CERTIFICATE OF ANALYSIS (GUIDELINE EVALUATION)

Work Order	:	**WP2513295**			
Client	:	**Manitoba Conservation & Climate**	Laboratory	:	ALS Environmental - Winnipeg
Contact	:	Amanda Fewings	Account Manager	:	Sheriza Rajack-Ahamed
Address	:	14 Fultz Boulevard Winnipeg Manitoba Canada R3Y 0L6	Address	:	1329 Niakwa Road East, Unit 12 Winnipeg MB Canada R2J 3T4
Telephone	:	204 795 9614	Telephone	:	+1 204 255 9720
Project	:	Cartier Regional - PWS 36.00	Date Samples Received	:	12-Aug-2025 14:20
PO	:	----	Date Analysis Commenced	:	12-Aug-2025
C-O-C number	:	----	Issue Date	:	20-Aug-2025 13:11
Sampler	:	----			
Site	:	Cartier Regional - PWS 36.00			
Quote number	:	2025 WTP Chemistry			
No. of samples received	:	4			
No. of samples analysed	:	4			

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).

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
Kevin Baxter		Metals, Winnipeg, Manitoba
Kevin Baxter		Inorganics, Winnipeg, Manitoba
Kevin Baxter		Administration, Winnipeg, Manitoba
William Lake		Microbiology, Winnipeg, Manitoba

Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
Cartier Regional 1 - Raw Raw	Water	Colour, true	May interfere with disinfection; removal is important to ensure effective treatment.	CDWG	AO	15.7 CU	15 CU
	Water	Solids, total dissolved [TDS]	Based on taste; TDS above 500 mg/L results in excessive scaling in water pipes, water heaters, boilers and appliances; TDS is composed of calcium, magnesium, sodium, potassium, carbonate, bicarbonate, chloride, sulphate and nitrate.	CDWG	AO	683 mg/L	500 mg/L
	Water	Turbidity	For systems that use groundwater, turbidity should generally be below 1.0 NTU. Filtration systems should be designed and operated to reduce turbidity levels as low as reasonably achievable and strive to achieve a treated water turbidity target from individual filters of less than 0.1 NTU.	CDWG	AO	6.32 NTU	1 NTU
	Water	Manganese, total	Based on taste and staining of laundry and plumbing fixtures.	CDWG	AO	98.1 µg/L	20 µg/L

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.

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).

Unit	*Description*
-	no units
%	percent
% T/cm	% transmittance per centimetre
AU/cm	absorbance units per centimetre
CU	colour units (1 cu = 1 mg/l pt)
meq/L	milliequivalents per litre
mg/L	milligrams per litre
NTU	nephelometric turbidity units
pH units	pH units
µg/L	micrograms per litre
µS/cm	microsiemens per centimetre

>: greater than.
<: less than.

Red shading is applied where the result or the LOR is greater than the Guideline Upper Limit (or lower than the Guideline Lower Limit, if applicable).
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.

Analytical Results Evaluation

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	Cartier Regional 1 - Raw Raw	Cartier Regional 1 - Raw Raw	Cartier Regional 2 - Treated Treated	Cartier Regional 3 - Distribution @ (add from coc) Distribution	----	----	----
				Client sampling date / time	12-Aug-2025 11:00	12-Aug-2025 11:00	12-Aug-2025 11:15	12-Aug-2025 11:00	----	----	----
				Sub-Matrix	Water	Water	Water	Water	----	----	----
					WP2513295-001	WP2513295-002	WP2513295-003	WP2513295-004	----	----	----
					Result	Result	Result	Result	----	----	----
Field Tests											
Chlorine, free, field	7782-50-5	EF001/WP	mg/L		----	----	1.82	1.42	----	----	----
Chlorine, total, field	7782-50-5	EF001/WP	mg/L		----	----	2.00	1.51	----	----	----
Sample Preparation											
Dissolved carbon filtration location	----	EP358/WP	-		lab	----	lab	----	----	----	----
Physical Tests											
Absorbance, UV (@ 254nm)	----	E404/WP	AU/cm		0.217	----	0.0290	----	----	----	----
Alkalinity, bicarbonate (as CaCO3)	----	E290/WP	mg/L		248	----	80.8	----	----	----	----
Alkalinity, carbonate (as CaCO3)	----	E290/WP	mg/L		22.4	----	<1.0	----	----	----	----
Alkalinity, hydroxide (as CaCO3)	----	E290/WP	mg/L		<1.0	----	<1.0	----	----	----	----
Alkalinity, total (as CaCO3)	----	E290/WP	mg/L		271	----	80.8	----	----	----	----
Colour, true	----	E329/WP	CU		15.7	----	<5.0	----	----	----	----
Conductivity	----	E100/WP	µS/cm		1070	----	317	----	----	----	----
Hardness (as CaCO3), from total Ca/Mg	----	EC100A/WP	mg/L		388	----	68.2	----	----	----	----
Langelier index (@ 4°C)	----	EC105A/WP	-		1.05	----	-0.617	----	----	----	----
Langelier index (@ 60°C)	----	EC105A/WP	-		1.79	----	0.153	----	----	----	----
pH	----	E108/WP	pH units		8.53	----	8.00	----	----	----	----
Solids, total dissolved [TDS]	----	E162-L/WP	mg/L		683	----	164	----	----	----	----
Turbidity	----	E121/WP	NTU		6.32	----	<0.10	----	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Cartier Regional 1 - Raw Raw	Cartier Regional 1 - Raw Raw	Cartier Regional 2 - Treated Treated	Cartier Regional 3 - Distribution @ (add from coc) Distribution	----	----	----
Client sampling date / time				12-Aug-2025 11:00	12-Aug-2025 11:00	12-Aug-2025 11:15	12-Aug-2025 11:00	----	----	----
Sub-Matrix				Water	Water	Water	Water	----	----	----
				WP2513295-001	**WP2513295-002**	**WP2513295-003**	**WP2513295-004**	----	----	----
				Result	Result	Result	Result	----	----	----
Physical Tests										
Transmittance, UV (@ 254nm)	----	E404/WP	% T/cm	60.7	----	93.5	----	----	----	----
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/WP	mg/L	0.0806	----	<0.0050	----	----	----	----
Bromide	24959-67-9	E235.Br-L/WP	mg/L	0.108	----	0.0078	----	----	----	----
Chloride	16887-00-6	E235.Cl-L/WP	mg/L	37.9	----	16.0	----	----	----	----
Fluoride	16984-48-8	E235.F/WP	mg/L	0.140	----	0.294	----	----	----	----
Nitrate (as N)	14797-55-8	E235.NO3-L/WP	mg/L	0.163	----	0.118	----	----	----	----
Nitrite (as N)	14797-65-0	E235.NO2-L/WP	mg/L	0.0064	----	<0.0010	----	----	----	----
Sulfate (as SO4)	14808-79-8	E235.SO4/WP	mg/L	263	----	50.1	----	----	----	----
Organic / Inorganic Carbon										
Carbon, dissolved organic [DOC]	----	E358-L/WP	mg/L	9.43	----	1.78	----	----	----	----
Carbon, total organic [TOC]	----	E355-L/WP	mg/L	9.59	----	1.80	----	----	----	----
Ion Balance										
Anion sum	----	EC101A/WP	meq/L	12.0	----	3.13	----	----	----	----
Cation sum (total)	----	EC101A/WP	meq/L	11.5	----	3.02	----	----	----	----
Ion balance (cations/anions)	----	EC101A/WP	%	95.8	----	96.5	----	----	----	----
Ion balance (APHA)	----	EC101A/WP	%	-2.13	----	-1.79	----	----	----	----
Total Metals										
Aluminum, total	7429-90-5	E420/WP	µg/L	78.8	----	6.0	10.8	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	Cartier Regional 1 - Raw Raw	Cartier Regional 1 - Raw Raw	Cartier Regional 2 - Treated Treated	Cartier Regional 3 - Distribution @ (add from coc) Distribution	----	----	----
				Client sampling date / time	12-Aug-2025 11:00	12-Aug-2025 11:00	12-Aug-2025 11:15	12-Aug-2025 11:00	----	----	----
				Sub-Matrix	Water	Water	Water	Water	----	----	----
					WP2513295-001	WP2513295-002	WP2513295-003	WP2513295-004	----	----	----
					Result	Result	Result	Result	----	----	----
Total Metals											
Antimony, total	7440-36-0	E420/WP	µg/L		0.37	----	0.078	0.081	----	----	----
Arsenic, total	7440-38-2	E420/WP	µg/L		8.02	----	1.25	1.36	----	----	----
Barium, total	7440-39-3	E420/WP	µg/L		62.4	----	11.2	12.2	----	----	----
Beryllium, total	7440-41-7	E420/WP	µg/L		0.0012	----	Not Detected	Not Detected	----	----	----
Bismuth, total	7440-69-9	E420/WP	µg/L		0.0010	----	0.0018	Not Detected	----	----	----
Boron, total	7440-42-8	E420/WP	µg/L		142	----	133	131	----	----	----
Cadmium, total	7440-43-9	E420/WP	µg/L		0.0088	----	Not Detected	Not Detected	----	----	----
Calcium, total	7440-70-2	E420/WP	µg/L		70900	----	12700	13300	----	----	----
Cesium, total	7440-46-2	E420/WP	µg/L		0.014	----	0.0036	0.0063	----	----	----
Chromium, total	7440-47-3	E420/WP	µg/L		0.15	----	Not Detected	0.051	----	----	----
Cobalt, total	7440-48-4	E420/WP	µg/L		0.20	----	0.020	0.022	----	----	----
Copper, total	7440-50-8	E420/WP	µg/L		24.0	----	18.0	3.64	----	----	----
Iron, total	7439-89-6	E420/WP	µg/L		87	----	Not Detected	1.2	----	----	----
Lead, total	7439-92-1	E420/WP	µg/L		0.072	----	0.0059	0.048	----	----	----
Lithium, total	7439-93-2	E420/WP	µg/L		73.9	----	25.9	27.0	----	----	----
Magnesium, total	7439-95-4	E420/WP	µg/L		51200	----	8870	9550	----	----	----
Manganese, total	7439-96-5	E420/WP	µg/L		98.1	----	13.1	9.52	----	----	----
Molybdenum, total	7439-98-7	E420/WP	µg/L		4.04	----	0.692	0.709	----	----	----
Nickel, total	7440-02-0	E420/WP	µg/L		2.67	----	0.46	0.34	----	----	----

Matrix: Water

Analyte	CAS Number	Method/Lab	Unit	Client sample ID	Cartier Regional 1 - Raw Raw	Cartier Regional 1 - Raw Raw	Cartier Regional 2 - Treated Treated	Cartier Regional 3 - Distribution @ (add from coc) Distribution	----	----	----
				Client sampling date / time	12-Aug-2025 11:00	12-Aug-2025 11:00	12-Aug-2025 11:15	12-Aug-2025 11:00	----	----	----
				Sub-Matrix	Water	Water	Water	Water	----	----	----
					WP2513295-001	WP2513295-002	WP2513295-003	WP2513295-004	----	----	----
					Result	Result	Result	Result	----	----	----
Total Metals											
Phosphorus, total	7723-14-0	E420/WP	µg/L		283	----	414	427	----	----	----
Potassium, total	7440-09-7	E420/WP	µg/L		15200	----	4710	5030	----	----	----
Rubidium, total	7440-17-7	E420/WP	µg/L		3.32	----	1.01	1.14	----	----	----
Selenium, total	7782-49-2	E420/WP	µg/L		0.463	----	0.108	0.090	----	----	----
Silicon, total	7440-21-3	E420/WP	µg/L		9470	----	3600	3700	----	----	----
Silver, total	7440-22-4	E420/WP	µg/L		Not Detected	----	Not Detected	0.0020	----	----	----
Sodium, total	7440-23-5	E420/WP	µg/L		77600	----	35400	37600	----	----	----
Strontium, total	7440-24-6	E420/WP	µg/L		350	----	63.6	69.3	----	----	----
Sulfur, total	7704-34-9	E420/WP	µg/L		99100	----	18200	18000	----	----	----
Tellurium, total	13494-80-9	E420/WP	µg/L		0.027	----	Not Detected	Not Detected	----	----	----
Thallium, total	7440-28-0	E420/WP	µg/L		0.012	----	0.0021	Not Detected	----	----	----
Thorium, total	7440-29-1	E420/WP	µg/L		0.018	----	Not Detected	Not Detected	----	----	----
Tin, total	7440-31-5	E420/WP	µg/L		Not Detected	----	Not Detected	0.011	----	----	----
Titanium, total	7440-32-6	E420/WP	µg/L		3.93	----	0.042	0.058	----	----	----
Tungsten, total	7440-33-7	E420/WP	µg/L		Not Detected	----	Not Detected	Not Detected	----	----	----
Uranium, total	7440-61-1	E420/WP	µg/L		3.18	----	0.471	0.514	----	----	----
Vanadium, total	7440-62-2	E420/WP	µg/L		3.65	----	0.73	0.76	----	----	----
Zinc, total	7440-66-6	E420/WP	µg/L		14.4	----	1.3	Not Detected	----	----	----

Matrix: Water			Client sample ID	Cartier Regional 1 - Raw Raw	Cartier Regional 1 - Raw Raw	Cartier Regional 2 - Treated Treated	Cartier Regional 3 - Distribution @ (add from coc) Distribution	----	----	----
			Client sampling date / time	12-Aug-2025 11:00	12-Aug-2025 11:00	12-Aug-2025 11:15	12-Aug-2025 11:00	----	----	----
			Sub-Matrix	Water	Water	Water	Water	----	----	----
Analyte	CAS Number	Method/Lab	Unit	WP2513295-001	WP2513295-002	WP2513295-003	WP2513295-004	----	----	----
				Result	Result	Result	Result	----	----	----
Total Metals										
Zirconium, total	7440-67-7	E420/WP	µg/L	0.22	----	Not Detected	Not Detected	----	----	----
Organic Parameters										
Microcystin	101043-37-2	E576/WP	µg/L	----	<0.15	----	----	----	----	----

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

Summary of Guideline Limits

Analyte	CAS Number	Unit	CDWG AO	CDWG MAC	CDWG OG				
Field Tests									
Chlorine, free, field	7782-50-5	mg/L	----	----	----	----	----	----	----
Chlorine, total, field	7782-50-5	mg/L	----	----	----	----	----	----	----
Sample Preparation									
Dissolved carbon filtration location	----	-	----	----	----	----	----	----	----
Physical Tests									
Absorbance, UV (@ 254nm)		AU/cm	----	----	----	----	----	----	----
Alkalinity, bicarbonate (as CaCO3)	----	mg/L	----	----	----	----	----	----	----
Alkalinity, carbonate (as CaCO3)		mg/L	----	----	----	----	----	----	----
Alkalinity, hydroxide (as CaCO3)		mg/L	----	----	----	----	----	----	----
Alkalinity, total (as CaCO3)		mg/L	----	----	----	----	----	----	----
Colour, true		CU	**15 CU**	----	----	----	----	----	----
Conductivity	----	µS/cm	----	----	----	----	----	----	----
Hardness (as CaCO3), from total Ca/Mg		mg/L	----	----	----	----	----	----	----
Langelier index (@ 4°C)		-	----	----	----	----	----	----	----
Langelier index (@ 60°C)		-	----	----	----	----	----	----	----
pH	----	pH units	----	----	**7 - 10.5 pH units**	----	----	----	----
Solids, total dissolved [TDS]		mg/L	**500 mg/L**	----	----	----	----	----	----
Turbidity	----	NTU	**1 NTU**	----	----	----	----	----	----
Transmittance, UV (@ 254nm)		% T/cm	----	----	----	----	----	----	----
Anions and Nutrients									
Ammonia, total (as N)	7664-41-7	mg/L	----	----	----	----	----	----	----
Bromide	24959-67-9	mg/L	----	----	----	----	----	----	----
Chloride	16887-00-6	mg/L	**250 mg/L**	----	----	----	----	----	----

Fluoride	16984-48-8	mg/L	----	**1.5 mg/L**	----	----	----	----	----
Nitrate (as N)	14797-55-8	mg/L	----	**10 mg/L**	----	----	----	----	----
Nitrite (as N)	14797-65-0	mg/L	----	**1 mg/L**	----	----	----	----	----
Sulfate (as SO4)	14808-79-8	mg/L	**500 mg/L**	----	----	----	----	----	----
Organic / Inorganic Carbon									
Carbon, dissolved organic [DOC]		mg/L	----	----	----	----	----	----	----
Carbon, total organic [TOC]		mg/L	----	----	----	----	----	----	----
Ion Balance									
Anion sum		meq/L	----	----	----	----	----	----	----
Cation sum (total)	----	meq/L	----	----	----	----	----	----	----
Ion balance (cations/anions)	----	%	----	----	----	----	----	----	----
Ion balance (APHA)	----	%	----	----	----	----	----	----	----
Total Metals									
Aluminum, total	7429-90-5	µg/L	----	**2900 µg/L**	**100 µg/L**	----	----	----	----
Antimony, total	7440-36-0	µg/L	----	**6 µg/L**	----	----	----	----	----
Arsenic, total	7440-38-2	µg/L	----	**10 µg/L**	----	----	----	----	----
Barium, total	7440-39-3	µg/L	----	**2000 µg/L**	----	----	----	----	----
Beryllium, total	7440-41-7	µg/L	----	----	----	----	----	----	----
Bismuth, total	7440-69-9	µg/L	----	----	----	----	----	----	----
Boron, total	7440-42-8	µg/L	----	**5000 µg/L**	----	----	----	----	----
Cadmium, total	7440-43-9	µg/L	----	**7 µg/L**	----	----	----	----	----
Calcium, total	7440-70-2	µg/L	----	----	----	----	----	----	----
Cesium, total	7440-46-2	µg/L	----	----	----	----	----	----	----
Chromium, total	7440-47-3	µg/L	----	**50 µg/L**	----	----	----	----	----
Cobalt, total	7440-48-4	µg/L	----	----	----	----	----	----	----
Copper, total	7440-50-8	µg/L	**1000 µg/L**	**2000 µg/L**	----	----	----	----	----
Iron, total	7439-89-6	µg/L	**100 µg/L**	----	----	----	----	----	----
Lead, total	7439-92-1	µg/L	----	**5 µg/L**	----	----	----	----	----

Lithium, total	7439-93-2	µg/L	----	----	----	----	----	----	----
Magnesium, total	7439-95-4	µg/L	----	----	----	----	----	----	----
Manganese, total	7439-96-5	µg/L	**20 µg/L**	**120 µg/L**	----	----	----	----	----
Molybdenum, total	7439-98-7	µg/L	----	----	----	----	----	----	----
Nickel, total	7440-02-0	µg/L	----	----	----	----	----	----	----
Phosphorus, total	7723-14-0	µg/L	----	----	----	----	----	----	----
Potassium, total	7440-09-7	µg/L	----	----	----	----	----	----	----
Rubidium, total	7440-17-7	µg/L	----	----	----	----	----	----	----
Selenium, total	7782-49-2	µg/L	----	**50 µg/L**	----	----	----	----	----
Silicon, total	7440-21-3	µg/L	----	----	----	----	----	----	----
Silver, total	7440-22-4	µg/L	----	----	----	----	----	----	----
Sodium, total	7440-23-5	µg/L	**200000 µg/L**	----	----	----	----	----	----
Strontium, total	7440-24-6	µg/L	----	**7000 µg/L**	----	----	----	----	----
Sulfur, total	7704-34-9	µg/L	----	----	----	----	----	----	----
Tellurium, total	13494-80-9	µg/L	----	----	----	----	----	----	----
Thallium, total	7440-28-0	µg/L	----	----	----	----	----	----	----
Thorium, total	7440-29-1	µg/L	----	----	----	----	----	----	----
Tin, total	7440-31-5	µg/L	----	----	----	----	----	----	----
Titanium, total	7440-32-6	µg/L	----	----	----	----	----	----	----
Tungsten, total	7440-33-7	µg/L	----	----	----	----	----	----	----
Uranium, total	7440-61-1	µg/L	----	**20 µg/L**	----	----	----	----	----
Vanadium, total	7440-62-2	µg/L	----	----	----	----	----	----	----
Zinc, total	7440-66-6	µg/L	**5000 µg/L**	----	----	----	----	----	----
Zirconium, total	7440-67-7	µg/L	----	----	----	----	----	----	----
Organic Parameters									
Microcystin	101043-37-2	µg/L	----	**1.5 µg/L**	----	----	----	----	----

Key:

CDWG		Canada Guidelines for Canadian Drinking Water Quality (JAN, 2023)
	AO	Aesthetic Objective
	MAC	Maximum Acceptable Concentrations
	OG	Operational Guidance

ALS Canada Ltd.

right solutions.
right partner.

QUALITY CONTROL INTERPRETIVE REPORT

Work Order	: **WP2513295**	Page	: 1 of 12
Client	: **Manitoba Conservation & Climate**	Laboratory	: ALS Environmental - Winnipeg
Contact	: Amanda Fewings	Account Manager	: Sheriza Rajack-Ahamed
Address	: 14 Fultz Boulevard Winnipeg MB Canada R3Y 0L6	Address	: 1329 Niakwa Road East, Unit 12 Winnipeg, Manitoba Canada R2J 3T4
Telephone	: 204 795 9614	Telephone	: +1 204 255 9720
Project	: Cartier Regional - PWS 36.00	Date Samples Received	: 12-Aug-2025 14:20
PO	: ----	Issue Date	: 20-Aug-2025 13:11
C-O-C number	: ----		
Sampler	: ----		
Site	: Cartier Regional - PWS 36.00		
Quote number	: 2025 WTP Chemistry		
No. of samples received	: 4		
No. of samples analysed	: 4		

This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

Key

Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
DQO: Data Quality Objective.
LOR: Limit of Reporting (detection limit).
RPD: Relative Percent Difference.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Summary of Outliers

Outliers : Quality Control Samples

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- No Matrix Spike outliers occur.
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- Analysis Holding Time Outliers exist - please see following pages for full details.

Outliers : Frequency of Quality Control Samples

- Quality Control Sample Frequency Outliers occur - please see following pages for full details.

Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: **Water** Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Aggregate Organics : Microcystin by ELISA (Extraction by Sonication)										
Amber glass vial Cartier Regional 1 - Raw - Raw	E576	12-Aug-2025	----	----	----		15-Aug-2025	14 days	3 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) Cartier Regional 1 - Raw - Raw	E298	12-Aug-2025	18-Aug-2025	28 days	6 days	✓	18-Aug-2025	28 days	6 days	✓
Anions and Nutrients : Ammonia by Fluorescence										
Amber glass total (sulfuric acid) Cartier Regional 2 - Treated - Treated	E298	12-Aug-2025	18-Aug-2025	28 days	6 days	✓	18-Aug-2025	28 days	6 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE Cartier Regional 1 - Raw - Raw	E235.Br-L	12-Aug-2025	13-Aug-2025	28 days	1 days	✓	13-Aug-2025	28 days	1 days	✓
Anions and Nutrients : Bromide in Water by IC (Low Level)										
HDPE Cartier Regional 2 - Treated - Treated	E235.Br-L	12-Aug-2025	13-Aug-2025	28 days	1 days	✓	13-Aug-2025	28 days	1 days	✓
Anions and Nutrients : Chloride in Water by IC (Low Level)										
HDPE Cartier Regional 1 - Raw - Raw	E235.Cl-L	12-Aug-2025	13-Aug-2025	28 days	1 days	✓	13-Aug-2025	28 days	1 days	✓
Anions and Nutrients : Chloride in Water by IC (Low Level)										
HDPE Cartier Regional 2 - Treated - Treated	E235.Cl-L	12-Aug-2025	13-Aug-2025	28 days	1 days	✓	13-Aug-2025	28 days	1 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Anions and Nutrients : Fluoride in Water by IC										
HDPE										
Cartier Regional 1 - Raw - Raw	E235.F	12-Aug-2025	13-Aug-2025	28 days	1 days	✓	13-Aug-2025	28 days	1 days	✓
Anions and Nutrients : Fluoride in Water by IC										
HDPE										
Cartier Regional 2 - Treated - Treated	E235.F	12-Aug-2025	13-Aug-2025	28 days	1 days	✓	13-Aug-2025	28 days	1 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE										
Cartier Regional 1 - Raw - Raw	E235.NO3-L	12-Aug-2025	13-Aug-2025	3 days	1 days	✓	13-Aug-2025	3 days	1 days	✓
Anions and Nutrients : Nitrate in Water by IC (Low Level)										
HDPE										
Cartier Regional 2 - Treated - Treated	E235.NO3-L	12-Aug-2025	13-Aug-2025	3 days	1 days	✓	13-Aug-2025	3 days	1 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE										
Cartier Regional 1 - Raw - Raw	E235.NO2-L	12-Aug-2025	13-Aug-2025	3 days	1 days	✓	13-Aug-2025	3 days	1 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)										
HDPE										
Cartier Regional 2 - Treated - Treated	E235.NO2-L	12-Aug-2025	13-Aug-2025	3 days	1 days	✓	13-Aug-2025	3 days	1 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
Cartier Regional 1 - Raw - Raw	E235.SO4	12-Aug-2025	13-Aug-2025	28 days	1 days	✓	13-Aug-2025	28 days	1 days	✓
Anions and Nutrients : Sulfate in Water by IC										
HDPE										
Cartier Regional 2 - Treated - Treated	E235.SO4	12-Aug-2025	13-Aug-2025	28 days	1 days	✓	13-Aug-2025	28 days	1 days	✓
Field Tests : Field pH,EC,Salinity, TDS, Cl2,ClO2,ORP,DO, Turbidity,T,T-P,o-PO4,NH3,Chloramine										
HDPE total (nitric acid)										
Cartier Regional 2 - Treated - Treated	EF001	12-Aug-2025	----	----	----		18-Aug-2025	----	----	

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Field Tests : Field pH,EC,Salinity, TDS, Cl2,ClO2,ORP,DO, Turbidity,T,T-P,o-PO4,NH3,Chloramine										
HDPE total (nitric acid)										
Cartier Regional 3 - Distribution @ (add from coc) - Distribution	EF001	12-Aug-2025	----	----	----		18-Aug-2025	----	----	
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass - dissolved (field filtered/sulfuric acid)										
Cartier Regional 1 - Raw - Raw	E358-L	12-Aug-2025	12-Aug-2025	28 days	0 days	✓	14-Aug-2025	28 days	0 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)										
Amber glass - dissolved (field filtered/sulfuric acid)										
Cartier Regional 2 - Treated - Treated	E358-L	12-Aug-2025	12-Aug-2025	28 days	0 days	✓	14-Aug-2025	28 days	0 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid)										
Cartier Regional 1 - Raw - Raw	E355-L	12-Aug-2025	12-Aug-2025	28 days	0 days	✓	14-Aug-2025	28 days	0 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)										
Amber glass total (sulfuric acid)										
Cartier Regional 2 - Treated - Treated	E355-L	12-Aug-2025	12-Aug-2025	28 days	0 days	✓	14-Aug-2025	28 days	0 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE										
Cartier Regional 1 - Raw - Raw	E290	12-Aug-2025	13-Aug-2025	14 days	1 days	✓	13-Aug-2025	14 days	1 days	✓
Physical Tests : Alkalinity Species by Titration										
HDPE										
Cartier Regional 2 - Treated - Treated	E290	12-Aug-2025	13-Aug-2025	14 days	1 days	✓	13-Aug-2025	14 days	1 days	✓
Physical Tests : Colour (True) by Spectrometer (5 CU)										
HDPE										
Cartier Regional 1 - Raw - Raw	E329	12-Aug-2025	14-Aug-2025	3 days	2 days	✓	14-Aug-2025	3 days	2 days	✓
Physical Tests : Colour (True) by Spectrometer (5 CU)										
HDPE										
Cartier Regional 2 - Treated - Treated	E329	12-Aug-2025	14-Aug-2025	3 days	2 days	✓	14-Aug-2025	3 days	2 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : Conductivity in Water										
HDPE										
Cartier Regional 1 - Raw - Raw	E100	12-Aug-2025	13-Aug-2025	28 days	1 days	✓	13-Aug-2025	28 days	1 days	✓
Physical Tests : Conductivity in Water										
HDPE										
Cartier Regional 2 - Treated - Treated	E100	12-Aug-2025	13-Aug-2025	28 days	1 days	✓	13-Aug-2025	28 days	1 days	✓
Physical Tests : pH by Meter										
HDPE										
Cartier Regional 2 - Treated - Treated	E108	12-Aug-2025	13-Aug-2025	0.25 hrs	23 hrs	× EHTR-FM	13-Aug-2025	0.25 hrs	23 hrs	× EHTR-FM
Physical Tests : pH by Meter										
HDPE										
Cartier Regional 1 - Raw - Raw	E108	12-Aug-2025	13-Aug-2025	0.25 hrs	24 hrs	× EHTR-FM	13-Aug-2025	0.25 hrs	24 hrs	× EHTR-FM
Physical Tests : TDS by Gravimetry (Low Level)										
HDPE										
Cartier Regional 1 - Raw - Raw	E162-L	12-Aug-2025	----	----	----		14-Aug-2025	7 days	2 days	✓
Physical Tests : TDS by Gravimetry (Low Level)										
HDPE										
Cartier Regional 2 - Treated - Treated	E162-L	12-Aug-2025	----	----	----		14-Aug-2025	7 days	2 days	✓
Physical Tests : Turbidity by Nephelometry										
HDPE										
Cartier Regional 1 - Raw - Raw	E121	12-Aug-2025	----	----	----		13-Aug-2025	3 days	1 days	✓
Physical Tests : Turbidity by Nephelometry										
HDPE										
Cartier Regional 2 - Treated - Treated	E121	12-Aug-2025	----	----	----		13-Aug-2025	3 days	1 days	✓
Physical Tests : UV Absorbance and Transmittance by Spectrometry										
HDPE										
Cartier Regional 1 - Raw - Raw	E404	12-Aug-2025	----	----	----		15-Aug-2025	3 days	3 days	✓

Matrix: **Water**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	Method	Sampling Date	Extraction / Preparation				Analysis			
			Preparation Date	Holding Times Rec	Holding Times Actual	Eval	Analysis Date	Holding Times Rec	Holding Times Actual	Eval
Physical Tests : UV Absorbance and Transmittance by Spectrometry										
HDPE										
Cartier Regional 2 - Treated - Treated	E404	12-Aug-2025	----	----	----		15-Aug-2025	3 days	3 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE total (nitric acid)										
Cartier Regional 1 - Raw - Raw	E420	12-Aug-2025	18-Aug-2025	180 days	6 days	✓	18-Aug-2025	180 days	6 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE total (nitric acid)										
Cartier Regional 2 - Treated - Treated	E420	12-Aug-2025	18-Aug-2025	180 days	6 days	✓	18-Aug-2025	180 days	6 days	✓
Total Metals : Total Metals in Water by CRC ICPMS										
HDPE total (nitric acid)										
Cartier Regional 3 - Distribution @ (add from coc) - Distribution	E420	12-Aug-2025	18-Aug-2025	180 days	6 days	✓	18-Aug-2025	180 days	6 days	✓

Legend & Qualifier Definitions

EHTR-FM: Exceeded ALS recommended hold time prior to sample receipt. Field Measurement recommended

Rec. HT: ALS recommended hold time (see units).

Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Water**

Evaluation: × = QC frequency outside specification; ✓ = QC frequency within specification.

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Duplicates (DUP)							
Conductivity in Water	E100	2158420	1	16	6.2	5.0	✓
pH by Meter	E108	2158419	1	18	5.5	5.0	✓
Turbidity by Nephelometry	E121	2158483	1	13	7.6	5.0	✓
TDS by Gravimetry (Low Level)	E162-L	2158698	1	20	5.0	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	2159636	0	2	0.0	5.0	×
Chloride in Water by IC (Low Level)	E235.Cl-L	2159637	0	2	0.0	5.0	×
Fluoride in Water by IC	E235.F	2159631	0	10	0.0	5.0	×
Nitrite in Water by IC (Low Level)	E235.NO2-L	2159639	0	6	0.0	5.0	×
Nitrate in Water by IC (Low Level)	E235.NO3-L	2159638	0	6	0.0	5.0	×
Sulfate in Water by IC	E235.SO4	2159633	1	11	9.0	5.0	✓
Alkalinity Species by Titration	E290	2158421	1	17	5.8	5.0	✓
Ammonia by Fluorescence	E298	2165912	1	18	5.5	5.0	✓
Colour (True) by Spectrometer (5 CU)	E329	2161184	1	20	5.0	5.0	✓
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L	2159655	1	20	5.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	2160000	1	20	5.0	5.0	✓
UV Absorbance and Transmittance by Spectrometry	E404	2163681	1	20	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	2165917	0	15	0.0	5.0	×
Microcystin by ELISA (Extraction by Sonication)	E576	2162336	1	14	7.1	5.0	✓
Laboratory Control Samples (LCS)							
Conductivity in Water	E100	2158420	1	16	6.2	5.0	✓
pH by Meter	E108	2158419	1	18	5.5	5.0	✓
Turbidity by Nephelometry	E121	2158483	1	13	7.6	5.0	✓
TDS by Gravimetry (Low Level)	E162-L	2158698	1	20	5.0	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	2159636	1	2	50.0	5.0	✓
Chloride in Water by IC (Low Level)	E235.Cl-L	2159637	1	2	50.0	5.0	✓
Fluoride in Water by IC	E235.F	2159631	1	10	10.0	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	2159639	1	6	16.6	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	2159638	1	6	16.6	5.0	✓
Sulfate in Water by IC	E235.SO4	2159633	1	11	9.0	5.0	✓
Alkalinity Species by Titration	E290	2158421	1	17	5.8	5.0	✓
Ammonia by Fluorescence	E298	2165912	1	18	5.5	5.0	✓
Colour (True) by Spectrometer (5 CU)	E329	2161184	1	20	5.0	5.0	✓
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L	2159655	1	20	5.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	2160000	1	20	5.0	5.0	✓
UV Absorbance and Transmittance by Spectrometry	E404	2163681	1	20	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	2165917	1	15	6.6	5.0	✓

Matrix: **Water**

Evaluation: × = QC frequency outside specification; ✓ = QC frequency within specification.

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Control Samples (LCS) - Continued							
Microcystin by ELISA (Extraction by Sonication)	E576	2162336	1	14	7.1	5.0	✓
Method Blanks (MB)							
Conductivity in Water	E100	2158420	1	16	6.2	5.0	✓
Turbidity by Nephelometry	E121	2158483	1	13	7.6	5.0	✓
TDS by Gravimetry (Low Level)	E162-L	2158698	1	20	5.0	5.0	✓
Bromide in Water by IC (Low Level)	E235.Br-L	2159636	1	2	50.0	5.0	✓
Chloride in Water by IC (Low Level)	E235.Cl-L	2159637	1	2	50.0	5.0	✓
Fluoride in Water by IC	E235.F	2159631	1	10	10.0	5.0	✓
Nitrite in Water by IC (Low Level)	E235.NO2-L	2159639	1	6	16.6	5.0	✓
Nitrate in Water by IC (Low Level)	E235.NO3-L	2159638	1	6	16.6	5.0	✓
Sulfate in Water by IC	E235.SO4	2159633	1	11	9.0	5.0	✓
Alkalinity Species by Titration	E290	2158421	1	17	5.8	5.0	✓
Ammonia by Fluorescence	E298	2165912	1	18	5.5	5.0	✓
Colour (True) by Spectrometer (5 CU)	E329	2161184	1	20	5.0	5.0	✓
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L	2159655	1	20	5.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	2160000	1	20	5.0	5.0	✓
UV Absorbance and Transmittance by Spectrometry	E404	2163681	1	20	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	2165917	1	15	6.6	5.0	✓
Microcystin by ELISA (Extraction by Sonication)	E576	2162336	1	14	7.1	5.0	✓
Matrix Spikes (MS)							
Bromide in Water by IC (Low Level)	E235.Br-L	2159636	0	2	0.0	5.0	×
Chloride in Water by IC (Low Level)	E235.Cl-L	2159637	0	2	0.0	5.0	×
Fluoride in Water by IC	E235.F	2159631	0	10	0.0	5.0	×
Nitrite in Water by IC (Low Level)	E235.NO2-L	2159639	0	6	0.0	5.0	×
Nitrate in Water by IC (Low Level)	E235.NO3-L	2159638	0	6	0.0	5.0	×
Sulfate in Water by IC	E235.SO4	2159633	1	11	9.0	5.0	✓
Ammonia by Fluorescence	E298	2165912	1	18	5.5	5.0	✓
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L	2159655	1	20	5.0	5.0	✓
Dissolved Organic Carbon by Combustion (Low Level)	E358-L	2160000	1	20	5.0	5.0	✓
Total Metals in Water by CRC ICPMS	E420	2165917	0	15	0.0	5.0	×
Microcystin by ELISA (Extraction by Sonication)	E576	2162336	1	14	7.1	5.0	✓

Methodology References and Summaries

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. Reference methods may incorporate modifications to improve performance (indicated by "mod").

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Conductivity in Water	E100 ALS Environmental - Winnipeg	Water	APHA 2510 (mod)	Conductivity, also known as Electrical Conductivity (EC) or Specific Conductance, is measured by immersion of a conductivity cell with platinum electrodes into a water sample. Conductivity measurements are temperature-compensated to 25°C.
pH by Meter	E108 ALS Environmental - Winnipeg	Water	APHA 4500-H (mod)	pH is determined by potentiometric measurement with a pH electrode, and is conducted at ambient laboratory temperature (normally 20 ± 5°C). For high accuracy test results, pH should be measured in the field within the recommended 15 minute hold time.
Turbidity by Nephelometry	E121 ALS Environmental - Winnipeg	Water	APHA 2130 B (mod)	Turbidity is measured by the nephelometric method, by measuring the intensity of light scatter under defined conditions.
TDS by Gravimetry (Low Level)	E162-L ALS Environmental - Winnipeg	Water	APHA 2540 C (mod)	Total Dissolved Solids (TDS) are determined by filtering a sample through a glass fibre filter, with evaporation of the filtrate at 180 ± 2°C for 16 hours or to constant weight, with gravimetric measurement of the residue.
Bromide in Water by IC (Low Level)	E235.Br-L ALS Environmental - Winnipeg	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Chloride in Water by IC (Low Level)	E235.Cl-L ALS Environmental - Winnipeg	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Fluoride in Water by IC	E235.F ALS Environmental - Winnipeg	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Nitrite in Water by IC (Low Level)	E235.NO2-L ALS Environmental - Winnipeg	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Nitrate in Water by IC (Low Level)	E235.NO3-L ALS Environmental - Winnipeg	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.
Sulfate in Water by IC	E235.SO4 ALS Environmental - Winnipeg	Water	EPA 300.1 (mod)	Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Alkalinity Species by Titration	E290 ALS Environmental - Winnipeg	Water	APHA 2320 B (mod)	Total alkalinity is determined by potentiometric titration to a pH 4.5 endpoint. Bicarbonate, carbonate and hydroxide alkalinity are calculated from phenolphthalein alkalinity and total alkalinity values.
Ammonia by Fluorescence	E298 ALS Environmental - Winnipeg	Water	Method Fialab 100, 2018	Ammonia in water is determined by automated continuous flow analysis with membrane diffusion and fluorescence detection, after reaction with OPA (ortho-phthalaldehyde). This method is approved under US EPA 40 CFR Part 136 (May 2021)
Colour (True) by Spectrometer (5 CU)	E329 ALS Environmental - Winnipeg	Water	APHA 2120 C (mod)	Colour (True Colour) is determined by filtering a sample through a 0.45 micron membrane filter followed by analysis of the filtrate using the platinum-cobalt colourimetric method. Colour measurements can be highly pH dependent, and apply to the pH of the sample as received (at time of testing), without pH adjustment.
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L ALS Environmental - Winnipeg	Water	APHA 5310 B (mod)	Total Organic Carbon (Non-Purgeable), also known as NPOC (total), is a direct measurement of TOC after an acidified sample has been purged to remove carbonate-based Inorganic Carbon (IC). Analysis is by high temperature combustion with infrared detection of CO2. Forms of carbon associated with inorganic or organic molecules (e.g. SCN and CN) are included in NPOC if they are not removed by purging under acidic conditions. Notably, NPOC excludes most volatile organic compounds and free cyanide. For samples where the majority of Total Carbon is inorganic, this method provides greater accuracy and reliability versus the TOC by subtraction method (TC minus TIC).
Dissolved Organic Carbon by Combustion (Low Level)	E358-L ALS Environmental - Winnipeg	Water	APHA 5310 B (mod)	Dissolved Organic Carbon (Non-Purgeable), also known as NPOC (dissolved), is a direct measurement of DOC after a filtered (0.45 micron) sample has been acidified and purged to remove inorganic carbon (IC). Analysis is by high temperature combustion with infrared detection of CO2. NPOC does not include volatile organic species that are purged off with IC. For samples where the majority of DC (dissolved carbon) is comprised of IC (which is common), this method is more accurate and more reliable than the DOC by subtraction method (i.e. DC minus DIC).
UV Absorbance and Transmittance by Spectrometry	E404 ALS Environmental - Winnipeg	Water	APHA 5910 B (mod)	UV Absorbance is determined by first filtering a sample through a 0.45 micron filter, followed by UV absorbance measurement in a quartz cell at 254 nm. The analysis is carried out without pH adjustment.
Total Metals in Water by CRC ICPMS	E420 ALS Environmental - Winnipeg	Water	EPA 200.2/6020B (mod)	Water samples are digested with nitric and hydrochloric acids, and analyzed by Collision/Reaction Cell ICPMS. Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.
Microcystin by ELISA (Extraction by Sonication)	E576 ALS Environmental - Winnipeg	Water	ENVIROLOGIX QUANTIPLATE KIT CAT. EP022	Total Microcystins (intraceller and extraceller) in aqueous matrices is determined by the Enzyme-Linked ImmunoSorbent Assay (ELISA) method. Extraction is by sonication

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Hardness (Calculated) from Total Ca/Mg	EC100A ALS Environmental - Winnipeg	Water	APHA 2340B	"Hardness (as CaCO3), from total Ca/Mg" is calculated from the sum of total Calcium and Magnesium concentrations, expressed as $CaCO_3$ equivalents. "Total Hardness" refers to the sum of Calcium and Magnesium Hardness. Hardness is normally or preferentially calculated from dissolved Calcium and Magnesium concentrations, because hardness is a property of water due to dissolved divalent cations. In non-turbid waters, Hardness from total Ca/Mg is normally comparable to Dissolved Hardness, but may be biased high if particulate forms of Ca or Mg are present.
Ion Balance using Total Metals	EC101A ALS Environmental - Winnipeg	Water	APHA 1030E	Cation Sum (using total metals), Anion Sum, and Ion Balance are calculated based on guidance from APHA Standard Methods (1030E Checking Correctness of Analysis). Minor ions are included where data is present. Ion Balance cannot be calculated accurately for waters with very low electrical conductivity (EC).
Saturation Index using Laboratory pH (Ca-T)	EC105A ALS Environmental - Winnipeg	Water	APHA 2330B	Langelier Index provides an indication of scale formation potential at a given pH and temperature, and is calculated as per APHA 2330B Saturation Index. Positive values indicate oversaturation with respect to CaCO3. Negative values indicate undersaturation of CaCO3. This calculation uses laboratory pH measurements and provides estimates of Langelier Index at temperatures of 4, 15, 20, 25, 66, and 77°C. Ryznar Stability Index is an alternative index used for scale formation and corrosion potential.
Field pH,EC,Salinity, TDS, Cl2,ClO2,ORP,DO, Turbidity,T,T-P,o-PO4,NH3,Chloramine	EF001 ALS Environmental - Winnipeg	Water	Field Measurement (Client Supplied)	Field pH,EC,Salinity, TDS, Cl2,ClO2,ORP,DO, Turbidity,T,T-P,o-PO4,NH3 or Chloramine measurements provided by client and recorded on ALS report may affect the validity of results.

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Preparation for Ammonia	EP298 ALS Environmental - Winnipeg	Water		Sample preparation for Preserved Nutrients Water Quality Analysis.
Preparation for Total Organic Carbon by Combustion	EP355 ALS Environmental - Winnipeg	Water		Preparation for Total Organic Carbon by Combustion
Preparation for Dissolved Organic Carbon for Combustion	EP358 ALS Environmental - Winnipeg	Water	APHA 5310 B (mod)	Preparation for Dissolved Organic Carbon

QUALITY CONTROL REPORT

Work Order	: **WP2513295**	Page	: 1 of 9
Client	: Manitoba Conservation & Climate	Laboratory	: ALS Environmental - Winnipeg
Contact	: Amanda Fewings	Account Manager	: Sheriza Rajack-Ahamed
Address	: 36.00 - Cartier Regional - PWS Box 217 St. Eustache MB Canada R0H 1H0	Address	: 1329 Niakwa Road East, Unit 12 Winnipeg, Manitoba Canada R2J 3T4
Telephone	: 204 795 9614	Telephone	: +1 204 255 9720
Project	: Cartier Regional - PWS 36.00	Date Samples Received	: 12-Aug-2025 14:20
PO	: ----	Date Analysis Commenced	: 12-Aug-2025
C-O-C number	: ----	Issue Date	: 20-Aug-2025 13:05
Sampler	: ----		
Site	: Cartier Regional - PWS 36.00		
Quote number	: 2025 WTP Chemistry		
No. of samples received	: 4		
No. of samples analysed	: 4		

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 Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Matrix Spike (MS) Report; Recovery and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
Kevin Baxter	Supervisor - Inorganic	Winnipeg Administration, Winnipeg, Manitoba
Kevin Baxter	Supervisor - Inorganic	Winnipeg Inorganics, Winnipeg, Manitoba
Kevin Baxter	Supervisor - Inorganic	Winnipeg Metals, Winnipeg, Manitoba
William Lake	Laboratory Supervisor	Winnipeg Microbiology, Winnipeg, Manitoba

General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
DQO = Data Quality Objective.
LOR = Limit of Reporting (detection limit).
RPD = Relative Percent Difference
# = Indicates a QC result that did not meet the ALS DQO.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

Sub-Matrix: **Water**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Physical Tests (QC Lot: 2158419)											
WP2513281-001	Anonymous	pH	----	E108	0.10	pH units	8.51	8.52	0.117%	4%	----
Physical Tests (QC Lot: 2158420)											
WP2513281-001	Anonymous	Conductivity	----	E100	1.0	µS/cm	1010	1010	0.297%	10%	----
Physical Tests (QC Lot: 2158421)											
WP2513281-001	Anonymous	Alkalinity, total (as CaCO3)	----	E290	1.0	mg/L	140	138	1.30%	20%	----
Physical Tests (QC Lot: 2158483)											
WP2513344-002	Anonymous	Turbidity	----	E121	0.10	NTU	0.46	0.46	0.007	Diff <2x LOR	----
Physical Tests (QC Lot: 2158698)											
WP2513282-001	Anonymous	Solids, total dissolved [TDS]	----	E162-L	15.0	mg/L	384	377	1.97%	20%	----
Physical Tests (QC Lot: 2161184)											
WP2513295-001	Cartier Regional 1 - Raw Raw	Colour, true	----	E329	5.0	CU	15.7	14.2	1.5	Diff <2x LOR	----
Physical Tests (QC Lot: 2163681)											
WP2513295-001	Cartier Regional 1 - Raw Raw	Absorbance, UV (@ 254nm)	----	E404	0.0050	AU/cm	0.217	0.217	0.00%	20%	----
Anions and Nutrients (QC Lot: 2159633)											
WP2513282-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	46.5	46.6	0.0885%	20%	----
Anions and Nutrients (QC Lot: 2165912)											
WP2513228-004	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.0050	mg/L	0.442	0.442	0.156%	20%	----
Organic / Inorganic Carbon (QC Lot: 2159655)											
WP2513055-001	Anonymous	Carbon, total organic [TOC]	----	E355-L	0.50	mg/L	9.89	9.50	4.01%	20%	----
Organic / Inorganic Carbon (QC Lot: 2160000)											
WP2513295-001	Cartier Regional 1 - Raw Raw	Carbon, dissolved organic [DOC]	----	E358-L	0.50	mg/L	9.43	9.46	0.395%	20%	----
Aggregate Organics (QC Lot: 2162336)											
CG2511213-003	Anonymous	Microcystin	101043-37-2	E576	0.15	µg/L	<0.15	<0.15	0	Diff <2x LOR	----

Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests (QCLot: 2158420)						
Conductivity	----	E100	1	µS/cm	<1.0	----
Physical Tests (QCLot: 2158421)						
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	<1.0	----
Physical Tests (QCLot: 2158483)						
Turbidity	----	E121	0.1	NTU	<0.10	----
Physical Tests (QCLot: 2158698)						
Solids, total dissolved [TDS]	----	E162-L	3	mg/L	<3.0	----
Physical Tests (QCLot: 2161184)						
Colour, true	----	E329	5	CU	<5.0	----
Physical Tests (QCLot: 2163681)						
Absorbance, UV (@ 254nm)	----	E404	0.005	AU/cm	<0.0050	----
Anions and Nutrients (QCLot: 2159631)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients (QCLot: 2159633)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Anions and Nutrients (QCLot: 2159636)						
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	<0.050	----
Anions and Nutrients (QCLot: 2159637)						
Chloride	16887-00-6	E235.Cl-L	0.1	mg/L	<0.10	----
Anions and Nutrients (QCLot: 2159638)						
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	<0.0050	----
Anions and Nutrients (QCLot: 2159639)						
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	<0.0010	----
Anions and Nutrients (QCLot: 2165912)						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	----
Organic / Inorganic Carbon (QCLot: 2159655)						
Carbon, total organic [TOC]	----	E355-L	0.5	mg/L	<0.50	----
Organic / Inorganic Carbon (QCLot: 2160000)						
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	<0.50	----
Total Metals (QCLot: 2165917)						
Aluminum, total	7429-90-5	E420	0.003	mg/L	<0.0030	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	<0.00010	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Total Metals (QCLot: 2165917) - continued						
Arsenic, total	7440-38-2	E420	0.0001	mg/L	<0.00010	----
Barium, total	7440-39-3	E420	0.0001	mg/L	<0.00010	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	<0.000020	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	<0.000050	----
Boron, total	7440-42-8	E420	0.01	mg/L	<0.010	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	<0.0000050	----
Calcium, total	7440-70-2	E420	0.05	mg/L	<0.050	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	<0.000010	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	<0.00050	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	<0.00010	----
Copper, total	7440-50-8	E420	0.0005	mg/L	<0.00050	----
Iron, total	7439-89-6	E420	0.01	mg/L	<0.010	----
Lead, total	7439-92-1	E420	0.00005	mg/L	<0.000050	----
Lithium, total	7439-93-2	E420	0.001	mg/L	<0.0010	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	<0.0050	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	<0.00010	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	<0.000050	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	<0.00050	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	<0.050	----
Potassium, total	7440-09-7	E420	0.05	mg/L	<0.050	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	<0.00020	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	<0.000050	----
Silicon, total	7440-21-3	E420	0.1	mg/L	<0.10	----
Silver, total	7440-22-4	E420	0.00001	mg/L	<0.000010	----
Sodium, total	7440-23-5	E420	0.05	mg/L	<0.050	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	<0.00020	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	<0.50	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	<0.00020	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	<0.000010	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	<0.00010	----
Tin, total	7440-31-5	E420	0.0001	mg/L	<0.00010	----
Titanium, total	7440-32-6	E420	0.0003	mg/L	<0.00030	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	<0.00010	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	<0.000010	----
Vanadium, total	7440-62-2	E420	0.0005	mg/L	<0.00050	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Total Metals (QCLot: 2165917) - continued						
Zinc, total	7440-66-6	E420	0.003	mg/L	<0.0030	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	<0.00020	----
Aggregate Organics (QCLot: 2162336)						
Microcystin	101043-37-2	E576	0.15	µg/L	<0.15	----

Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Physical Tests (QCLot: 2158419)									
pH	----	E108	----	pH units	7 pH units	101	98.0	102	----
Physical Tests (QCLot: 2158420)									
Conductivity	----	E100	1	µS/cm	1410 µS/cm	100	90.0	110	----
Physical Tests (QCLot: 2158421)									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	100 mg/L	100	85.0	115	----
Physical Tests (QCLot: 2158483)									
Turbidity	----	E121	0.1	NTU	200 NTU	98.0	85.0	115	----
Physical Tests (QCLot: 2158698)									
Solids, total dissolved [TDS]	----	E162-L	3	mg/L	1000 mg/L	95.7	85.0	115	----
Physical Tests (QCLot: 2161184)									
Colour, true	----	E329	5	CU	250 CU	102	85.0	115	----
Physical Tests (QCLot: 2163681)									
Absorbance, UV (@ 254nm)	----	E404	0.005	AU/cm	0.544 AU/cm	97.4	85.0	115	----
Anions and Nutrients (QCLot: 2159631)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	98.7	90.0	110	----
Anions and Nutrients (QCLot: 2159633)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	100	90.0	110	----
Anions and Nutrients (QCLot: 2159636)									
Bromide	24959-67-9	E235.Br-L	0.05	mg/L	0.5 mg/L	100	85.0	115	----
Anions and Nutrients (QCLot: 2159637)									
Chloride	16887-00-6	E235.Cl-L	0.1	mg/L	100 mg/L	99.5	90.0	110	----
Anions and Nutrients (QCLot: 2159638)									
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	2.5 mg/L	99.6	90.0	110	----
Anions and Nutrients (QCLot: 2159639)									
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	0.5 mg/L	99.1	90.0	110	----
Anions and Nutrients (QCLot: 2165912)									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	109	85.0	115	----
Organic / Inorganic Carbon (QCLot: 2159655)									
Carbon, total organic [TOC]	----	E355-L	0.5	mg/L	8.57 mg/L	101	80.0	120	----
Organic / Inorganic Carbon (QCLot: 2160000)									

Sub-Matrix: **Water**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Organic / Inorganic Carbon (QCLot: 2160000) - continued									
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	8.57 mg/L	102	80.0	120	----
Total Metals (QCLot: 2165917)									
Aluminum, total	7429-90-5	E420	0.003	mg/L	2 mg/L	100	80.0	120	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	1 mg/L	101	80.0	120	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	1 mg/L	103	80.0	120	----
Barium, total	7440-39-3	E420	0.0001	mg/L	0.25 mg/L	97.8	80.0	120	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	0.1 mg/L	102	80.0	120	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	1 mg/L	97.1	80.0	120	----
Boron, total	7440-42-8	E420	0.01	mg/L	1 mg/L	97.1	80.0	120	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	0.1 mg/L	99.3	80.0	120	----
Calcium, total	7440-70-2	E420	0.05	mg/L	50 mg/L	95.8	80.0	120	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	0.05 mg/L	99.4	80.0	120	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	0.25 mg/L	100	80.0	120	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	0.25 mg/L	101	80.0	120	----
Copper, total	7440-50-8	E420	0.0005	mg/L	0.25 mg/L	101	80.0	120	----
Iron, total	7439-89-6	E420	0.01	mg/L	1 mg/L	100	80.0	120	----
Lead, total	7439-92-1	E420	0.00005	mg/L	0.5 mg/L	93.9	80.0	120	----
Lithium, total	7439-93-2	E420	0.001	mg/L	0.25 mg/L	106	80.0	120	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	50 mg/L	107	80.0	120	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	0.25 mg/L	99.0	80.0	120	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	0.25 mg/L	99.4	80.0	120	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	0.5 mg/L	97.7	80.0	120	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	10 mg/L	104	80.0	120	----
Potassium, total	7440-09-7	E420	0.05	mg/L	50 mg/L	100	80.0	120	----
Rubidium, total	7440-17-7	E420	0.0002	mg/L	0.1 mg/L	102	80.0	120	----
Selenium, total	7782-49-2	E420	0.00005	mg/L	1 mg/L	98.9	80.0	120	----
Silicon, total	7440-21-3	E420	0.1	mg/L	10 mg/L	106	80.0	120	----
Silver, total	7440-22-4	E420	0.00001	mg/L	0.1 mg/L	89.0	80.0	120	----
Sodium, total	7440-23-5	E420	0.05	mg/L	50 mg/L	99.2	80.0	120	----
Strontium, total	7440-24-6	E420	0.0002	mg/L	0.25 mg/L	97.6	80.0	120	----
Sulfur, total	7704-34-9	E420	0.5	mg/L	50 mg/L	95.4	80.0	120	----
Tellurium, total	13494-80-9	E420	0.0002	mg/L	0.1 mg/L	99.4	80.0	120	----
Thallium, total	7440-28-0	E420	0.00001	mg/L	1 mg/L	94.5	80.0	120	----
Thorium, total	7440-29-1	E420	0.0001	mg/L	0.1 mg/L	97.7	80.0	120	----
Tin, total	7440-31-5	E420	0.0001	mg/L	0.5 mg/L	98.7	80.0	120	----

Sub-Matrix: **Water**

Analyte	CAS Number	Method	LOR	Unit	Laboratory Control Sample (LCS) Report: Spike: Target Concentration	Recovery (%): LCS	Recovery Limits (%): Low	Recovery Limits (%): High	Qualifier
Total Metals (QCLot: 2165917) - continued									
Titanium, total	7440-32-6	E420	0.0003	mg/L	0.25 mg/L	99.6	80.0	120	----
Tungsten, total	7440-33-7	E420	0.0001	mg/L	0.1 mg/L	99.9	80.0	120	----
Uranium, total	7440-61-1	E420	0.00001	mg/L	0.005 mg/L	96.3	80.0	120	----
Vanadium, total	7440-62-2	E420	0.0005	mg/L	0.5 mg/L	103	80.0	120	----
Zinc, total	7440-66-6	E420	0.003	mg/L	0.5 mg/L	97.4	80.0	120	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	0.1 mg/L	98.1	80.0	120	----
Aggregate Organics (QCLot: 2162336)									
Microcystin	101043-37-2	E576	0.15	µg/L	0.5 µg/L	74.2	60.0	140	----

Matrix Spike (MS) Report

A Matrix Spike (MS) is a randomly selected intra-laboratory replicate sample that has been fortified (spiked) with test analytes at known concentration, and processed in an identical manner to test samples. Matrix Spikes provide information regarding analyte recovery and potential matrix effects. MS DQO exceedances due to sample matrix may sometimes be unavoidable; in such cases, test results for the associated sample (or similar samples) may be subject to bias. ND – Recovery not determined, background level >= 1x spike level.

Sub-Matrix: **Water**

Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Matrix Spike (MS) Report: Spike: Concentration	Spike: Target	Recovery (%): MS	Recovery Limits (%): Low	Recovery Limits (%): High	Qualifier
Anions and Nutrients (QCLot: 2159633)										
WP2513282-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	96.4 mg/L	100 mg/L	96.4	75.0	125	----
Anions and Nutrients (QCLot: 2165912)										
WP2513228-004	Anonymous	Ammonia, total (as N)	7664-41-7	E298	ND mg/L	----	ND	75.0	125	----
Organic / Inorganic Carbon (QCLot: 2159655)										
WP2513055-002	Anonymous	Carbon, total organic [TOC]	----	E355-L	4.84 mg/L	5 mg/L	96.9	70.0	130	----
Organic / Inorganic Carbon (QCLot: 2160000)										
WP2513295-003	Cartier Regional 2 - Treated Treated	Carbon, dissolved organic [DOC]	----	E358-L	5.03 mg/L	5 mg/L	101	70.0	130	----
Aggregate Organics (QCLot: 2162336)										
CG2511213-003	Anonymous	Microcystin	101043-37-2	E576	0.60 µg/L	1 µg/L	59.6	50.0	150	----

Chain of Custody (COC)
Manitoba Drinking Water Systems

Regular Service (default):	☐ Regular Service (is 5-7 Days):
Unless otherwise requested	☐ 1 Day, rush / priority ☐ 2 Day, rush / priority ☐ 3 Day, rush / priority

Report to Operator (email PDF):	
Contact:	Grant McGorman
Address:	Box 217, St. Eustache, MB R0H 1H0
Phone:	(204) 353-4055
Email:	gmcgorman@crwc.ca; cartierwtp@crwc.ca;

Report to Owner (email PDF):	
Contact:	Danielle Vaillant
Address:	6000 Portage Avenue, Headingley, MB R4H 1E8
Phone:	(204) 832-2555
Email:	admin@crwc.ca; mwsb3@gov.mb.ca; dvaillant@crwc.ca

Email PDF copy to:	
DWO:	Mujibur Rahman
DWO Address:	309-25 Tupper St. N, Portage la Prairie, MB
DWO Phone:	(204) 340-3423
COA Email:	odw.invoices@gov.mb.ca
EDD Email:	wqemsdata@gov.mb.ca

If an update in Owner or Operator contact information is required, please contact your Drinking Water Officer

Client / Project Information:	**Lab:**	**Account:**	Agency Code: 382	Report Type: EMS (Lab-MWS)	Project: DWQ-C

Operation Name:	CARTIER REGIONAL - PWS
Operation Code:	36.00
Operation ID:	28128
Sampled by:	Parker Page

Expected Sample Time: August-2025

Please record Free & Total Chlorine residuals for Distribution By-product Sampling

DO NOT COPY or RE-USE this form. Sample Number are unique to the Office of Drinking Water and provided by Drinking Water Officer.

Sample Number	Station Number	Sample Identification	Free Chlorine (mg/L)	Total Chlorine (mg/L)	Sample Date dd-mmm-yyyy	Sample Time hh:mm	Sample Matrix	Sample Type	MB-CH-PWS-V2013	MB-MET-T-CCMS	MB-Microcystin	# of Containers
2508MR5061	MB05MJD041	Cartier Regional 1 - Raw	—	—	12-Aug-2025	11:00	6	1	X			4
2508MR5062	MB05MJD041	Cartier Regional 1 - Raw	—	—	12-Aug-2025	11:00	6	1			X	2
2508MR5063	MB05MJD042	Cartier Regional 2 - Treated	1.82	2.00	12-Aug-2025	11:15	10	1	X			4
2508MR5064	MB05MJD043	Cartier Regional 3 - Distribution @mid-point Elm bank	1.42	1.31	12-Aug-2025	11:00	9	1		X		1

Environmental Division Winnipeg
Work Order Reference
WP2513295

Telephone +1 204 255 9720

Failure to complete all portions of this form may delay analysis.	Sample Matrix: 6-Raw Water, 9-Distributed Water,
Please fill in this form LEGIBLY.	Sample Type: 1-Grab Sample

By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified by the Laboratory.
For ALL other testing, please use Laboratory specific forms.

Relinquished By:	Parker Page	Date & Time	August 12, 2025 2:00PM	Validated By (lab use only):	Date & Tim
				Sample Condition (lab use only)	
Received By: (lab use only)	[illegible]	Date & Time: (lab use only)	12 AUG 2025 14:20	Temperature: 16.1	Samples Received in Good Condition