



CERTIFICATE OF ANALYSIS

<p>Work Order : FC2302035</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 : 4500051416</p> <p>C-O-C number : ----</p> <p>Sampler : Darwin M, DESMOND F</p> <p>Site : Schedule 4: Fort Chip</p> <p>Quote number : Q61323 (Fort chip)</p> <p>No. of samples received : 1</p> <p>No. of samples analysed : 1</p>	<p>Page : 1 of 8</p> <p>Laboratory : ALS Environmental - Fort McMurray</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 : 27-Jul-2023 15:50</p> <p>Date Analysis Commenced : 28-Jul-2023</p> <p>Issue Date : 31-Jul-2023 17:29</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>
Anthony Calero	Supervisor - Inorganic	Inorganics, Calgary, Alberta
Harpreet Chawla	Team Leader - Inorganics	Inorganics, Calgary, Alberta
Kevin Baxter	Team Leader - Inorganics	Inorganics, Calgary, Alberta
Kevin Baxter	Team Leader - Inorganics	Metals, Calgary, Alberta
Lindsay Gung	Supervisor - Water Chemistry	Inorganics, Burnaby, British Columbia
Maqsood UHassan	Laboratory Analyst	Organics, Calgary, Alberta
Nguyen Tran	Laboratory Analyst	Organics, Calgary, Alberta
Pamela Toledo	Laboratory Assistant	Metals, Calgary, Alberta
Yan Zhang	Lab Analyst	Organics, Edmonton, Alberta



General Comments

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

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

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

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

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

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

<: less than.

>: greater than.

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

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

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

Accreditation

Accreditation	Description	Laboratory	Address
A	CALA ISO/IEC 17025:2017	CG ALS Environmental - Calgary	2559 29th Street NE, Calgary, AB
B	CALA ISO/IEC 17025:2017	VA ALS Environmental - Vancouver	8081 Lougheed Highway, Burnaby, BC
C	CALA ISO/IEC 17025:2017	EO ALS Environmental - Edmonton	9450 - 17 Avenue NW, Edmonton, AB

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



Analytical Results

Sub-Matrix: Water						Client sample ID	RAW WATER	---	---	---	---
(Matrix: Water)							POND ONE				
						Client sampling date / time	27-Jul-2023 09:30	---	---	---	---
Analyte	CAS Number	Method/Lab	LOR	Unit		FC2302035-001	-----	-----	-----	-----	
						Result	---	---	---	---	
Physical Tests											
Alkalinity, bicarbonate (as HCO3)	71-52-3	E290/CG	A	1.0	mg/L	93.6	---	---	---	---	
Alkalinity, carbonate (as CO3)	3812-32-6	E290/CG	A	1.0	mg/L	<1.0	---	---	---	---	
Alkalinity, hydroxide (as OH)	14280-30-9	E290/CG	A	1.0	mg/L	<1.0	---	---	---	---	
Alkalinity, total (as CaCO3)	---	E290/CG	A	1.0	mg/L	76.7	---	---	---	---	
Conductivity	---	E100/CG	A	1.0	µS/cm	182	---	---	---	---	
Hardness (as CaCO3), dissolved	---	EC100/CG		0.50	mg/L	79.6	---	---	---	---	
Hardness (as CaCO3), from total Ca/Mg	---	EC100A/CG		0.50	mg/L	83.1	---	---	---	---	
pH	---	E108/CG	A	0.10	pH units	7.86	---	---	---	---	
Salinity	---	EC100S/VA		1.0	psu	<1.0	---	---	---	---	
Solids, total dissolved [TDS], calculated	---	EC103/CG		1.0	mg/L	111	---	---	---	---	
Anions and Nutrients											
Chloride	16887-00-6	E235.Cl/CG	A	0.50	mg/L	4.99	---	---	---	---	
Fluoride	16984-48-8	E235.F/CG	A	0.020	mg/L	0.087	---	---	---	---	
Nitrate (as N)	14797-55-8	E235.NO3/CG	A	0.020	mg/L	0.082	---	---	---	---	
Nitrate + Nitrite (as N)	---	EC235.N+N/C G		0.0300	mg/L	0.0820	---	---	---	---	
Nitrite (as N)	14797-65-0	E235.NO2/CG	A	0.010	mg/L	<0.010	---	---	---	---	
Sulfate (as SO4)	14808-79-8	E235.SO4/CG	A	0.30	mg/L	14.6	---	---	---	---	
Total Sulfides											
Sulfide, total (as S)	18496-25-8	E395/VA	B	0.0015	mg/L	<0.0015	---	---	---	---	
Ion Balance											
Anion sum	---	EC101/CG		0.10	meq/L	1.99	---	---	---	---	
Cation sum	---	EC101/CG		0.10	meq/L	1.96	---	---	---	---	
Ion balance (APHA)	---	EC101/CG		0.01	%	-0.76	---	---	---	---	
Ion balance (cations/anions)	---	EC101/CG		0.010	%	98.5	---	---	---	---	
Total Metals											
Aluminum, total	7429-90-5	E420/CG	A	0.0030	mg/L	1.47	---	---	---	---	
Antimony, total	7440-36-0	E420/CG	A	0.00010	mg/L	0.00016	---	---	---	---	
Arsenic, total	7440-38-2	E420/CG	A	0.00010	mg/L	0.00190	---	---	---	---	
Barium, total	7440-39-3	E420/CG	A	0.00010	mg/L	0.0714	---	---	---	---	



Analytical Results

Sub-Matrix: Water						Client sample ID	RAW WATER	----	----	----	----
(Matrix: Water)							POND ONE				
						Client sampling date / time	27-Jul-2023 09:30	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		FC2302035-001	-----	-----	-----	-----	
						Result	----	----	----	----	
Total Metals											
Beryllium, total	7440-41-7	E420/CG	A	0.000020	mg/L	0.000091	----	----	----	----	
Bismuth, total	7440-69-9	E420/CG	A	0.000050	mg/L	<0.000050	----	----	----	----	
Boron, total	7440-42-8	E420/CG	A	0.010	mg/L	0.024	----	----	----	----	
Cadmium, total	7440-43-9	E420/CG	A	0.0000050	mg/L	0.0000418	----	----	----	----	
Calcium, total	7440-70-2	E420/CG	A	0.050	mg/L	22.4	----	----	----	----	
Cesium, total	7440-46-2	E420/CG	A	0.000010	mg/L	0.000369	----	----	----	----	
Chromium, total	7440-47-3	E420/CG	A	0.00050	mg/L	0.00293	----	----	----	----	
Cobalt, total	7440-48-4	E420/CG	A	0.00010	mg/L	0.00095	----	----	----	----	
Copper, total	7440-50-8	E420/CG	A	0.00050	mg/L	0.00428	----	----	----	----	
Iron, total	7439-89-6	E420/CG	A	0.010	mg/L	2.66	----	----	----	----	
Lead, total	7439-92-1	E420/CG	A	0.000050	mg/L	0.00146	----	----	----	----	
Lithium, total	7439-93-2	E420/CG	A	0.0010	mg/L	0.0059	----	----	----	----	
Magnesium, total	7439-95-4	E420/CG	A	0.0050	mg/L	6.59	----	----	----	----	
Manganese, total	7439-96-5	E420/CG	A	0.00010	mg/L	0.104	----	----	----	----	
Molybdenum, total	7439-98-7	E420/CG	A	0.000050	mg/L	0.000865	----	----	----	----	
Nickel, total	7440-02-0	E420/CG	A	0.00050	mg/L	0.00408	----	----	----	----	
Phosphorus, total	7723-14-0	E420/CG	A	0.050	mg/L	0.069	----	----	----	----	
Potassium, total	7440-09-7	E420/CG	A	0.050	mg/L	1.73	----	----	----	----	
Rubidium, total	7440-17-7	E420/CG	A	0.00020	mg/L	0.00488	----	----	----	----	
Selenium, total	7782-49-2	E420/CG	A	0.000050	mg/L	0.000262	----	----	----	----	
Silicon, total	7440-21-3	E420/CG	A	0.10	mg/L	5.81	----	----	----	----	
Silver, total	7440-22-4	E420/CG	A	0.000010	mg/L	0.000018	----	----	----	----	
Sodium, total	7440-23-5	E420/CG	A	0.050	mg/L	7.45	----	----	----	----	
Strontium, total	7440-24-6	E420/CG	A	0.00020	mg/L	0.144	----	----	----	----	
Sulfur, total	7704-34-9	E420/CG	A	0.50	mg/L	4.84	----	----	----	----	
Tellurium, total	13494-80-9	E420/CG	A	0.00020	mg/L	<0.00020	----	----	----	----	
Thallium, total	7440-28-0	E420/CG	A	0.000010	mg/L	0.000035	----	----	----	----	
Thorium, total	7440-29-1	E420/CG	A	0.00010	mg/L	0.00032	----	----	----	----	
Tin, total	7440-31-5	E420/CG	A	0.00010	mg/L	<0.00010	----	----	----	----	
Titanium, total	7440-32-6	E420/CG	A	0.00030	mg/L	0.0237	----	----	----	----	
Tungsten, total	7440-33-7	E420/CG	A	0.00010	mg/L	<0.00010	----	----	----	----	



Analytical Results

Sub-Matrix: Water						Client sample ID	RAW WATER	----	----	----	----
(Matrix: Water)							POND ONE				
						Client sampling date / time	27-Jul-2023 09:30	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		FC2302035-001	-----	-----	-----	-----	
						Result	----	----	----	----	
Total Metals											
Uranium, total	7440-61-1	E420/CG	A	0.000010	mg/L	0.000416	----	----	----	----	
Vanadium, total	7440-62-2	E420/CG	A	0.000050	mg/L	0.00473	----	----	----	----	
Zinc, total	7440-66-6	E420/CG	A	0.0030	mg/L	0.0090	----	----	----	----	
Zirconium, total	7440-67-7	E420/CG	A	0.00020	mg/L	0.00043	----	----	----	----	
Dissolved Metals											
Aluminum, dissolved	7429-90-5	E421/CG	A	0.0010	mg/L	0.0138	----	----	----	----	
Antimony, dissolved	7440-36-0	E421/CG	A	0.00010	mg/L	0.00013	----	----	----	----	
Arsenic, dissolved	7440-38-2	E421/CG	A	0.00010	mg/L	0.00062	----	----	----	----	
Barium, dissolved	7440-39-3	E421/CG	A	0.00010	mg/L	0.0496	----	----	----	----	
Beryllium, dissolved	7440-41-7	E421/CG	A	0.000020	mg/L	<0.000020	----	----	----	----	
Bismuth, dissolved	7440-69-9	E421/CG	A	0.000050	mg/L	<0.000050	----	----	----	----	
Boron, dissolved	7440-42-8	E421/CG	A	0.010	mg/L	0.022	----	----	----	----	
Cadmium, dissolved	7440-43-9	E421/CG	A	0.0000050	mg/L	0.0000102	----	----	----	----	
Calcium, dissolved	7440-70-2	E421/CG	A	0.050	mg/L	21.9	----	----	----	----	
Cesium, dissolved	7440-46-2	E421/CG	A	0.000010	mg/L	<0.000010	----	----	----	----	
Chromium, dissolved	7440-47-3	E421/CG	A	0.00050	mg/L	<0.00050	----	----	----	----	
Cobalt, dissolved	7440-48-4	E421/CG	A	0.00010	mg/L	<0.00010	----	----	----	----	
Copper, dissolved	7440-50-8	E421/CG	A	0.00020	mg/L	0.00217	----	----	----	----	
Iron, dissolved	7439-89-6	E421/CG	A	0.030	mg/L	0.105	----	----	----	----	
Lead, dissolved	7439-92-1	E421/CG	A	0.000050	mg/L	0.000085	----	----	----	----	
Lithium, dissolved	7439-93-2	E421/CG	A	0.0010	mg/L	0.0058	----	----	----	----	
Magnesium, dissolved	7439-95-4	E421/CG	A	0.0050	mg/L	6.06	----	----	----	----	
Manganese, dissolved	7439-96-5	E421/CG	A	0.00500	mg/L	0.00967	----	----	----	----	
Molybdenum, dissolved	7439-98-7	E421/CG	A	0.000050	mg/L	0.000872	----	----	----	----	
Nickel, dissolved	7440-02-0	E421/CG	A	0.00050	mg/L	0.00152	----	----	----	----	
Phosphorus, dissolved	7723-14-0	E421/CG	A	0.050	mg/L	<0.050	----	----	----	----	
Potassium, dissolved	7440-09-7	E421/CG	A	0.050	mg/L	1.35	----	----	----	----	
Rubidium, dissolved	7440-17-7	E421/CG	A	0.00020	mg/L	0.00138	----	----	----	----	
Selenium, dissolved	7782-49-2	E421/CG	A	0.000050	mg/L	0.000289	----	----	----	----	
Silicon, dissolved	7440-21-3	E421/CG	A	0.050	mg/L	2.97	----	----	----	----	
Silver, dissolved	7440-22-4	E421/CG	A	0.000010	mg/L	<0.000010	----	----	----	----	



Analytical Results

Sub-Matrix: Water						Client sample ID	RAW WATER	----	----	----	----
(Matrix: Water)							POND ONE				
						Client sampling date / time	27-Jul-2023 09:30	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		FC2302035-001	-----	-----	-----	-----	
						Result	----	----	----	----	
Dissolved Metals											
Sodium, dissolved	7440-23-5	E421/CG	A	0.050	mg/L	7.47	----	----	----	----	
Strontium, dissolved	7440-24-6	E421/CG	A	0.00020	mg/L	0.138	----	----	----	----	
Sulfur, dissolved	7704-34-9	E421/CG	A	0.50	mg/L	5.21	----	----	----	----	
Tellurium, dissolved	13494-80-9	E421/CG	A	0.00020	mg/L	<0.00020	----	----	----	----	
Thallium, dissolved	7440-28-0	E421/CG	A	0.000010	mg/L	<0.000010	----	----	----	----	
Thorium, dissolved	7440-29-1	E421/CG	A	0.00010	mg/L	<0.00010	----	----	----	----	
Tin, dissolved	7440-31-5	E421/CG	A	0.00010	mg/L	<0.00010	----	----	----	----	
Titanium, dissolved	7440-32-6	E421/CG	A	0.00030	mg/L	0.00445	----	----	----	----	
Tungsten, dissolved	7440-33-7	E421/CG	A	0.00010	mg/L	<0.00010	----	----	----	----	
Uranium, dissolved	7440-61-1	E421/CG	A	0.000010	mg/L	0.000332	----	----	----	----	
Vanadium, dissolved	7440-62-2	E421/CG	A	0.00050	mg/L	<0.00050	----	----	----	----	
Zinc, dissolved	7440-66-6	E421/CG	A	0.0010	mg/L	<0.0010	----	----	----	----	
Zirconium, dissolved	7440-67-7	E421/CG	A	0.00030	mg/L	0.00036	----	----	----	----	
Dissolved metals filtration location	----	EP421/CG		-	-	Laboratory	----	----	----	----	
Aggregate Organics											
Naphthenic acids	----	E565-L/EO	C	0.10	mg/L	<0.10	----	----	----	----	
Volatile Organic Compounds [BTEXS+MTBE]											
Benzene	71-43-2	E611A/CG	A	0.50	µg/L	<0.50	----	----	----	----	
Ethylbenzene	100-41-4	E611A/CG	A	0.50	µg/L	<0.50	----	----	----	----	
Toluene	108-88-3	E611A/CG	A	0.50	µg/L	<0.50	----	----	----	----	
Xylene, m+p-	179601-23-1	E611A/CG	A	0.50	µg/L	<0.50	----	----	----	----	
Xylene, o-	95-47-6	E611A/CG	A	0.50	µg/L	<0.50	----	----	----	----	
Xylenes, total	1330-20-7	E611A/CG	A	0.75	µg/L	<0.75	----	----	----	----	
BTEX, total	----	E611A/CG	A	1.2	µg/L	<1.2	----	----	----	----	
Hydrocarbons											
F1 (C6-C10)	----	E581.F1/CG	A	100	µg/L	<100	----	----	----	----	
F1-BTEX	----	EC580/CG		100	µg/L	<100	----	----	----	----	
F2 (C10-C16)	----	E601/CG	A	100	µg/L	<100	----	----	----	----	
F3 (C16-C34)	----	E601/CG	A	250	µg/L	<250	----	----	----	----	
F4 (C34-C50)	----	E601/CG	A	250	µg/L	<250	----	----	----	----	
Hydrocarbons, total (C6-C50)	----	EC581/CG		400	µg/L	<400	----	----	----	----	



Analytical Results

Sub-Matrix: Water						Client sample ID	RAW WATER	----	----	----	----
(Matrix: Water)							POND ONE				
Client sampling date / time						27-Jul-2023 09:30	----	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		FC2302035-001	-----	-----	-----	-----	
						Result	----	----	----	----	
Hydrocarbons Surrogates											
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	E601/CG	A	1.0	%	108	----	----	----	----	
Dichlorotoluene, 3,4-	95-75-0	E581.F1/CG	A	1.0	%	107	----	----	----	----	
Volatile Organic Compounds Surrogates											
Bromofluorobenzene, 4-	460-00-4	E611A/CG	A	1.0	%	102	----	----	----	----	
Difluorobenzene, 1,4-	540-36-3	E611A/CG	A	1.0	%	98.3	----	----	----	----	
Polycyclic Aromatic Hydrocarbons											
Acenaphthene	83-32-9	E641A/CG	A	0.010	µg/L	<0.010	----	----	----	----	
Acenaphthylene	208-96-8	E641A/CG	A	0.010	µg/L	<0.010	----	----	----	----	
Acridine	260-94-6	E641A/CG	A	0.010	µg/L	<0.010	----	----	----	----	
Anthracene	120-12-7	E641A/CG	A	0.010	µg/L	<0.010	----	----	----	----	
Benz(a)anthracene	56-55-3	E641A/CG	A	0.010	µg/L	<0.010	----	----	----	----	
Benzo(a)pyrene	50-32-8	E641A/CG	A	0.0050	µg/L	<0.0050	----	----	----	----	
Benzo(b+j)fluoranthene	n/a	E641A/CG	A	0.010	µg/L	<0.010	----	----	----	----	
Benzo(b+j+k)fluoranthene	n/a	E641A/CG	A	0.015	µg/L	<0.015	----	----	----	----	
Benzo(g,h,i)perylene	191-24-2	E641A/CG	A	0.010	µg/L	<0.010	----	----	----	----	
Benzo(k)fluoranthene	207-08-9	E641A/CG	A	0.010	µg/L	<0.010	----	----	----	----	
Chrysene	218-01-9	E641A/CG	A	0.010	µg/L	<0.010	----	----	----	----	
Dibenz(a,h)anthracene	53-70-3	E641A/CG	A	0.0050	µg/L	<0.0050	----	----	----	----	
Fluoranthene	206-44-0	E641A/CG	A	0.010	µg/L	<0.010	----	----	----	----	
Fluorene	86-73-7	E641A/CG	A	0.010	µg/L	<0.010	----	----	----	----	
Indeno(1,2,3-c,d)pyrene	193-39-5	E641A/CG	A	0.010	µg/L	<0.010	----	----	----	----	
Methylnaphthalene, 1-	90-12-0	E641A/CG	A	0.010	µg/L	<0.010	----	----	----	----	
Methylnaphthalene, 1+2-	----	E641A/CG	A	0.015	µg/L	<0.015	----	----	----	----	
Methylnaphthalene, 2-	91-57-6	E641A/CG	A	0.010	µg/L	<0.010	----	----	----	----	
Naphthalene	91-20-3	E641A/CG	A	0.050	µg/L	<0.050	----	----	----	----	
Phenanthrene	85-01-8	E641A/CG	A	0.020	µg/L	<0.020	----	----	----	----	
Pyrene	129-00-0	E641A/CG	A	0.010	µg/L	<0.010	----	----	----	----	
Quinoline	91-22-5	E641A/CG	A	0.050	µg/L	<0.050	----	----	----	----	
B(a)P total potency equivalents [B(a)P TPE]	----	E641A/CG	A	0.010	µg/L	<0.010	----	----	----	----	
PAHs, high molecular weight (BC AWQ)	n/a	E641A/CG	A	0.030	µg/L	<0.030	----	----	----	----	
PAHs, low molecular weight (BC AWQ)	n/a	E641A/CG	A	0.060	µg/L	<0.060	----	----	----	----	



Analytical Results

Sub-Matrix: Water						Client sample ID	RAW WATER				
(Matrix: Water)							POND ONE	----	----	----	----
						Client sampling date / time	27-Jul-2023 09:30	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		FC2302035-001	-----	-----	-----	-----	
						Result	----	----	----	----	
Polycyclic Aromatic Hydrocarbons											
PAHs, total (CCME sewer 18)	n/a	E641A/CG	A	0.070	µg/L	<0.070	----	----	----	----	
PAHs, total (EPA 16)	n/a	E641A/CG	A	0.065	µg/L	<0.065	----	----	----	----	
Polycyclic Aromatic Hydrocarbons Surrogates											
Chrysene-d12	1719-03-5	E641A/CG	A	0.1	%	110	----	----	----	----	
Naphthalene-d8	1146-65-2	E641A/CG	A	0.1	%	116	----	----	----	----	
Phenanthrene-d10	1517-22-2	E641A/CG	A	0.1	%	107	----	----	----	----	

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

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



CERTIFICATE OF ANALYSIS

Work Order	: FC2302035	Page	: 1 of 6
Client	: Regional Municipality of Wood Buffalo	Laboratory	: ALS Environmental - Fort McMurray
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	: 27-Jul-2023 15:50
PO	: 4500051416	Date Analysis	: 28-Jul-2023
C-O-C number	: ----	Commenced	
Sampler	: Darwin M, DESMOND F	Issue Date	: 31-Jul-2023 17:29
Site	: Schedule 4: Fort Chip		
Quote number	: Q61323 (Fort chip)		
No. of samples received	: 1		
No. of samples analysed	: 1		

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>
Anthony Calero	Supervisor - Inorganic	Inorganics, Calgary, Alberta
Harpreet Chawla	Team Leader - Inorganics	Inorganics, Calgary, Alberta
Kevin Baxter	Team Leader - Inorganics	Inorganics, Calgary, Alberta
Kevin Baxter	Team Leader - Inorganics	Metals, Calgary, Alberta
Lindsay Gung	Supervisor - Water Chemistry	Inorganics, Burnaby, British Columbia
Maqsood UlHassan	Laboratory Analyst	Organics, Calgary, Alberta
Nguyen Tran	Laboratory Analyst	Organics, Calgary, Alberta
Pamela Toledo	Laboratory Assistant	Metals, Calgary, Alberta
Yan Zhang	Lab Analyst	Organics, Edmonton, Alberta



General Comments

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

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

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

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

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

LOR: Limit of Reporting (detection limit).

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

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

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

>: greater than.

<: less than.

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

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

Accreditation

Accreditation	Description	Laboratory	Address
A	CALA ISO/IEC 17025:2017	CG ALS Environmental - Calgary	2559 29th Street NE, Calgary, AB
B	CALA ISO/IEC 17025:2017	VA ALS Environmental - Vancouver	8081 Lougheed Highway, Burnaby, BC
C	CALA ISO/IEC 17025:2017	EO ALS Environmental - Edmonton	9450 - 17 Avenue NW, Edmonton, AB

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



Analytical Results

FC2302035-001

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: RAW WATER POND ONE

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

Analyte	CAS Number	Result	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot
Physical Tests								
Alkalinity, bicarbonate (as HCO ₃)	71-52-3	93.6	1.0	mg/L	E290/CG	A 28-Jul-2023	28-Jul-2023	1060730
Alkalinity, carbonate (as CO ₃)	3812-32-6	<1.0	1.0	mg/L	E290/CG	A 28-Jul-2023	28-Jul-2023	1060730
Alkalinity, hydroxide (as OH)	14280-30-9	<1.0	1.0	mg/L	E290/CG	A 28-Jul-2023	28-Jul-2023	1060730
Alkalinity, total (as CaCO ₃)	----	76.7	1.0	mg/L	E290/CG	A 28-Jul-2023	28-Jul-2023	1060730
Conductivity	----	182	1.0	µS/cm	E100/CG	A 28-Jul-2023	28-Jul-2023	1060732
Hardness (as CaCO ₃), dissolved	----	79.6	0.50	mg/L	EC100/CG	-	29-Jul-2023	-
Hardness (as CaCO ₃), from total Ca/Mg	----	83.1	0.50	mg/L	EC100A/CG	-	29-Jul-2023	-
pH	----	7.86	0.10	pH units	E108/CG	A 28-Jul-2023	28-Jul-2023	1060731
Salinity	----	<1.0	1.0	psu	EC100S/VA	-	31-Jul-2023	-
Solids, total dissolved [TDS], calculated	----	111	1.0	mg/L	EC103/CG	-	28-Jul-2023	-
Anions and Nutrients								
Chloride	16887-00-6	4.99	0.50	mg/L	E235.Cl/CG	A 28-Jul-2023	28-Jul-2023	1060778
Fluoride	16984-48-8	0.087	0.020	mg/L	E235.F/CG	A 28-Jul-2023	28-Jul-2023	1060777
Nitrate (as N)	14797-55-8	0.082	0.020	mg/L	E235.NO3/CG	A 28-Jul-2023	28-Jul-2023	1060774
Nitrate + Nitrite (as N)	----	0.0820	0.03	mg/L	EC235.N+N/CG	-	29-Jul-2023	1062277
Nitrite (as N)	14797-65-0	<0.010	0.010	mg/L	E235.NO2/CG	A 28-Jul-2023	28-Jul-2023	1060776
Sulfate (as SO ₄)	14808-79-8	14.6	0.30	mg/L	E235.SO4/CG	A 28-Jul-2023	28-Jul-2023	1060775
Total Sulfides								
Sulfide, total (as S)	18496-25-8	<0.0015	0.0015	mg/L	E395/VA	B -	30-Jul-2023	1063024
Ion Balance								
Anion sum	----	1.99	0.10	meq/L	EC101/CG	-	28-Jul-2023	-
Cation sum	----	1.96	0.10	meq/L	EC101/CG	-	28-Jul-2023	-
Ion balance (APHA)	----	-0.76	0.01	%	EC101/CG	-	28-Jul-2023	-
Ion balance (cations/anions)	----	98.5	0.010	%	EC101/CG	-	28-Jul-2023	-
Total Metals								
Aluminum, total	7429-90-5	1.47	0.0030	mg/L	E420/CG	A 29-Jul-2023	29-Jul-2023	1061313
Antimony, total	7440-36-0	0.00016	0.00010	mg/L	E420/CG	A 29-Jul-2023	29-Jul-2023	1061313
Arsenic, total	7440-38-2	0.00190	0.00010	mg/L	E420/CG	A 29-Jul-2023	29-Jul-2023	1061313
Barium, total	7440-39-3	0.0714	0.00010	mg/L	E420/CG	A 29-Jul-2023	29-Jul-2023	1061313
Beryllium, total	7440-41-7	0.000091	0.000020	mg/L	E420/CG	A 29-Jul-2023	29-Jul-2023	1061313
Bismuth, total	7440-69-9	<0.000050	0.000050	mg/L	E420/CG	A 29-Jul-2023	29-Jul-2023	1061313
Boron, total	7440-42-8	0.024	0.010	mg/L	E420/CG	A 29-Jul-2023	29-Jul-2023	1061313
Cadmium, total	7440-43-9	0.0000418	0.0000050	mg/L	E420/CG	A 29-Jul-2023	29-Jul-2023	1061313
Calcium, total	7440-70-2	22.4	0.050	mg/L	E420/CG	A 29-Jul-2023	29-Jul-2023	1061313
Cesium, total	7440-46-2	0.000369	0.000010	mg/L	E420/CG	A 29-Jul-2023	29-Jul-2023	1061313
Chromium, total	7440-47-3	0.00293	0.00050	mg/L	E420/CG	A 29-Jul-2023	29-Jul-2023	1061313
Cobalt, total	7440-48-4	0.00095	0.00010	mg/L	E420/CG	A 29-Jul-2023	29-Jul-2023	1061313
Copper, total	7440-50-8	0.00428	0.00050	mg/L	E420/CG	A 29-Jul-2023	29-Jul-2023	1061313
Iron, total	7439-89-6	2.66	0.010	mg/L	E420/CG	A 29-Jul-2023	29-Jul-2023	1061313
Lead, total	7439-92-1	0.00146	0.000050	mg/L	E420/CG	A 29-Jul-2023	29-Jul-2023	1061313
Lithium, total	7439-93-2	0.0059	0.0010	mg/L	E420/CG	A 29-Jul-2023	29-Jul-2023	1061313
Magnesium, total	7439-95-4	6.59	0.0050	mg/L	E420/CG	A 29-Jul-2023	29-Jul-2023	1061313
Manganese, total	7439-96-5	0.104	0.00010	mg/L	E420/CG	A 29-Jul-2023	29-Jul-2023	1061313



Analytical Results

FC2302035-001

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: RAW WATER POND ONE

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

Analyte	CAS Number	Result	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QC/Lot
Total Metals								
Molybdenum, total	7439-98-7	0.000865	0.000050	mg/L	E420/CG	A 29-Jul-2023	29-Jul-2023	1061313
Nickel, total	7440-02-0	0.00408	0.00050	mg/L	E420/CG	A 29-Jul-2023	29-Jul-2023	1061313
Phosphorus, total	7723-14-0	0.069	0.050	mg/L	E420/CG	A 29-Jul-2023	29-Jul-2023	1061313
Potassium, total	7440-09-7	1.73	0.050	mg/L	E420/CG	A 29-Jul-2023	29-Jul-2023	1061313
Rubidium, total	7440-17-7	0.00488	0.00020	mg/L	E420/CG	A 29-Jul-2023	29-Jul-2023	1061313
Selenium, total	7782-49-2	0.000262	0.000050	mg/L	E420/CG	A 29-Jul-2023	29-Jul-2023	1061313
Silicon, total	7440-21-3	5.81	0.10	mg/L	E420/CG	A 29-Jul-2023	29-Jul-2023	1061313
Silver, total	7440-22-4	0.000018	0.000010	mg/L	E420/CG	A 29-Jul-2023	29-Jul-2023	1061313
Sodium, total	7440-23-5	7.45	0.050	mg/L	E420/CG	A 29-Jul-2023	29-Jul-2023	1061313
Strontium, total	7440-24-6	0.144	0.00020	mg/L	E420/CG	A 29-Jul-2023	29-Jul-2023	1061313
Sulfur, total	7704-34-9	4.84	0.50	mg/L	E420/CG	A 29-Jul-2023	29-Jul-2023	1061313
Tellurium, total	13494-80-9	<0.00020	0.00020	mg/L	E420/CG	A 29-Jul-2023	29-Jul-2023	1061313
Thallium, total	7440-28-0	0.000035	0.000010	mg/L	E420/CG	A 29-Jul-2023	29-Jul-2023	1061313
Thorium, total	7440-29-1	0.00032	0.00010	mg/L	E420/CG	A 29-Jul-2023	29-Jul-2023	1061313
Tin, total	7440-31-5	<0.00010	0.00010	mg/L	E420/CG	A 29-Jul-2023	29-Jul-2023	1061313
Titanium, total	7440-32-6	0.0237	0.00030	mg/L	E420/CG	A 29-Jul-2023	29-Jul-2023	1061313
Tungsten, total	7440-33-7	<0.00010	0.00010	mg/L	E420/CG	A 29-Jul-2023	29-Jul-2023	1061313
Uranium, total	7440-61-1	0.000416	0.000010	mg/L	E420/CG	A 29-Jul-2023	29-Jul-2023	1061313
Vanadium, total	7440-62-2	0.00473	0.00050	mg/L	E420/CG	A 29-Jul-2023	29-Jul-2023	1061313
Zinc, total	7440-66-6	0.0090	0.0030	mg/L	E420/CG	A 29-Jul-2023	29-Jul-2023	1061313
Zirconium, total	7440-67-7	0.00043	0.00020	mg/L	E420/CG	A 29-Jul-2023	29-Jul-2023	1061313
Dissolved Metals								
Aluminum, dissolved	7429-90-5	0.0138	0.0010	mg/L	E421/CG	A 29-Jul-2023	29-Jul-2023	1061311
Antimony, dissolved	7440-36-0	0.00013	0.00010	mg/L	E421/CG	A 29-Jul-2023	29-Jul-2023	1061311
Arsenic, dissolved	7440-38-2	0.00062	0.00010	mg/L	E421/CG	A 29-Jul-2023	29-Jul-2023	1061311
Barium, dissolved	7440-39-3	0.0496	0.00010	mg/L	E421/CG	A 29-Jul-2023	29-Jul-2023	1061311
Beryllium, dissolved	7440-41-7	<0.000020	0.000020	mg/L	E421/CG	A 29-Jul-2023	29-Jul-2023	1061311
Bismuth, dissolved	7440-69-9	<0.000050	0.000050	mg/L	E421/CG	A 29-Jul-2023	29-Jul-2023	1061311
Boron, dissolved	7440-42-8	0.022	0.010	mg/L	E421/CG	A 29-Jul-2023	29-Jul-2023	1061311
Cadmium, dissolved	7440-43-9	0.0000102	0.0000050	mg/L	E421/CG	A 29-Jul-2023	29-Jul-2023	1061311
Calcium, dissolved	7440-70-2	21.9	0.050	mg/L	E421/CG	A 29-Jul-2023	29-Jul-2023	1061311
Cesium, dissolved	7440-46-2	<0.000010	0.000010	mg/L	E421/CG	A 29-Jul-2023	29-Jul-2023	1061311
Chromium, dissolved	7440-47-3	<0.00050	0.00050	mg/L	E421/CG	A 29-Jul-2023	29-Jul-2023	1061311
Cobalt, dissolved	7440-48-4	<0.00010	0.00010	mg/L	E421/CG	A 29-Jul-2023	29-Jul-2023	1061311
Copper, dissolved	7440-50-8	0.00217	0.00020	mg/L	E421/CG	A 29-Jul-2023	29-Jul-2023	1061311
Iron, dissolved	7439-89-6	0.105	0.030	mg/L	E421/CG	A 29-Jul-2023	29-Jul-2023	1061311
Lead, dissolved	7439-92-1	0.000085	0.000050	mg/L	E421/CG	A 29-Jul-2023	29-Jul-2023	1061311
Lithium, dissolved	7439-93-2	0.0058	0.0010	mg/L	E421/CG	A 29-Jul-2023	29-Jul-2023	1061311
Magnesium, dissolved	7439-95-4	6.06	0.0050	mg/L	E421/CG	A 29-Jul-2023	29-Jul-2023	1061311
Manganese, dissolved	7439-96-5	0.00967	0.00500	mg/L	E421/CG	A 29-Jul-2023	29-Jul-2023	1061311
Molybdenum, dissolved	7439-98-7	0.000872	0.000050	mg/L	E421/CG	A 29-Jul-2023	29-Jul-2023	1061311
Nickel, dissolved	7440-02-0	0.00152	0.00050	mg/L	E421/CG	A 29-Jul-2023	29-Jul-2023	1061311
Phosphorus, dissolved	7723-14-0	<0.050	0.050	mg/L	E421/CG	A 29-Jul-2023	29-Jul-2023	1061311
Potassium, dissolved	7440-09-7	1.35	0.050	mg/L	E421/CG	A 29-Jul-2023	29-Jul-2023	1061311
Rubidium, dissolved	7440-17-7	0.00138	0.00020	mg/L	E421/CG	A 29-Jul-2023	29-Jul-2023	1061311



Analytical Results

FC2302035-001

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: RAW WATER POND ONE

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

Analyte	CAS Number	Result	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLOT
Dissolved Metals								
Selenium, dissolved	7782-49-2	0.000289	0.000050	mg/L	E421/CG	A 29-Jul-2023	29-Jul-2023	1061311
Silicon, dissolved	7440-21-3	2.97	0.050	mg/L	E421/CG	A 29-Jul-2023	29-Jul-2023	1061311
Silver, dissolved	7440-22-4	<0.000010	0.000010	mg/L	E421/CG	A 29-Jul-2023	29-Jul-2023	1061311
Sodium, dissolved	7440-23-5	7.47	0.050	mg/L	E421/CG	A 29-Jul-2023	29-Jul-2023	1061311
Strontium, dissolved	7440-24-6	0.138	0.00020	mg/L	E421/CG	A 29-Jul-2023	29-Jul-2023	1061311
Sulfur, dissolved	7704-34-9	5.21	0.50	mg/L	E421/CG	A 29-Jul-2023	29-Jul-2023	1061311
Tellurium, dissolved	13494-80-9	<0.00020	0.00020	mg/L	E421/CG	A 29-Jul-2023	29-Jul-2023	1061311
Thallium, dissolved	7440-28-0	<0.000010	0.000010	mg/L	E421/CG	A 29-Jul-2023	29-Jul-2023	1061311
Thorium, dissolved	7440-29-1	<0.00010	0.00010	mg/L	E421/CG	A 29-Jul-2023	29-Jul-2023	1061311
Tin, dissolved	7440-31-5	<0.00010	0.00010	mg/L	E421/CG	A 29-Jul-2023	29-Jul-2023	1061311
Titanium, dissolved	7440-32-6	0.00445	0.00030	mg/L	E421/CG	A 29-Jul-2023	29-Jul-2023	1061311
Tungsten, dissolved	7440-33-7	<0.00010	0.00010	mg/L	E421/CG	A 29-Jul-2023	29-Jul-2023	1061311
Uranium, dissolved	7440-61-1	0.000332	0.000010	mg/L	E421/CG	A 29-Jul-2023	29-Jul-2023	1061311
Vanadium, dissolved	7440-62-2	<0.00050	0.00050	mg/L	E421/CG	A 29-Jul-2023	29-Jul-2023	1061311
Zinc, dissolved	7440-66-6	<0.0010	0.0010	mg/L	E421/CG	A 29-Jul-2023	29-Jul-2023	1061311
Zirconium, dissolved	7440-67-7	0.00036	0.00030	mg/L	E421/CG	A 29-Jul-2023	29-Jul-2023	1061311
Dissolved metals filtration location	----	Laboratory	-	-	EP421/CG	-	29-Jul-2023	1061311
Aggregate Organics								
Naphthenic acids	----	<0.10	0.10	mg/L	E565-L/EO	C 31-Jul-2023	31-Jul-2023	1063498
Volatile Organic Compounds [BTEXS+MTBE]								
Benzene	71-43-2	<0.50	0.50	µg/L	E611A/CG	A 28-Jul-2023	28-Jul-2023	1060694
Ethylbenzene	100-41-4	<0.50	0.50	µg/L	E611A/CG	A 28-Jul-2023	28-Jul-2023	1060694
Toluene	108-88-3	<0.50	0.50	µg/L	E611A/CG	A 28-Jul-2023	28-Jul-2023	1060694
Xylene, m+p-	179601-23-1	<0.50	0.50	µg/L	E611A/CG	A 28-Jul-2023	28-Jul-2023	1060694
Xylene, o-	95-47-6	<0.50	0.50	µg/L	E611A/CG	A 28-Jul-2023	28-Jul-2023	1060694
Xylenes, total	1330-20-7	<0.75	0.75	µg/L	E611A/CG	A 28-Jul-2023	28-Jul-2023	1060694
BTEX, total	----	<1.2	1.2	µg/L	E611A/CG	A 28-Jul-2023	28-Jul-2023	1060694
Hydrocarbons								
F1 (C6-C10)	----	<100	100	µg/L	E581.F1/C	A 28-Jul-2023	28-Jul-2023	1060695
F1-BTEX	----	<100	100	µg/L	EC580/CG	-	29-Jul-2023	-
F2 (C10-C16)	----	<100	100	µg/L	E601/CG	A 28-Jul-2023	28-Jul-2023	1060590
F3 (C16-C34)	----	<250	250	µg/L	E601/CG	A 28-Jul-2023	28-Jul-2023	1060590
F4 (C34-C50)	----	<250	250	µg/L	E601/CG	A 28-Jul-2023	28-Jul-2023	1060590
Hydrocarbons, total (C6-C50)	----	<400	400	µg/L	EC581/CG	-	29-Jul-2023	-
Hydrocarbons Surrogates								
Bromobenzotrifluoride, 2- (F2-F4 surrogate)	392-83-6	108	1.0	%	E601/CG	A 28-Jul-2023	28-Jul-2023	1060590
Dichlorotoluene, 3,4-	95-75-0	107	1.0	%	E581.F1/C	A 28-Jul-2023	28-Jul-2023	1060695
Volatile Organic Compounds Surrogates								
Bromofluorobenzene, 4-	460-00-4	102	1.0	%	E611A/CG	A 28-Jul-2023	28-Jul-2023	1060694
Difluorobenzene, 1,4-	540-36-3	98.3	1.0	%	E611A/CG	A 28-Jul-2023	28-Jul-2023	1060694
Polycyclic Aromatic Hydrocarbons								
Acenaphthene	83-32-9	<0.010	0.010	µg/L	E641A/CG	A 28-Jul-2023	28-Jul-2023	1060589
Acenaphthylene	208-96-8	<0.010	0.010	µg/L	E641A/CG	A 28-Jul-2023	28-Jul-2023	1060589
Acridine	260-94-6	<0.010	0.010	µg/L	E641A/CG	A 28-Jul-2023	28-Jul-2023	1060589



Analytical Results

FC2302035-001

Sub-Matrix: Water

(Matrix: Water)

Client sample ID: RAW WATER POND ONE

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

Analyte	CAS Number	Result	LOR	Unit	Method/Lab	Prep Date	Analysis Date	QCLot	
Polycyclic Aromatic Hydrocarbons									
Anthracene	120-12-7	<0.010	0.010	µg/L	E641A/CG	A	28-Jul-2023	28-Jul-2023	1060589
Benz(a)anthracene	56-55-3	<0.010	0.010	µg/L	E641A/CG	A	28-Jul-2023	28-Jul-2023	1060589
Benzo(a)pyrene	50-32-8	<0.0050	0.0050	µg/L	E641A/CG	A	28-Jul-2023	28-Jul-2023	1060589
Benzo(b+j)fluoranthene	n/a	<0.010	0.010	µg/L	E641A/CG	A	28-Jul-2023	28-Jul-2023	1060589
Benzo(b+j+k)fluoranthene	n/a	<0.015	0.015	µg/L	E641A/CG	A	28-Jul-2023	28-Jul-2023	1060589
Benzo(g,h,i)perylene	191-24-2	<0.010	0.010	µg/L	E641A/CG	A	28-Jul-2023	28-Jul-2023	1060589
Benzo(k)fluoranthene	207-08-9	<0.010	0.010	µg/L	E641A/CG	A	28-Jul-2023	28-Jul-2023	1060589
Chrysene	218-01-9	<0.010	0.010	µg/L	E641A/CG	A	28-Jul-2023	28-Jul-2023	1060589
Dibenz(a,h)anthracene	53-70-3	<0.0050	0.0050	µg/L	E641A/CG	A	28-Jul-2023	28-Jul-2023	1060589
Fluoranthene	206-44-0	<0.010	0.010	µg/L	E641A/CG	A	28-Jul-2023	28-Jul-2023	1060589
Fluorene	86-73-7	<0.010	0.010	µg/L	E641A/CG	A	28-Jul-2023	28-Jul-2023	1060589
Indeno(1,2,3-c,d)pyrene	193-39-5	<0.010	0.010	µg/L	E641A/CG	A	28-Jul-2023	28-Jul-2023	1060589
Methylnaphthalene, 1-	90-12-0	<0.010	0.010	µg/L	E641A/CG	A	28-Jul-2023	28-Jul-2023	1060589
Methylnaphthalene, 1+2-	----	<0.015	0.015	µg/L	E641A/CG	A	28-Jul-2023	28-Jul-2023	1060589
Methylnaphthalene, 2-	91-57-6	<0.010	0.010	µg/L	E641A/CG	A	28-Jul-2023	28-Jul-2023	1060589
Naphthalene	91-20-3	<0.050	0.050	µg/L	E641A/CG	A	28-Jul-2023	28-Jul-2023	1060589
Phenanthrene	85-01-8	<0.020	0.020	µg/L	E641A/CG	A	28-Jul-2023	28-Jul-2023	1060589
Pyrene	129-00-0	<0.010	0.010	µg/L	E641A/CG	A	28-Jul-2023	28-Jul-2023	1060589
Quinoline	91-22-5	<0.050	0.050	µg/L	E641A/CG	A	28-Jul-2023	28-Jul-2023	1060589
B(a)P total potency equivalents [B(a)P TPE]	----	<0.010	0.010	µg/L	E641A/CG	A	28-Jul-2023	28-Jul-2023	1060589
PAHs, high molecular weight (BC AWQ)	n/a	<0.030	0.03	µg/L	E641A/CG	A	28-Jul-2023	28-Jul-2023	1060589
PAHs, low molecular weight (BC AWQ)	n/a	<0.060	0.06	µg/L	E641A/CG	A	28-Jul-2023	28-Jul-2023	1060589
PAHs, total (CCME sewer 18)	n/a	<0.070	0.07	µg/L	E641A/CG	A	28-Jul-2023	28-Jul-2023	1060589
PAHs, total (EPA 16)	n/a	<0.065	0.065	µg/L	E641A/CG	A	28-Jul-2023	28-Jul-2023	1060589
Polycyclic Aromatic Hydrocarbons Surrogates									
Chrysene-d12	1719-03-5	110	0.1	%	E641A/CG	A	28-Jul-2023	28-Jul-2023	1060589
Naphthalene-d8	1146-65-2	116	0.1	%	E641A/CG	A	28-Jul-2023	28-Jul-2023	1060589
Phenanthrene-d10	1517-22-2	107	0.1	%	E641A/CG	A	28-Jul-2023	28-Jul-2023	1060589

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.