

CERTIFICATE OF ANALYSIS (GUIDELINE EVALUATION)

Work Order	: WP2613244		
Client	: Manitoba Conservation & Climate	Laboratory	: ALS Environmental - Winnipeg
Contact	: Amrith Kumar	Account Manager	: Sheriza Rajack-Ahamed
Address	: 14 Fultz Boulevard	Address	: 1329 Niakwa Road East, Unit 12
	: Winnipeg Manitoba Canada R3Y 0L6		: Winnipeg MB Canada R2J 3T4
Telephone	: 204 340 3423	Telephone	: +1 204 255 9720
Project	: Headingley Regional - PWS 89.40	Date Samples Received	: 05-Aug-2026 13:22
PO	: ----	Date Analysis Commenced	: 05-Aug-2026
C-O-C number	: ----	Issue Date	: 13-Aug-2026 13:02
Sampler	: ----		
Site	: Headingley Regional - PWS 89.40		
Quote number	: 2026 WTP Chemistry		
No. of samples received	: 3		
No. of samples analysed	: 3		

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
Rhovee Guevarra		Metals, Winnipeg, Manitoba
Rhovee Guevarra		Inorganics, Winnipeg, Manitoba



Summary of Guideline Breaches by Sample

SampleID/Client ID	Matrix	Analyte	Analyte Summary	Guideline	Category	Result	Limit
Headingley Regional 1 - Raw Raw	Water	Colour, true	May interfere with disinfection; removal is important to ensure effective treatment.	CDWG	AO	45.9 CU	15 CU
	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	24.5 NTU	1 NTU
	Water	Iron, total	Based on taste and staining of laundry and plumbing fixtures; no evidence exists of dietary iron toxicity in the general population.	CDWG	AO	681 µg/L	100 µg/L
	Water	Manganese, total	Based on taste and staining of laundry and plumbing fixtures.	CDWG	AO	101 µg/L	20 µg/L
	Water	Aluminum, total	The OG value is established to minimize the potential for the distribution system and to avoid other operational and aesthetic issues. It takes treatment achievability into consideration.	CDWG	OG	363 µg/L	100 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

Client sample ID				Headingley Regional 3 - Distribution @mid-point Distribution	Headingley Regional 1 - Raw Raw	Headingley Regional 2 - Treated Treated	----	----	----	----
Client sampling date / time				05-Aug-2026 11:07	05-Aug-2026 08:01	05-Aug-2026 07:49	----	----	----	----
Sub-Matrix				Water	Water	Water	----	----	----	----
Analyte	CAS Number	Method/Lab	Unit	WP2613244-001	WP2613244-002	WP2613244-003	----	----	----	----
				Result	Result	Result	----	----	----	----
Sample Preparation										
Dissolved carbon filtration location	----	EP358/WP	-	----	lab	lab	----	----	----	----
Physical Tests										
Absorbance, UV (@ 254nm)	----	E404/WP	AU/cm	----	0.454	0.0300	----	----	----	----
Alkalinity, bicarbonate (as CaCO3)	----	E290/WP	mg/L	----	218	43.1	----	----	----	----
Alkalinity, carbonate (as CaCO3)	----	E290/WP	mg/L	----	15.6	<1.0	----	----	----	----
Alkalinity, hydroxide (as CaCO3)	----	E290/WP	mg/L	----	<1.0	<1.0	----	----	----	----
Alkalinity, total (as CaCO3)	----	E290/WP	mg/L	----	234	43.1	----	----	----	----
Colour, true	----	E329/WP	CU	----	45.9	<5.0	----	----	----	----
Conductivity	----	E100/WP	µS/cm	----	704	140	----	----	----	----
Hardness (as CaCO3), from total Ca/Mg	----	EC100A/WP	mg/L	----	288	33.8	----	----	----	----
Langelier index (@ 4°C)	----	EC105A/WP	-	----	0.864	-1.53	----	----	----	----
Langelier index (@ 60°C)	----	EC105A/WP	-	----	1.61	-0.755	----	----	----	----
pH	----	E108/WP	pH units	----	8.44	7.57	----	----	----	----
Solids, total dissolved [TDS]	----	E162-L/WP	mg/L	----	495	85.5	----	----	----	----
Turbidity	----	E121/WP	NTU	----	24.5	<0.10	----	----	----	----
Transmittance, UV (@ 254nm)	----	E404/WP	% T/cm	----	35.2	93.3	----	----	----	----
Anions and Nutrients										
Ammonia, total (as N)	7664-41-7	E298/WP	mg/L	----	0.0929	<0.0050	----	----	----	----



Matrix: Water

				Client sample ID	Headingley Regional 3 - Distribution @mid-point Distribution	Headingley Regional 1 - Raw Raw	Headingley Regional 2 - Treated Treated	----	----	----	----
Client sampling date / time					05-Aug-2026 11:07	05-Aug-2026 08:01	05-Aug-2026 07:49	----	----	----	----
Sub-Matrix					Water	Water	Water	----	----	----	----
Analyte	CAS Number	Method/Lab	Unit		WP2613244-001	WP2613244-002	WP2613244-003	----	----	----	----
					Result	Result	Result	----	----	----	----
Anions and Nutrients											
Bromide	24959-67-9	E235.Br-T/WP	mg/L	----	0.052	<0.010	----	----	----	----	----
Chloride	16887-00-6	E235.Cl-L/WP	mg/L	----	15.0	6.51	----	----	----	----	----
Fluoride	16984-48-8	E235.F/WP	mg/L	----	0.164	0.033	----	----	----	----	----
Nitrate (as N)	14797-55-8	E235.NO3-L/WP	mg/L	----	0.321	0.174	----	----	----	----	----
Nitrite (as N)	14797-65-0	E235.NO2-L/WP	mg/L	----	0.0116	<0.0010	----	----	----	----	----
Sulfate (as SO4)	14808-79-8	E235.SO4/W P	mg/L	----	132	13.9	----	----	----	----	----
Organic / Inorganic Carbon											
Carbon, dissolved organic [DOC]	----	E358-L/WP	mg/L	----	14.9	1.58	----	----	----	----	----
Carbon, total organic [TOC]	----	E355-L/WP	mg/L	----	14.5	1.79	----	----	----	----	----
Ion Balance											
Anion sum	----	EC101A/WP	meq/L	----	7.88	1.35	----	----	----	----	----
Cation sum (total)	----	EC101A/WP	meq/L	----	7.65	1.27	----	----	----	----	----
Ion balance (cations/anions)	----	EC101A/WP	%	----	97.1	94.1	----	----	----	----	----
Ion balance (APHA)	----	EC101A/WP	%	----	-1.48	-3.05	----	----	----	----	----
Total Metals											
Aluminum, total	7429-90-5	E420/WP	µg/L	6.1	363	2.5	----	----	----	----	----
Antimony, total	7440-36-0	E420/WP	µg/L	0.058	0.37	0.062	----	----	----	----	----
Arsenic, total	7440-38-2	E420/WP	µg/L	0.86	8.76	0.83	----	----	----	----	----
Barium, total	7440-39-3	E420/WP	µg/L	7.78	66.8	7.26	----	----	----	----	----



Matrix: Water

Matrix: Water				Client sample ID	Headingley Regional 3 - Distribution @mid-point Distribution	Headingley Regional 1 - Raw Raw	Headingley Regional 2 - Treated Treated	----	----	----	----
Client sampling date / time				05-Aug-2026 11:07	05-Aug-2026 08:01	05-Aug-2026 07:49	----	----	----	----	
Sub-Matrix				Water	Water	Water	----	----	----	----	
Analyte	CAS Number	Method/Lab	Unit	WP2613244-001	WP2613244-002	WP2613244-003	----	----	----	----	
				Result	Result	Result	----	----	----	----	
Total Metals											
Beryllium, total	7440-41-7	E420/WP	µg/L	Not Detected	0.027	0.0014	----	----	----	----	
Bismuth, total	7440-69-9	E420/WP	µg/L	0.0014	0.0094	0.00092	----	----	----	----	
Boron, total	7440-42-8	E420/WP	µg/L	70	81	74	----	----	----	----	
Cadmium, total	7440-43-9	E420/WP	µg/L	0.0019	0.0268	0.00088	----	----	----	----	
Calcium, total	7440-70-2	E420/WP	µg/L	7330	60300	7110	----	----	----	----	
Cesium, total	7440-46-2	E420/WP	µg/L	0.0057	0.070	0.0017	----	----	----	----	
Chromium, total	7440-47-3	E420/WP	µg/L	0.16	0.74	0.17	----	----	----	----	
Cobalt, total	7440-48-4	E420/WP	µg/L	0.015	0.47	0.013	----	----	----	----	
Copper, total	7440-50-8	E420/WP	µg/L	4.71	77.3	5.61	----	----	----	----	
Iron, total	7439-89-6	E420/WP	µg/L	5.4	681	3.7	----	----	----	----	
Lead, total	7439-92-1	E420/WP	µg/L	Not Detected	0.414	0.036	----	----	----	----	
Lithium, total	7439-93-2	E420/WP	µg/L	10.3	37.6	10.2	----	----	----	----	
Magnesium, total	7439-95-4	E420/WP	µg/L	3840	33400	3900	----	----	----	----	
Manganese, total	7439-96-5	E420/WP	µg/L	2.82	101	3.53	----	----	----	----	
Molybdenum, total	7439-98-7	E420/WP	µg/L	0.282	2.87	0.297	----	----	----	----	
Nickel, total	7440-02-0	E420/WP	µg/L	0.44	5.17	0.54	----	----	----	----	
Phosphorus, total	7723-14-0	E420/WP	µg/L	50	353	38	----	----	----	----	
Potassium, total	7440-09-7	E420/WP	µg/L	3270	12900	2930	----	----	----	----	



Matrix: Water

Matrix: Water				Client sample ID	Headingley Regional 3 - Distribution @mid-point Distribution	Headingley Regional 1 - Raw Raw	Headingley Regional 2 - Treated Treated	----	----	----	----
Client sampling date / time				05-Aug-2026 11:07	05-Aug-2026 08:01	05-Aug-2026 07:49	----	----	----	----	
Sub-Matrix				Water	Water	Water	----	----	----	----	
Analyte	CAS Number	Method/Lab	Unit	WP2613244-001	WP2613244-002	WP2613244-003	----	----	----	----	
				Result	Result	Result	----	----	----	----	
Total Metals											
Rubidium, total	7440-17-7	E420/WP	µg/L	0.78	3.40	0.67	----	----	----	----	
Selenium, total	7782-49-2	E420/WP	µg/L	0.109	0.427	0.092	----	----	----	----	
Silicon, total	7440-21-3	E420/WP	µg/L	2860	12200	2770	----	----	----	----	
Silver, total	7440-22-4	E420/WP	µg/L	Not Detected	0.0046	Not Detected	----	----	----	----	
Sodium, total	7440-23-5	E420/WP	µg/L	12400	34100	11900	----	----	----	----	
Strontium, total	7440-24-6	E420/WP	µg/L	29.1	243	28.7	----	----	----	----	
Sulfur, total	7704-34-9	E420/WP	µg/L	4550	45800	4480	----	----	----	----	
Tellurium, total	13494-80-9	E420/WP	µg/L	Not Detected	0.048	Not Detected	----	----	----	----	
Thallium, total	7440-28-0	E420/WP	µg/L	0.0014	0.026	0.0036	----	----	----	----	
Thorium, total	7440-29-1	E420/WP	µg/L	Not Detected	0.077	Not Detected	----	----	----	----	
Tin, total	7440-31-5	E420/WP	µg/L	Not Detected	0.023	Not Detected	----	----	----	----	
Titanium, total	7440-32-6	E420/WP	µg/L	0.035	10.5	0.031	----	----	----	----	
Tungsten, total	7440-33-7	E420/WP	µg/L	Not Detected	Not Detected	Not Detected	----	----	----	----	
Uranium, total	7440-61-1	E420/WP	µg/L	0.221	2.17	0.214	----	----	----	----	
Vanadium, total	7440-62-2	E420/WP	µg/L	0.69	5.29	0.64	----	----	----	----	
Zinc, total	7440-66-6	E420/WP	µg/L	0.32	2.8	1.0	----	----	----	----	
Zirconium, total	7440-67-7	E420/WP	µg/L	Not Detected	0.57	Not Detected	----	----	----	----	

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				
Sample Preparation									
Dissolved carbon filtration location	----	-	----	----	----	----	----	----	----
Physical Tests									
Absorbance, UV (@ 254nm)		AU/cm	----	----	----	----	----	----	----
Alkalinity, bicarbonate (as CaCO ₃)	----	mg/L	----	----	----	----	----	----	----
Alkalinity, carbonate (as CaCO ₃)		mg/L	----	----	----	----	----	----	----
Alkalinity, hydroxide (as CaCO ₃)		mg/L	----	----	----	----	----	----	----
Alkalinity, total (as CaCO ₃)		mg/L	----	----	----	----	----	----	----
Colour, true		CU	15 CU	----	----	----	----	----	----
Conductivity	----	µS/cm	----	----	----	----	----	----	----
Hardness (as CaCO ₃), 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	----	----	----	----	----	----	----

Key:

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

CERTIFICATE OF ANALYSIS

Work Order	: WP2613244	Laboratory	: ALS Environmental - Winnipeg
Client	: Manitoba Conservation & Climate	Account Manager	: Sheriza Rajack-Ahamed
Contact	: Amrith Kumar	Address	: 1329 Niakwa Road East, Unit 12
Address	: 14 Fultz Boulevard Winnipeg Manitoba Canada R3Y 0L6		: Winnipeg MB Canada R2J 3T4
Telephone	: 204 340 3423	E-mail	: Sheriza.RajackAhamed@alsglobal.com
Project	: Headingley Regional - PWS 89.40	Telephone	: +1 204 255 9720
PO	: ----	Date Samples Received	: 05-Aug-2026 13:22
C-O-C number	: ----	Date Analysis Commenced	: 05-Aug-2026
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No. of samples analysed	: 3		

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Signatories

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<i>Signatories</i>	<i>Position</i>	<i>Laboratory Department</i>
Rhovee Guevarra		Metals, Winnipeg, Manitoba
Rhovee Guevarra		Inorganics, Winnipeg, Manitoba



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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
% 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

<: 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.





Analytical Results

Sub-Matrix: Water

(Matrix: Water)

Client sample ID					Headingley Regional 3 - Distribution @mid-point Distribution	Headingley Regional 1 - Raw Raw	Headingley Regional 2 - Treated Treated	----	----
Client sampling date / time					05-Aug-2026 11:07	05-Aug-2026 08:01	05-Aug-2026 07:49	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	WP2613244-001	WP2613244-002	WP2613244-003	----	----
					Result	Result	Result	----	----
Sample Preparation									
Dissolved carbon filtration location	----	EP358/WP	-	-	----	lab	lab	----	----
Physical Tests									
Absorbance, UV (@ 254nm)	----	E404/WP	0.0050	AU/cm	----	0.454	0.0300	----	----
Alkalinity, bicarbonate (as CaCO ₃)	----	E290/WP	1.0	mg/L	----	218	43.1	----	----
Alkalinity, carbonate (as CaCO ₃)	----	E290/WP	1.0	mg/L	----	15.6	<1.0	----	----
Alkalinity, hydroxide (as CaCO ₃)	----	E290/WP	1.0	mg/L	----	<1.0	<1.0	----	----
Alkalinity, total (as CaCO ₃)	----	E290/WP	1.0	mg/L	----	234	43.1	----	----
Colour, true	----	E329/WP	5.0	CU	----	45.9	<5.0	----	----
Conductivity	----	E100/WP	2.0	µS/cm	----	704	140	----	----
Hardness (as CaCO ₃), from total Ca/Mg	----	EC100A/WP	0.50	mg/L	----	288	33.8	----	----
Langelier index (@ 4°C)	----	EC105A/WP	0.010	-	----	0.864	-1.53	----	----
Langelier index (@ 60°C)	----	EC105A/WP	0.010	-	----	1.61	-0.755	----	----
pH	----	E108/WP	0.10	pH units	----	8.44	7.57	----	----
Solids, total dissolved [TDS]	----	E162-L/WP	3.0	mg/L	----	495	85.5	----	----
Turbidity	----	E121/WP	0.10	NTU	----	24.5	<0.10	----	----
Transmittance, UV (@ 254nm)	----	E404/WP	1.0	% T/cm	----	35.2	93.3	----	----
Anions and Nutrients									
Ammonia, total (as N)	7664-41-7	E298/WP	0.0050	mg/L	----	0.0929	<0.0050	----	----
Bromide	24959-67-9	E235.Br-T/WP	0.010	mg/L	----	0.052	<0.010	----	----
Chloride	16887-00-6	E235.Cl-L/WP	0.10	mg/L	----	15.0	6.51	----	----



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

Client sample ID					Headingley Regional 3 - Distribution @mid- point Distribution	Headingley Regional 1 - Raw Raw	Headingley Regional 2 - Treated Treated	----	----
Client sampling date / time					05-Aug-2026 11:07	05-Aug-2026 08:01	05-Aug-2026 07:49	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	WP2613244-001	WP2613244-002	WP2613244-003	----	----
					Result	Result	Result	----	----
Anions and Nutrients									
Fluoride	16984-48-8	E235.F/WP	0.020	mg/L	----	0.164	0.033	----	----
Nitrate (as N)	14797-55-8	E235.NO3-L/WP	0.0050	mg/L	----	0.321	0.174	----	----
Nitrite (as N)	14797-65-0	E235.NO2-L/WP	0.0010	mg/L	----	0.0116	<0.0010	----	----
Sulfate (as SO4)	14808-79-8	E235.SO4/WP	0.30	mg/L	----	132	13.9	----	----
Organic / Inorganic Carbon									
Carbon, dissolved organic [DOC]	----	E358-L/WP	0.50	mg/L	----	14.9	1.58	----	----
Carbon, total organic [TOC]	----	E355-L/WP	0.50	mg/L	----	14.5	1.79	----	----
Ion Balance									
Anion sum	----	EC101A/WP	0.10	meq/L	----	7.88	1.35	----	----
Cation sum (total)	----	EC101A/WP	0.10	meq/L	----	7.65	1.27	----	----
Ion balance (cations/anions)	----	EC101A/WP	0.01	%	----	97.1	94.1	----	----
Ion balance (APHA)	----	EC101A/WP	0.010	%	----	-1.48	-3.05	----	----
Total Metals									
Aluminum, total	7429-90-5	E420/WP	3.0	µg/L	6.1	363	2.5	----	----
Antimony, total	7440-36-0	E420/WP	0.10	µg/L	0.058	0.37	0.062	----	----
Arsenic, total	7440-38-2	E420/WP	0.10	µg/L	0.86	8.76	0.83	----	----
Barium, total	7440-39-3	E420/WP	0.10	µg/L	7.78	66.8	7.26	----	----
Beryllium, total	7440-41-7	E420/WP	0.020	µg/L	Not Detected	0.027	0.0014	----	----
Bismuth, total	7440-69-9	E420/WP	0.050	µg/L	0.0014	0.0094	0.00092	----	----
Boron, total	7440-42-8	E420/WP	10	µg/L	70	81	74	----	----



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

					Client sample ID	Headingley Regional 3 - Distribution @mid- point Distribution	Headingley Regional 1 - Raw Raw	Headingley Regional 2 - Treated Treated	----	----
					Client sampling date / time	05-Aug-2026 11:07	05-Aug-2026 08:01	05-Aug-2026 07:49	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit	WP2613244-001	WP2613244-002	WP2613244-003	----	----	----
					Result	Result	Result	----	----	----
Total Metals										
Cadmium, total	7440-43-9	E420/WP	0.0050	µg/L	0.0019	0.0268	0.00088	----	----	----
Calcium, total	7440-70-2	E420/WP	50	µg/L	7330	60300	7110	----	----	----
Cesium, total	7440-46-2	E420/WP	0.010	µg/L	0.0057	0.070	0.0017	----	----	----
Chromium, total	7440-47-3	E420/WP	0.50	µg/L	0.16	0.74	0.17	----	----	----
Cobalt, total	7440-48-4	E420/WP	0.10	µg/L	0.015	0.47	0.013	----	----	----
Copper, total	7440-50-8	E420/WP	0.50	µg/L	4.71	77.3	5.61	----	----	----
Iron, total	7439-89-6	E420/WP	10	µg/L	5.4	681	3.7	----	----	----
Lead, total	7439-92-1	E420/WP	0.050	µg/L	Not Detected	0.414	0.036	----	----	----
Lithium, total	7439-93-2	E420/WP	1.0	µg/L	10.3	37.6	10.2	----	----	----
Magnesium, total	7439-95-4	E420/WP	5.0	µg/L	3840	33400	3900	----	----	----
Manganese, total	7439-96-5	E420/WP	0.10	µg/L	2.82	101	3.53	----	----	----
Molybdenum, total	7439-98-7	E420/WP	0.050	µg/L	0.282	2.87	0.297	----	----	----
Nickel, total	7440-02-0	E420/WP	0.50	µg/L	0.44	5.17	0.54	----	----	----
Phosphorus, total	7723-14-0	E420/WP	50	µg/L	50	353	38	----	----	----
Potassium, total	7440-09-7	E420/WP	50	µg/L	3270	12900	2930	----	----	----
Rubidium, total	7440-17-7	E420/WP	0.20	µg/L	0.78	3.40	0.67	----	----	----
Selenium, total	7782-49-2	E420/WP	0.050	µg/L	0.109	0.427	0.092	----	----	----
Silicon, total	7440-21-3	E420/WP	100	µg/L	2860	12200	2770	----	----	----
Silver, total	7440-22-4	E420/WP	0.010	µg/L	Not Detected	0.0046	Not Detected	----	----	----
Sodium, total	7440-23-5	E420/WP	50	µg/L	12400	34100	11900	----	----	----



Analytical Results

Sub-Matrix: Water
(Matrix: Water)

					Client sample ID	Headingley Regional 3 - Distribution @mid-point Distribution	Headingley Regional 1 - Raw Raw	Headingley Regional 2 - Treated Treated	----	----
					Client sampling date / time	05-Aug-2026 11:07	05-Aug-2026 08:01	05-Aug-2026 07:49	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		WP2613244-001	WP2613244-002	WP2613244-003	----	----
						Result	Result	Result	----	----
Total Metals										
Strontium, total	7440-24-6	E420/WP	0.20	µg/L		29.1	243	28.7	----	----
Sulfur, total	7704-34-9	E420/WP	500	µg/L		4550	45800	4480	----	----
Tellurium, total	13494-80-9	E420/WP	0.20	µg/L		Not Detected	0.048	Not Detected	----	----
Thallium, total	7440-28-0	E420/WP	0.010	µg/L		0.0014	0.026	0.0036	----	----
Thorium, total	7440-29-1	E420/WP	0.10	µg/L		Not Detected	0.077	Not Detected	----	----
Tin, total	7440-31-5	E420/WP	0.10	µg/L		Not Detected	0.023	Not Detected	----	----
Titanium, total	7440-32-6	E420/WP	0.30	µg/L		0.035	10.5	0.031	----	----
Tungsten, total	7440-33-7	E420/WP	0.10	µg/L		Not Detected	Not Detected	Not Detected	----	----
Uranium, total	7440-61-1	E420/WP	0.010	µg/L		0.221	2.17	0.214	----	----
Vanadium, total	7440-62-2	E420/WP	0.50	µg/L		0.69	5.29	0.64	----	----
Zinc, total	7440-66-6	E420/WP	3.0	µg/L		0.32	2.8	1.0	----	----
Zirconium, total	7440-67-7	E420/WP	0.20	µg/L		Not Detected	0.57	Not Detected	----	----

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

Quality Control Interpretive Report

Work Order : WP2613244

Client : Manitoba Conservation & Climate
Contact : Amrith Kumar
Address : 14 Fultz Boulevard
Winnipeg MB Canada R3Y 0L6
Telephone : 204 340 3423
Project : Headingley Regional - PWS 89.40
PO : ----
C-O-C number : ----
Sampler : ----
Site : Headingley Regional - PWS 89.40
Quote number : 2026 WTP Chemistry
No. of samples received : 3
No. of samples analysed : 3

Laboratory : ALS Environmental - Winnipeg
Account Manager : Sheriza Rajack-Ahamed
Address : 1329 Niakwa Road East, Unit 12
Winnipeg MB Canada R2J 3T4
Telephone : +1 204 255 9720
Date Samples Received : 05-Aug-2026 13:22
Issue Date : 13-Aug-2026 13:02

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 Services 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 Laboratory Control Sample Duplicate (LCSD) outliers occur
- No Matrix Spike outliers occur.
- No Matrix Spike Duplicate (MSD) 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.

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	ALS Sample ID	QC Lot	Method	Sampling Date	Extraction / Preparation				Analysis			
Container					Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
Client sample ID						Rec	Actual			Rec	Actual	
Anions and Nutrients : Ammonia by Fluorescence												
Amber glass total (sulfuric acid)												
Headingley Regional 1 - Raw - Raw	002	2758031	E298	05-Aug-2026	05-Aug-2026	28 days	0 days	✓	10-Aug-2026	28 days	5 days	✓
Headingley Regional 2 - Treated - Treated	003	2758031	E298	05-Aug-2026	05-Aug-2026	28 days	0 days	✓	10-Aug-2026	28 days	5 days	✓
Anions and Nutrients : Bromide in Water by IC (Trace level)												
HDPE												
Headingley Regional 1 - Raw - Raw	002	2751951	E235.Br-T	05-Aug-2026	06-Aug-2026	28 days	1 days	✓	06-Aug-2026	28 days	1 days	✓
Headingley Regional 2 - Treated - Treated	003	2752280	E235.Br-T	05-Aug-2026	06-Aug-2026	28 days	1 days	✓	06-Aug-2026	28 days	1 days	✓
Anions and Nutrients : Chloride in Water by IC (Low Level)												
HDPE												
Headingley Regional 1 - Raw - Raw	002	2751944	E235.Cl-L	05-Aug-2026	06-Aug-2026	28 days	1 days	✓	06-Aug-2026	28 days	1 days	✓
Headingley Regional 2 - Treated - Treated	003	2752277	E235.Cl-L	05-Aug-2026	06-Aug-2026	28 days	1 days	✓	06-Aug-2026	28 days	1 days	✓
Anions and Nutrients : Fluoride in Water by IC												
HDPE												
Headingley Regional 1 - Raw - Raw	002	2751943	E235.F	05-Aug-2026	06-Aug-2026	28 days	1 days	✓	06-Aug-2026	28 days	1 days	✓
Headingley Regional 2 - Treated - Treated	003	2752276	E235.F	05-Aug-2026	06-Aug-2026	28 days	1 days	✓	06-Aug-2026	28 days	1 days	✓



Matrix: Water

Evaluation: ✖ = Holding time exceedance; ✔ = Within Holding Time

Analyte Group : Analytical Method					Extraction / Preparation				Analysis			
Container					Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
Client sample ID						Rec	Actual			Rec	Actual	
Anions and Nutrients : Nitrate in Water by IC (Low Level)												
HDPE												
Headingley Regional 1 - Raw - Raw	002	2751945	E235.NO3-L	05-Aug-2026	06-Aug-2026	3 days	1 days	✓	06-Aug-2026	3 days	1 days	✓
Headingley Regional 2 - Treated - Treated	003	2752278	E235.NO3-L	05-Aug-2026	06-Aug-2026	3 days	1 days	✓	06-Aug-2026	3 days	1 days	✓
Anions and Nutrients : Nitrite in Water by IC (Low Level)												
HDPE												
Headingley Regional 1 - Raw - Raw	002	2751946	E235.NO2-L	05-Aug-2026	06-Aug-2026	3 days	1 days	✓	06-Aug-2026	3 days	1 days	✓
Headingley Regional 2 - Treated - Treated	003	2752279	E235.NO2-L	05-Aug-2026	06-Aug-2026	3 days	1 days	✓	06-Aug-2026	3 days	1 days	✓
Anions and Nutrients : Sulfate in Water by IC												
HDPE												
Headingley Regional 1 - Raw - Raw	002	2751947	E235.SO4	05-Aug-2026	06-Aug-2026	28 days	1 days	✓	06-Aug-2026	28 days	1 days	✓
Headingley Regional 2 - Treated - Treated	003	2752281	E235.SO4	05-Aug-2026	06-Aug-2026	28 days	1 days	✓	06-Aug-2026	28 days	1 days	✓
Organic / Inorganic Carbon : Dissolved Organic Carbon by Combustion (Low Level)												
Amber glass - dissolved (field filter/sulfuric acid)												
Headingley Regional 1 - Raw - Raw	002	2755867	E358-L	05-Aug-2026	05-Aug-2026	28 days	0 days	✓	08-Aug-2026	28 days	2 days	✓
Headingley Regional 2 - Treated - Treated	003	2755867	E358-L	05-Aug-2026	05-Aug-2026	28 days	0 days	✓	08-Aug-2026	28 days	2 days	✓
Organic / Inorganic Carbon : Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)												
Amber glass total (sulfuric acid)												
Headingley Regional 1 - Raw - Raw	002	2754574	E355-L	05-Aug-2026	05-Aug-2026	28 days	0 days	✓	07-Aug-2026	28 days	2 days	✓
Headingley Regional 2 - Treated - Treated	003	2754574	E355-L	05-Aug-2026	05-Aug-2026	28 days	0 days	✓	07-Aug-2026	28 days	2 days	✓



Matrix: Water

Evaluation: ✖ = Holding time exceedance; ✔ = Within Holding Time

Analyte Group : Analytical Method	ALS Sample ID	QC Lot	Method	Sampling Date	Extraction / Preparation				Analysis			
Container					Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
						Rec	Actual			Rec	Actual	
Client sample ID												
Physical Tests : Alkalinity Species by Titration												
HDPE												
Headingley Regional 1 - Raw - Raw	002	2752264	E290	05-Aug-2026	06-Aug-2026	14 days	1 days	✓	06-Aug-2026	14 days	1 days	✓
Headingley Regional 2 - Treated - Treated	003	2752264	E290	05-Aug-2026	06-Aug-2026	14 days	1 days	✓	06-Aug-2026	14 days	1 days	✓
Physical Tests : Colour (True) by Spectrometer (5 CU)												
HDPE												
Headingley Regional 1 - Raw - Raw	002	2752673	E329	05-Aug-2026	06-Aug-2026	3 days	1 days	✓	06-Aug-2026	3 days	1 days	✓
Headingley Regional 2 - Treated - Treated	003	2752673	E329	05-Aug-2026	06-Aug-2026	3 days	1 days	✓	06-Aug-2026	3 days	1 days	✓
Physical Tests : Conductivity in Water												
HDPE												
Headingley Regional 1 - Raw - Raw	002	2752263	E100	05-Aug-2026	06-Aug-2026	28 days	1 days	✓	06-Aug-2026	28 days	1 days	✓
Headingley Regional 2 - Treated - Treated	003	2752263	E100	05-Aug-2026	06-Aug-2026	28 days	1 days	✓	06-Aug-2026	28 days	1 days	✓
Physical Tests : pH by Meter												
HDPE												
Headingley Regional 1 - Raw - Raw	002	2752262	E108	05-Aug-2026	06-Aug-2026	0.25 hrs	31 hrs	✗ EHTR-FM	06-Aug-2026	0.25 hrs	38 hrs	✗ EHTR-FM
Headingley Regional 2 - Treated - Treated	003	2752262	E108	05-Aug-2026	06-Aug-2026	0.25 hrs	31 hrs	✗ EHTR-FM	06-Aug-2026	0.25 hrs	38 hrs	✗ EHTR-FM
Physical Tests : TDS by Gravimetry (Low Level)												
HDPE												
Headingley Regional 1 - Raw - Raw	002	2758938	E162-L	05-Aug-2026	----	----	----		11-Aug-2026	7 days	6 days	✓
Headingley Regional 2 - Treated - Treated	003	2758938	E162-L	05-Aug-2026	----	----	----		11-Aug-2026	7 days	6 days	✓



Matrix: Water

Evaluation: ✖ = Holding time exceedance; ✔ = Within Holding Time

Analyte Group : Analytical Method	ALS Sample ID	QC Lot	Method	Sampling Date	Extraction / Preparation				Analysis			
Container					Preparation Date	Holding Times		Eval	Analysis Date	Holding Times		Eval
Client sample ID						Rec	Actual			Rec	Actual	
Physical Tests : Turbidity by Nephelometry												
HDPE												
Headingley Regional 1 - Raw - Raw	002	2751220	E121	05-Aug-2026	----	----	----		06-Aug-2026	3 days	1 days	✔
Headingley Regional 2 - Treated - Treated	003	2751220	E121	05-Aug-2026	----	----	----		06-Aug-2026	3 days	1 days	✔
Physical Tests : UV Absorbance and Transmittance by Spectrometry												
HDPE												
Headingley Regional 1 - Raw - Raw	002	2752314	E404	05-Aug-2026	----	----	----		06-Aug-2026	3 days	1 days	✔
Headingley Regional 2 - Treated - Treated	003	2752315	E404	05-Aug-2026	----	----	----		06-Aug-2026	3 days	1 days	✔
Total Metals : Total Metals in Water by CRC ICPMS												
HDPE total (nitric acid)												
Headingley Regional 3 - Distribution @mid-point - Distribution	001	2760077	E420	05-Aug-2026	11-Aug-2026	180 days	6 days	✔	11-Aug-2026	180 days	6 days	✔
Headingley Regional 1 - Raw - Raw	002	2760077	E420	05-Aug-2026	11-Aug-2026	180 days	6 days	✔	11-Aug-2026	180 days	6 days	✔
Headingley Regional 2 - Treated - Treated	003	2760077	E420	05-Aug-2026	11-Aug-2026	180 days	6 days	✔	11-Aug-2026	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 / Lab	QC Lot #	QC	Regular	Actual	Expected	Evaluation
Laboratory Duplicates (DUP)							
Conductivity in Water	E100 / WP	2752263	1	11	9.1	5.0	✔
pH by Meter	E108 / WP	2752262	1	19	5.3	5.0	✔
Turbidity by Nephelometry	E121 / WP	2751220	1	9	11.1	5.0	✔
TDS by Gravimetry (Low Level)	E162-L / WP	2758938	1	20	5.0	5.0	✔
Bromide in Water by IC (Trace level)	E235.Br-T / WP	2751951	0	2	0.0	5.0	✖
Chloride in Water by IC (Low Level)	E235.Cl-L / WP	2751944	1	14	7.1	5.0	✔
Fluoride in Water by IC	E235.F / WP	2751943	2	22	9.1	5.0	✔
Nitrite in Water by IC (Low Level)	E235.NO2-L / WP	2751946	1	15	6.7	5.0	✔
Nitrate in Water by IC (Low Level)	E235.NO3-L / WP	2751945	1	15	6.7	5.0	✔
Sulfate in Water by IC	E235.SO4 / WP	2751947	2	22	9.1	5.0	✔
Alkalinity Species by Titration	E290 / WP	2752264	1	11	9.1	5.0	✔
Ammonia by Fluorescence	E298 / WP	2758031	1	20	5.0	5.0	✔
Colour (True) by Spectrometer (5 CU)	E329 / WP	2752673	1	10	10.0	5.0	✔
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L / WP	2754574	1	19	5.3	5.0	✔
Dissolved Organic Carbon by Combustion (Low Level)	E358-L / WP	2755867	1	20	5.0	5.0	✔
UV Absorbance and Transmittance by Spectrometry	E404 / WP	2752314	2	21	9.5	5.0	✔
Total Metals in Water by CRC ICPMS	E420 / WP	2760077	1	15	6.7	5.0	✔
Laboratory Control Samples (LCS)							
Conductivity in Water	E100 / WP	2752263	1	11	9.1	5.0	✔
pH by Meter	E108 / WP	2752262	1	19	5.3	5.0	✔
Turbidity by Nephelometry	E121 / WP	2751220	1	9	11.1	5.0	✔
TDS by Gravimetry (Low Level)	E162-L / WP	2758938	1	20	5.0	5.0	✔
Bromide in Water by IC (Trace level)	E235.Br-T / WP	2751951	2	2	100.0	5.0	✔
Chloride in Water by IC (Low Level)	E235.Cl-L / WP	2751944	2	14	14.3	5.0	✔
Fluoride in Water by IC	E235.F / WP	2751943	2	22	9.1	5.0	✔
Nitrite in Water by IC (Low Level)	E235.NO2-L / WP	2751946	2	15	13.3	5.0	✔
Nitrate in Water by IC (Low Level)	E235.NO3-L / WP	2751945	2	15	13.3	5.0	✔



Matrix: Water

Evaluation: ✖ = QC frequency outside specification; ✔ = QC frequency within specification

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	Method / Lab	QC Lot #	QC	Regular	Actual	Expected	Evaluation
Laboratory Control Samples (LCS)							
Sulfate in Water by IC	E235.SO4 / WP	2751947	2	22	9.1	5.0	✔
Alkalinity Species by Titration	E290 / WP	2752264	1	11	9.1	5.0	✔
Ammonia by Fluorescence	E298 / WP	2758031	1	20	5.0	5.0	✔
Colour (True) by Spectrometer (5 CU)	E329 / WP	2752673	1	10	10.0	5.0	✔
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L / WP	2754574	1	19	5.3	5.0	✔
Dissolved Organic Carbon by Combustion (Low Level)	E358-L / WP	2755867	1	20	5.0	5.0	✔
UV Absorbance and Transmittance by Spectrometry	E404 / WP	2752314	2	21	9.5	5.0	✔
Total Metals in Water by CRC ICPMS	E420 / WP	2760077	1	15	6.7	5.0	✔
Method Blanks (MB)							
Conductivity in Water	E100 / WP	2752263	1	11	9.1	5.0	✔
Turbidity by Nephelometry	E121 / WP	2751220	1	9	11.1	5.0	✔
TDS by Gravimetry (Low Level)	E162-L / WP	2758938	1	20	5.0	5.0	✔
Bromide in Water by IC (Trace level)	E235.Br-T / WP	2751951	2	2	100.0	5.0	✔
Chloride in Water by IC (Low Level)	E235.Cl-L / WP	2751944	2	14	14.3	5.0	✔
Fluoride in Water by IC	E235.F / WP	2751943	2	22	9.1	5.0	✔
Nitrite in Water by IC (Low Level)	E235.NO2-L / WP	2751946	2	15	13.3	5.0	✔
Nitrate in Water by IC (Low Level)	E235.NO3-L / WP	2751945	2	15	13.3	5.0	✔
Sulfate in Water by IC	E235.SO4 / WP	2751947	2	22	9.1	5.0	✔
Alkalinity Species by Titration	E290 / WP	2752264	1	11	9.1	5.0	✔
Ammonia by Fluorescence	E298 / WP	2758031	1	20	5.0	5.0	✔
Colour (True) by Spectrometer (5 CU)	E329 / WP	2752673	1	10	10.0	5.0	✔
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L / WP	2754574	1	19	5.3	5.0	✔
Dissolved Organic Carbon by Combustion (Low Level)	E358-L / WP	2755867	1	20	5.0	5.0	✔
UV Absorbance and Transmittance by Spectrometry	E404 / WP	2752314	2	21	9.5	5.0	✔
Total Metals in Water by CRC ICPMS	E420 / WP	2760077	1	15	6.7	5.0	✔
Matrix Spikes (MS)							
Bromide in Water by IC (Trace level)	E235.Br-T / WP	2751951	0	2	0.0	5.0	✖
Chloride in Water by IC (Low Level)	E235.Cl-L / WP	2751944	1	14	7.1	5.0	✔
Fluoride in Water by IC	E235.F / WP	2751943	2	22	9.1	5.0	✔
Nitrite in Water by IC (Low Level)	E235.NO2-L / WP	2751946	1	15	6.7	5.0	✔



Matrix: Water

Evaluation: ✖ = QC frequency outside specification; ✔ = QC frequency within specification

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	Method / Lab	QC Lot #	QC	Regular	Actual	Expected	Evaluation
Matrix Spikes (MS)							
Nitrate in Water by IC (Low Level)	E235.NO3-L / WP	2751945	1	15	6.7	5.0	✔
Sulfate in Water by IC	E235.SO4 / WP	2751947	2	22	9.1	5.0	✔
Ammonia by Fluorescence	E298 / WP	2758031	1	20	5.0	5.0	✔
Total Organic Carbon (Non-Purgeable) by Combustion (Low Level)	E355-L / WP	2754574	1	19	5.3	5.0	✔
Dissolved Organic Carbon by Combustion (Low Level)	E358-L / WP	2755867	1	20	5.0	5.0	✔
Total Metals in Water by CRC ICPMS	E420 / WP	2760077	1	15	6.7	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").

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 Autotitrator	EP108-TITR ALS Environmental - Winnipeg	Water		Sample preparation for parameters analysed by Autotitrator
Preparation for Colour	EP329-COL ALS Environmental - Winnipeg	Water		Sample preparation for analysis of colour
Preparation for Dissolved Organic Carbon for Combustion	EP358 ALS Environmental - Winnipeg	Water	APHA 5310 B (mod)	Preparation for Dissolved Organic Carbon
Preparation for Ion Chromatography	EP235-IC ALS Environmental - Winnipeg	Water		Sample preparation for ion chromatography
Preparation for Total Organic Carbon by Combustion	EP355 ALS Environmental - Winnipeg	Water		Preparation for Total Organic Carbon by Combustion
Total Metals Water Digestion	EP420 ALS Environmental - Winnipeg	Water	EPA 200.2 (mod)	Water samples are digested with HNO ₃ and HCl to liberate "total recoverable" metals.
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)
Bromide in Water by IC (Trace level)	E235.Br-T 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.
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.



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.
Conductivity Screen (Internal Use Only)	ES100 ALS Environmental - Winnipeg	Water	APHA 2510 (mod)	Qualitative analysis of conductivity where required during preparation of other tests - e.g. TDS, metals, etc.
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 CO ₂ . 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).
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.
Hardness (Calculated) from Total Ca/Mg	EC100A ALS Environmental - Winnipeg	Water	APHA 2340B	"Hardness (as CaCO ₃), 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).
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.
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.
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.
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 CaCO ₃ . Negative values indicate undersaturation of CaCO ₃ . 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.
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.
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.
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.



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 CO ₂ . 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).
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.
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.



QUALITY CONTROL REPORT

Work Order : WP2613244

Client : Manitoba Conservation & Climate
Contact : Amrith Kumar
Address : 14 Fultz Boulevard
Winnipeg MB Canada R3Y 0L6
Telephone : 204 340 3423
Project : Headingley Regional - PWS 89.40
PO : ----
C-O-C number : ----
Sampler : ----
Site : Headingley Regional - PWS 89.40
Quote number : 2026 WTP Chemistry
No. of samples received : 3
No. of samples analysed : 3

Laboratory : ALS Environmental - Winnipeg
Account Manager : Sheriza Rajack-Ahamed
Address : 1329 Niakwa Road East, Unit 12
Winnipeg MB Canada R2J 3T4
Telephone : +1 204 255 9720
Date Samples Received : 05-Aug-2026 13:22
Date Analysis Commenced : 05-Aug-2026
Issue Date : 13-Aug-2026 13:02

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
Rhovee Guevarra		Winnipeg Inorganics, Winnipeg, Manitoba
Rhovee Guevarra		Winnipeg Metals, 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: Drinking 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: 2752314)											
WP2613024-001	Anonymous	Absorbance, UV (@ 254nm)	----	E404	0.0050	AU/cm	0.102	0.104	1.94 %	20%	---
Organic / Inorganic Carbon(QC Lot: 2754574)											
WP2613027-001	Anonymous	Carbon, total organic [TOC]	----	E355-L	0.50	mg/L	12.4	12.5	0.766 %	20%	---

Sub-Matrix: Surface 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
Anions and Nutrients(QC Lot: 2758031)											
WP2613180-001	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.0050	mg/L	0.0122	0.0122	0.00008	Diff <2x LOR	---

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: 2751220)											
WP2613164-003	Anonymous	Turbidity	----	E121	0.10	NTU	2.30	2.51	8.74 %	15%	---
Physical Tests(QC Lot: 2752262)											
WP2613175-007	Anonymous	pH	----	E108	0.10	pH units	7.45	7.48	0.402 %	4%	---
Physical Tests(QC Lot: 2752263)											
WP2613175-007	Anonymous	Conductivity	----	E100	1.0	µS/cm	214	212	0.939 %	10%	---
Physical Tests(QC Lot: 2752264)											
WP2613175-007	Anonymous	Alkalinity, total (as CaCO3)	----	E290	1.0	mg/L	27.5	27.3	0.730 %	20%	---
Physical Tests(QC Lot: 2752315)											
WP2613244-003	Headingley Regional 2 -	Absorbance, UV (@ 254nm)	----	E404	0.0050	AU/cm	0.0300	0.0300	0	Diff <2x LOR	---
Physical Tests(QC Lot: 2752673)											
WP2613222-002	Anonymous	Colour, true	----	E329	5.0	CU	<5.0	<5.0	0	Diff <2x LOR	---
Physical Tests(QC Lot: 2758938)											
WP2613175-003	Anonymous	Solids, total dissolved [TDS]	----	E162-L	10.0	mg/L	42.2	43.5	1.3	Diff <2x LOR	---
Anions and Nutrients(QC Lot: 2751943)											
WP2613222-001	Anonymous	Fluoride	16984-48-8	E235.F	0.020	mg/L	0.220	0.215	2.41 %	20%	---



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
Anions and Nutrients(QC Lot: 2751944)											
WP2613222-001	Anonymous	Chloride	16887-00-6	E235.Cl-L	0.10	mg/L	56.3	56.5	0.391 %	20%	---
Anions and Nutrients(QC Lot: 2751945)											
WP2613222-001	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3-L	0.0050	mg/L	0.0219	0.0217	0.0002	Diff <2x LOR	---
Anions and Nutrients(QC Lot: 2751946)											
WP2613222-001	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2-L	0.0010	mg/L	0.0055	0.0053	0.0002	Diff <2x LOR	---
Anions and Nutrients(QC Lot: 2751947)											
WP2613222-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	75.7	76.0	0.436 %	20%	---
Anions and Nutrients(QC Lot: 2752276)											
WP2613245-001	Anonymous	Fluoride	16984-48-8	E235.F	0.020	mg/L	0.040	0.040	0.0008	Diff <2x LOR	---
Anions and Nutrients(QC Lot: 2752281)											
WP2613245-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	1.05	1.03	0.02	Diff <2x LOR	---
Organic / Inorganic Carbon(QC Lot: 2755867)											
WP2613222-001	Anonymous	Carbon, dissolved organic [DOC]	---	E358-L	0.50	mg/L	12.9	13.0	1.16 %	20%	---
Total Metals(QC Lot: 2760077)											
WP2613208-005	Anonymous	Aluminum, total	7429-90-5	E420	0.0030	mg/L	0.137	0.121	12.2 %	20%	---
		Antimony, total	7440-36-0	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	---
		Arsenic, total	7440-38-2	E420	0.00010	mg/L	1.58	1.54	2.44 %	20%	---
		Barium, total	7440-39-3	E420	0.00010	mg/L	1.41	1.42	0.455 %	20%	---
		Beryllium, total	7440-41-7	E420	0.000020	mg/L	0.000718	0.000691	3.93 %	20%	---
		Bismuth, total	7440-69-9	E420	0.000050	mg/L	<0.000050	<0.000050	0	Diff <2x LOR	---
		Boron, total	7440-42-8	E420	0.010	mg/L	0.142	0.139	2.14 %	20%	---
		Cadmium, total	7440-43-9	E420	0.0000050	mg/L	0.000262	0.000243	7.40 %	20%	---
		Calcium, total	7440-70-2	E420	0.050	mg/L	86.4	83.1	3.88 %	20%	---
		Cesium, total	7440-46-2	E420	0.000010	mg/L	0.000010	<0.000010	0.0000001	Diff <2x LOR	---
		Chromium, total	7440-47-3	E420	0.00050	mg/L	0.00103	0.00090	0.00012	Diff <2x LOR	---
		Cobalt, total	7440-48-4	E420	0.00010	mg/L	0.0142	0.0137	3.78 %	20%	---
		Copper, total	7440-50-8	E420	0.00050	mg/L	0.00121	0.00116	0.00005	Diff <2x LOR	---
		Lead, total	7439-92-1	E420	0.000050	mg/L	0.000598	0.000575	3.85 %	20%	---
		Lithium, total	7439-93-2	E420	0.0010	mg/L	0.0227	0.0212	6.86 %	20%	---
		Magnesium, total	7439-95-4	E420	0.0050	mg/L	45.9	45.4	1.04 %	20%	---
		Manganese, total	7439-96-5	E420	0.00010	mg/L	6.28	6.03	3.99 %	20%	---
		Molybdenum, total	7439-98-7	E420	0.000050	mg/L	0.00651	0.00632	3.02 %	20%	---
		Nickel, total	7440-02-0	E420	0.00050	mg/L	0.00754	0.00719	4.75 %	20%	---
		Phosphorus, total	7723-14-0	E420	0.050	mg/L	1.67	1.64	1.85 %	20%	---
		Potassium, total	7440-09-7	E420	0.050	mg/L	4.12	4.08	0.817 %	20%	---
		Rubidium, total	7440-17-7	E420	0.00020	mg/L	0.00169	0.00152	0.00017	Diff <2x LOR	---
		Silver, total	7440-22-4	E420	0.000010	mg/L	0.000030	0.000030	0.0000003	Diff <2x LOR	---
		Sodium, total	7440-23-5	E420	0.050	mg/L	66.3	66.8	0.851 %	20%	---



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
Total Metals(QC Lot: 2760077)											
		Strontium, total	7440-24-6	E420	0.00020	mg/L	0.523	0.510	2.47 %	20%	---
		Sulfur, total	7704-34-9	E420	0.50	mg/L	18.3	18.2	0.592 %	20%	---
		Tellurium, total	13494-80-9	E420	0.00020	mg/L	<0.00020	<0.00020	0	Diff <2x LOR	---
		Thallium, total	7440-28-0	E420	0.000010	mg/L	0.000849	0.000803	5.58 %	20%	---
		Thorium, total	7440-29-1	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	---
		Tin, total	7440-31-5	E420	0.00010	mg/L	<0.00010	<0.00010	0	Diff <2x LOR	---
		Tungsten, total	7440-33-7	E420	0.00010	mg/L	0.00075	0.00073	0.00003	Diff <2x LOR	---
		Uranium, total	7440-61-1	E420	0.000010	mg/L	0.00234	0.00229	2.06 %	20%	---
		Vanadium, total	7440-62-2	E420	0.00050	mg/L	0.0101	0.00961	4.70 %	20%	---
		Zinc, total	7440-66-6	E420	0.0030	mg/L	0.0111	0.0113	0.0002	Diff <2x LOR	---
		Zirconium, total	7440-67-7	E420	0.00020	mg/L	0.0129	0.0125	2.98 %	20%	---

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(QC Lot: 2751220)						
Turbidity	----	E121	0.1	NTU	<0.10	----
Physical Tests(QC Lot: 2752262)						
pH	----	E108	----	pH units	----	----
Physical Tests(QC Lot: 2752263)						
Conductivity	----	E100	1	µS/cm	<1.0	----
Physical Tests(QC Lot: 2752264)						
Alkalinity, total (as CaCO ₃)	----	E290	1	mg/L	<1.0	----
Physical Tests(QC Lot: 2752314)						
Absorbance, UV (@ 254nm)	----	E404	0.005	AU/cm	<0.0050	----
Physical Tests(QC Lot: 2752315)						
Absorbance, UV (@ 254nm)	----	E404	0.005	AU/cm	<0.0050	----
Physical Tests(QC Lot: 2752673)						
Colour, true	----	E329	5	CU	<5.0	----



Sub-Matrix: Water

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests(QC Lot: 2758938)						
Solids, total dissolved [TDS]	----	E162-L	3	mg/L	<3.0	----
Anions and Nutrients(QC Lot: 2751943)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients(QC Lot: 2751944)						
Chloride	16887-00-6	E235.Cl-L	0.1	mg/L	<0.10	----
Anions and Nutrients(QC Lot: 2751945)						
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	<0.0050	----
Anions and Nutrients(QC Lot: 2751946)						
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	<0.0010	----
Anions and Nutrients(QC Lot: 2751947)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Anions and Nutrients(QC Lot: 2751951)						
Bromide	24959-67-9	E235.Br-T	0.01	mg/L	<0.010	----
Anions and Nutrients(QC Lot: 2752276)						
Fluoride	16984-48-8	E235.F	0.02	mg/L	<0.020	----
Anions and Nutrients(QC Lot: 2752277)						
Chloride	16887-00-6	E235.Cl-L	0.1	mg/L	<0.10	----
Anions and Nutrients(QC Lot: 2752278)						
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	<0.0050	----
Anions and Nutrients(QC Lot: 2752279)						
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	<0.0010	----
Anions and Nutrients(QC Lot: 2752280)						
Bromide	24959-67-9	E235.Br-T	0.01	mg/L	<0.010	----
Anions and Nutrients(QC Lot: 2752281)						
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	<0.30	----
Anions and Nutrients(QC Lot: 2758031)						
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	<0.0050	----
Organic / Inorganic Carbon(QC Lot: 2754574)						
Carbon, total organic [TOC]	----	E355-L	0.5	mg/L	<0.50	----
Organic / Inorganic Carbon(QC Lot: 2755867)						
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	<0.50	----
Total Metals(QC Lot: 2760077)						
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(QC Lot: 2760077)						
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	----
Zinc, total	7440-66-6	E420	0.003	mg/L	<0.0030	----
Zirconium, total	7440-67-7	E420	0.0002	mg/L	<0.00020	----



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

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(QC Lot: 2751220)									
Turbidity	----	E121	0.1	NTU	200 NTU	102	85.0	115	----
Physical Tests(QC Lot: 2752262)									
pH	----	E108	----	pH units	7 pH units	101	98.0	102	----
Physical Tests(QC Lot: 2752263)									
Conductivity	----	E100	1	µS/cm	1412 µS/cm	101	90.0	110	----
Physical Tests(QC Lot: 2752264)									
Alkalinity, total (as CaCO3)	----	E290	1	mg/L	100 mg/L	101	85.0	115	----
Physical Tests(QC Lot: 2752314)									
Absorbance, UV (@ 254nm)	----	E404	0.005	AU/cm	0.266 AU/cm	90.6	85.0	115	----
Physical Tests(QC Lot: 2752315)									
Absorbance, UV (@ 254nm)	----	E404	0.005	AU/cm	0.266 AU/cm	91.0	85.0	115	----
Physical Tests(QC Lot: 2752673)									
Colour, true	----	E329	5	CU	250 CU	103	85.0	115	----
Physical Tests(QC Lot: 2758938)									
Solids, total dissolved [TDS]	----	E162-L	3	mg/L	1000 mg/L	95.6	85.0	115	----
Anions and Nutrients(QC Lot: 2751943)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	103	90.0	110	----
Anions and Nutrients(QC Lot: 2751944)									
Chloride	16887-00-6	E235.Cl-L	0.1	mg/L	100 mg/L	99.5	90.0	110	----
Anions and Nutrients(QC Lot: 2751945)									
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	2.5 mg/L	100	90.0	110	----
Anions and Nutrients(QC Lot: 2751946)									
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	0.5 mg/L	97.7	90.0	110	----
Anions and Nutrients(QC Lot: 2751947)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	102	90.0	110	----
Anions and Nutrients(QC Lot: 2751951)									
Bromide	24959-67-9	E235.Br-T	0.01	mg/L	0.5 mg/L	100	85.0	115	----
Anions and Nutrients(QC Lot: 2752276)									
Fluoride	16984-48-8	E235.F	0.02	mg/L	1 mg/L	105	90.0	110	----
Anions and Nutrients(QC Lot: 2752277)									
Chloride	16887-00-6	E235.Cl-L	0.1	mg/L	100 mg/L	101	90.0	110	----
Anions and Nutrients(QC Lot: 2752278)									
Nitrate (as N)	14797-55-8	E235.NO3-L	0.005	mg/L	2.5 mg/L	102	90.0	110	----



Sub-Matrix: Water

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Anions and Nutrients(QC Lot: 2752279)									
Nitrite (as N)	14797-65-0	E235.NO2-L	0.001	mg/L	0.5 mg/L	98.8	90.0	110	----
Anions and Nutrients(QC Lot: 2752280)									
Bromide	24959-67-9	E235.Br-T	0.01	mg/L	0.5 mg/L	103	85.0	115	----
Anions and Nutrients(QC Lot: 2752281)									
Sulfate (as SO4)	14808-79-8	E235.SO4	0.3	mg/L	100 mg/L	103	90.0	110	----
Anions and Nutrients(QC Lot: 2758031)									
Ammonia, total (as N)	7664-41-7	E298	0.005	mg/L	0.2 mg/L	96.9	85.0	115	----
Organic / Inorganic Carbon(QC Lot: 2754574)									
Carbon, total organic [TOC]	----	E355-L	0.5	mg/L	8.57 mg/L	95.0	80.0	120	----
Organic / Inorganic Carbon(QC Lot: 2755867)									
Carbon, dissolved organic [DOC]	----	E358-L	0.5	mg/L	8.57 mg/L	103	80.0	120	----
Total Metals(QC Lot: 2760077)									
Aluminum, total	7429-90-5	E420	0.003	mg/L	2 mg/L	102	80.0	120	----
Antimony, total	7440-36-0	E420	0.0001	mg/L	1 mg/L	99.9	80.0	120	----
Arsenic, total	7440-38-2	E420	0.0001	mg/L	1 mg/L	104	80.0	120	----
Barium, total	7440-39-3	E420	0.0001	mg/L	0.25 mg/L	100	80.0	120	----
Beryllium, total	7440-41-7	E420	0.00002	mg/L	0.1 mg/L	109	80.0	120	----
Bismuth, total	7440-69-9	E420	0.00005	mg/L	1 mg/L	101	80.0	120	----
Boron, total	7440-42-8	E420	0.01	mg/L	1 mg/L	101	80.0	120	----
Cadmium, total	7440-43-9	E420	0.000005	mg/L	0.1 mg/L	101	80.0	120	----
Calcium, total	7440-70-2	E420	0.05	mg/L	50 mg/L	100	80.0	120	----
Cesium, total	7440-46-2	E420	0.00001	mg/L	0.05 mg/L	99.6	80.0	120	----
Chromium, total	7440-47-3	E420	0.0005	mg/L	0.25 mg/L	100.0	80.0	120	----
Cobalt, total	7440-48-4	E420	0.0001	mg/L	0.25 mg/L	99.8	80.0	120	----
Copper, total	7440-50-8	E420	0.0005	mg/L	0.25 mg/L	100	80.0	120	----
Iron, total	7439-89-6	E420	0.01	mg/L	1 mg/L	98.1	80.0	120	----
Lead, total	7439-92-1	E420	0.00005	mg/L	0.5 mg/L	102	80.0	120	----
Lithium, total	7439-93-2	E420	0.001	mg/L	0.25 mg/L	110	80.0	120	----
Magnesium, total	7439-95-4	E420	0.005	mg/L	50 mg/L	104	80.0	120	----
Manganese, total	7439-96-5	E420	0.0001	mg/L	0.25 mg/L	98.8	80.0	120	----
Molybdenum, total	7439-98-7	E420	0.00005	mg/L	0.25 mg/L	99.5	80.0	120	----
Nickel, total	7440-02-0	E420	0.0005	mg/L	0.5 mg/L	99.1	80.0	120	----
Phosphorus, total	7723-14-0	E420	0.05	mg/L	10 mg/L	102	80.0	120	----
Potassium, total	7440-09-7	E420	0.05	mg/L	50 mg/L	98.8	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	97.0	80.0	120	----
Silicon, total	7440-21-3	E420	0.1	mg/L	10 mg/L	99.6	80.0	120	----
Silver, total	7440-22-4	E420	0.00001	mg/L	0.1 mg/L	90.2	80.0	120	----



Sub-Matrix: Water

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Total Metals(QC Lot: 2760077)									
Sodium, total	7440-23-5	E420	0.05	mg/L	50 mg/L	101	80.0	120	---
Strontium, total	7440-24-6	E420	0.0002	mg/L	0.25 mg/L	98.3	80.0	120	---
Sulfur, total	7704-34-9	E420	0.5	mg/L	50 mg/L	101	80.0	120	---
Tellurium, total	13494-80-9	E420	0.0002	mg/L	0.1 mg/L	95.7	80.0	120	---
Thallium, total	7440-28-0	E420	0.00001	mg/L	1 mg/L	100	80.0	120	---
Thorium, total	7440-29-1	E420	0.0001	mg/L	0.1 mg/L	99.3	80.0	120	---
Tin, total	7440-31-5	E420	0.0001	mg/L	0.5 mg/L	98.3	80.0	120	---
Titanium, total	7440-32-6	E420	0.0003	mg/L	0.25 mg/L	98.9	80.0	120	---
Tungsten, total	7440-33-7	E420	0.0001	mg/L	0.1 mg/L	101	80.0	120	---
Uranium, total	7440-61-1	E420	0.00001	mg/L	0.005 mg/L	101	80.0	120	---
Vanadium, total	7440-62-2	E420	0.0005	mg/L	0.5 mg/L	101	80.0	120	---
Zinc, total	7440-66-6	E420	0.003	mg/L	0.5 mg/L	102	80.0	120	---
Zirconium, total	7440-67-7	E420	0.0002	mg/L	0.1 mg/L	95.8	80.0	120	---

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

Sub-Matrix: Drinking Water

					Matrix Spike (MS) Report				
					Spike		Recovery (%)	Recovery (%)	
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High
Anions and Nutrients(QC Lot: 2751943)									
WP2613222-001	Anonymous	Fluoride	16984-48-8	E235.F	1.02 mg/L	1 mg/L	102	75.0	125
Anions and Nutrients(QC Lot: 2751944)									
WP2613222-001	Anonymous	Chloride	16887-00-6	E235.Cl-L	102 mg/L	100 mg/L	102	75.0	125
Anions and Nutrients(QC Lot: 2751945)									
WP2613222-001	Anonymous	Nitrate (as N)	14797-55-8	E235.NO3-L	2.55 mg/L	2.5 mg/L	102	75.0	125
Anions and Nutrients(QC Lot: 2751946)									
WP2613222-001	Anonymous	Nitrite (as N)	14797-65-0	E235.NO2-L	0.489 mg/L	0.5 mg/L	97.8	75.0	125
Anions and Nutrients(QC Lot: 2751947)									
WP2613222-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	100 mg/L	100 mg/L	100	75.0	125
Anions and Nutrients(QC Lot: 2752276)									
WP2613245-001	Anonymous	Fluoride	16984-48-8	E235.F	1.01 mg/L	1 mg/L	101	75.0	125



Sub-Matrix: Drinking Water

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery (%)		Qualifier
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	
Anions and Nutrients(QC Lot: 2752281)										
WP2613245-001	Anonymous	Sulfate (as SO4)	14808-79-8	E235.SO4	102 mg/L	100 mg/L	102	75.0	125	---
Anions and Nutrients(QC Lot: 2758031)										
WP2613180-001	Anonymous	Ammonia, total (as N)	7664-41-7	E298	0.0973 mg/L	0.1 mg/L	97.3	75.0	125	---
Organic / Inorganic Carbon(QC Lot: 2754574)										
WP2613027-002	Anonymous	Carbon, total organic [TOC]	----	E355-L	ND	----	ND	70.0	130	---
Organic / Inorganic Carbon(QC Lot: 2755867)										
WP2613222-002	Anonymous	Carbon, dissolved organic [DOC]	----	E358-L	4.94 mg/L	5 mg/L	98.7	70.0	130	---
Total Metals(QC Lot: 2760077)										
WP2613208-005	Anonymous	Aluminum, total	7429-90-5	E420	0.202 mg/L	0.2 mg/L	101	70.0	130	---
		Antimony, total	7440-36-0	E420	0.0207 mg/L	0.02 mg/L	104	70.0	130	---
		Arsenic, total	7440-38-2	E420	ND	----	ND	70.0	130	---
		Barium, total	7440-39-3	E420	ND	----	ND	70.0	130	---
		Beryllium, total	7440-41-7	E420	0.0332 mg/L	0.04 mg/L	83.0	70.0	130	---
		Bismuth, total	7440-69-9	E420	0.00854 mg/L	0.01 mg/L	85.4	70.0	130	---
		Boron, total	7440-42-8	E420	ND	----	ND	70.0	130	---
		Cadmium, total	7440-43-9	E420	0.00363 mg/L	0.004 mg/L	90.8	70.0	130	---
		Calcium, total	7440-70-2	E420	ND	----	ND	70.0	130	---
		Cesium, total	7440-46-2	E420	0.0103 mg/L	0.01 mg/L	103	70.0	130	---
		Chromium, total	7440-47-3	E420	0.0406 mg/L	0.04 mg/L	101	70.0	130	---
		Cobalt, total	7440-48-4	E420	0.0188 mg/L	0.02 mg/L	94.2	70.0	130	---
		Copper, total	7440-50-8	E420	0.0183 mg/L	0.02 mg/L	91.4	70.0	130	---
		Lead, total	7439-92-1	E420	0.0175 mg/L	0.02 mg/L	87.5	70.0	130	---
		Lithium, total	7439-93-2	E420	0.0778 mg/L	0.1 mg/L	77.8	70.0	130	---
		Magnesium, total	7439-95-4	E420	ND	----	ND	70.0	130	---
		Manganese, total	7439-96-5	E420	ND	----	ND	70.0	130	---
		Molybdenum, total	7439-98-7	E420	0.0203 mg/L	0.02 mg/L	101	70.0	130	---
		Nickel, total	7440-02-0	E420	0.0366 mg/L	0.04 mg/L	91.6	70.0	130	---
		Phosphorus, total	7723-14-0	E420	9.78 mg/L	10 mg/L	97.8	70.0	130	---
		Potassium, total	7440-09-7	E420	ND	----	ND	70.0	130	---
		Rubidium, total	7440-17-7	E420	0.0193 mg/L	0.02 mg/L	96.6	70.0	130	---
		Silver, total	7440-22-4	E420	0.00353 mg/L	0.004 mg/L	88.4	70.0	130	---
		Sodium, total	7440-23-5	E420	ND	----	ND	70.0	130	---
		Strontium, total	7440-24-6	E420	ND	----	ND	70.0	130	---
		Sulfur, total	7704-34-9	E420	20.5 mg/L	20 mg/L	103	70.0	130	---
		Tellurium, total	13494-80-9	E420	0.0331 mg/L	0.04 mg/L	82.7	70.0	130	---
		Thallium, total	7440-28-0	E420	0.00342 mg/L	0.004 mg/L	85.4	70.0	130	---
		Thorium, total	7440-29-1	E420	0.0184 mg/L	0.02 mg/L	92.1	70.0	130	---



Sub-Matrix: Drinking Water

					Matrix Spike (MS) Report					
					Spike		Recovery (%)	Recovery (%)		Qualifier
Laboratory sample ID	Client sample ID	Analyte	CAS Number	Method	Concentration	Target	MS	Low	High	
Total Metals(QC Lot: 2760077)										
		Tin, total	7440-31-5	E420	0.0194 mg/L	0.02 mg/L	97.0	70.0	130	---
		Tungsten, total	7440-33-7	E420	0.0191 mg/L	0.02 mg/L	95.5	70.0	130	---
		Uranium, total	7440-61-1	E420	0.00360 mg/L	0.004 mg/L	90.0	70.0	130	---
		Vanadium, total	7440-62-2	E420	0.105 mg/L	0.1 mg/L	105	70.0	130	---
		Zinc, total	7440-66-6	E420	0.345 mg/L	0.4 mg/L	86.2	70.0	130	---
		Zirconium, total	7440-67-7	E420	0.0403 mg/L	0.04 mg/L	101	70.0	130	---

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):	Report to Owner (email PDF):
Contact: Danielle Vaillant	Contact: Danielle Vaillant
Address: 6000 Portage Ave, Headingley, MB R4H 1E8	Address: 6000 Portage Avenue, Headingley, MB R4H 1E8
Phone: (204) 832-2555	Phone: (204) 832-2555
Email: headingleywtp@crwc.ca	Email: admin@crwc.ca; mwmb3@gov.mb.ca; dvaillant@crwc.ca
	Email PDF copy to: DWO: Mujibur Rahman DWO Address: 14 Fultz Boulevard, Winnipeg, MB R3Y0L6 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: DWO-C
Operation Name: HEADINGLEY REGIONAL - PWS					
Operation Code: 89.40					
Operation ID: 57047					
Sampled by:					

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-mm-yyyy	Sample Time hh:mm	Sample Matrix	Sample Type	# of Containers
2608MR5009	MB05MJD483	Headingley Regional 3 - Distribution @mid-point	1.02	1.23	5-Aug-2026	11:07am	9	1	1
2608MR5010	MB05MJD481	Headingley Regional 1 - Raw			5-Aug-2026	8:01am	6	1	4
2608MR5011	MB05MJD482	Headingley Regional 2 - Treated	1.62	1.79	5-Aug-2026	7:49am	10	1	4

Failure to complete all portions of this form may delay analysis.			
Please fill in this form LEGIBLY.		Sample Matrix: 6-Raw Water, 9-Distributed Water	
		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:	<i>Ekle Van Maccabue</i>	Date & Time:	<i>August 5, 2026</i>
Received By:	<i>WB</i>	Date & Time:	<i>Aug 5/26 12:21 PM</i>
(lab use only)		(lab use only)	
Validated By (lab use only):		Date & Time:	
Sample Condition (lab use only):		Temperature	
		<i>20.20</i>	
Samples Received in Good Condition			



Environmental Division
Winnipeg
Work Order Reference
WP2613244