	0.00030	mg/L	<0.00030	<0.00030	<0.00030	----	----	
Dissolved metals filtration location	----	EP421	-	-	Laboratory	Laboratory	Laboratory	----	----	
Aggregate Organics										
Naphthenic acids	----	E565-L	0.10	mg/L	<0.10	<0.10	<0.10	----	----	
Volatile Organic Compounds [Fuels]										
Benzene	71-43-2	E611A	0.50	µg/L	<0.50	<0.50	<0.50	----	----	
Ethylbenzene	100-41-4	E611A	0.50	µg/L	<0.50	<0.50	<0.50	----	----	
Styrene	100-42-5	E611A	0.50	µg/L	<0.50	<0.50	<0.50	----	----	
Toluene	108-88-3	E611A	0.50	µg/L	<0.50	<0.50	<0.50	----	----	
Xylene, m+p-	179601-23-1	E611A	0.40	µg/L	<0.40	<0.40	<0.40	----	----	
Xylene, o-	95-47-6	E611A	0.30	µg/L	<0.30	<0.30	<0.30	----	----	
Xylenes, total	1330-20-7	E611A	0.50	µg/L	<0.50	<0.50	<0.50	----	----	
BTEX, total	----	E611A	1.0	µg/L	<1.0	<1.0	<1.0	----	----	



Analytical Results

Sub-Matrix: Water (Matrix: Water)					Client sample ID	Raw Water-Lake Intake	Raw Water-Chamber WTP	Treated Water-Lab Sink	----	----
Client sampling date / time					23-Mar-2023 09:30	23-Mar-2023 09:50	23-Mar-2023 09:40	----	----	
Analyte	CAS Number	Method	LOR	Unit	FC2300684-001 Result	FC2300684-002 Result	FC2300684-003 Result	----- ----	----- ----	
Hydrocarbons										
F1 (C6-C10)	----	E581.F1	100	µg/L	<100	<100	<100	----	----	
F1-BTEX	----	EC580	25	µg/L	<100	<100	<100	----	----	
F2 (C10-C16)	----	E601	100	µg/L	<100	<100	<100	----	----	
F3 (C16-C34)	----	E601	250	µg/L	<250	<250	<250	----	----	
F4 (C34-C50)	----	E601	250	µg/L	<250	<250	<250	----	----	
Hydrocarbons, total (C6-C50)	----	EC581	370	µg/L	<380	<380	<380	----	----	
Hydrocarbons Surrogates										
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	E601	1.0	%	99.1	102	97.6	----	----	
Dichlorotoluene, 3,4-	95-75-0	E581.F1	1.0	%	110	111	127	----	----	
Volatile Organic Compounds Surrogates										
Bromofluorobenzene, 4-	460-00-4	E611A	1.0	%	108	106	91.2	----	----	
Difluorobenzene, 1,4-	540-36-3	E611A	1.0	%	96.9	95.1	105	----	----	
Polycyclic Aromatic Hydrocarbons										
Benzo(a)pyrene	50-32-8	E641A	0.0000050	mg/L	<0.0000050	<0.0000050	<0.0000050	----	----	
Polycyclic Aromatic Hydrocarbons Surrogates										
Chrysene-d12	1719-03-5	E641A	0.1	%	111	111	91.4	----	----	
Naphthalene-d8	1146-65-2	E641A	0.1	%	109	109	101	----	----	
Phenanthrene-d10	1517-22-2	E641A	0.1	%	115	119	106	----	----	

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



CERTIFICATE OF ANALYSIS

Work Order	: FC2300684	Page	: 1 of 11
Client	: Regional Municipality of Wood Buffalo	Laboratory	: Fort McMurray - Environmental
Contact	: Water Treatment Plant	Account Manager	: Megan Trydal
Address	: 1 Silin Forest Road Fort McMurray AB Canada T9H 5A1	Address	: #4, 340 Macalpine Crescent Fort McMurray AB Canada T9H 4A8
Telephone	: 780-762-5863	Telephone	: +1 780 791 1524
Project	: Fort Chipewyan Imperial Release	Date Samples Received	: 23-Mar-2023 16:30
PO	: 4500049712	Date Analysis	: 24-Mar-2023
C-O-C number	: ----	Commenced	
Sampler	: DM	Issue Date	: 29-Mar-2023 16:27
Site	: Schedule 4: Fort Chip		
Quote number	: Q61323 (Fort chip)		
No. of samples received	: 3		
No. of samples analysed	: 3		

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Signatories

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<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Alex Drake	Lab Analyst	Inorganics, Edmonton, Alberta
Andrew Fox		Metals, Calgary, Alberta
Geoff Berg	Lab Analyst	Organics, Edmonton, Alberta
Harpreet Chawla	Team Leader - Inorganics	Inorganics, Calgary, Alberta
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Kevin Baxter	Team Leader - Inorganics	Metals, Calgary, Alberta
Lindsay Gung	Supervisor - Water Chemistry	Inorganics, Burnaby, British Columbia
Miles Gropen	Department Manager - Inorganics	Inorganics, Burnaby, British Columbia
Remy Gatabazi	Lab Analyst	Organics, Edmonton, Alberta
Samantha Mayor	Lab Assistant	Inorganics, Edmonton, Alberta



General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

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

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

Key : CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances

LOR: Limit of Reporting (detection limit).

Measurement Uncertainty: The reported uncertainties in this report are expanded uncertainties calculated using a coverage factor of 2, which gives a level of confidence of approximately 95%.

Surrogate: An analyte that is similar in behavior to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

<i>Unit</i>	<i>Description</i>
-	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.

Workorder Comments

Sulfide analysis was conducted on samples without appropriate preservation. The reported concentrations may have significant negative biases associated with them.

Qualifiers

<i>Qualifier</i>	<i>Description</i>
HTD	Hold time exceeded for re-analysis or dilution, but initial testing was conducted within hold time.
RRR	Refer to report comments for issues regarding this analysis.
RRV	Reported result verified by repeat analysis.



Analytical Results

FC2300684-001

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: Raw Water-Lake Intake

Client sampling date / time: 23-Mar-2023 09:30

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QC Lot
Physical Tests								
Hardness (as CaCO ₃), dissolved	----	30.5	0.50	mg/L	EC100	-	26-Mar-2023	-
Salinity	----	<1.0	1.0	psu	EC100S	-	27-Mar-2023	-
Conductivity	----	76.8 ^{RRV}	2.0	µS/cm	E100	24-Mar-2023	24-Mar-2023	875503
pH	----	7.10 ^{RRV}	0.10	pH units	E108	24-Mar-2023	24-Mar-2023	875502
Alkalinity, bicarbonate (as HCO ₃)	71-52-3	37.1 ^{RRV}	1.0	mg/L	E290	24-Mar-2023	24-Mar-2023	875504
Alkalinity, carbonate (as CO ₃)	3812-32-6	<1.0 ^{RRV}	1.0	mg/L	E290	24-Mar-2023	24-Mar-2023	875504
Alkalinity, hydroxide (as OH)	14280-30-9	<1.0 ^{RRV}	1.0	mg/L	E290	24-Mar-2023	24-Mar-2023	875504
Alkalinity, total (as CaCO ₃)	----	30.4 ^{RRV}	2.0	mg/L	E290	24-Mar-2023	24-Mar-2023	875504
Solids, total dissolved [TDS], calculated	----	45.5	1.0	mg/L	EC103	-	25-Mar-2023	-
Anions and Nutrients								
Chloride	16887-00-6	3.14	0.50	mg/L	E235.Cl	24-Mar-2023	25-Mar-2023	875479
Fluoride	16984-48-8	0.032	0.020	mg/L	E235.F	24-Mar-2023	25-Mar-2023	875477
Nitrate (as N)	14797-55-8	0.087 ^{HTD}	0.020	mg/L	E235.NO3	24-Mar-2023	25-Mar-2023	875476
Nitrite (as N)	14797-65-0	<0.010 ^{HTD}	0.010	mg/L	E235.NO2	24-Mar-2023	25-Mar-2023	875478
Sulfate (as SO ₄)	14808-79-8	1.95	0.30	mg/L	E235.SO4	24-Mar-2023	25-Mar-2023	875480
Nitrate + Nitrite (as N)	----	0.0870	0.05	mg/L	EC235.N+N	-	25-Mar-2023	-
Total Sulfides								
Sulfide, total (as S)	18496-25-8	<0.0015 ^{RRR}	0.0015	mg/L	E395	-	29-Mar-2023	879599
Ion Balance								
Anion sum	----	0.74	0.10	meq/L	EC101	-	25-Mar-2023	-
Cation sum	----	0.77	0.10	meq/L	EC101	-	25-Mar-2023	-
Ion balance (APHA)	----	1.99	0.01	%	EC101	-	25-Mar-2023	-
Ion balance (cations/anions)	----	104	0.010	%	EC101	-	25-Mar-2023	-
Total Metals								
Aluminum, total	7429-90-5	0.843	0.0030	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Antimony, total	7440-36-0	0.00010	0.00010	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Arsenic, total	7440-38-2	0.00105	0.00010	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Barium, total	7440-39-3	0.0337	0.00010	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Beryllium, total	7440-41-7	0.000063	0.000020	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Bismuth, total	7440-69-9	<0.000050	0.000050	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Boron, total	7440-42-8	0.015	0.010	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Cadmium, total	7440-43-9	0.0000456	0.0000050	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Calcium, total	7440-70-2	8.53	0.050	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Cesium, total	7440-46-2	0.000261	0.000010	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Chromium, total	7440-47-3	0.00219	0.00050	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Cobalt, total	7440-48-4	0.00088	0.00010	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Copper, total	7440-50-8	0.00976	0.00050	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Iron, total	7439-89-6	2.28	0.010	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Lead, total	7439-92-1	0.00264	0.000050	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Lithium, total	7439-93-2	0.0039	0.0010	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Magnesium, total	7439-95-4	3.05	0.0050	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Manganese, total	7439-96-5	0.0659	0.00010	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Molybdenum, total	7439-98-7	0.000324	0.000050	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Nickel, total	7440-02-0	0.00316	0.00050	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Phosphorus, total	7723-14-0	0.063	0.050	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Potassium, total	7440-09-7	1.29	0.050	mg/L	E420	25-Mar-2023	25-Mar-2023	875733



Analytical Results

FC2300684-001

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: Raw Water-Lake Intake

Client sampling date / time: 23-Mar-2023 09:30

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLOT
Total Metals								
Rubidium, total	7440-17-7	0.00390	0.00020	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Selenium, total	7782-49-2	0.000083	0.000050	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Silicon, total	7440-21-3	4.18	0.10	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Silver, total	7440-22-4	0.000017	0.000010	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Sodium, total	7440-23-5	2.73	0.050	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Strontium, total	7440-24-6	0.0637	0.00020	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Sulfur, total	7704-34-9	0.97	0.50	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Tellurium, total	13494-80-9	<0.00020	0.00020	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Thallium, total	7440-28-0	0.000026	0.000010	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Thorium, total	7440-29-1	0.00026	0.00010	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Tin, total	7440-31-5	0.00048	0.00010	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Titanium, total	7440-32-6	0.0193	0.00030	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Tungsten, total	7440-33-7	<0.00010	0.00010	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Uranium, total	7440-61-1	0.000200	0.000010	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Vanadium, total	7440-62-2	0.00298	0.00050	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Zinc, total	7440-66-6	0.0356	0.0030	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Zirconium, total	7440-67-7	0.00020	0.00020	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Dissolved Metals								
Aluminum, dissolved	7429-90-5	0.0053	0.0010	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Antimony, dissolved	7440-36-0	<0.00010	0.00010	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Arsenic, dissolved	7440-38-2	0.00019	0.00010	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Barium, dissolved	7440-39-3	0.0162	0.00010	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Beryllium, dissolved	7440-41-7	<0.000020	0.000020	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Bismuth, dissolved	7440-69-9	<0.000050	0.000050	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Boron, dissolved	7440-42-8	0.015	0.010	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Cadmium, dissolved	7440-43-9	0.0000163	0.0000050	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Calcium, dissolved	7440-70-2	8.19	0.050	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Cesium, dissolved	7440-46-2	<0.000010	0.000010	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Chromium, dissolved	7440-47-3	<0.00050	0.00050	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Cobalt, dissolved	7440-48-4	<0.00010	0.00010	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Copper, dissolved	7440-50-8	0.00142	0.00020	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Iron, dissolved	7439-89-6	<0.030	0.030	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Lead, dissolved	7439-92-1	<0.000050	0.000050	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Lithium, dissolved	7439-93-2	0.0033	0.0010	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Magnesium, dissolved	7439-95-4	2.45	0.0050	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Manganese, dissolved	7439-96-5	<0.00500	0.00500	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Molybdenum, dissolved	7439-98-7	0.000304	0.000050	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Nickel, dissolved	7440-02-0	0.00070	0.00050	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Phosphorus, dissolved	7723-14-0	<0.050	0.050	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Potassium, dissolved	7440-09-7	1.09	0.050	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Rubidium, dissolved	7440-17-7	0.00094	0.00020	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Selenium, dissolved	7782-49-2	0.000058	0.000050	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Silicon, dissolved	7440-21-3	2.57	0.050	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Silver, dissolved	7440-22-4	<0.000010	0.000010	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Sodium, dissolved	7440-23-5	3.03	0.050	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Strontium, dissolved	7440-24-6	0.0607	0.00020	mg/L	E421	26-Mar-2023	26-Mar-2023	876506



Analytical Results

FC2300684-001

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: Raw Water-Lake Intake

Client sampling date / time: 23-Mar-2023 09:30

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Dissolved Metals								
Sulfur, dissolved	7704-34-9	1.29 ^{RRV}	0.50	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Tellurium, dissolved	13494-80-9	<0.00020	0.00020	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Thallium, dissolved	7440-28-0	<0.000010	0.000010	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Thorium, dissolved	7440-29-1	<0.00010	0.00010	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Tin, dissolved	7440-31-5	<0.00010	0.00010	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Titanium, dissolved	7440-32-6	<0.00030	0.00030	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Tungsten, dissolved	7440-33-7	<0.00010	0.00010	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Uranium, dissolved	7440-61-1	0.000081	0.000010	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Vanadium, dissolved	7440-62-2	<0.00050	0.00050	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Zinc, dissolved	7440-66-6	0.0075	0.0010	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Zirconium, dissolved	7440-67-7	<0.00030	0.00030	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Dissolved metals filtration location	----	Laboratory	-	-	EP421	-	26-Mar-2023	876506
Aggregate Organics								
Naphthenic acids	----	<0.10	0.10	mg/L	E565-L	24-Mar-2023	27-Mar-2023	875144
Volatile Organic Compounds [Fuels]								
Benzene	71-43-2	<0.50	0.50	µg/L	E611A	24-Mar-2023	25-Mar-2023	875150
Ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611A	24-Mar-2023	25-Mar-2023	875150
Styrene	100-42-5	<0.50	0.50	µg/L	E611A	24-Mar-2023	25-Mar-2023	875150
Toluene	108-88-3	<0.50	0.50	µg/L	E611A	24-Mar-2023	25-Mar-2023	875150
Xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611A	24-Mar-2023	25-Mar-2023	875150
Xylene, o-	95-47-6	<0.30	0.30	µg/L	E611A	24-Mar-2023	25-Mar-2023	875150
Xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611A	24-Mar-2023	25-Mar-2023	875150
BTEX, total	----	<1.0	1.0	µg/L	E611A	24-Mar-2023	25-Mar-2023	875150
Hydrocarbons								
F1 (C6-C10)	----	<100	100	µg/L	E581.F1	24-Mar-2023	25-Mar-2023	875151
F1-BTEX	----	<100	100	µg/L	EC580	-	25-Mar-2023	-
F2 (C10-C16)	----	<100	100	µg/L	E601	24-Mar-2023	24-Mar-2023	875492
F3 (C16-C34)	----	<250	250	µg/L	E601	24-Mar-2023	24-Mar-2023	875492
F4 (C34-C50)	----	<250	250	µg/L	E601	24-Mar-2023	24-Mar-2023	875492
Hydrocarbons, total (C6-C50)	----	<380	380	µg/L	EC581	-	25-Mar-2023	-
Hydrocarbons Surrogates								
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	99.1	1.0	%	E601	24-Mar-2023	24-Mar-2023	875492
Dichlorotoluene, 3,4-	95-75-0	110	1.0	%	E581.F1	24-Mar-2023	25-Mar-2023	875151
Volatile Organic Compounds Surrogates								
Bromofluorobenzene, 4-	460-00-4	108	1.0	%	E611A	24-Mar-2023	25-Mar-2023	875150
Difluorobenzene, 1,4-	540-36-3	96.9	1.0	%	E611A	24-Mar-2023	25-Mar-2023	875150
Polycyclic Aromatic Hydrocarbons								
Benzo(a)pyrene	50-32-8	<0.0000050	0.0000050	mg/L	E641A	24-Mar-2023	24-Mar-2023	875493
Polycyclic Aromatic Hydrocarbons Surrogates								
Chrysene-d12	1719-03-5	111	0.1	%	E641A	24-Mar-2023	24-Mar-2023	875493
Naphthalene-d8	1146-65-2	109	0.1	%	E641A	24-Mar-2023	24-Mar-2023	875493
Phenanthrene-d10	1517-22-2	115	0.1	%	E641A	24-Mar-2023	24-Mar-2023	875493

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



Analytical Results

FC2300684-002

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: Raw Water-Chamber WTP

Client sampling date / time: 23-Mar-2023 09:50

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Physical Tests								
Hardness (as CaCO ₃), dissolved	----	34.5	0.50	mg/L	EC100	-	26-Mar-2023	-
Salinity	----	<1.0	1.0	psu	EC100S	-	27-Mar-2023	-
Conductivity	----	85.7 ^{RRV}	2.0	µS/cm	E100	24-Mar-2023	24-Mar-2023	875503
pH	----	7.09 ^{RRV}	0.10	pH units	E108	24-Mar-2023	24-Mar-2023	875502
Alkalinity, bicarbonate (as HCO ₃)	71-52-3	39.9 ^{RRV}	1.0	mg/L	E290	24-Mar-2023	24-Mar-2023	875504
Alkalinity, carbonate (as CO ₃)	3812-32-6	<1.0 ^{RRV}	1.0	mg/L	E290	24-Mar-2023	24-Mar-2023	875504
Alkalinity, hydroxide (as OH)	14280-30-9	<1.0 ^{RRV}	1.0	mg/L	E290	24-Mar-2023	24-Mar-2023	875504
Alkalinity, total (as CaCO ₃)	----	32.7 ^{RRV}	2.0	mg/L	E290	24-Mar-2023	24-Mar-2023	875504
Solids, total dissolved [TDS], calculated	----	49.4	1.0	mg/L	EC103	-	25-Mar-2023	-
Anions and Nutrients								
Chloride	16887-00-6	3.27	0.50	mg/L	E235.Cl	24-Mar-2023	25-Mar-2023	875479
Fluoride	16984-48-8	0.033	0.020	mg/L	E235.F	24-Mar-2023	25-Mar-2023	875477
Nitrate (as N)	14797-55-8	0.094 ^{HTD}	0.020	mg/L	E235.NO3	24-Mar-2023	25-Mar-2023	875476
Nitrite (as N)	14797-65-0	<0.010 ^{HTD}	0.010	mg/L	E235.NO2	24-Mar-2023	25-Mar-2023	875478
Sulfate (as SO ₄)	14808-79-8	2.16	0.30	mg/L	E235.SO4	24-Mar-2023	25-Mar-2023	875480
Nitrate + Nitrite (as N)	----	0.0940	0.05	mg/L	EC235.N+N	-	25-Mar-2023	-
Total Sulfides								
Sulfide, total (as S)	18496-25-8	<0.0015 ^{RRR}	0.0015	mg/L	E395	-	29-Mar-2023	879599
Ion Balance								
Anion sum	----	0.80	0.10	meq/L	EC101	-	25-Mar-2023	-
Cation sum	----	0.86	0.10	meq/L	EC101	-	25-Mar-2023	-
Ion balance (APHA)	----	3.61	0.01	%	EC101	-	25-Mar-2023	-
Ion balance (cations/anions)	----	108	0.010	%	EC101	-	25-Mar-2023	-
Total Metals								
Aluminum, total	7429-90-5	0.0850	0.0030	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Antimony, total	7440-36-0	<0.00010	0.00010	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Arsenic, total	7440-38-2	0.00024	0.00010	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Barium, total	7440-39-3	0.0197	0.00010	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Beryllium, total	7440-41-7	<0.000020	0.000020	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Bismuth, total	7440-69-9	<0.000050	0.000050	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Boron, total	7440-42-8	0.014	0.010	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Cadmium, total	7440-43-9	<0.0000050	0.0000050	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Calcium, total	7440-70-2	8.24	0.050	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Cesium, total	7440-46-2	0.000011	0.000010	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Chromium, total	7440-47-3	<0.00050	0.00050	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Cobalt, total	7440-48-4	<0.00010	0.00010	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Copper, total	7440-50-8	0.00113	0.00050	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Iron, total	7439-89-6	0.160	0.010	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Lead, total	7439-92-1	<0.000050	0.000050	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Lithium, total	7439-93-2	0.0024	0.0010	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Magnesium, total	7439-95-4	2.82	0.0050	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Manganese, total	7439-96-5	0.00780	0.00010	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Molybdenum, total	7439-98-7	0.000236	0.000050	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Nickel, total	7440-02-0	<0.00050	0.00050	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Phosphorus, total	7723-14-0	<0.050	0.050	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Potassium, total	7440-09-7	1.06	0.050	mg/L	E420	25-Mar-2023	25-Mar-2023	875733



Analytical Results

FC2300684-002

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: Raw Water-Chamber WTP

Client sampling date / time: 23-Mar-2023 09:50

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLOT
Total Metals								
Rubidium, total	7440-17-7	0.00117	0.00020	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Selenium, total	7782-49-2	0.000070	0.000050	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Silicon, total	7440-21-3	2.67	0.10	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Silver, total	7440-22-4	<0.000010	0.000010	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Sodium, total	7440-23-5	2.92	0.050	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Strontium, total	7440-24-6	0.0645	0.00020	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Sulfur, total	7704-34-9	1.09	0.50	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Tellurium, total	13494-80-9	<0.00020	0.00020	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Thallium, total	7440-28-0	<0.000010	0.000010	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Thorium, total	7440-29-1	<0.00010	0.00010	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Tin, total	7440-31-5	<0.00010	0.00010	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Titanium, total	7440-32-6	0.00260	0.00030	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Tungsten, total	7440-33-7	<0.00010	0.00010	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Uranium, total	7440-61-1	0.000078	0.000010	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Vanadium, total	7440-62-2	<0.00050	0.00050	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Zinc, total	7440-66-6	<0.0030	0.0030	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Zirconium, total	7440-67-7	<0.00020	0.00020	mg/L	E420	25-Mar-2023	25-Mar-2023	875733
Dissolved Metals								
Aluminum, dissolved	7429-90-5	0.0129	0.0010	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Antimony, dissolved	7440-36-0	<0.00010	0.00010	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Arsenic, dissolved	7440-38-2	0.00023	0.00010	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Barium, dissolved	7440-39-3	0.0196	0.00010	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Beryllium, dissolved	7440-41-7	<0.000020	0.000020	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Bismuth, dissolved	7440-69-9	<0.000050	0.000050	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Boron, dissolved	7440-42-8	0.014	0.010	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Cadmium, dissolved	7440-43-9	<0.0000050	0.0000050	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Calcium, dissolved	7440-70-2	9.28	0.050	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Cesium, dissolved	7440-46-2	<0.000010	0.000010	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Chromium, dissolved	7440-47-3	<0.00050	0.00050	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Cobalt, dissolved	7440-48-4	<0.00010	0.00010	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Copper, dissolved	7440-50-8	0.00082	0.00020	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Iron, dissolved	7439-89-6	0.040	0.030	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Lead, dissolved	7439-92-1	<0.000050	0.000050	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Lithium, dissolved	7439-93-2	0.0033	0.0010	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Magnesium, dissolved	7439-95-4	2.75	0.0050	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Manganese, dissolved	7439-96-5	<0.00500	0.00500	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Molybdenum, dissolved	7439-98-7	0.000240	0.000050	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Nickel, dissolved	7440-02-0	<0.00050	0.00050	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Phosphorus, dissolved	7723-14-0	<0.050	0.050	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Potassium, dissolved	7440-09-7	1.14	0.050	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Rubidium, dissolved	7440-17-7	0.00087	0.00020	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Selenium, dissolved	7782-49-2	0.000056	0.000050	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Silicon, dissolved	7440-21-3	2.74	0.050	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Silver, dissolved	7440-22-4	<0.000010	0.000010	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Sodium, dissolved	7440-23-5	3.25	0.050	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Strontium, dissolved	7440-24-6	0.0666	0.00020	mg/L	E421	26-Mar-2023	26-Mar-2023	876506



Analytical Results

FC2300684-002

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: Raw Water-Chamber WTP

Client sampling date / time: 23-Mar-2023 09:50

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Dissolved Metals								
Sulfur, dissolved	7704-34-9	1.50	0.50	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Tellurium, dissolved	13494-80-9	<0.00020	0.00020	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Thallium, dissolved	7440-28-0	<0.000010	0.000010	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Thorium, dissolved	7440-29-1	<0.00010	0.00010	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Tin, dissolved	7440-31-5	<0.00010	0.00010	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Titanium, dissolved	7440-32-6	0.00044	0.00030	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Tungsten, dissolved	7440-33-7	<0.00010	0.00010	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Uranium, dissolved	7440-61-1	0.000072	0.000010	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Vanadium, dissolved	7440-62-2	<0.00050	0.00050	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Zinc, dissolved	7440-66-6	<0.0010	0.0010	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Zirconium, dissolved	7440-67-7	<0.00030	0.00030	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Dissolved metals filtration location	----	Laboratory	-	-	EP421	-	26-Mar-2023	876506
Aggregate Organics								
Naphthenic acids	----	<0.10	0.10	mg/L	E565-L	24-Mar-2023	27-Mar-2023	875144
Volatile Organic Compounds [Fuels]								
Benzene	71-43-2	<0.50	0.50	µg/L	E611A	24-Mar-2023	25-Mar-2023	875150
Ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611A	24-Mar-2023	25-Mar-2023	875150
Styrene	100-42-5	<0.50	0.50	µg/L	E611A	24-Mar-2023	25-Mar-2023	875150
Toluene	108-88-3	<0.50	0.50	µg/L	E611A	24-Mar-2023	25-Mar-2023	875150
Xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611A	24-Mar-2023	25-Mar-2023	875150
Xylene, o-	95-47-6	<0.30	0.30	µg/L	E611A	24-Mar-2023	25-Mar-2023	875150
Xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611A	24-Mar-2023	25-Mar-2023	875150
BTEX, total	----	<1.0	1.0	µg/L	E611A	24-Mar-2023	25-Mar-2023	875150
Hydrocarbons								
F1 (C6-C10)	----	<100	100	µg/L	E581.F1	24-Mar-2023	25-Mar-2023	875151
F1-BTEX	----	<100	100	µg/L	EC580	-	25-Mar-2023	-
F2 (C10-C16)	----	<100	100	µg/L	E601	24-Mar-2023	24-Mar-2023	875492
F3 (C16-C34)	----	<250	250	µg/L	E601	24-Mar-2023	24-Mar-2023	875492
F4 (C34-C50)	----	<250	250	µg/L	E601	24-Mar-2023	24-Mar-2023	875492
Hydrocarbons, total (C6-C50)	----	<380	380	µg/L	EC581	-	25-Mar-2023	-
Hydrocarbons Surrogates								
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	102	1.0	%	E601	24-Mar-2023	24-Mar-2023	875492
Dichlorotoluene, 3,4-	95-75-0	111	1.0	%	E581.F1	24-Mar-2023	25-Mar-2023	875151
Volatile Organic Compounds Surrogates								
Bromofluorobenzene, 4-	460-00-4	106	1.0	%	E611A	24-Mar-2023	25-Mar-2023	875150
Diffuorobenzene, 1,4-	540-36-3	95.1	1.0	%	E611A	24-Mar-2023	25-Mar-2023	875150
Polycyclic Aromatic Hydrocarbons								
Benzo(a)pyrene	50-32-8	<0.0000050	0.0000050	mg/L	E641A	24-Mar-2023	24-Mar-2023	875493
Polycyclic Aromatic Hydrocarbons Surrogates								
Chrysene-d12	1719-03-5	111	0.1	%	E641A	24-Mar-2023	24-Mar-2023	875493
Naphthalene-d8	1146-65-2	109	0.1	%	E641A	24-Mar-2023	24-Mar-2023	875493
Phenanthrene-d10	1517-22-2	119	0.1	%	E641A	24-Mar-2023	24-Mar-2023	875493

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



Analytical Results

FC2300684-003

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: Treated Water-Lab Sink

Client sampling date / time: 23-Mar-2023 09:40

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Physical Tests								
Hardness (as CaCO ₃), dissolved	----	37.1	0.50	mg/L	EC100	-	26-Mar-2023	-
Salinity	----	<1.0	1.0	psu	EC100S	-	27-Mar-2023	-
Conductivity	----	151 ^{RRV}	2.0	µS/cm	E100	24-Mar-2023	24-Mar-2023	875503
pH	----	7.89 ^{RRV}	0.10	pH units	E108	24-Mar-2023	24-Mar-2023	875502
Alkalinity, bicarbonate (as HCO ₃)	71-52-3	69.5 ^{RRV}	1.0	mg/L	E290	24-Mar-2023	24-Mar-2023	875504
Alkalinity, carbonate (as CO ₃)	3812-32-6	<1.0 ^{RRV}	1.0	mg/L	E290	24-Mar-2023	24-Mar-2023	875504
Alkalinity, hydroxide (as OH)	14280-30-9	<1.0 ^{RRV}	1.0	mg/L	E290	24-Mar-2023	24-Mar-2023	875504
Alkalinity, total (as CaCO ₃)	----	57.0 ^{RRV}	2.0	mg/L	E290	24-Mar-2023	24-Mar-2023	875504
Solids, total dissolved [TDS], calculated	----	89.1	1.0	mg/L	EC103	-	25-Mar-2023	-
Anions and Nutrients								
Chloride	16887-00-6	11.9	0.50	mg/L	E235.Cl	24-Mar-2023	25-Mar-2023	875479
Fluoride	16984-48-8	0.050	0.020	mg/L	E235.F	24-Mar-2023	25-Mar-2023	875477
Nitrate (as N)	14797-55-8	0.094 ^{HTD}	0.020	mg/L	E235.NO3	24-Mar-2023	25-Mar-2023	875476
Nitrite (as N)	14797-65-0	<0.010 ^{HTD}	0.010	mg/L	E235.NO2	24-Mar-2023	25-Mar-2023	875478
Sulfate (as SO ₄)	14808-79-8	1.75	0.30	mg/L	E235.SO4	24-Mar-2023	25-Mar-2023	875480
Nitrate + Nitrite (as N)	----	0.0940	0.05	mg/L	EC235.N+N	-	25-Mar-2023	-
Total Sulfides								
Sulfide, total (as S)	18496-25-8	<0.0015 ^{RRR}	0.0015	mg/L	E395	-	29-Mar-2023	879599
Ion Balance								
Anion sum	----	1.52	0.10	meq/L	EC101	-	25-Mar-2023	-
Cation sum	----	1.62	0.10	meq/L	EC101	-	25-Mar-2023	-
Ion balance (APHA)	----	3.18	0.01	%	EC101	-	25-Mar-2023	-
Ion balance (cations/anions)	----	106	0.010	%	EC101	-	25-Mar-2023	-
Total Metals								
Aluminum, total	7429-90-5	0.0124	0.0030	mg/L	E420	25-Mar-2023	25-Mar-2023	876185
Antimony, total	7440-36-0	<0.00010	0.00010	mg/L	E420	25-Mar-2023	25-Mar-2023	876185
Arsenic, total	7440-38-2	0.00011	0.00010	mg/L	E420	25-Mar-2023	25-Mar-2023	876185
Barium, total	7440-39-3	0.0182	0.00010	mg/L	E420	25-Mar-2023	25-Mar-2023	876185
Beryllium, total	7440-41-7	<0.000020	0.000020	mg/L	E420	25-Mar-2023	25-Mar-2023	876185
Bismuth, total	7440-69-9	<0.000050	0.000050	mg/L	E420	25-Mar-2023	25-Mar-2023	876185
Boron, total	7440-42-8	0.012	0.010	mg/L	E420	25-Mar-2023	25-Mar-2023	876185
Cadmium, total	7440-43-9	<0.0000050	0.0000050	mg/L	E420	25-Mar-2023	25-Mar-2023	876185
Calcium, total	7440-70-2	9.14	0.050	mg/L	E420	25-Mar-2023	25-Mar-2023	876185
Cesium, total	7440-46-2	<0.000010	0.000010	mg/L	E420	25-Mar-2023	25-Mar-2023	876185
Chromium, total	7440-47-3	<0.00050	0.00050	mg/L	E420	25-Mar-2023	25-Mar-2023	876185
Cobalt, total	7440-48-4	<0.00010	0.00010	mg/L	E420	25-Mar-2023	25-Mar-2023	876185
Copper, total	7440-50-8	0.00054	0.00050	mg/L	E420	25-Mar-2023	25-Mar-2023	876185
Iron, total	7439-89-6	<0.010	0.010	mg/L	E420	25-Mar-2023	25-Mar-2023	876185
Lead, total	7439-92-1	<0.000050	0.000050	mg/L	E420	25-Mar-2023	25-Mar-2023	876185
Lithium, total	7439-93-2	0.0013	0.0010	mg/L	E420	25-Mar-2023	25-Mar-2023	876185
Magnesium, total	7439-95-4	2.94	0.0050	mg/L	E420	25-Mar-2023	25-Mar-2023	876185
Manganese, total	7439-96-5	0.00539	0.00010	mg/L	E420	25-Mar-2023	25-Mar-2023	876185
Molybdenum, total	7439-98-7	0.000211	0.000050	mg/L	E420	25-Mar-2023	25-Mar-2023	876185
Nickel, total	7440-02-0	<0.00050	0.00050	mg/L	E420	25-Mar-2023	25-Mar-2023	876185
Phosphorus, total	7723-14-0	<0.050	0.050	mg/L	E420	25-Mar-2023	25-Mar-2023	876185
Potassium, total	7440-09-7	1.02	0.050	mg/L	E420	25-Mar-2023	25-Mar-2023	876185



Analytical Results

FC2300684-003

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: Treated Water-Lab Sink

Client sampling date / time: 23-Mar-2023 09:40

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLOT
Total Metals								
Rubidium, total	7440-17-7	0.00118	0.00020	mg/L	E420	25-Mar-2023	25-Mar-2023	876185
Selenium, total	7782-49-2	0.000060	0.000050	mg/L	E420	25-Mar-2023	25-Mar-2023	876185
Silicon, total	7440-21-3	2.15	0.10	mg/L	E420	25-Mar-2023	25-Mar-2023	876185
Silver, total	7440-22-4	<0.000010	0.000010	mg/L	E420	25-Mar-2023	25-Mar-2023	876185
Sodium, total	7440-23-5	16.7	0.050	mg/L	E420	25-Mar-2023	25-Mar-2023	876185
Strontium, total	7440-24-6	0.0645	0.00020	mg/L	E420	25-Mar-2023	25-Mar-2023	876185
Sulfur, total	7704-34-9	1.65	0.50	mg/L	E420	25-Mar-2023	25-Mar-2023	876185
Tellurium, total	13494-80-9	<0.00020	0.00020	mg/L	E420	25-Mar-2023	25-Mar-2023	876185
Thallium, total	7440-28-0	<0.000010	0.000010	mg/L	E420	25-Mar-2023	25-Mar-2023	876185
Thorium, total	7440-29-1	<0.00010	0.00010	mg/L	E420	25-Mar-2023	25-Mar-2023	876185
Tin, total	7440-31-5	<0.00010	0.00010	mg/L	E420	25-Mar-2023	25-Mar-2023	876185
Titanium, total	7440-32-6	<0.00030	0.00030	mg/L	E420	25-Mar-2023	25-Mar-2023	876185
Tungsten, total	7440-33-7	<0.00010	0.00010	mg/L	E420	25-Mar-2023	25-Mar-2023	876185
Uranium, total	7440-61-1	0.000012	0.000010	mg/L	E420	25-Mar-2023	25-Mar-2023	876185
Vanadium, total	7440-62-2	<0.00050	0.00050	mg/L	E420	25-Mar-2023	25-Mar-2023	876185
Zinc, total	7440-66-6	<0.0030	0.0030	mg/L	E420	25-Mar-2023	25-Mar-2023	876185
Zirconium, total	7440-67-7	<0.00020	0.00020	mg/L	E420	25-Mar-2023	25-Mar-2023	876185
Dissolved Metals								
Aluminum, dissolved	7429-90-5	0.0164	0.0010	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Antimony, dissolved	7440-36-0	<0.00010	0.00010	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Arsenic, dissolved	7440-38-2	0.00013	0.00010	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Barium, dissolved	7440-39-3	0.0191	0.00010	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Beryllium, dissolved	7440-41-7	<0.000020	0.000020	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Bismuth, dissolved	7440-69-9	<0.000050	0.000050	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Boron, dissolved	7440-42-8	0.015	0.010	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Cadmium, dissolved	7440-43-9	<0.0000050	0.0000050	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Calcium, dissolved	7440-70-2	10.2	0.050	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Cesium, dissolved	7440-46-2	<0.000010	0.000010	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Chromium, dissolved	7440-47-3	<0.00050	0.00050	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Cobalt, dissolved	7440-48-4	<0.00010	0.00010	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Copper, dissolved	7440-50-8	0.00042	0.00020	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Iron, dissolved	7439-89-6	<0.030	0.030	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Lead, dissolved	7439-92-1	<0.000050	0.000050	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Lithium, dissolved	7439-93-2	0.0024	0.0010	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Magnesium, dissolved	7439-95-4	2.83	0.0050	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Manganese, dissolved	7439-96-5	<0.00500	0.00500	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Molybdenum, dissolved	7439-98-7	0.000227	0.000050	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Nickel, dissolved	7440-02-0	<0.00050	0.00050	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Phosphorus, dissolved	7723-14-0	<0.050	0.050	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Potassium, dissolved	7440-09-7	1.16	0.050	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Rubidium, dissolved	7440-17-7	0.00105	0.00020	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Selenium, dissolved	7782-49-2	<0.000050	0.000050	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Silicon, dissolved	7440-21-3	2.60	0.050	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Silver, dissolved	7440-22-4	<0.000010	0.000010	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Sodium, dissolved	7440-23-5	19.5	0.050	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Strontium, dissolved	7440-24-6	0.0650	0.00020	mg/L	E421	26-Mar-2023	26-Mar-2023	876506



Analytical Results

FC2300684-003

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: Treated Water-Lab Sink

Client sampling date / time: 23-Mar-2023 09:40

Analyte	CAS Number	Result	LOR	Unit	Method	Prep Date	Analysis Date	QCLot
Dissolved Metals								
Sulfur, dissolved	7704-34-9	1.66	0.50	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Tellurium, dissolved	13494-80-9	<0.00020	0.00020	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Thallium, dissolved	7440-28-0	<0.000010	0.000010	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Thorium, dissolved	7440-29-1	<0.00010	0.00010	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Tin, dissolved	7440-31-5	<0.00010	0.00010	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Titanium, dissolved	7440-32-6	<0.00030	0.00030	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Tungsten, dissolved	7440-33-7	<0.00010	0.00010	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Uranium, dissolved	7440-61-1	<0.000010	0.000010	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Vanadium, dissolved	7440-62-2	<0.00050	0.00050	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Zinc, dissolved	7440-66-6	<0.0010	0.0010	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Zirconium, dissolved	7440-67-7	<0.00030	0.00030	mg/L	E421	26-Mar-2023	26-Mar-2023	876506
Dissolved metals filtration location	----	Laboratory	-	-	EP421	-	26-Mar-2023	876506
Aggregate Organics								
Naphthenic acids	----	<0.10	0.10	mg/L	E565-L	24-Mar-2023	27-Mar-2023	875144
Volatile Organic Compounds [Fuels]								
Benzene	71-43-2	<0.50	0.50	µg/L	E611A	24-Mar-2023	25-Mar-2023	875150
Ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611A	24-Mar-2023	25-Mar-2023	875150
Styrene	100-42-5	<0.50	0.50	µg/L	E611A	24-Mar-2023	25-Mar-2023	875150
Toluene	108-88-3	<0.50	0.50	µg/L	E611A	24-Mar-2023	25-Mar-2023	875150
Xylene, m+p-	179601-23-1	<0.40	0.40	µg/L	E611A	24-Mar-2023	25-Mar-2023	875150
Xylene, o-	95-47-6	<0.30	0.30	µg/L	E611A	24-Mar-2023	25-Mar-2023	875150
Xylenes, total	1330-20-7	<0.50	0.50	µg/L	E611A	24-Mar-2023	25-Mar-2023	875150
BTEX, total	----	<1.0	1.0	µg/L	E611A	24-Mar-2023	25-Mar-2023	875150
Hydrocarbons								
F1 (C6-C10)	----	<100	100	µg/L	E581.F1	24-Mar-2023	25-Mar-2023	875151
F1-BTEX	----	<100	100	µg/L	EC580	-	25-Mar-2023	-
F2 (C10-C16)	----	<100	100	µg/L	E601	24-Mar-2023	24-Mar-2023	875492
F3 (C16-C34)	----	<250	250	µg/L	E601	24-Mar-2023	24-Mar-2023	875492
F4 (C34-C50)	----	<250	250	µg/L	E601	24-Mar-2023	24-Mar-2023	875492
Hydrocarbons, total (C6-C50)	----	<380	380	µg/L	EC581	-	25-Mar-2023	-
Hydrocarbons Surrogates								
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	97.6	1.0	%	E601	24-Mar-2023	24-Mar-2023	875492
Dichlorotoluene, 3,4-	95-75-0	127	1.0	%	E581.F1	24-Mar-2023	25-Mar-2023	875151
Volatile Organic Compounds Surrogates								
Bromofluorobenzene, 4-	460-00-4	91.2	1.0	%	E611A	24-Mar-2023	25-Mar-2023	875150
Diffluorobenzene, 1,4-	540-36-3	105	1.0	%	E611A	24-Mar-2023	25-Mar-2023	875150
Polycyclic Aromatic Hydrocarbons								
Benzo(a)pyrene	50-32-8	<0.0000050	0.0000050	mg/L	E641A	24-Mar-2023	24-Mar-2023	875493
Polycyclic Aromatic Hydrocarbons Surrogates								
Chrysene-d12	1719-03-5	91.4	0.1	%	E641A	24-Mar-2023	24-Mar-2023	875493
Naphthalene-d8	1146-65-2	101	0.1	%	E641A	24-Mar-2023	24-Mar-2023	875493
Phenanthrene-d10	1517-22-2	106	0.1	%	E641A	24-Mar-2023	24-Mar-2023	875493

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