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June 27, 2025

Project/File: 113352027

Mike Auge, Manager, Capital Planning

Department of Education, Culture and Employment
4501 Franklin Avenue
Yellowknife, NT X1A 3W8

Dear Mike,

Reference: 2025 Potable Water Quality Assessment – Range Lake North School, 170 Borden Dr, Yellowknife, NT

Summary

The results from the potable water samples collected on June 13, 2025 from the selected fixtures at Range Lake North School did not satisfy the applicable health-related federal guidelines for lead and copper in drinking water in 3/12 fixtures sampled in Tier 1 (first flush) samples and none of the fixtures sampled at Tier 2 (5-minute flush and 30-minute stagnation period) samples.

Introduction

Stantec Consulting Ltd. (Stantec) was retained by the Government of the Northwest Territories (GNWT) Department of Education, Culture and Employment (ECE) to conduct a potable water quality assessment at Range Lake North School located at 170 Borden Dr in Yellowknife, NT. This work was carried out in accordance with ECE's request dated May 29, 2025, and our proposal dated June 2, 2025.

Background Information

A potable water quality assessment was requested by GNWT-ECE to confirm the quality of the potable water at the building is acceptable in accordance with *Guidelines for Canadian Drinking Water Quality* (Health Canada, 2019).

The potable water quality assessment field program was completed using the Health Canada's *Guidance on Sampling and Mitigation Measures for Controlling Lead Corrosion* (Health Canada, 2025) established potable water sampling procedures, focusing on the points of consumption, to confirm acceptable potable water quality in the building.

Potable water is supplied to the building by the City of Yellowknife.



Reference: 2025 Potable Water Quality Assessment – Range Lake North School, 170 Borden Dr, Yellowknife, NT

Scope of Work

The scope of work for this project included potable water sampling, laboratory analysis, as well as this summary of findings. Sampling locations are presented in **Figures 1 and 2**, in **Appendix A**, a summary of analytical results and field measurements are provided in **Table 1** in **Appendix B**, laboratory certificates of analysis are provided in **Appendix C**, and the sampling protocol presented to GNWT-ECE by Stantec on June 9, 2025 is presented in **Appendix D**. All the proposed points of consumption, as well as a fixture near the point of entry, were sampled on June 12, 2025.

Sample analysis included one or more of the following parameters: bacteria, copper, lead and other drinking water metals, and general chemistry. On-site measurements for pH and temperature were collected at each of the fixtures during each sampling event.

Duplicate samples were collected for quality control purposes in samples collected for background water quality measurements and in the point of entry samples, following identical methodology as the parent samples.

Methodology

Potable water sample collection was completed as outlined in the sampling protocol developed by Stantec and approved by GNWT-ECE. The sampling protocol was developed in accordance with:

- Health Canada, Guidance on Sampling and Mitigation Measures for Controlling Lead Corrosion February, 2025.
- Health Canada, Guidelines for Canadian Drinking Water Quality: Guideline Technical Document - Lead, March 2019.

Samples were collected from fixtures used for water consumption and food preparation, including both sinks and drinking fountains, hereafter referred to as “fixtures”. The sampling protocol included:

- First draw samples collected from twelve locations after an 8 to 24 hour stagnation period without any flushing, hereafter referred to as Tier 1. These were analyzed for lead and copper.
- Samples collected from twelve locations after a 5-minute flush and 30-minute stagnation period, hereafter referred to as Tier 2. These were analyzed for lead and copper.
- Background water quality parameter samples collected from twelve locations after a 5-minute flush with no stagnation period. These were analyzed for pH, chloride, sulfate, total alkalinity, dissolved inorganic carbon, calcium and magnesium.
- One point of entry sample analyzed for lead, copper, pH, chloride, chlorine, sulfate, total alkalinity, dissolved inorganic carbon, calcium, magnesium, total coliforms and E. coli, drinking water metals, routine chemistry, turbidity, conductivity, and true colour.

Field parameters, pH and temperature, were collected at each fixtures during every sampling event. The specific methodology for each sampling event is described below.



Reference: 2025 Potable Water Quality Assessment – Range Lake North School, 170 Borden Dr, Yellowknife, NT

Tier 1 and 2

Two 125 mL samples for lead and copper analysis were collected at each point of consumption sample location prior to any flushing following an 8 – 24-hour stagnation period (Tier 1) and after a 5-minute flush followed by a 30-minute stagnation period (Tier 2). The reported results are an average of the two samples collected for each of Tier 1 and Tier 2 samples.

Background Water Quality Parameters

Samples were collected after a 5-minute flush into laboratory provided sampling containers collected at each point of consumption sample location. These samples were analyzed for pH, chloride, sulfate, total alkalinity, dissolved inorganic carbon, calcium and magnesium.

Point of entry

Samples were collected after a 5-minute flush into laboratory provided sampling containers at a fixture near the point of entry of municipal water into the school. These samples were analyzed for lead, copper, pH, chloride, chlorine, sulfate, total alkalinity, dissolved inorganic carbon, calcium, magnesium, total coliforms and E. coli, drinking water metals, routine chemistry, turbidity, conductivity, and true colour.

Field Measurements

On-site pH and temperature readings were taken at each location using a Hanna Instruments HI 98129 Waterproof pH/Conductivity meter. These parameters were collected at all fixtures during each sampling event, Tier 1 and 2 and during background sample collection.

Quality Assurance and Quality Control

Samples collected were submitted to Taiga Environmental Laboratory in Yellowknife, Northwest Territories, which is accredited by the Canadian Association for Laboratory Accreditation (CALA).

Two blind field duplicates (BFDs) consisting of the sample and parent sample were collected. The BFDs consisted of background water quality samples and the point of entry sample as it is not possible to collect Tier 1 and Tier 2 duplications. These BFD results were evaluated using the relative percent difference (RPD) method.

One field blank was collected using deionized water and analyzed for the same parameters as the point of entry sample.

Regulatory Framework and Interpretation of Drinking Water Criteria

The analytical results and field measurements for the potable water samples collected were compared to the applicable federal and provincial drinking water criteria, including:



Reference: 2025 Potable Water Quality Assessment – Range Lake North School, 170 Borden Dr, Yellowknife, NT

- Health Canada, Guidelines for Canadian Drinking Water Quality – Summary Table, March 2019.

Federal drinking water quality criteria for different parameters are categorized as follows:

- Aesthetic Objectives (AOs): established for parameters that may impair the taste, odour, or colour of drinking water.
- Operational Guidelines (OGs): established for parameters that, if not controlled, may negatively impact the efficiency and efficacy of treatment, disinfection, and distribution of drinking water.
- Maximum Acceptable Concentrations (MACs): established for parameters that have known or suspected adverse health effects.

Analytical results for potable water samples collected that do not satisfy MACs are identified to have a concentration that exceeds the maximum health related drinking water criterion.

Analytical results and field measurements for potable water samples collected that do not satisfy AOs or OGs are identified to have a concentration that does not meet the minimum, or exceeds the maximum, non-health related drinking water criterion.

Results

Analytical and field results are presented in **Table 1** in **Appendix B**, and the lab certificate is presented in **Appendix C**.

The results met the applicable health-related criteria with the exception of the following:

- Lead exceeded the federal criteria (5 µg/L) in Tier 1 samples at Fixtures 4, 6, and 8.

A summary of the health-related results is presented in **Table 1** below.

Table 1 Summary of Lead Results

Building Level – Sample Location	Average Lead Concentration Measured in Tier 1 Samples (µg/L)	Average Lead Concentration Measured in Tier 2 Samples (µg/L)	Lead Concentration Measured at Point of Entry (µg/L)	Fixture description
Fixture 1	0.6	0.5		Second floor water fountain
Fixture 2	<0.1	0.1		Second floor water fountain
Fixture 3	2.3	1.1		Food lab sink
Fixture 4	6.2	2.6		Food lab sink
Fixture 5	3.6	1.7		Food lab sink
Fixture 6	9.0	4.3		Food lab sink
Fixture 7	3.3	2.5		Food lab sink



Reference: 2025 Potable Water Quality Assessment – Range Lake North School, 170 Borden Dr, Yellowknife, NT

Building Level – Sample Location	Average Lead Concentration Measured in Tier 1 Samples (µg/L)	Average Lead Concentration Measured in Tier 2 Samples (µg/L)	Lead Concentration Measured at Point of Entry (µg/L)	Fixture description
Fixture 8	5.8	2.6		Staff room sink
Fixture 9	0.6	0.7		First floor water fountain
Fixture 10	3.6	1.9		First floor kitchen sink
Fixture 11	0.4	0.4		First floor water fountain
Fixture 12	0.4	0.6		First floor water fountain
Fixture 13			0.4	Sink near Point of entry

Notes:

5 µg/L Samples exceeding Health Canada's Canadian Drinking Water Guidelines (Health Canada, 2019)

<5 µg/L Samples below guideline values

The results met the applicable non-health related criteria.

Quality Assurance/Quality Control

Acceptable RPDs for water samples are typically considered to be values less than 40%. Parameters analysed in the parent and duplicate samples were not detected or within five times the laboratory detection limit; therefore, no RPDs were calculated. As a result, neither the field nor laboratory methodology are considered to have adversely impacted the analytical results.

Parameters analyzed in the field blank fell below detection limit, or within five times the laboratory detection limit. As a result, neither the field nor laboratory methodology are considered to have adversely impacted the analytical results.

Conclusions

Based on the results of this sampling program, the potable water from the selected fixtures at Range Lake North School in 3/12 fixtures sampled exceed federal guidelines for lead in drinking water.

Limitations

This report documents work that was performed in accordance with generally accepted professional standards at the time and location in which the services were provided.

No other representations, warranties or guarantees are made concerning the accuracy or completeness of the data or conclusions contained within this report, including no assurance that this work has uncovered all potential liabilities associated with the identified property.



Reference: 2025 Potable Water Quality Assessment – Range Lake North School, 170 Borden Dr, Yellowknife, NT

This report provides an evaluation of selected environmental conditions associated with the identified portion of the property that was assessed at the time the work was conducted and is based on information obtained by and/or provided to Stantec at that time. There are no assurances regarding the accuracy and completeness of this information. All information received from the client or third parties in the preparation of this report has been assumed by Stantec to be correct. Stantec assumes no responsibility for any deficiency or inaccuracy in information received from others.

The opinions in this report can only be relied upon as they relate to the condition of the portion of the identified property that was assessed at the time the work was conducted. Activities at the property subsequent to Stantec's assessment may have significantly altered the property's condition. Stantec cannot comment on other areas of the property that were not assessed.

Conclusions made within this report consist of Stantec's professional opinion as of the time of the writing of this report and are based solely on the scope of work described in the report, the limited data available and the results of the work. They are not a certification of the property's environmental condition. This report should not be construed as legal advice.

This report has been prepared for the exclusive use of the client identified herein and any use by any third party is prohibited. Stantec assumes no responsibility for losses, damages, liabilities or claims, howsoever arising, from third party use of this report.

This report is limited by the following:

- A potable water quality assessment is a limited sampling of the water at the time of testing. The conclusions given in this report are based on data obtained from the samples only.
- The assessment represents the conditions in the subject area at the time of the sampling event. It should be noted that these conditions are subject to variations with seasonal occupancy and time of day.

The locations of any utilities, buildings and structures, and property boundaries illustrated in or described within this report, if any, including pole lines, conduits, water mains, sewers and other surface or sub-surface utilities and structures are not guaranteed. Before starting work, the exact location of all such utilities and structures should be confirmed and Stantec assumes no liability for damage to them.

The conclusions are based on the site conditions encountered by Stantec at the time the work was performed at the specific testing and/or sampling locations, and conditions may vary among sampling locations. Factors such as areas of potential concern identified in previous studies, site conditions (e.g., utilities) and cost may have constrained the sampling locations used in this assessment. In addition, analysis has been carried out for only a limited number of chemical parameters, and it should not be inferred that other chemical species are not present. Due to the nature of the investigation and the limited data available, Stantec does not warrant against undiscovered environmental liabilities nor that the sampling results are indicative of the condition of the entire site.

As the purpose of this report is to identify site conditions which may pose an environmental risk; the identification of non-environmental risks to structures or people on the site is beyond the scope of this assessment.

Should additional information become available which differs significantly from our understanding of conditions presented in this report, Stantec specifically disclaims any responsibility to update the conclusions in this report.



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Should you have any questions, please do not hesitate to contact the undersigned.

Sincerely,

Stantec Consulting Ltd.

Celejewski, Magda Digitally signed by
Celejewski, Magda
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Attachments:

Appendix A Sample Location Figures
Appendix B Analytical and Field Results
Appendix C Laboratory Certificates of Analysis
Appendix D Sampling Protocol



June 27, 2025
Mike Auge, Manager, Capital Planning

Reference: 2025 Potable Water Quality Assessment – Range Lake North School, 170 Borden Dr, Yellowknife, NT

Appendix A Sample Location Figures

June 27, 2025
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Appendix B Analytical and Field Results

Table 2
Summary of Drinking Water Analytical Results - Range Lake North School
Yellowknife, NT
Government of the Northwest Territories - Department of Education, Culture and Employment

Sample Location			Fixture 1			Fixture 2			Fixture 3			Fixture 4			Fixture 5			Fixture 6		
			Tier 1*	Tier 2*		Tier 1*	Tier 2*		Tier 1*	Tier 2*		Tier 1*	Tier 2*		Tier 1*	Tier 2*		Tier 1*	Tier 2*	
Sample Date			13-Jun-25	13-Jun-25	13-Jun-25	13-Jun-25	13-Jun-25	13-Jun-25	13-Jun-25	13-Jun-25	13-Jun-25	13-Jun-25	13-Jun-25	13-Jun-25	13-Jun-25	13-Jun-25	13-Jun-25	13-Jun-25	13-Jun-25	
Sample Time			6:18	5:44	6:52	6:15	5:46	6:50	6:07	5:48	6:44	6:09	5:50	6:45	6:10	5:51	6:46	6:11	5:53	
Sample ID			RL-PW25-01	RL-PW25-001	RL-PW25-501	RL-PW25-02	RL-PW25-002	RL-PW25-502	RL-PW25-03	RL-PW25-003	RL-PW25-503	RL-PW25-04	RL-PW25-004	RL-PW25-504	RL-PW25-05	RL-PW25-005	RL-PW25-505	RL-PW25-06	RL-PW25-006	
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	
Laboratory			TAIGA	TAIGA	TAIGA	TAIGA	TAIGA	TAIGA	TAIGA	TAIGA	TAIGA	TAIGA	TAIGA	TAIGA	TAIGA	TAIGA	TAIGA	TAIGA	TAIGA	
Laboratory Work Order			250749	250749	250749	250749	250749	250749	250749	250749	250749	250749	250749	250749	250749	250749	250749	250749	250749	
Laboratory Sample ID			250749-001	250749-018	250749-042	250749-002	250749-020	250749-044	250749-003	250749-022	250749-046	250749-004	250749-024	250749-048	250749-005	250749-026	250749-050	250749-006	250749-028	
Sample Type	Units	GCDWQ																		
Field Parameters																				
pH, Field	S.U.	7.0-10.5 ^A	7.67	7.54	7.64	7.63	7.42	7.68	7.6	7.41	7.64	7.62	7.47	7.67	7.68	7.47	7.69	7.72	7.52	
Temperature, Field	deg C	n/v	13.3	15	13.5	10.6	9.8	9.6	15.8	18.4	16.4	15.3	19.2	16.4	15	19.6	16.3	15.1	20.1	
General Chemistry																				
pH, lab	S.U.	7.0-10.5 ^A	6.36 ^A	-	-	6.37 ^A	-	-	6.39 ^A	-	-	6.39 ^A	-	-	6.39 ^A	-	-	6.40 ^A	-	
Specific Conductivity	µS/cm	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Chloride	mg/L	≤250 ^A	6.1	-	-	6.2	-	-	5.9	-	-	5.9	-	-	5.9	-	-	6	-	
Fluoride	mg/L	1.5 ^B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Chlorine, Residual	mg/L	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total Chlorine	mg/L	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Sulfate	mg/L	≤500 ^A	4	-	-	4	-	-	3	-	-	3	-	-	3	-	-	3	-	
Alkalinity, Total (as CaCO3)	mg/L	n/v	25.8	-	-	25.1	-	-	25.1	-	-	25.0	-	-	25.3	-	-	25.2	-	
Hardness (as CaCO3)	mg/L	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Calcium	mg/L	n/v	7	-	-	6.4	-	-	6.5	-	-	6.6	-	-	6.5	-	-	6.6	-	
Magnesium	mg/L	n/v	2.3	-	-	2.3	-	-	2.3	-	-	2.2	-	-	2.2	-	-	2.3	-	
Potassium	mg/L	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Sodium	mg/L	≤200 ^A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Turbidity, Lab	NTU	≤0.3/1.0/0.1 ^C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Color, True	TCU	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Nitrogen Compounds																				
Nitrate (as N)	mg/L	10 ^B	-			-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Nitrite (as N)	mg/L	1 ^B	-			-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Nitrate + Nitrite (as N)	mg/L	n/v	-			-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Metals																				
Aluminum	µg/L	100 ^A 2,900 ^B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Antimony	µg/L	6 ^B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Arsenic	µg/L	10 ^{ALARA} ^B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Barium	µg/L	2,000 ^B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Boron	µg/L	5,000 ^B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Cadmium	µg/L	7 ^B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Chromium	µg/L	50 ^B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Copper	µg/L	≤1000 ^A 2,000 ^B	-	363	438	-	9.5	13	-	685	325.5	-	779	310.5	-	782	311.5	-	611.5	
Iron	µg/L	≤100 ^A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Lead	µg/L	5 ^{ALARA} ^B	-	0.6	0.5	-	<0.1	0.1	-	2.3	1.1	-	6.2 ^B	2.6	-	3.6	1.7	-	9.0 ^B	
Manganese	µg/L	≤20 ^A 120 ^B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Mercury	µg/L	1 ^B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Silver	µg/L	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Uranium	µg/L	20 ^B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Zinc	µg/L	≤5000 ^A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Microbiological Analysis																				
Escherichia coli (E.Coli)	mpn/100mL	0 ^C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total Coliforms	mpn/100mL	0 ^C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

See notes on last page

Table 2
Summary of Drinking Water Analytical Results - Range Lake North School
Yellowknife, NT
Government of the Northwest Territories - Department of Education, Culture and Employment

Sample Location			Fixture 7			Fixture 8			Fixture 9			Fixture 10					Fixture 11		
				Tier 1*	Tier 2*		Tier 1*	Tier 2*		Tier 1*	Tier 2*			Tier 1*	Tier 2*		Tier 1*	Tier 2*	
Sample Date			13-Jun-25	13-Jun-25	13-Jun-25	13-Jun-25	13-Jun-25	13-Jun-25	13-Jun-25	13-Jun-25	13-Jun-25	13-Jun-25	13-Jun-25	13-Jun-25	13-Jun-25	13-Jun-25	13-Jun-25	13-Jun-25	
Sample Time			6:12	5:54	6:48	6:14	5:56	6:49	6:32	5:33	7:02	6:30	6:30	5:36	7:00	6:38	5:38	7:09	
Sample ID			RL-PW25-07	RL-PW25-007	RL-PW25-507	RL-PW25-08	RL-PW25-008	RL-PW25-508	RL-PW25-09	RL-PW25-009	RL-PW25-509	RL-PW25-10	QC-03	RL-PW25-010	RL-PW25-510	RL-PW25-11	RL-PW25-011	RL-PW25-511	
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	STANTEC	
Laboratory			TAIGA	TAIGA	TAIGA	TAIGA	TAIGA	TAIGA	TAIGA	TAIGA	TAIGA	TAIGA	TAIGA	TAIGA	TAIGA	TAIGA	TAIGA	TAIGA	
Laboratory Work Order			250749	250749	250749	250749	250749	250749	250749	250749	250749	250749	250749	250749	250749	250749	250749	250749	
Laboratory Sample ID			250749-007	250749-030	250749-054	250749-008	250749-032	250749-056	250749-009	250749-034	250749-058	250749-010	250749-013	250749-036	250749-060	250749-011	250749-038	250749-062	
Sample Type	Units	GCDWQ											Field Duplicate	RPD (%)					
Field Parameters																			
pH, Field	S.U.	7.0-10.5 ^A	7.76	7.53	7.73	7.78	7.54	7.7	7.7	7.46	7.63	7.63	-	-	7.47	7.61	7.68	7.49	7.64
Temperature, Field	deg C	n/v	14.9	19.8	16.3	14.9	20.4	16.4	13.0	15.4	14	16.7	-	-	16.4	7.1	12.4	14.4	12.6
General Chemistry																			
pH, lab	S.U.	7.0-10.5 ^A	6.40 ^A	-	-	6.40 ^A	-	-	6.38 ^A	-	-	6.40 ^A	6.41 ^A	nc	-	-	6.40 ^A	-	-
Specific Conductivity	µS/cm	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloride	mg/L	≤250 ^A	5.9	-	-	5.9	-	-	6.1	-	-	5.9	6	nc	-	-	5.9	-	-
Fluoride	mg/L	1.5 ^B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorine, Residual	mg/L	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Chlorine	mg/L	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulfate	mg/L	≤500 ^A	3	-	-	3	-	-	3	-	-	3	3	nc	-	-	3	-	-
Alkalinity, Total (as CaCO3)	mg/L	n/v	25.6	-	-	25.1	-	-	25.3	-	-	25.7	25.3	nc	-	-	24.7	-	-
Hardness (as CaCO3)	mg/L	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Calcium	mg/L	n/v	6.6	-	-	6.5	-	-	6.5	-	-	6.7	6.6	nc	-	-	6.6	-	-
Magnesium	mg/L	n/v	2.2	-	-	2.3	-	-	2.3	-	-	2.3	2.2	nc	-	-	2.2	-	-
Potassium	mg/L	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	mg/L	≤200 ^A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Turbidity, Lab	NTU	≤0.3/1.0/0.1 ^C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Color, True	TCU	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen Compounds																			
Nitrate (as N)	mg/L	10 ^B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrite (as N)	mg/L	1 ^B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate + Nitrite (as N)	mg/L	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Metals																			
Aluminum	µg/L	100 ^A 2,900 ^B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Antimony	µg/L	6 ^B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	µg/L	10 ^{ALARA} ^B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Barium	µg/L	2,000 ^B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boron	µg/L	5,000 ^B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	µg/L	7 ^B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	µg/L	50 ^B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	µg/L	≤1000 ^A 2,000 ^B	-	346	234.5	-	761.5	309.5	-	395.5	472.5	-	-	-	811.5	319.5	-	335	246.5
Iron	µg/L	≤100 ^A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	µg/L	5 ^{ALARA} ^B	-	3.3	2.5	-	5.8 ^B	2.6	-	0.6	0.7	-	-	-	3.6	1.9	-	0.4	0.4
Manganese	µg/L	≤20 ^A 120 ^B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury	µg/L	1 ^B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	µg/L	n/v	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Uranium	µg/L	20 ^B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	µg/L	≤5000 ^A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Microbiological Analysis																			
Escherichia coli (E.Coli)	mpn/100mL	0 ^C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Coliforms	mpn/100mL	0 ^C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

See notes on last page

Table 2
Summary of Drinking Water Analytical Results - Range Lake North School
Yellowknife, NT
Government of the Northwest Territories - Department of Education, Culture and Employment

Sample Location			Fixture 12			Fixture 13			Field Blank
Sample Date			13-Jun-25	13-Jun-25	13-Jun-25	13-Jun-25	13-Jun-25		13-Jun-25
Sample Time			6:40	5:41	7:10	7:20	7:20		
Sample ID			RL-PW25-12	RL-PW25-012	RL-PW25-512	RL-PW25-13	QC-04		Field Blank-RL
Sampling Company			STANTEC	STANTEC	STANTEC	STANTEC	STANTEC		STANTEC
Laboratory			TAIGA	TAIGA	TAIGA	TAIGA	TAIGA		TAIGA
Laboratory Work Order			250749	250749	250749	250749	250749		250749
Laboratory Sample ID			250749-012	250749-040	250749-064	250749-014	250749-015	RPD (%)	250749-016
Sample Type	Units	GCDWQ					Field Duplicate		Field Blank

Field Parameters									
pH, Field	S.U.	7.0-10.5 ^A	7.64	7.5	7.63	7.71	-	-	-
Temperature, Field	deg C	n/v	14.1	13.1	13.7	14.1	-	-	-

General Chemistry									
pH, lab	S.U.	7.0-10.5 ^A	6.39 ^A	-	-	6.41 ^A	6.40 ^A	nc	5.37 ^A
Specific Conductivity	µS/cm	n/v	-	-	-	77.8	77.9	nc	<0.4
Chloride	mg/L	≤250 ^A	6.1	-	-	6	5.9	nc	<0.7
Fluoride	mg/L	1.5 ^B	-	-	-	0.6	0.6	nc	<0.1
Chlorine, Residual	mg/L	n/v	-	-	-	0.43	0.41	nc	<0.01
Total Chlorine	mg/L	n/v	-	-	-	0.64	0.64	nc	0.01
Sulfate	mg/L	≤500 ^A	4	-	-	4	4	nc	<1
Alkalinity, Total (as CaCO3)	mg/L	n/v	25.5	-	-	25	24.8	nc	2.1
Hardness (as CaCO3)	mg/L	n/v	-	-	-	25.3	25.1	nc	<0.7
Calcium	mg/L	n/v	6.6	-	-	6.5	6.4	nc	<0.1
Magnesium	mg/L	n/v	2.2	-	-	2.2	2.2	nc	<0.1
Potassium	mg/L	n/v	-	-	-	1.3	1.3	nc	<0.1
Sodium	mg/L	≤200 ^A	-	-	-	5.3	5.3	nc	<0.1
Turbidity, Lab	NTU	≤0.3/1.0/0.1 ^C	-	-	-	0.12	0.06	nc	0.09
Color, True	TCU	n/v	-	-	-	<5	<5	nc	<5

Nitrogen Compounds									
Nitrate (as N)	mg/L	10 ^B	-	-	-	0.02	0.01	nc	<0.01
Nitrite (as N)	mg/L	1 ^B	-	-	-	<0.01	<0.01	nc	<0.01
Nitrate + Nitrite (as N)	mg/L	n/v	-	-	-	0.02	0.01	nc	<0.01

Metals									
Aluminum	µg/L	100 ^A 2,900 ^B	-	-	-	4.6	4.6	nc	<0.6
Antimony	µg/L	6 ^B	-	-	-	0.1	<0.1	nc	<0.1
Arsenic	µg/L	10 ^{ALARA} ^B	-	-	-	0.4	0.4	nc	<0.2
Barium	µg/L	2,000 ^B	-	-	-	4.5	4.6	nc	<0.1
Boron	µg/L	5,000 ^B	-	-	-	6.2	6.2	nc	<0.9
Cadmium	µg/L	7 ^B	-	-	-	<0.04	<0.04	nc	<0.04
Chromium	µg/L	50 ^B	-	-	-	<0.1	<0.1	nc	<0.1
Copper	µg/L	≤1000 ^A 2,000 ^B	-	326.5	394.5	123	122	nc	<0.2
Iron	µg/L	≤100 ^A	-	-	-	24	25	nc	<5
Lead	µg/L	5 ^{ALARA} ^B	-	0.4	0.6	0.4	0.4	nc	<0.1
Manganese	µg/L	≤20 ^A 120 ^B	-	-	-	0.5	0.5	nc	<0.1
Mercury	µg/L	1 ^B	-	-	-	0.02	<0.01	nc	<0.01
Silver	µg/L	n/v	-	-	-	<0.1	<0.1	nc	<0.1
Uranium	µg/L	20 ^B	-	-	-	0.2	0.2	nc	<0.1
Zinc	µg/L	≤5000 ^A	-	-	-	2.4	2.3	nc	<0.4

Microbiological Analysis									
Escherichia coli (E.Coli)	mpn/100mL	0 ^C	-	-	-	<1.0	<1.0	nc	<1.0
Total Coliforms	mpn/100mL	0 ^C	-	-	-	<1.0	<1.0	nc	<1.0

See notes on last page

Table 2
Summary of Drinking Water Analytical Results - Range Lake North School
Yellowknife, NT
Government of the Northwest Territories - Department of Education, Culture and Employment

Notes:	
GCDWQ	Health Canada (March 2025). Guidelines for Canadian Drinking Water Quality—Summary Table. Water and Air Quality Bureau, Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario.
A	Guidelines for Canadian Drinking Water Quality - Aesthetic Objectives/ Operational Guidelines
B	Guidelines for Canadian Drinking Water Quality - Maximum Acceptable Concentration
C	Guidelines for Canadian Drinking Water Quality - Microbiological Parameters
D	Guidelines for Canadian Drinking Water Quality - Radiological Parameters
6.5 ^A	Concentration exceeds the indicated standard.
15.2	Measured concentration did not exceed the indicated standard.
<0.50	Laboratory reporting limit was greater than the applicable standard.
<0.03	Analyte was not detected at a concentration greater than the laboratory reporting limit.
n/v	No standard/guideline value.
-	Parameter not analyzed / not available.
a	This is an operational guidance value, designed to apply only to drinking water treatment plants using aluminum-based coagulants; it does not apply to naturally occurring aluminum found in groundwater. The operational guidance values of 0.1 mg/L applies to conventional treatment plants, and 0.2 mg/L applies to other types of treatment systems.
ALARA	as low as reasonably achievable
RPD	Relative Percent Difference.
61%	RPD exceeds data quality objective of 30%.
nc	RPD is not calculated if one or more values is non detect or if one or more values is less than five times the reportable detection limit.
*	Reported values are an average of the two 125 mL samples collected for Tier 1 and Tier 2 samples

June 27, 2025
Mike Auge, Manager, Capital Planning

Reference: 2025 Potable Water Quality Assessment – Range Lake North School, 170 Borden Dr, Yellowknife, NT

Appendix C Laboratory Certificate of Analysis



Taiga Environmental Laboratory
4601-52nd Ave., Box 1320, Yellowknife, NT. X1A 2L9
Tel: (867)-767-9235 Fax: (867)-920-8740

Taiga Batch No.:
250749

- PRELIMINARY REPORT -

Prepared For: Stantec Consulting Ltd.

Address: P.O. Box 1777
4910 - 53rd Street, 2nd Floor
Yellowknife, NT
X1A 2P4

Attn: Magda Celejewski

Facsimile:

Final report has been reviewed and approved by:

Bradley Koswan
Quality Assurance Officer

NOTES:

- Test methods and data are validated by the laboratory's Quality Assurance Program. Taiga Environmental Laboratory is accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) to ISO/IEC 17025 as a testing laboratory for specific tests registered with CALA.
- Routine methods are based on recognized procedures from sources such as
 - Standard Methods for the Examination of Water and Wastewater APHA AWWA WEF;
 - Environment Canada
 - USEPA
- Samples shall be kept for thirty (30) days after the final report is issued. All microbiological samples shall be disposed of immediately upon completion of analysis to minimize biohazardous risks to laboratory personnel. Please contact the laboratory if you have any special requirements.
- Final results are based on the specific tests at the time of analysis and do not represent the conditions during sampling.

ReportDate:

Print Date: *Monday, June 16, 2025*

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Taiga Environmental Laboratory
4601-52nd Ave., Box 1320, Yellowknife, NT. X1A 2L9
Tel: (867)-767-9235 Fax: (867)-920-8740

Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-01**

Taiga Sample ID: **001**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<u>Cations by ICP-MS</u>						
Calcium	7.0	0.1	mg/L	13-Jun-25	TEL035	
Magnesium	2.3	0.1	mg/L	13-Jun-25	TEL035	
<u>Inorganics - Physicals</u>						
Alkalinity, Total (as CaCO ₃)	25.8	0.4	mg/L	14-Jun-25	TEL060	
pH	6.36		pH units	14-Jun-25	TEL058	
<u>Major Ions</u>						
Chloride	6.1	0.7	mg/L	14-Jun-25	TEL055	
Sulphate	4	1	mg/L	14-Jun-25	TEL055	

ReportDate:
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Taiga Environmental Laboratory
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Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-02**

Taiga Sample ID: **002**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<u>Cations by ICP-MS</u>						
Calcium	6.4	0.1	mg/L	13-Jun-25	TEL035	
Magnesium	2.3	0.1	mg/L	13-Jun-25	TEL035	
<u>Inorganics - Physicals</u>						
Alkalinity, Total (as CaCO ₃)	25.1	0.4	mg/L	14-Jun-25	TEL060	
pH	6.37		pH units	14-Jun-25	TEL058	
<u>Major Ions</u>						
Chloride	6.2	0.7	mg/L	14-Jun-25	TEL055	
Sulphate	4	1	mg/L	14-Jun-25	TEL055	

ReportDate:
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Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-03**

Taiga Sample ID: **003**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<u>Cations by ICP-MS</u>						
Calcium	6.5	0.1	mg/L	13-Jun-25	TEL035	
Magnesium	2.3	0.1	mg/L	13-Jun-25	TEL035	
<u>Inorganics - Physicals</u>						
Alkalinity, Total (as CaCO ₃)	25.1	0.4	mg/L	14-Jun-25	TEL060	
pH	6.39		pH units	14-Jun-25	TEL058	
<u>Major Ions</u>						
Chloride	5.9	0.7	mg/L	14-Jun-25	TEL055	
Sulphate	3	1	mg/L	14-Jun-25	TEL055	

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Taiga Environmental Laboratory
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Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-04**

Taiga Sample ID: **004**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<u>Cations by ICP-MS</u>						
Calcium	6.6	0.1	mg/L	13-Jun-25	TEL035	
Magnesium	2.2	0.1	mg/L	13-Jun-25	TEL035	
<u>Inorganics - Physicals</u>						
Alkalinity, Total (as CaCO ₃)	25.0	0.4	mg/L	14-Jun-25	TEL060	
pH	6.39		pH units	14-Jun-25	TEL058	
<u>Major Ions</u>						
Chloride	5.9	0.7	mg/L	14-Jun-25	TEL055	
Sulphate	3	1	mg/L	14-Jun-25	TEL055	

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Taiga Environmental Laboratory
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Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-05**

Taiga Sample ID: **005**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<u>Cations by ICP-MS</u>						
Calcium	6.5	0.1	mg/L	13-Jun-25	TEL035	
Magnesium	2.2	0.1	mg/L	13-Jun-25	TEL035	
<u>Inorganics - Physicals</u>						
Alkalinity, Total (as CaCO ₃)	25.3	0.4	mg/L	14-Jun-25	TEL060	
pH	6.39		pH units	14-Jun-25	TEL058	
<u>Major Ions</u>						
Chloride	5.9	0.7	mg/L	14-Jun-25	TEL055	
Sulphate	3	1	mg/L	14-Jun-25	TEL055	

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Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-06**

Taiga Sample ID: **006**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<u>Cations by ICP-MS</u>						
Calcium	6.6	0.1	mg/L	13-Jun-25	TEL035	
Magnesium	2.3	0.1	mg/L	13-Jun-25	TEL035	
<u>Inorganics - Physicals</u>						
Alkalinity, Total (as CaCO ₃)	25.2	0.4	mg/L	14-Jun-25	TEL060	
pH	6.40		pH units	14-Jun-25	TEL058	
<u>Major Ions</u>						
Chloride	6.0	0.7	mg/L	14-Jun-25	TEL055	
Sulphate	3	1	mg/L	14-Jun-25	TEL055	

ReportDate:
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Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-07**

Taiga Sample ID: **007**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<u>Cations by ICP-MS</u>						
Calcium	6.6	0.1	mg/L	13-Jun-25	TEL035	
Magnesium	2.2	0.1	mg/L	13-Jun-25	TEL035	
<u>Inorganics - Physicals</u>						
Alkalinity, Total (as CaCO ₃)	25.6	0.4	mg/L	14-Jun-25	TEL060	
pH	6.40		pH units	14-Jun-25	TEL058	
<u>Major Ions</u>						
Chloride	5.9	0.7	mg/L	14-Jun-25	TEL055	
Sulphate	3	1	mg/L	14-Jun-25	TEL055	

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Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-08**

Taiga Sample ID: **008**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<u>Cations by ICP-MS</u>						
Calcium	6.5	0.1	mg/L	13-Jun-25	TEL035	
Magnesium	2.3	0.1	mg/L	13-Jun-25	TEL035	
<u>Inorganics - Physicals</u>						
Alkalinity, Total (as CaCO ₃)	25.1	0.4	mg/L	14-Jun-25	TEL060	
pH	6.40		pH units	14-Jun-25	TEL058	
<u>Major Ions</u>						
Chloride	5.9	0.7	mg/L	14-Jun-25	TEL055	
Sulphate	3	1	mg/L	14-Jun-25	TEL055	

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Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-09**

Taiga Sample ID: **009**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<u>Cations by ICP-MS</u>						
Calcium	6.5	0.1	mg/L	13-Jun-25	TEL035	
Magnesium	2.3	0.1	mg/L	13-Jun-25	TEL035	
<u>Inorganics - Physicals</u>						
Alkalinity, Total (as CaCO ₃)	25.3	0.4	mg/L	14-Jun-25	TEL060	
pH	6.38		pH units	14-Jun-25	TEL058	
<u>Major Ions</u>						
Chloride	6.1	0.7	mg/L	14-Jun-25	TEL055	
Sulphate	3	1	mg/L	14-Jun-25	TEL055	

ReportDate:
Print Date: *Monday, June 16, 2025*



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Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-10**

Taiga Sample ID: **010**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<u>Cations by ICP-MS</u>						
Calcium	6.7	0.1	mg/L	13-Jun-25	TEL035	
Magnesium	2.3	0.1	mg/L	13-Jun-25	TEL035	
<u>Inorganics - Physicals</u>						
Alkalinity, Total (as CaCO ₃)	25.7	0.4	mg/L	14-Jun-25	TEL060	
pH	6.40		pH units	14-Jun-25	TEL058	
<u>Major Ions</u>						
Chloride	5.9	0.7	mg/L	14-Jun-25	TEL055	
Sulphate	3	1	mg/L	14-Jun-25	TEL055	

ReportDate:
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Taiga Environmental Laboratory
4601-52nd Ave., Box 1320, Yellowknife, NT. X1A 2L9
Tel: (867)-767-9235 Fax: (867)-920-8740

Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-11**

Taiga Sample ID: **011**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<u>Cations by ICP-MS</u>						
Calcium	6.6	0.1	mg/L	13-Jun-25	TEL035	
Magnesium	2.2	0.1	mg/L	13-Jun-25	TEL035	
<u>Inorganics - Physicals</u>						
Alkalinity, Total (as CaCO ₃)	24.7	0.4	mg/L	14-Jun-25	TEL060	
pH	6.40		pH units	14-Jun-25	TEL058	
<u>Major Ions</u>						
Chloride	5.9	0.7	mg/L	14-Jun-25	TEL055	
Sulphate	3	1	mg/L	14-Jun-25	TEL055	

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Taiga Environmental Laboratory
4601-52nd Ave., Box 1320, Yellowknife, NT. X1A 2L9
Tel: (867)-767-9235 Fax: (867)-920-8740

Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-12**

Taiga Sample ID: **012**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<u>Cations by ICP-MS</u>						
Calcium	6.6	0.1	mg/L	13-Jun-25	TEL035	
Magnesium	2.2	0.1	mg/L	13-Jun-25	TEL035	
<u>Inorganics - Physicals</u>						
Alkalinity, Total (as CaCO ₃)	25.5	0.4	mg/L	14-Jun-25	TEL060	
pH	6.39		pH units	14-Jun-25	TEL058	
<u>Major Ions</u>						
Chloride	6.1	0.7	mg/L	14-Jun-25	TEL055	
Sulphate	4	1	mg/L	14-Jun-25	TEL055	

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Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **QC-03**

Taiga Sample ID: **013**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<u>Cations by ICP-MS</u>						
Calcium	6.6	0.1	mg/L	13-Jun-25	TEL035	
Magnesium	2.2	0.1	mg/L	13-Jun-25	TEL035	
<u>Inorganics - Physicals</u>						
Alkalinity, Total (as CaCO ₃)	25.3	0.4	mg/L	14-Jun-25	TEL060	
pH	6.41		pH units	14-Jun-25	TEL058	
<u>Major Ions</u>						
Chloride	6.0	0.7	mg/L	14-Jun-25	TEL055	
Sulphate	3	1	mg/L	14-Jun-25	TEL055	

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Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-13**

Taiga Sample ID: **014**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<u>Cations by ICP-MS</u>						
Calcium	6.5	0.1	mg/L	13-Jun-25	TEL035	
Hardness	25.3	0.7	mg/L	13-Jun-25	TEL035	
Magnesium	2.2	0.1	mg/L	13-Jun-25	TEL035	
Potassium	1.3	0.1	mg/L	13-Jun-25	TEL035	
Sodium	5.3	0.1	mg/L	13-Jun-25	TEL035	
<u>Inorganics - Physicals</u>						
Alkalinity, Total (as CaCO ₃)	25.0	0.4	mg/L	14-Jun-25	TEL060	
Chlorine, Residual	0.43	0.01	mg/L	13-Jun-25	TEL049	
Chlorine, Total	0.64	0.01	mg/L	13-Jun-25	TEL049	
Colour, True	< 5	5	TCU	13-Jun-25	TEL051	
Conductivity, Specific (@25C)	77.8	0.4	µS/cm	14-Jun-25	TEL059	
pH	6.41		pH units	14-Jun-25	TEL058	
Turbidity	0.12	0.05	NTU	13-Jun-25	TEL006	
<u>Major Ions</u>						
Chloride	6.0	0.7	mg/L	14-Jun-25	TEL055	
Fluoride	0.6	0.1	mg/L	14-Jun-25	TEL055	

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Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: RL-PW25-13

Taiga Sample ID: 014

Nitrate as Nitrogen	0.02	0.01	mg/L	14-Jun-25	TEL055
Nitrate+Nitrite as Nitrogen	0.02	0.01	mg/L	14-Jun-25	TEL055
Nitrite as Nitrogen	< 0.01	0.01	mg/L	14-Jun-25	TEL055
Sulphate	4	1	mg/L	14-Jun-25	TEL055

Microbiology

Coliforms, Total	< 1.0	1	MPN/100ml	13-Jun-25	TEL053
Escherichia coli	< 1.0	1	MPN/100ml	13-Jun-25	TEL053

Trace Metals, Total

Aluminum	4.6	0.6	µg/L	13-Jun-25	TEL035
Antimony	0.1	0.1	µg/L	13-Jun-25	TEL035
Arsenic	0.4	0.2	µg/L	13-Jun-25	TEL035
Barium	4.5	0.1	µg/L	13-Jun-25	TEL035
Boron	6.2	0.9	µg/L	13-Jun-25	TEL035
Cadmium	< 0.04	0.04	µg/L	13-Jun-25	TEL035
Chromium	< 0.1	0.1	µg/L	13-Jun-25	TEL035
Copper	123	0.2	µg/L	13-Jun-25	TEL035
Iron	24	5	ug/L	13-Jun-25	TEL035
Lead	0.4	0.1	µg/L	13-Jun-25	TEL035
Manganese	0.5	0.1	µg/L	13-Jun-25	TEL035
Mercury	0.02	0.01	µg/L	13-Jun-25	TEL035
Silver	< 0.1	0.1	µg/L	13-Jun-25	TEL035
Uranium	0.2	0.1	µg/L	13-Jun-25	TEL035
Zinc	2.4	0.4	µg/L	13-Jun-25	TEL035

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Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **QC-04**

Taiga Sample ID: **015**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<u>Cations by ICP-MS</u>						
Calcium	6.4	0.1	mg/L	13-Jun-25	TEL035	
Hardness	25.1	0.7	mg/L	13-Jun-25	TEL035	
Magnesium	2.2	0.1	mg/L	13-Jun-25	TEL035	
Potassium	1.3	0.1	mg/L	13-Jun-25	TEL035	
Sodium	5.3	0.1	mg/L	13-Jun-25	TEL035	
<u>Inorganics - Physicals</u>						
Alkalinity, Total (as CaCO ₃)	24.8	0.4	mg/L	14-Jun-25	TEL060	
Chlorine, Residual	0.41	0.01	mg/L	13-Jun-25	TEL049	
Chlorine, Total	0.64	0.01	mg/L	13-Jun-25	TEL049	
Colour, True	< 5	5	TCU	13-Jun-25	TEL051	
Conductivity, Specific (@25C)	77.9	0.4	µS/cm	14-Jun-25	TEL059	
pH	6.40		pH units	14-Jun-25	TEL058	
Turbidity	0.06	0.05	NTU	13-Jun-25	TEL006	
<u>Major Ions</u>						
Chloride	5.9	0.7	mg/L	14-Jun-25	TEL055	
Fluoride	0.6	0.1	mg/L	14-Jun-25	TEL055	

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Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: QC-04

Taiga Sample ID: 015

Nitrate as Nitrogen	0.01	0.01	mg/L	14-Jun-25	TEL055
Nitrate+Nitrite as Nitrogen	0.01	0.01	mg/L	14-Jun-25	TEL055
Nitrite as Nitrogen	< 0.01	0.01	mg/L	14-Jun-25	TEL055
Sulphate	4	1	mg/L	14-Jun-25	TEL055

Microbiology

Coliforms, Total	< 1.0	1	MPN/100ml	13-Jun-25	TEL053
Escherichia coli	< 1.0	1	MPN/100ml	13-Jun-25	TEL053

Trace Metals, Total

Aluminum	4.6	0.6	µg/L	13-Jun-25	TEL035
Antimony	< 0.1	0.1	µg/L	13-Jun-25	TEL035
Arsenic	0.4	0.2	µg/L	13-Jun-25	TEL035
Barium	4.6	0.1	µg/L	13-Jun-25	TEL035
Boron	6.2	0.9	µg/L	13-Jun-25	TEL035
Cadmium	< 0.04	0.04	µg/L	13-Jun-25	TEL035
Chromium	< 0.1	0.1	µg/L	13-Jun-25	TEL035
Copper	122	0.2	µg/L	13-Jun-25	TEL035
Iron	25	5	ug/L	13-Jun-25	TEL035
Lead	0.4	0.1	µg/L	13-Jun-25	TEL035
Manganese	0.5	0.1	µg/L	13-Jun-25	TEL035
Mercury	< 0.01	0.01	µg/L	13-Jun-25	TEL035
Silver	< 0.1	0.1	µg/L	13-Jun-25	TEL035
Uranium	0.2	0.1	µg/L	13-Jun-25	TEL035
Zinc	2.3	0.4	µg/L	13-Jun-25	TEL035

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Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **Field Blank-RL**

Taiga Sample ID: **016**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<u>Cations by ICP-MS</u>						
Calcium	< 0.1	0.1	mg/L	13-Jun-25	TEL035	
Hardness	< 0.7	0.7	mg/L	13-Jun-25	TEL035	
Magnesium	< 0.1	0.1	mg/L	13-Jun-25	TEL035	
Potassium	< 0.1	0.1	mg/L	13-Jun-25	TEL035	
Sodium	< 0.1	0.1	mg/L	13-Jun-25	TEL035	
<u>Inorganics - Physicals</u>						
Alkalinity, Total (as CaCO ₃)	2.1	0.4	mg/L	14-Jun-25	TEL060	
Chlorine, Residual	< 0.01	0.01	mg/L	13-Jun-25	TEL049	
Chlorine, Total	0.01	0.01	mg/L	13-Jun-25	TEL049	
Colour, True	< 5	5	TCU	13-Jun-25	TEL051	
Conductivity, Specific (@25C)	< 0.4	0.4	µS/cm	14-Jun-25	TEL059	
pH	5.37		pH units	14-Jun-25	TEL058	
Turbidity	0.09	0.05	NTU	13-Jun-25	TEL006	
<u>Major Ions</u>						
Chloride	< 0.7	0.7	mg/L	14-Jun-25	TEL055	
Fluoride	< 0.1	0.1	mg/L	14-Jun-25	TEL055	

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Taiga Environmental Laboratory

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Tel: (867)-767-9235 Fax: (867)-920-8740

Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **Field Blank-RL**

Taiga Sample ID: **016**

Nitrate as Nitrogen	< 0.01	0.01	mg/L	14-Jun-25	TEL055
Nitrate+Nitrite as Nitrogen	< 0.01	0.01	mg/L	14-Jun-25	TEL055
Nitrite as Nitrogen	< 0.01	0.01	mg/L	14-Jun-25	TEL055
Sulphate	< 1	1	mg/L	14-Jun-25	TEL055

Microbiology

Coliforms, Total	< 1.0	1	MPN/100ml	13-Jun-25	TEL053
Escherichia coli	< 1.0	1	MPN/100ml	13-Jun-25	TEL053

Trace Metals, Total

Aluminum	< 0.6	0.6	µg/L	13-Jun-25	TEL035
Antimony	< 0.1	0.1	µg/L	13-Jun-25	TEL035
Arsenic	< 0.2	0.2	µg/L	13-Jun-25	TEL035
Barium	< 0.1	0.1	µg/L	13-Jun-25	TEL035
Boron	< 0.9	0.9	µg/L	13-Jun-25	TEL035
Cadmium	< 0.04	0.04	µg/L	13-Jun-25	TEL035
Chromium	< 0.1	0.1	µg/L	13-Jun-25	TEL035
Copper	< 0.2	0.2	µg/L	13-Jun-25	TEL035
Iron	< 5	5	ug/L	13-Jun-25	TEL035
Lead	< 0.1	0.1	µg/L	13-Jun-25	TEL035
Manganese	< 0.1	0.1	µg/L	13-Jun-25	TEL035
Mercury	< 0.01	0.01	µg/L	13-Jun-25	TEL035
Silver	< 0.1	0.1	µg/L	13-Jun-25	TEL035
Uranium	< 0.1	0.1	µg/L	13-Jun-25	TEL035
Zinc	< 0.4	0.4	µg/L	13-Jun-25	TEL035

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Tel: (867)-767-9235 Fax: (867)-920-8740

Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-001a**

Taiga Sample ID: **017**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<u>Trace Metals, Total</u>						
Copper	342	0.2	µg/L	13-Jun-25	TEL035	
Lead	0.6	0.1	µg/L	13-Jun-25	TEL035	

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Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-001b**

Taiga Sample ID: **018**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<u>Trace Metals, Total</u>						
Copper	384	0.2	µg/L	13-Jun-25	TEL035	
Lead	0.5	0.1	µg/L	13-Jun-25	TEL035	

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Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-002a**

Taiga Sample ID: **019**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<u>Trace Metals, Total</u>						
Copper	9.4	0.2	µg/L	13-Jun-25	TEL035	
Lead	< 0.1	0.1	µg/L	13-Jun-25	TEL035	

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Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-002b**

Taiga Sample ID: **020**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<u>Trace Metals, Total</u>						
Copper	9.6	0.2	µg/L	13-Jun-25	TEL035	
Lead	< 0.1	0.1	µg/L	13-Jun-25	TEL035	

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Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-003a**

Taiga Sample ID: **021**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<u>Trace Metals, Total</u>						
Copper	558	0.2	µg/L	13-Jun-25	TEL035	
Lead	3.7	0.1	µg/L	13-Jun-25	TEL035	

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Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-003b**

Taiga Sample ID: **022**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<u>Trace Metals, Total</u>						
Copper	812	0.2	µg/L	13-Jun-25	TEL035	
Lead	0.8	0.1	µg/L	13-Jun-25	TEL035	

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Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-004a**

Taiga Sample ID: **023**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<u>Trace Metals, Total</u>						
Copper	610	0.2	µg/L	13-Jun-25	TEL035	
Lead	9.5	0.1	µg/L	13-Jun-25	TEL035	

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Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-004b**

Taiga Sample ID: **024**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<u>Trace Metals, Total</u>						
Copper	948	0.2	µg/L	13-Jun-25	TEL035	
Lead	2.8	0.1	µg/L	13-Jun-25	TEL035	

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Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-005a**

Taiga Sample ID: **025**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<u>Trace Metals, Total</u>						
Copper	584	0.2	µg/L	13-Jun-25	TEL035	
Lead	5.3	0.1	µg/L	13-Jun-25	TEL035	

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Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-005b**

Taiga Sample ID: **026**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<u>Trace Metals, Total</u>						
Copper	980	0.2	µg/L	13-Jun-25	TEL035	
Lead	1.9	0.1	µg/L	13-Jun-25	TEL035	

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Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-006a**

Taiga Sample ID: **027**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<u>Trace Metals, Total</u>						
Copper	638	0.2	µg/L	13-Jun-25	TEL035	
Lead	14.5	0.1	µg/L	13-Jun-25	TEL035	

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Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-006b**

Taiga Sample ID: **028**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<u>Trace Metals, Total</u>						
Copper	585	0.2	µg/L	13-Jun-25	TEL035	
Lead	3.5	0.1	µg/L	13-Jun-25	TEL035	

ReportDate:
Print Date: *Monday, June 16, 2025*

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Taiga Environmental Laboratory
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Tel: (867)-767-9235 Fax: (867)-920-8740

Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-007a**

Taiga Sample ID: **029**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<u>Trace Metals, Total</u>						
Copper	369	0.2	µg/L	13-Jun-25	TEL035	
Lead	4.8	0.1	µg/L	13-Jun-25	TEL035	

ReportDate:
Print Date: *Monday, June 16, 2025*

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Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-007b**

Taiga Sample ID: **030**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<u>Trace Metals, Total</u>						
Copper	323	0.2	µg/L	13-Jun-25	TEL035	
Lead	1.8	0.1	µg/L	13-Jun-25	TEL035	

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Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-008a**

Taiga Sample ID: **031**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<u>Trace Metals, Total</u>						
Copper	554	0.2	µg/L	13-Jun-25	TEL035	
Lead	9.5	0.1	µg/L	13-Jun-25	TEL035	

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Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-008b**

Taiga Sample ID: **032**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<u>Trace Metals, Total</u>						
Copper	969	0.2	µg/L	13-Jun-25	TEL035	
Lead	2.0	0.1	µg/L	13-Jun-25	TEL035	

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Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-009a**

Taiga Sample ID: **033**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<u>Trace Metals, Total</u>						
Copper	373	0.2	µg/L	13-Jun-25	TEL035	
Lead	0.6	0.1	µg/L	13-Jun-25	TEL035	

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Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-009b**

Taiga Sample ID: **034**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<u>Trace Metals, Total</u>						
Copper	418	0.2	µg/L	13-Jun-25	TEL035	
Lead	0.5	0.1	µg/L	13-Jun-25	TEL035	

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Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-010a**

Taiga Sample ID: **035**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<u>Trace Metals, Total</u>						
Copper	623	0.2	µg/L	13-Jun-25	TEL035	
Lead	5.7	0.1	µg/L	13-Jun-25	TEL035	

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Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-010b**

Taiga Sample ID: **036**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<u>Trace Metals, Total</u>						
Copper	1000	0.2	µg/L	13-Jun-25	TEL035	
Lead	1.4	0.1	µg/L	13-Jun-25	TEL035	

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Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-011a**

Taiga Sample ID: **037**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<u>Trace Metals, Total</u>						
Copper	308	0.2	µg/L	13-Jun-25	TEL035	
Lead	0.4	0.1	µg/L	13-Jun-25	TEL035	

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Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-011b**

Taiga Sample ID: **038**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<u>Trace Metals, Total</u>						
Copper	362	0.2	µg/L	13-Jun-25	TEL035	
Lead	0.4	0.1	µg/L	13-Jun-25	TEL035	

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Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-012a**

Taiga Sample ID: **039**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<u>Trace Metals, Total</u>						
Copper	311	0.2	µg/L	13-Jun-25	TEL035	
Lead	0.4	0.1	µg/L	13-Jun-25	TEL035	

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Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-012b**

Taiga Sample ID: **040**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<u>Trace Metals, Total</u>						
Copper	342	0.2	µg/L	13-Jun-25	TEL035	
Lead	0.4	0.1	µg/L	13-Jun-25	TEL035	

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Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-501a**

Taiga Sample ID: **041**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<u>Trace Metals, Total</u>						
Copper	423	0.2	µg/L	13-Jun-25	TEL035	
Lead	0.5	0.1	µg/L	13-Jun-25	TEL035	

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Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-501b**

Taiga Sample ID: **042**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<u>Trace Metals, Total</u>						
Copper	453	0.2	µg/L	13-Jun-25	TEL035	
Lead	0.5	0.1	µg/L	13-Jun-25	TEL035	

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Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-502a**

Taiga Sample ID: **043**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<u>Trace Metals, Total</u>						
Copper	12.6	0.2	µg/L	13-Jun-25	TEL035	
Lead	0.1	0.1	µg/L	13-Jun-25	TEL035	

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Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-502b**

Taiga Sample ID: **044**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<u>Trace Metals, Total</u>						
Copper	13.4	0.2	µg/L	13-Jun-25	TEL035	
Lead	0.1	0.1	µg/L	13-Jun-25	TEL035	

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Tel: (867)-767-9235 Fax: (867)-920-8740

Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-503a**

Taiga Sample ID: **045**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<u>Trace Metals, Total</u>						
Copper	282	0.2	µg/L	13-Jun-25	TEL035	
Lead	1.6	0.1	µg/L	13-Jun-25	TEL035	

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Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-503b**

Taiga Sample ID: **046**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<u>Trace Metals, Total</u>						
Copper	369	0.2	µg/L	13-Jun-25	TEL035	
Lead	0.6	0.1	µg/L	13-Jun-25	TEL035	

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Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-504a**

Taiga Sample ID: **047**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<u>Trace Metals, Total</u>						
Copper	297	0.2	µg/L	13-Jun-25	TEL035	
Lead	2.8	0.1	µg/L	13-Jun-25	TEL035	

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Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-504b**

Taiga Sample ID: **048**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<u>Trace Metals, Total</u>						
Copper	324	0.2	µg/L	13-Jun-25	TEL035	
Lead	2.3	0.1	µg/L	13-Jun-25	TEL035	

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Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-505a**

Taiga Sample ID: **049**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<u>Trace Metals, Total</u>						
Copper	289	0.2	µg/L	13-Jun-25	TEL035	
Lead	2.5	0.1	µg/L	13-Jun-25	TEL035	

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Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-505b**

Taiga Sample ID: **050**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<u>Trace Metals, Total</u>						
Copper	334	0.2	µg/L	13-Jun-25	TEL035	
Lead	0.9	0.1	µg/L	13-Jun-25	TEL035	

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Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-506a**

Taiga Sample ID: **051**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<u>Trace Metals, Total</u>						
Copper	290	0.2	µg/L	13-Jun-25	TEL035	
Lead	5.4	0.1	µg/L	13-Jun-25	TEL035	

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Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-506b**

Taiga Sample ID: **052**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<u>Trace Metals, Total</u>						
Copper	331	0.2	µg/L	13-Jun-25	TEL035	
Lead	3.1	0.1	µg/L	13-Jun-25	TEL035	

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Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-507a**

Taiga Sample ID: **053**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<u>Trace Metals, Total</u>						
Copper	225	0.2	µg/L	13-Jun-25	TEL035	
Lead	3.9	0.1	µg/L	13-Jun-25	TEL035	

ReportDate:
Print Date: *Monday, June 16, 2025*

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Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-507b**

Taiga Sample ID: **054**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<u>Trace Metals, Total</u>						
Copper	244	0.2	µg/L	13-Jun-25	TEL035	
Lead	1.1	0.1	µg/L	13-Jun-25	TEL035	

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Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-508a**

Taiga Sample ID: **055**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<u>Trace Metals, Total</u>						
Copper	281	0.2	µg/L	13-Jun-25	TEL035	
Lead	4.2	0.1	µg/L	13-Jun-25	TEL035	

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Print Date: *Monday, June 16, 2025*

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Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-508b**

Taiga Sample ID: **056**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<u>Trace Metals, Total</u>						
Copper	338	0.2	µg/L	13-Jun-25	TEL035	
Lead	1.0	0.1	µg/L	13-Jun-25	TEL035	

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Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-509a**

Taiga Sample ID: **057**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<u>Trace Metals, Total</u>						
Copper	463	0.2	µg/L	13-Jun-25	TEL035	
Lead	0.7	0.1	µg/L	13-Jun-25	TEL035	

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Taiga Environmental Laboratory
4601-52nd Ave., Box 1320, Yellowknife, NT. X1A 2L9
Tel: (867)-767-9235 Fax: (867)-920-8740

Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-509b**

Taiga Sample ID: **058**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<u>Trace Metals, Total</u>						
Copper	482	0.2	µg/L	13-Jun-25	TEL035	
Lead	0.7	0.1	µg/L	13-Jun-25	TEL035	

ReportDate:
Print Date: *Monday, June 16, 2025*

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4601-52nd Ave., Box 1320, Yellowknife, NT. X1A 2L9
Tel: (867)-767-9235 Fax: (867)-920-8740

Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-510a**

Taiga Sample ID: **059**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<u>Trace Metals, Total</u>						
Copper	307	0.2	µg/L	13-Jun-25	TEL035	
Lead	2.5	0.1	µg/L	13-Jun-25	TEL035	

ReportDate:
Print Date: *Monday, June 16, 2025*

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4601-52nd Ave., Box 1320, Yellowknife, NT. X1A 2L9
Tel: (867)-767-9235 Fax: (867)-920-8740

Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-510b**

Taiga Sample ID: **060**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<u>Trace Metals, Total</u>						
Copper	332	0.2	µg/L	13-Jun-25	TEL035	
Lead	1.3	0.1	µg/L	13-Jun-25	TEL035	

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Tel: (867)-767-9235 Fax: (867)-920-8740

Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-511a**

Taiga Sample ID: **061**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<u>Trace Metals, Total</u>						
Copper	236	0.2	µg/L	13-Jun-25	TEL035	
Lead	0.4	0.1	µg/L	13-Jun-25	TEL035	

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Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-511b**

Taiga Sample ID: **062**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<u>Trace Metals, Total</u>						
Copper	257	0.2	µg/L	13-Jun-25	TEL035	
Lead	0.4	0.1	µg/L	13-Jun-25	TEL035	

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Taiga Environmental Laboratory
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Tel: (867)-767-9235 Fax: (867)-920-8740

Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-512a**

Taiga Sample ID: **063**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<u>Trace Metals, Total</u>						
Copper	384	0.2	µg/L	13-Jun-25	TEL035	
Lead	0.6	0.1	µg/L	13-Jun-25	TEL035	

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Tel: (867)-767-9235 Fax: (867)-920-8740

Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: **RL-PW25-512b**

Taiga Sample ID: **064**

Client Project: 113352027
Sample Type: Drinking Water
Received Date: 13-Jun-25
Sampling Date: 13-Jun-25
Sampling Time:
Location:
Report Status: Preliminary

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<u>Trace Metals, Total</u>						
Copper	405	0.2	µg/L	13-Jun-25	TEL035	
Lead	0.6	0.1	µg/L	13-Jun-25	TEL035	

ReportDate:
Print Date: *Monday, June 16, 2025*

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Tel: (867)-767-9235 Fax: (867)-920-8740

Taiga Batch No.:
250749

- CERTIFICATE OF ANALYSIS -

Client Sample ID: RL-PW25-512b

Taiga Sample ID: 064

*** Taiga analytical methods are based on the following standard analytical methods**

SM - Standard Methods for the Examination of Water and Wastewater

EPA - United States Environmental Protection Agency

ReportDate:

Print Date: *Monday, June 16, 2025*

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June 27, 2025
Mike Auge, Manager, Capital Planning

Reference: 2025 Potable Water Quality Assessment – Range Lake North School, 170 Borden Dr, Yellowknife, NT

Appendix D Sampling Protocol

June 11, 2025

Project/File: 1157822

Mike Auge, Manager, Capital Planning

Department of Education, Culture and Employment

4501 Franklin Avenue

Yellowknife, NT X1A 2L9

Dear Mike,

Reference: Water Quality Yellowknife Education District No. 1 – Sampling Protocol

1 Introduction

Elevated lead concentrations were reported in two Yellowknife Education District No. 1 schools – École William McDonald Middle School and Range Lake North School on May 27, 2025. A major source of metals, such as lead, has been attributed to corrosion within plumbing systems, according to Health Canada¹. Additional sampling will be conducted by Stantec accordance with *Guidance on Sampling and Mitigation Measures for Controlling Lead Corrosion*¹ and the *Public Services and Procurement Canada (PSPC) Drinking Water Sampling Procedures Manual, Version 3.0*.²

The aim of this sampling protocol is twofold. Firstly, sampling will be conducted to identify whether lead concentrations in water from water fountains and cold-water outlets exceed Guidelines for Canadian Drinking Water Quality³. Secondly, if lead concentrations in drinking water is measured to exceed guideline values, the sampling protocol will aim to help identify sources of lead within the plumbing systems of École William McDonald Middle School and Range Lake North School.

The *Guidance on Sampling and Mitigation Measures for Controlling Lead Corrosion*¹ calls for a two-tiered approach to sampling drinking water from non-residential buildings. The goal of Tier 1 is to identify specific cold drinking water outlets that have elevated levels of lead. The aim of Tier 2 is to determine the source of lead in the plumbing within the building.

The following outlines the sample collection protocol for both École William McDonald Middle School and Range Lake North School.

¹ Health Canada. 2025. *Guidance on Sampling and Mitigation Measures for Controlling Lead Corrosion*. Health Canada. ISBN: 978-0-660-74580-0

² PSPC. 2004. *PSPC Drinking Water Sampling Procedures Manual, Version 3.0* (August 13, 2004).

³ Health Canada. 2025. *Guidelines for Canadian Drinking Water Quality*. <https://www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/water-quality/guidelines-canadian-drinking-water-quality-summary-table.html>

Reference: Water Quality Yellowknife Education District No. 1 – Sampling Protocol

2 Methodology

2.1 Sampling

2.1.1 Sampling Locations

Samples will be collected from all drinking water fountains and faucets located in areas used for food preparation. The Department of Education, Culture and Employment has identified water fountains and faucets located in areas used for food preparation at both schools, including:

- 5 water fountains at École William McDonald Middle School,
- 5 water fountains at Range Lake North School,
- 7 faucets located in areas used for food preparation École William McDonald Middle School, and
- 8 faucets located in areas used for food preparation Range Lake North School.

2.1.2 Sample Collection

To ensure representative samples collection, aerators or screens on outlets will not be removed prior to sampling. Samples collected for metal (lead and copper) analysis will constitute of 250 mL volumes collected as two aliquots of 125 mL each. The collection of two aliquots is a form of profile sampling that aids in the investigative phase should the samples contain elevated concentrations of lead. Smaller samples represent water from different portions of the fittings and plumbing leading to the cold drinking water outlet. Wide-mouth sample bottles will be used to allow for collection of water at medium-high flow rates representative of typical usage flow rates.

2.1.2.1 First Draw Samples – Tier 1

After an 8 to 24 hour stagnation period, a 250 mL sample will be collected in two aliquots of 125 mL each. The samples will be collected from all water fountains and faucets located in areas of food preparation. Each 125 mL sample is analyzed individually to obtain a profile of lead and copper contributions from the faucet and plumbing.

The collection of samples after a period of stagnation allows for the identification of the presence of lead and copper in the fittings and plumbing closest to cold drinking water outlets.

2.1.2.2 5- Minute Flush Samples – Background Water Quality Parameters

Following a 5-minute flush of the system, samples will be collected and analyzed for pH, chloride, sulfate, total alkalinity, dissolved inorganic carbon, calcium and magnesium. These parameters will be used to

Reference: Water Quality Yellowknife Education District No. 1 – Sampling Protocol

assess the corrosiveness of the water in the plumbing system as defined in the *Guidance on Sampling and Mitigation Measures for Controlling Lead Corrosion*⁴.

2.1.2.3 5-Minute Flush Samples – Tier 2

Two consecutive 125 mL samples will be collected after the water has been fully flushed for 5 minutes and then left to stagnate for 30 minutes. Each 125 mL sample is analyzed individually to obtain a profile of lead and copper contributions from the faucet and plumbing.

If both Tier 1 and Tier 2 sampling results indicate lead contamination, additional sampling from the interior plumbing within the building to further determine the sources of lead contamination will be required.

2.1.2.4 Water Main Sample

One sample will be collected from a faucet closest to the water main. This will be collected following a 5-minute flushing period. This sample will be analyzed for lead, copper, pH, chloride, sulfate, total alkalinity, dissolved inorganic carbon, calcium, magnesium, total coliforms and E. coli, drinking water metals, routine chemistry, turbidity, conductivity, and true colour.

2.1.3 Field Measurements

Measurements of pH and temperature will be conducted on-site at each sampling location following each sampling event. Field measurements will be conducted using a calibrated Hanna pH pen, or equivalent.

2.1.4 Visual Assessment

Photographs will be taken of all fixtures and below sink areas. Notes will be taken of the types of fixtures used at all identified potable water sources.

2.2 QA/QC

2.2.1 Regulatory Framework and Site Criteria

Sample results will be compared to the Maximum Acceptable Concentrations (MACs) listed in the Guidelines for Canadian Drinking Water Quality⁵.

⁴ Health Canada. 2025. Guidance on Sampling and Mitigation Measures for Controlling Lead Corrosion. Health Canada. ISBN: 978-0-660-74580-0

⁵ Health Canada. 2025. Guidelines for Canadian Drinking Water Quality. <https://www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/water-quality/guidelines-canadian-drinking-water-quality-summary-table.html>

Reference: Water Quality Yellowknife Education District No. 1 – Sampling Protocol

2.2.2 Quality Assurance and Quality Control (QA/QC)

Best practice Standard Operating Procedures (SOPs) includes work procedures and instructions that are developed for technical work. Stantec's SOPs allow control of the quality of work throughout the project program. Applicable Stantec SOPs will be reviewed by field personnel prior to sample collection.

Samples will be submitted to Taiga Environmental Laboratory, in Yellowknife, NT per the client's request. The samples will be submitted with a request for a rush turnaround time. Taiga Environmental Laboratory is accredited by the Canadian Association for Laboratory Accreditation (CALA).

2.2.3 Field QA/QC

Efforts will be made to collect representative samples. For each sampling event, Stantec will collect QA/QC samples, including blind field duplicate (BFD) samples collected at the 5 minute flush sampling events, as well as one field blank sample collected at each school.

2.2.4 Sample Management and Quality Control

The following field QA/QC procedures were followed during the field program:

- Equipment will be calibrated according to manufacturer specifications
- New nitrile gloves will be used for collection of each sample
- The equipment used during water sampling will be rinsed with deionized water between each sample
- Samples will be collected into distinctly labeled laboratory provided sampling containers
- Samples will be stored on ice in coolers upon collection and sample temperatures of less than 10°C will be maintained prior to submission to Taiga Environmental Laboratory in Yellowknife, NT

2.2.5 Sampling Quality Control

One BFD will be prepared for every 10 samples collected. Data validation of the analytical results will involve the review of the data quality indicators, including precision, accuracy, representativeness, comparability, and completeness. The precision of the data will be assessed from blind field duplicates and will be quantified as the relative percent difference (RPD), calculated with the following equation:

$$RPD = \left[\frac{S_1 - S_2}{S_3} \right] \times 100$$

Where:

RPD = relative percent difference

S₁ = original parent sample concentration

S₂ = BFD sample concentration

S₃ = average concentration = (S₁ + S₂)/2

Reference: Water Quality Yellowknife Education District No. 1 – Sampling Protocol

The general industry standard for acceptable RPD in water analyses is less than or equal to 40% for field duplicated groundwater and surface water samples (CCME, 2016). RPDs are only considered to be an accurate when parameter concentrations in both the parent sample and its BFD are five times greater than the limit of detection (LOD) and are only calculated under such conditions. Where the analytical result for either sample is less than five times the LOD, no conclusion can be made with respect to the data reproducibility.

2.2.6 Laboratory QA/QC

Taiga Environmental Laboratory will analyze and assess method blanks, certified reference materials, method spikes, and surrogate recoveries to monitor data quality. The QA/QC methods employed, including matrix spikes, method blanks, replicates, reference criteria, and surrogate recoveries, will be reviewed to assess the reliability of the sample results.

3 Assumptions

All identified potable water sources will be flushed for at least 5 minutes by school personnel at minimum of 8 hours prior to the scheduled sampling event. The time of flushing will be noted and communicated to Stantec for each potable water source.

4 Closing


The project team looks forward to continuing to work with the GNWT and advancing our professional relationship while helping make our community a better place to live. Please review and provide comments related to this sampling protocol.

Regards,

Stantec Consulting Ltd.

Celejewski, Magda
Digitally signed
by Celejewski,
Magda
Date: 2025.06.11
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2025.06.11 13:46:37 -06'00'


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