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## CERTIFICATE OF ANALYSIS (GUIDELINE EVALUATION)

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**Work Order** : **CG2301883**  
**Client** : **North Springbank Water Coop Limited**  
**Contact** : Barry Okabe  
**Address** : 196 Lariat Loop  
                   Calgary AB Canada T3Z 1G1  
**Telephone** : 403-863-9521  
**Project** : S4 Q1-2023  
**PO** : NSWC  
**C-O-C number** : 20-923779  
**Sampler** : ----  
**Site** : ----  
**Quote number** : Q85330  
**No. of samples received** : 1  
**No. of samples analysed** : 1

**Page** : 1 of 12  
**Laboratory** : Calgary - Environmental  
**Account Manager** : Patryk Wojciak  
**Address** : 2559 29th Street NE  
                   Calgary, Alberta Canada T1Y 7B5  
**Telephone** : +1 403 407 1800  
**Date Samples Received** : 15-Feb-2023 10:50  
**Date Analysis Commenced** : 15-Feb-2023  
**Issue Date** : 01-Mar-2023 12:31

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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
- Guideline Comparison

**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).**

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## 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>
Amaninder Dhillon	Team Lead - Semi-Volatile Instrumentation	Organics, Waterloo, Ontario
Danielle Gravel	Supervisor - Semi-Volatile Instrumentation	Organics, Waterloo, Ontario
Elke Tabora		Inorganics, Calgary, Alberta
George Huang	Supervisor - Inorganic	Metals, Calgary, Alberta
Greg Pokocky	Supervisor - Inorganic	Inorganics, Waterloo, Ontario
Harpreet Chawla	Team Leader - Inorganics	Inorganics, Calgary, Alberta
Jocelyn Kennedy	Department Manager - Semi-Volatile Organics	Organics, Waterloo, Ontario
Jon Fisher	Department Manager - Inorganics	Inorganics, Waterloo, Ontario
Joshua Stessun	Laboratory Analyst	Organics, Calgary, Alberta
Kate Dimitrova	Analyst	Inorganics, Burnaby, British Columbia
Kevin Baxter	Team Leader - Inorganics	Inorganics, Calgary, Alberta
Maqsood UIHassan	Laboratory Analyst	Organics, Calgary, Alberta
Michelle Michalchuk	Analyst	Organics, Winnipeg, Manitoba
Ruifang Zheng	Analyst	Inorganics, Calgary, Alberta
Sanja Risticcevic	Department Manager - LCMS	LCMS, Waterloo, Ontario
Shirley Li	Team Leader - Inorganics	Inorganics, Calgary, Alberta
Summie Lo	Lab Assistant	Metals, Calgary, Alberta
Sunil Palak		Inorganics, Calgary, 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.

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to fitness for a particular purpose, or non-infringement. ALS assumes no responsibility for errors or omissions in the information. Guidelines are not adjusted for the hardness, pH or temperature of the sample (the most conservative values are used). Measurement uncertainty is not applied to test results prior to comparison with specified criteria values.

Key : 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
CU	colour units (1 cu = 1 mg/l pt)
meq/L	milliequivalents per litre
mg/L	milligrams per litre
pH units	pH units

>: greater than.

<: less than.

Red shading is applied where the result is greater than the Guideline Upper Limit or the result is lower than the Guideline Lower Limit.

For drinking water samples, Red shading is applied where the result for E.coli, fecal or total coliforms is greater than or equal to the Guideline Upper Limit .

## Qualifiers

Qualifier	Description
DLDS	Detection Limit Raised: Dilution required due to high Dissolved Solids / Electrical Conductivity.
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
SRU	Sample Received Unpreserved. Results may be biased low for indicated parameter(s).



## Analytical Results

Analyte	Method	LOR	Unit	Client sample ID							
				Sampling date/time	S4 Q1-2023 SCHEDULE 4	CDWG AO/OG	CDWG MAC				
Sub-Matrix: Water (Matrix: Water)				15-Feb-2023 07:30	CG2301883-001						
<b>Physical Tests</b>											
Colour, true	E329	5.0	CU	<5.0	15 CU	--	--	--	--	--	--
Hardness (as CaCO3), dissolved	EC100	0.50	mg/L	160	80 - 100 mg/L	--	--	--	--	--	--
Conductivity	E100	2.0	µS/cm	854	--	--	--	--	--	--	--
pH	E108	0.10	pH units	8.13	7 - 10.5 pH units	--	--	--	--	--	--
Alkalinity, bicarbonate (as HCO3)	E290	1.0	mg/L	400	--	--	--	--	--	--	--
Alkalinity, carbonate (as CO3)	E290	1.0	mg/L	<1.0	--	--	--	--	--	--	--
Alkalinity, hydroxide (as OH)	E290	1.0	mg/L	<1.0	--	--	--	--	--	--	--
Alkalinity, total (as CaCO3)	E290	2.0	mg/L	328	--	--	--	--	--	--	--
Solids, total dissolved [TDS], calculated	EC103	1.0	mg/L	619	--	--	--	--	--	--	--
<b>Anions and Nutrients</b>											
Ammonia, total (as N)	E298	0.0050	mg/L	<0.0050	--	--	--	--	--	--	--
Chloride	E235.Cl	0.50	mg/L	14.5	250 mg/L	--	--	--	--	--	--
Fluoride	E235.F	0.020	mg/L	0.528	--	1.5 mg/L	--	--	--	--	--
Nitrate (as N)	E235.NO3	0.020	mg/L	0.542	--	10 mg/L	--	--	--	--	--
Nitrite (as N)	E235.NO2	0.010	mg/L	<0.050	DLDS	1 mg/L	--	--	--	--	--
Sulfate (as SO4)	E235.SO4	0.30	mg/L	166	--	--	--	--	--	--	--
Nitrate + Nitrite (as N)	EC235.N+N	0.0500	mg/L	0.542	--	10 mg/L	--	--	--	--	--
<b>Cyanides</b>											
Cyanide, strong acid dissociable (Total)	E333	0.0020	mg/L	<0.0200	DLM	--	--	--	--	--	--
<b>Organic / Inorganic Carbon</b>											
Carbon, total organic [TOC]	E355-L	0.50	mg/L	1.71	--	--	--	--	--	--	--
<b>Inorganics</b>											
Chlorine, free	E327-H	0.10	mg/L	0.40	--	--	--	--	--	--	--
Chlorine, total	E326-H	0.10	mg/L	0.50	--	--	--	--	--	--	--
<b>Total Sulfides</b>											
Sulfide, total (as S)	E395	0.0015	mg/L	<0.0015	--	--	--	--	--	--	--
Sulfide, total (as H2S)	E395	0.0016	mg/L	<0.0016	0.05 mg/L	--	--	--	--	--	--



Analyte	Method	LOR	Unit	CG2301883-001 (Continued)	CDWG AO/OG	CDWG MAC				
<b>Ion Balance</b>										
Anion sum	EC101	0.10	meq/L	10.5	--	--	--	--	--	--
Cation sum	EC101	0.10	meq/L	11.0	--	--	--	--	--	--
Ion balance (APHA)	EC101	0.01	%	2.32	--	--	--	--	--	--
Ion balance (cations/anions)	EC101	0.010	%	105	--	--	--	--	--	--
<b>Total Metals</b>										
Aluminum, total	E420	0.0030	mg/L	0.0049	0.1 mg/L	2.9 mg/L	--	--	--	--
Antimony, total	E420	0.00010	mg/L	<0.00010	--	0.006 mg/L	--	--	--	--
Arsenic, total	E420	0.00010	mg/L	0.00032	--	0.01 mg/L	--	--	--	--
Barium, total	E420	0.00010	mg/L	0.0231	--	2 mg/L	--	--	--	--
Boron, total	E420	0.010	mg/L	0.052	--	5 mg/L	--	--	--	--
Cadmium, total	E420	0.0000050	mg/L	0.0000157	--	0.007 mg/L	--	--	--	--
Calcium, total	E420	0.050	mg/L	29.6	--	--	--	--	--	--
Chromium, total	E420	0.00050	mg/L	<0.00050	--	0.05 mg/L	--	--	--	--
Copper, total	E420	0.00050	mg/L	0.0258	1 mg/L	2 mg/L	--	--	--	--
Iron, total	E420	0.010	mg/L	<0.010	0.3 mg/L	--	--	--	--	--
Lead, total	E420	0.000050	mg/L	0.000282	--	0.005 mg/L	--	--	--	--
Magnesium, total	E420	0.0050	mg/L	23.6	--	--	--	--	--	--
Manganese, total	E420	0.00010	mg/L	0.0100	0.02 mg/L	0.12 mg/L	--	--	--	--
Mercury, total	E508	0.0000050	mg/L	<0.0000050	--	0.001 mg/L	--	--	--	--
Nickel, total	E420	0.00050	mg/L	<0.00050	--	--	--	--	--	--
Potassium, total	E420	0.050	mg/L	2.38	--	--	--	--	--	--
Selenium, total	E420	0.000050	mg/L	0.000323	--	0.05 mg/L	--	--	--	--
Silver, total	E420	0.000010	mg/L	<0.000010	--	--	--	--	--	--
Sodium, total	E420	0.050	mg/L	193	200 mg/L	--	--	--	--	--
Uranium, total	E420	0.000010	mg/L	0.00155	--	0.02 mg/L	--	--	--	--
Zinc, total	E420	0.0030	mg/L	0.0075	5 mg/L	--	--	--	--	--
<b>Dissolved Metals</b>										
Calcium, dissolved	E421	0.050	mg/L	28.6	--	--	--	--	--	--
Iron, dissolved	E421	0.030	mg/L	<0.030	0.3 mg/L	--	--	--	--	--
Magnesium, dissolved	E421	0.0050	mg/L	21.6	--	--	--	--	--	--
Manganese, dissolved	E421	0.00500	mg/L	<0.00500	0.02 mg/L	0.12 mg/L	--	--	--	--
Potassium, dissolved	E421	0.050	mg/L	2.37	--	--	--	--	--	--
Sodium, dissolved	E421	0.050	mg/L	177	200 mg/L	--	--	--	--	--
Dissolved metals filtration location	EP421		-	Laboratory	--	--	--	--	--	--
<b>Aggregate Organics</b>										



Analyte	Method	LOR	Unit	CG2301883-001 (Continued)	CDWG AO/OG	CDWG MAC				
<b>Aggregate Organics - Continued</b>										
Nitritotriacetic acid [NTA]	E394	0.20	mg/L	<0.20	--	0.4 mg/L	--	--	--	--
<b>Volatile Organic Compounds [Drycleaning]</b>										
Carbon tetrachloride	E611F	0.20	µg/L	<0.20	--	5 µg/L	--	--	--	--
Chloroethane	E611F	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloroethane, 1,1-	E611F	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloroethane, 1,2-	E611F	0.50	µg/L	<0.50	--	5 µg/L	--	--	--	--
Dichloroethylene, 1,1-	E611F	0.50	µg/L	<0.50	--	14 µg/L	--	--	--	--
Dichloroethylene, cis-1,2-	E611F	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloroethylene, trans-1,2-	E611F	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloromethane	E611F	1.0	µg/L	<1.0	--	50 µg/L	--	--	--	--
Dichloropropylene, trans-1,3-	E611F	0.50	µg/L	<0.50	--	--	--	--	--	--
Tetrachloroethylene	E611F	0.50	µg/L	<0.50	--	10 µg/L	--	--	--	--
Trichloroethane, 1,1,1-	E611F	0.50	µg/L	<0.50	--	--	--	--	--	--
Trichloroethylene	E611F	0.50	µg/L	<0.50	--	5 µg/L	--	--	--	--
Vinyl chloride	E611F	0.50	µg/L	<0.50	--	2 µg/L	--	--	--	--
Benzene	E611F	0.50	µg/L	<0.50	--	5 µg/L	--	--	--	--
Dibromoethane, 1,2-	E611F	0.20	µg/L	<0.20	--	--	--	--	--	--
Ethylbenzene	E611F	0.50	µg/L	<0.50	1.6 µg/L	140 µg/L	--	--	--	--
Hexane, n-	E611F	0.50	µg/L	<0.50	--	--	--	--	--	--
Isopropylbenzene	E611F	0.50	µg/L	<0.50	--	--	--	--	--	--
Methyl-tert-butyl ether [MTBE]	E611F	0.50	µg/L	<0.50	15 µg/L	--	--	--	--	--
Styrene	E611F	0.50	µg/L	<0.50	--	--	--	--	--	--
Toluene	E611F	0.50	µg/L	<0.50	24 µg/L	60 µg/L	--	--	--	--
Trimethylbenzene, 1,2,4-	E611F	0.50	µg/L	<0.50	--	--	--	--	--	--
Trimethylbenzene, 1,3,5-	E611F	0.50	µg/L	<0.50	--	--	--	--	--	--
Xylene, m+p-	E611F	0.40	µg/L	<0.40	--	--	--	--	--	--
Xylene, o-	E611F	0.30	µg/L	<0.30	--	--	--	--	--	--
Xylenes, total	E611F	0.50	µg/L	<0.50	20 µg/L	90 µg/L	--	--	--	--
Bromodichloromethane	E611F	0.50	µg/L	7.31	--	--	--	--	--	--
Bromoform	E611F	0.50	µg/L	<0.50	--	--	--	--	--	--
Chloroform	E611F	0.50	µg/L	15.7	--	--	--	--	--	--
Dibromochloromethane	E611F	0.50	µg/L	4.62	--	--	--	--	--	--
Acetone	E611F	20	µg/L	<20	--	--	--	--	--	--
Bromobenzene	E611F	0.50	µg/L	<0.50	--	--	--	--	--	--
Bromochloromethane	E611F	0.50	µg/L	<0.50	--	--	--	--	--	--
Bromomethane	E611F	0.50	µg/L	<0.50	--	--	--	--	--	--



Analyte	Method	LOR	Unit	CG2301883-001 (Continued)	CDWG AO/OG	CDWG MAC				
<b>Volatile Organic Compounds - Continued</b>										
Butylbenzene, n-	E611F	0.50	µg/L	<0.50	--	--	--	--	--	--
Butylbenzene, sec-	E611F	0.50	µg/L	<0.50	--	--	--	--	--	--
Butylbenzene, tert-	E611F	0.50	µg/L	<0.50	--	--	--	--	--	--
Carbon disulfide	E611F	0.50	µg/L	<0.50	--	--	--	--	--	--
Chlorobenzene	E611F	0.50	µg/L	<0.50	30 µg/L	--	--	--	--	--
Chloromethane	E611F	2.0	µg/L	<2.0	--	--	--	--	--	--
Chlorotoluene, 2-	E611F	0.50	µg/L	<0.50	--	--	--	--	--	--
Chlorotoluene, 4-	E611F	0.50	µg/L	<0.50	--	--	--	--	--	--
Cymene, p-	E611F	0.50	µg/L	<0.50	--	--	--	--	--	--
Dibromo-3-chloropropane, 1,2-	E611F	0.50	µg/L	<0.50	--	--	--	--	--	--
Dibromomethane	E611F	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichlorobenzene, 1,2-	E611F	0.50	µg/L	<0.50	3 µg/L	--	--	--	--	--
Dichlorobenzene, 1,3-	E611F	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichlorobenzene, 1,4-	E611F	0.50	µg/L	<0.50	1 µg/L	5 µg/L	--	--	--	--
Dichlorodifluoromethane	E611F	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloropropane, 1,2-	E611F	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloropropane, 1,3-	E611F	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloropropane, 2,2-	E611F	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloropropylene, 1,1-	E611F	0.50	µg/L	<0.50	--	--	--	--	--	--
Dichloropropylene, cis+trans-1,3-	E611F	0.75	µg/L	<0.75	--	--	--	--	--	--
Dichloropropylene, cis-1,3-	E611F	0.50	µg/L	<0.50	--	--	--	--	--	--
Hexachlorobutadiene	E611F	0.50	µg/L	<0.50	--	--	--	--	--	--
Hexanone, 2-	E611F	20	µg/L	<20	--	--	--	--	--	--
Methyl ethyl ketone [MEK]	E611F	20	µg/L	<20	--	--	--	--	--	--
Methyl isobutyl ketone [MIBK]	E611F	20	µg/L	<20	--	--	--	--	--	--
Propylbenzene, n-	E611F	0.50	µg/L	<0.50	--	--	--	--	--	--
Tetrachloroethane, 1,1,1,2-	E611F	0.50	µg/L	<0.50	--	--	--	--	--	--
Tetrachloroethane, 1,1,2,2-	E611F	0.50	µg/L	<0.50	--	--	--	--	--	--
Trichlorobenzene, 1,2,3-	E611F	0.50	µg/L	<0.50	--	--	--	--	--	--
Trichlorobenzene, 1,2,4-	E611F	0.50	µg/L	<0.50	--	--	--	--	--	--
Trichloroethane, 1,1,2-	E611F	0.50	µg/L	<0.50	--	--	--	--	--	--
Trichlorofluoromethane	E611F	0.50	µg/L	<0.50	--	--	--	--	--	--
Trichloropropane, 1,2,3-	E611F	0.50	µg/L	<0.50	--	--	--	--	--	--
Trihalomethanes [THMs], total	E611B	2.0	µg/L	27.6	--	100 µg/L	--	--	--	--
Bromofluorobenzene, 4-	E611B	1.0	%	83.0	--	--	--	--	--	--



Analyte	Method	LOR	Unit	CG2301883-001 (Continued)	CDWG AO/OG	CDWG MAC				
<b>Volatile Organic Compounds [THMs] Surrogates - Continued</b>										
Difluorobenzene, 1,4-	E611B	1.0	%	98.3	--	--	--	--	--	--
<b>Volatile Organic Compounds Surrogates</b>										
Bromofluorobenzene, 4-	E611F	1.0	%	83.0	--	--	--	--	--	--
Difluorobenzene, 1,4-	E611F	1.0	%	98.3	--	--	--	--	--	--
<b>Polycyclic Aromatic Hydrocarbons</b>										
Benzo(a)pyrene	E641A	0.0050	µg/L	<0.0050	--	0.04 µg/L	--	--	--	--
Chrysene-d12	E641A	0.1	%	83.4	--	--	--	--	--	--
Naphthalene-d8	E641A	0.1	%	88.8	--	--	--	--	--	--
Phenanthrene-d10	E641A	0.1	%	97.4	--	--	--	--	--	--
<b>Disinfectant By-Products</b>										
Bromate	E722A	0.00030	mg/L	0.00169	--	0.01 mg/L	--	--	--	--
Chlorate	E409.CLO3	0.010	mg/L	0.161	--	1 mg/L	--	--	--	--
Chlorite	E409.CLO2	0.010	mg/L	<0.010	--	1 mg/L	--	--	--	--
<b>Haloacetic Acids</b>										
Bromochloroacetic acid	E750	1.00	µg/L	2.52	--	--	--	--	--	--
Dibromoacetic acid	E750	1.00	µg/L	1.28	--	--	--	--	--	--
Dichloroacetic acid	E750	1.00	µg/L	3.56	--	--	--	--	--	--
Monobromoacetic acid	E750	1.00	µg/L	<1.00	--	--	--	--	--	--
Monochloroacetic acid	E750	1.00	µg/L	<1.00	--	--	--	--	--	--
Trichloroacetic acid	E750	1.00	µg/L	2.83	--	--	--	--	--	--
Haloacetic acids, total [HAA5]	E750	5.00	µg/L	7.67	--	80 µg/L	--	--	--	--
<b>Semi-Volatile Organics</b>										
Nitrosodimethylamine, N- [NDMA]	E725-T	0.00090	µg/L	<0.00090	--	0.04 µg/L	--	--	--	--
<b>Chlorinated Phenolics</b>										
Dichlorophenol, 2,4-	E651D	0.30	µg/L	<0.30	0.3 µg/L	--	--	--	--	--
Pentachlorophenol [PCP]	E651D	0.50	µg/L	<0.50	30 µg/L	60 µg/L	--	--	--	--
Tetrachlorophenol, 2,3,4,6-	E651D	0.50	µg/L	<0.50	1 µg/L	--	--	--	--	--
Trichlorophenol, 2,4,6-	E651D	0.50	µg/L	<0.50	2 µg/L	5 µg/L	--	--	--	--
Tribromophenol, 2,4,6-	E651D	1.0	%	114	--	--	--	--	--	--
<b>Organochlorine Pesticides</b>										
Aldrin	E660F	0.0080	µg/L	<0.0080	--	--	--	--	--	--
Chlordane, cis- (alpha)	E660F	0.0080	µg/L	<0.0080	--	--	--	--	--	--
Chlordane, total	E660F	0.011	µg/L	<0.011	--	--	--	--	--	--
Chlordane, trans- (gamma)	E660F	0.0080	µg/L	<0.0080	--	--	--	--	--	--
DDD, 2,4'-	E660F	0.0040	µg/L	<0.0040	--	--	--	--	--	--



Analyte	Method	LOR	Unit	CG2301883-001 (Continued)	CDWG AO/OG	CDWG MAC				
<b>Organochlorine Pesticides - Continued</b>										
DDD, 4,4'-	E660F	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDD, total	E660F	0.0060	µg/L	<0.0060	--	--	--	--	--	--
DDE, 2,4'-	E660F	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDE, 4,4'-	E660F	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDE, total	E660F	0.0060	µg/L	<0.0060	--	--	--	--	--	--
DDT, 2,4'-	E660F	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDT, 4,4'-	E660F	0.0040	µg/L	<0.0040	--	--	--	--	--	--
DDT, total	E660F	0.0060	µg/L	<0.0060	--	--	--	--	--	--
Dieldrin	E660F	0.0080	µg/L	<0.0080	--	--	--	--	--	--
Endosulfan sulfate	E660F	0.0070	µg/L	<0.0070	--	--	--	--	--	--
Endosulfan, alpha-	E660F	0.0070	µg/L	<0.0070	--	--	--	--	--	--
Endosulfan, beta-	E660F	0.0070	µg/L	<0.0070	--	--	--	--	--	--
Endosulfan, total	E660F	0.010	µg/L	<0.010	--	--	--	--	--	--
Endrin aldehyde	E660F	0.010	µg/L	<0.010	--	--	--	--	--	--
Endrin	E660F	0.010	µg/L	<0.010	--	--	--	--	--	--
Heptachlor epoxide	E660F	0.0080	µg/L	<0.0080	--	--	--	--	--	--
Heptachlor	E660F	0.0080	µg/L	<0.0080	--	--	--	--	--	--
Hexachlorobenzene	E660F	0.0080	µg/L	<0.0080	--	--	--	--	--	--
Hexachlorobutadiene	E660F	0.0080	µg/L	<0.0080	--	--	--	--	--	--
Hexachlorocyclohexane, alpha-	E660F	0.0080	µg/L	<0.0120	DLM	--	--	--	--	--
Hexachlorocyclohexane, beta-	E660F	0.0080	µg/L	<0.0880	DLM	--	--	--	--	--
Hexachlorocyclohexane, delta-	E660F	0.0080	µg/L	<0.0080	--	--	--	--	--	--
Hexachlorocyclohexane, gamma-	E660F	0.0080	µg/L	<0.0080	--	--	--	--	--	--
Hexachlorocyclohexane, total	E660F	0.016	µg/L	<0.090	--	--	--	--	--	--
Hexachloroethane	E660F	0.0080	µg/L	<0.0080	--	--	--	--	--	--
Methoxychlor	E660F	0.0080	µg/L	<0.0080	--	--	--	--	--	--
Mirex	E660F	0.0080	µg/L	<0.0080	--	--	--	--	--	--
Nonachlor, trans-	E660F	0.010	µg/L	<0.010	--	--	--	--	--	--
Oxychlorane	E660F	0.0080	µg/L	<0.0080	--	--	--	--	--	--
Pentachloronitrobenzene	E660F	0.010	µg/L	<0.010	--	--	--	--	--	--
Diuron	E712B	1.0	µg/L	<1.0	SRU	--	--	--	--	--
Aldrin + Dieldrin	E660F	0.011	µg/L	<0.011	--	--	--	--	--	--
DDT + metabolites, total	E660F	0.010	µg/L	<0.010	--	--	--	--	--	--
Heptachlor + Heptachlor epoxide	E660F	0.011	µg/L	<0.011	--	--	--	--	--	--



Analyte	Method	LOR	Unit	CG2301883-001 (Continued)	CDWG AO/OG	CDWG MAC				
<b>Organochlorine Pesticides - Continued</b>										
Decachlorobiphenyl	E660F	0.10	%	72.2	--	--	--	--	--	--
Tetrachloro-m-xylene	E660F	0.10	%	68.5	--	--	--	--	--	--
<b>Herbicides</b>										
Acetic acid, 2-methyl-4-chlorophenoxy- [MCPA]	E706A	0.050	µg/L	<0.050	--	350 µg/L	--	--	--	--
Asulam	E706A	0.010	µg/L	<0.100 DLM	--	--	--	--	--	--
Brodifacoum	E706A	0.010	µg/L	<0.500 DLM	--	--	--	--	--	--
Bromacil	E706A	0.10	µg/L	<0.10	--	--	--	--	--	--
Bromoxynil	E706A	0.050	µg/L	<0.050	--	30 µg/L	--	--	--	--
Butanoic acid, 4- (4-chloro-2-methylphenoxy)- [MCPB]	E706A	0.050	µg/L	<0.050	--	--	--	--	--	--
Clopyralid	E706A	0.10	µg/L	<0.10	--	--	--	--	--	--
Dicamba	E706A	0.10	µg/L	<0.10	--	110 µg/L	--	--	--	--
Dichlorophenoxy(2,4-)butyric acid, 4- [2,4-DB]	E706A	0.050	µg/L	<0.050	--	--	--	--	--	--
Dichlorophenoxyacetic acid, 2,4- [2,4-D]	E706A	0.050	µg/L	<0.050	--	100 µg/L	--	--	--	--
Dichlorprop [2,4-DP]	E706A	0.050	µg/L	<0.050	--	--	--	--	--	--
Diflufenican	E706A	0.010	µg/L	<0.010	--	--	--	--	--	--
Dinoseb	E706A	0.050	µg/L	<0.050	--	--	--	--	--	--
Diquat (ion)	E723A	1.0	µg/L	<1.0	--	70 µg/L	--	--	--	--
Glyphosate	E716A	0.20	µg/L	<0.20	--	280 µg/L	--	--	--	--
Linuron	E706A	0.10	µg/L	<0.10	--	--	--	--	--	--
Mecoprop [MCPD]	E706A	0.050	µg/L	<0.050	--	--	--	--	--	--
Nicarbazin	E706A	0.010	µg/L	<0.010	--	--	--	--	--	--
Oryzalin	E706A	0.050	µg/L	<0.100 DLM	--	--	--	--	--	--
Picloram	E706A	0.10	µg/L	<0.10	--	--	--	--	--	--
Propanil	E706A	0.010	µg/L	<0.010	--	--	--	--	--	--
Terbacil	E706A	0.010	µg/L	<0.010	--	--	--	--	--	--
Trichlorophenoxyacetic acid, 2,4,5- [2,4,5-T]	E706A	0.050	µg/L	<0.050	--	--	--	--	--	--
Trichlorophenoxypropionic acid, 2,4,5- [2,4,5-TP]	E706A	0.050	µg/L	<0.050	--	--	--	--	--	--
Triclopyr	E706A	0.050	µg/L	<0.050	--	--	--	--	--	--
Paraquat (as dichloride)	E723A	1.0	µg/L	<1.0	--	--	--	--	--	--



Analyte	Method	LOR	Unit	CG2301883-001 (Continued)	CDWG AO/OG	CDWG MAC				
<b>Herbicides Surrogates - Continued</b>										
Dichlorophenylacetic acid, 2,4-	E706A	1.0	%	95.5	--	--	--	--	--	--
<b>Pesticides</b>										
Alachlor	E660E-H	0.10	µg/L	<0.10	--	--	--	--	--	--
Ametryn	E660E-H	0.10	µg/L	<0.10	--	--	--	--	--	--
Atrazine	E660E-H	0.10	µg/L	<0.10	--	--	--	--	--	--
Atrazine-desethyl	E660E-H	0.10	µg/L	<0.10	--	--	--	--	--	--
Azinphos-methyl	E660E-H	0.10	µg/L	<0.10	--	--	--	--	--	--
Bendiocarb	E660E-H	0.50	µg/L	<0.50	--	--	--	--	--	--
Carbaryl	E660E-H	0.20	µg/L	<0.20	--	--	--	--	--	--
Carbofuran	E660E-H	0.20	µg/L	<0.20	--	--	--	--	--	--
Chlorpyrifos	E660E-H	0.10	µg/L	<0.10	--	90 µg/L	--	--	--	--
Cyanazine	E660E-H	0.10	µg/L	<0.10	--	--	--	--	--	--
Diazinon	E660E-H	0.10	µg/L	<0.10	--	--	--	--	--	--
Diclofop-methyl	E660E-H	0.10	µg/L	<0.10	--	--	--	--	--	--
Dimethoate	E660E-H	0.10	µg/L	<0.10	--	20 µg/L	--	--	--	--
Fluazifop-p-butyl	E660E-H	0.10	µg/L	<0.10	--	--	--	--	--	--
Malathion	E660E-H	0.10	µg/L	<0.10	--	290 µg/L	--	--	--	--
Metolachlor	E660E-H	0.10	µg/L	<0.10	--	--	--	--	--	--
Metribuzin	E660E-H	0.10	µg/L	<0.10	--	80 µg/L	--	--	--	--
Parathion	E660E-H	0.10	µg/L	<0.10	--	--	--	--	--	--
Parathion-methyl	E660E-H	0.10	µg/L	<0.10	--	--	--	--	--	--
Phorate	E660E-H	0.10	µg/L	<0.10	--	--	--	--	--	--
Prometon	E660E-H	0.10	µg/L	<0.10	--	--	--	--	--	--
Prometryn	E660E-H	0.10	µg/L	<0.10	--	--	--	--	--	--
Propazine	E660E-H	0.10	µg/L	<0.10	--	--	--	--	--	--
Simazine	E660E-H	0.10	µg/L	<0.10	--	--	--	--	--	--
Temephos	E660E-H	1.0	µg/L	<1.0	--	--	--	--	--	--
Terbufos	E660E-H	0.10	µg/L	<0.10	--	--	--	--	--	--
Terbutryn	E660E-H	0.10	µg/L	<0.10	--	--	--	--	--	--
Triallate	E660E-H	0.10	µg/L	<0.10	--	--	--	--	--	--
Trifluralin	E660E-H	0.10	µg/L	<0.10	--	--	--	--	--	--
Atrazine + N-dealkylated metabolites	E660E-H	0.20	µg/L	<0.20	--	5 µg/L	--	--	--	--
Fluorobiphenyl, 2-	E660E-H	0.10	%	79.2	--	--	--	--	--	--
Terphenyl-d14, p-	E660E-H	0.10	%	111	--	--	--	--	--	--
<b>Nitrosamines Surrogates</b>										



Analyte	Method	LOR	Unit	CG2301883-001 (Continued)	CDWG AO/OG	CDWG MAC				
<b>Nitrosamines Surrogates - Continued</b>										
Nitrosodimethylamine-d6, N-	E725-T	0.00090	%	116	--	--	--	--	--	--
<b>Organic Parameters</b>										
Microcystin	E576	0.20	µg/L	<0.20	--	1.5 µg/L	--	--	--	--

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

**Summary of Guideline Breaches by Sample**

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
S4 Q1-2023 SCHEDULE 4	Water	Hardness (as CaCO3), dissolved	Hardness levels between 80 and 100 mg/L (as CaCO3) provide acceptable balance between corrosion and incrustation; where a water softener is used, a separate unsoftened supply for cooking and drinking purposes is recommended.	CDWG	AO/OG	160 mg/L	80-100 mg/L

- Key:**
- CDWG Canada Guidelines for Canadian Drinking Water Quality (JAN, 2023)
  - AO/OG Aesthetic Objective/Operational Guideline
  - MAC Maximum Acceptable Concentrations