District of 100 Mile House

Annual Drinking Water Report

2024

Contents

Introduction

This report was prepared in compliance with the requirements under the British Columbia Drinking Water Protection Act (DWPA) and the District of 100 Mile House Operating Permit. Included in this document is an overview of the treatment and distribution system within the District, a summary of the total water consumption and water quality analysis within the system, and a recap of projects and related operations. This report has been provided to Interior Health and posted on the District of 100 Mile House website for public reading.

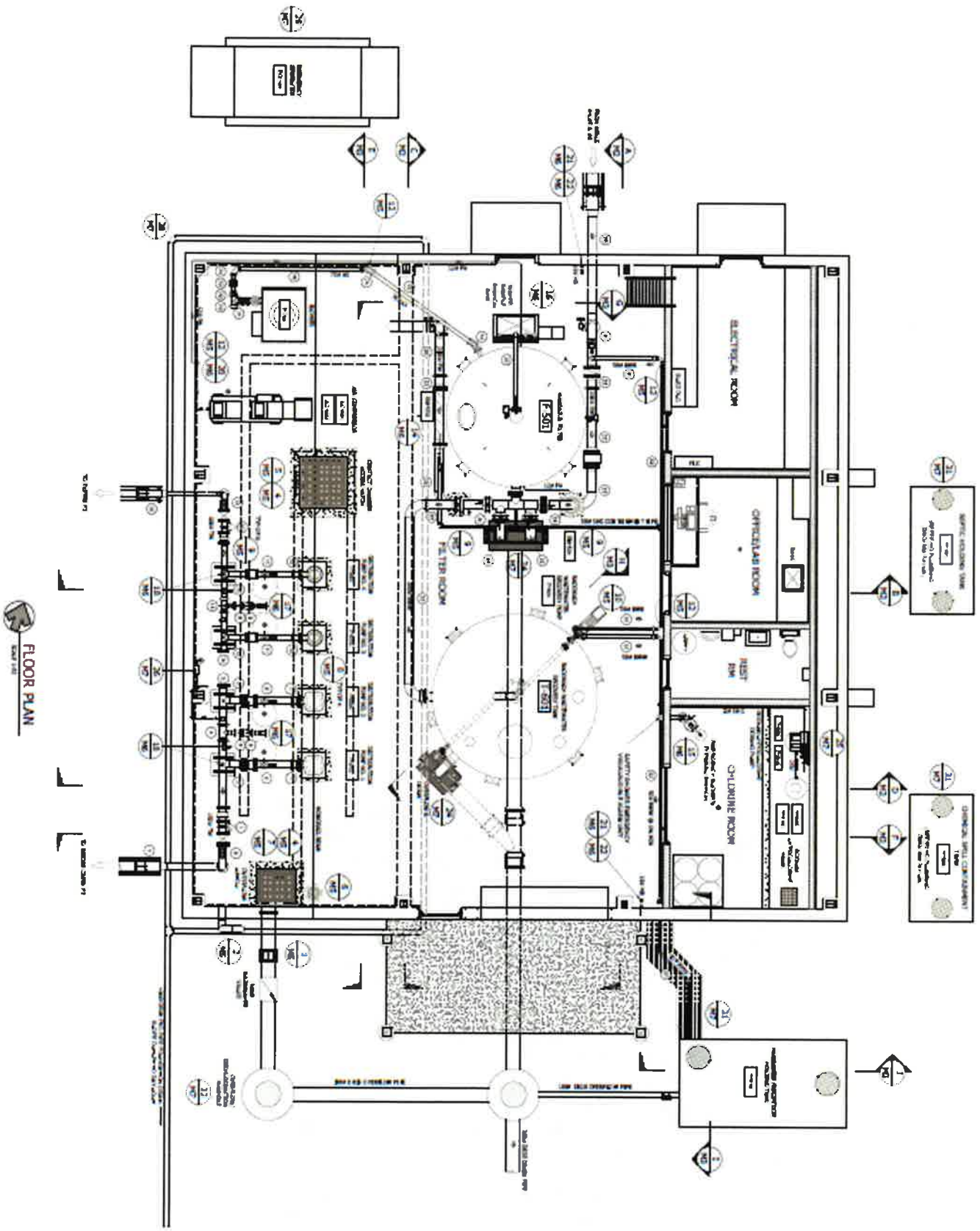
District of 100 Mile House Water System

The District of 100 Mile House drinking water system consists of a single treatment plant that feeds the distribution system through most areas of 100 Mile House. The water distribution system consists of three reservoirs, one booster station, and two pressure-reducing stations. The storage capacity of our reservoirs is as follows: Low Zone Reservoir - 1.2 million liters, High Zone Reservoir – 455,000 liters and the Exeter Reservoir – 1.6 Million Liters.

District of 100 Mile House Water Treatment Plant

The Water treatment plant, commissioned in September 2018, treats ground water that is collected from three deep wells located next to the water treatment plant. The water is filtered through a Biological Treatment Process. When in the filter, the water makes contact with the natural media. The natural occurring bacteria in the media (the Biolite™ "S") start to consume the Manganese and Iron that is naturally present in the ground water, which then forms the precipitate (sludge). The filtered water is then chlorinated and stored in our clear well, before being introduced into the distributed system. The filter media is maintained through periodic backwashes, which removes the precipitant (sludge) accumulated in the filter media. The bacteria naturally existing in the raw water stay in the media, even after an adapted wash of the filter. The backwashed water and waste material are then stored in the backwash wastewater recovery tank, where the sludge will be sent to a holding tank and the water will be recovered and reintroduced into the raw water entering the filter tank.

Figure 1: The District of 100 Mile House Water Treatment Plant


FLOOR PLAN
ELECTRICAL ROOM
CHLORINE ROOM

Water Treatment Plant Production

Figure 2: Monthly Total Production for the Past 5 Years

						Year to Year Comparison		
	2020	2021	2022	2023	2024	Average	Minimum	Maximum
January	29,351	30,187	42,165	31,851	31,179	32947	29,351	42,165
February	27,541	30,296	39,254	29,427	26,667	30,637	27,541	39,254
March	32,160	35,070	46,814	33,445	30,021	35,502	30,021	46,814
April	28,308	38,657	41,730	32,485	32,920	34,820	28,308	41,730
May	24,909	48,868	52,247	48,648	41,490	43,232	24,909	52,247
June	42,283	65,163	55,890	57,831	42,207	52,675	42,283	65,163
July	48,817	89,144	61,305	65,312	63,279	65,571	48,817	89,144
August	52,247	74,862	60,073	60,182	42,806	58,034	42,806	74,862
September	40,256	53,593	44,862	42,573	32,507	42,758	32,507	53,593
October	30,336	41,262	33,766	31,646	31,672	33,736	30,336	41,262
November	28,797	38,988	30,423	29,865	29,097	31,432	28,055	38,988
December	27,730	40,629	32,287	29,908	31,071	32,325	27,730	40,629
Total	**422,735**	**586,719**	**540,816**	**493,173**	**434,916**			
Daily Peak	2,380	3,510	2,714	2,747	2,648			
Peak Date	20-Aug	03-July	13-July	11-July	21-July			
Daily Low	626	801	669	548	558			
Average Daily Usage	1157	1,603	1,478	1,346	1,186			

These monthly numbers can be graphically seen in Figure 3. Total consumption for 2024 was 58,257 cubic meters less than 2023. Consumption has been measured in cubic meters. There are 1000 Litres in a Cubic Meter.

Figure 3: Graphical Representation of 2020 - 2024 Water Consumption

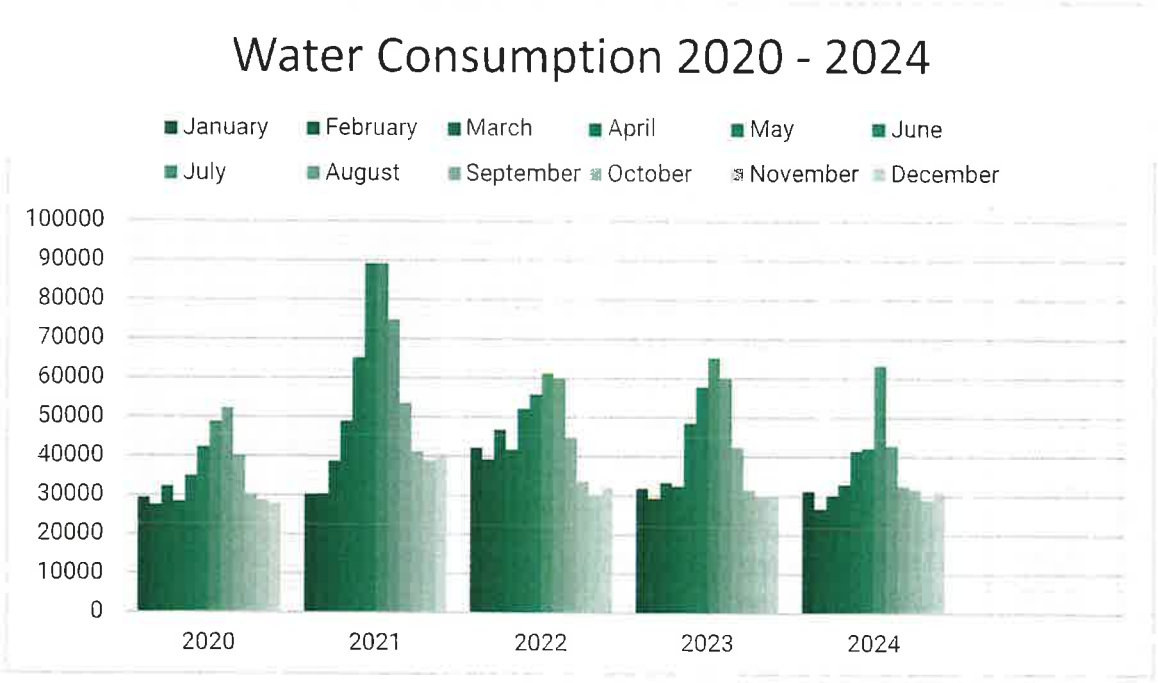
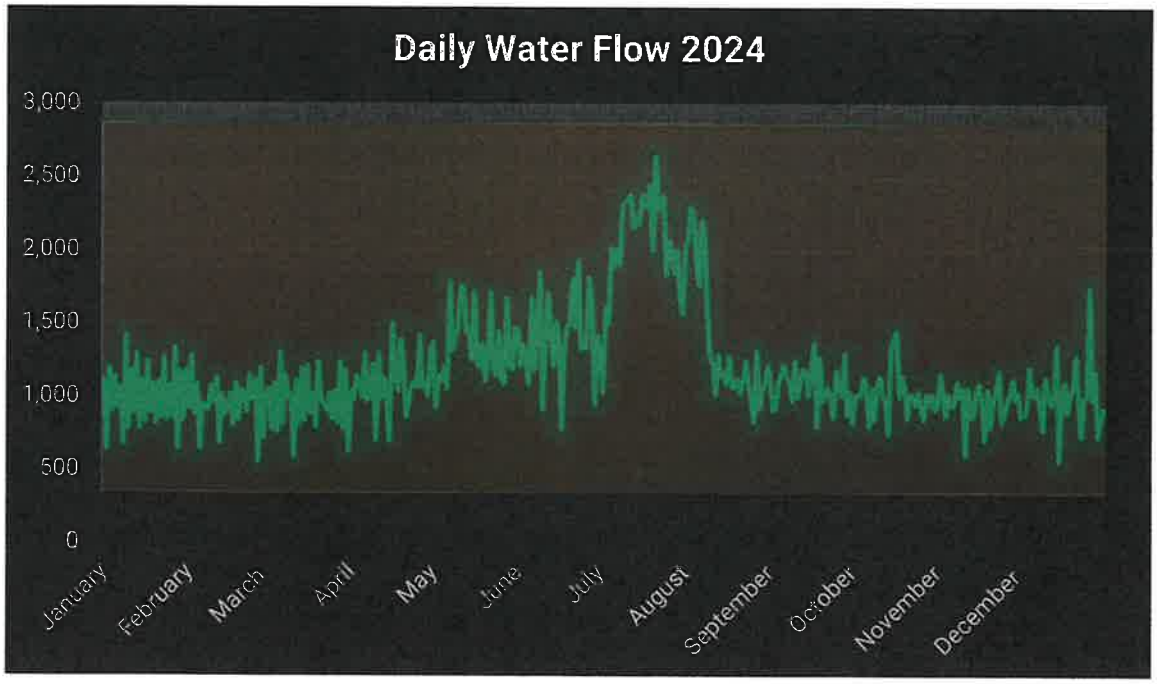


Figure 4 shows the daily water consumption for 2024. The daily peak for 2024 was 2,648 cubic meters, which occurred on July 21st. The treatment plant can achieve a maximum daily flow of 3.45 million liters which allows room for population growth well into the future.

Figure 4: Daily Water Flows for 2024



Distribution System Overview

The distribution system consists of 25.16km of water mains, one booster station, two pressure reducing valves, three reservoirs, and a total of approximately 850 connections.

Distribution System

The maintenance of the distribution system consists of actively replacing lines that have either reached the end of their functional life, need upgrading due to inadequate sizing for development, or are in poor condition and cause issues.

Figure 5: Water Main Material Summary

Length by Material Type	Abandoned Pipe (km)	Existing Total (km)
PVC:	0.105	13.18
AC:	0.72	11.98
Total:	0.585	25.16

2024 Distribution System Events

In 2024 the following event occurred:

- September 14th – First and Cedar. A 6" watermain valve had to be replaced as it was leaking and not able to be repaired. A small section of First Ave was without water for a few hours during replacement.
- On August 9th, 2024, The District of 100 Mile House had to implement water restrictions due to low aquafer level alarms. The District of 100 Mile has hired a third party to conduct well rehabilitation to the three ground water wells starting in late 2024 and into the spring of 2025. We are hoping that this will help improve the quantity of water that can be pumped from the aquifers.
- In 2024 The District of 100 Mile responded to seven emergency water leaks/breaks within the distribution system.

Cross Connection Control

In 2023 the District of 100 Mile House, in conjunction with Maintenance Training Systems (MTS) of Vernon, worked to establish a Cross Connection Program.

The purpose of the cross-connection control program is to reduce the hazard of contamination of the public water system by identifying actual and potential cross-connections and taking action to protect public and the water distribution system from these hazards.

SCADA – Supervisory Control and Data Acquisition (SCADA)

The SCADA system is designed to allow operators real time data on how the Water Treatment Plant and distribution system are functioning, as well as enabling an operator to make changes to the operation of the Water Treatment Plant and booster station. The SCADA system is also designed to send an alarm to the operator if there is a problem within the system to help ensure that the Districts water distribution system continues to function.

Water Quality Sampling and Analysis

The water quality from our source water, at the treatment facility and within the distribution system, is analyzed extensively. Samples are collected daily and analyzed locally from the raw water and treated water at the plant. Bacteriological samples are also analyzed throughout the distribution system on a weekly basis. Samples of our source water and from within the distribution system are taken and sent off to an accredited lab for extensive analysis.

Water Quality Testing

There are a variety of parameters measured which are listed in the following paragraphs. These parameters are monitored at the plant in order to check the treatment process. The following Figure 6 summarizes the results of the daily analysis for the water treatment plant. These analyses are done in-house by the certified operators at the District of 100 Mile House.

pH

pH is a measure of the activity of the hydrogen ion in water. It represents the acidity or basicity of water. The pH scale goes from 0 to 14 with anything smaller than 7 being acidic, anything greater than 7 being basic and 7 being neutral. Drinking water is regulated to fall between a pH of 6.5 to 8.5.

Free and Total Chlorine (Cl_2)

Chlorine levels are important in water treatment to ensure that water is safe all the way through the distribution system to each home. The primary form of chlorine used in our treatment system is sodium hypochlorite. Free chlorine measures the amount of hypochlorite in our water, while total chlorine measures the free chlorine plus any combined chlorine disinfectants such as chloramines. In our system we must maintain a residual free chlorine level greater than 0.2 mg/L at the end of the distribution system.

Figure 6: Levels leaving water treatment plant to district system

	Average PH	Average Free Cl2	Average Total Cl2
January	7.054	1.612	1.737
February	7.079	1.700	1.846
March	7.019	1.629	1.802
April	7.053	1.821	1.940
May	7.149	1.611	1.827
June	7.181	1.441	1.762
July	7.246	1.746	1.998
August	7.215	1.688	1.751
September	7.215	1.659	1.801
October	7.265	1.534	1.678
November	7.288	1.649	1.788
December	7.428	1.632	1.756
Yearly Average	**7.183**	**1.643**	**1.807**

Distribution Sampling

The District of 100 Mile House is committed to providing safe drinking water to each and every connection within its service area. To this end, the distribution system is sampled at 3 different locations. These samples are analyzed for background bacterial counts, total coliforms, and E. Coli. The District has installed 5 sample stations to optimize sampling.

Background Bacterial Monitoring

Background bacteria monitoring is done through what is called a Heterotrophic Plate Count (HPC). Heterotrophic bacteria are a group of bacteria that use carbon as a food source and can be found in a variety of water sources. Most bacteria found in water are heterotrophic. In general, these bacteria are not pathogenic and the HPC test in itself will not tell you whether the water is bad to drink. Due to this there is no maximum acceptable concentration (MAC) as stated in the Canadian Drinking Water Guidelines. What this test does tell you is whether there are conditions within the system that bacteria can regrow or thrive in.

The District of 100 Mile House uses this test to monitor integrity and overall 'health' of the distribution system. If a sample is positive for background bacteria greater than 200 counts the system is flushed and resampled. Any positive counts of any size for background bacteria are also resampled immediately which is above and beyond any legislative requirements.

Coliform Bacterial Monitoring

Coliform bacteria are a group of bacteria that is a little more of a narrow focus from the HPC test. These bacteria again represent a large group of bacteria found in water, soil, on vegetation and in the feces of mammals. Most of these bacteria are not harmful to humans, but because of the ease of testing of this bacterium it makes for a great indicator of contamination.

In water treatment systems there is a zero-threshold allowance for coliforms within water samples. If a sample shows up positive for coliforms the site is immediately resampled and if there are again coliforms a boil water advisory is put in place. The distribution area is then pulled offline and cleaned before being put back into action and resampled.

E. Coli Bacterial Monitoring

E. Coli bacteria are a sub section of coliform bacteria. Again, these bacteria may not be harmful to human health, but specific strains can cause serious health issues and even death in some instances. These bacteria are also found almost exclusively in warm blooded feces and therefore a definite sign of contamination. Any positive counts for coliforms or E. Coli result in an immediate boil water advisory, resampling and cleaning of the affected area.

2024 Bacterial Monitoring Results

There was a total of zero positive results for background bacteria and zero positive results for coliforms in 2024. The were no positive results for E. Coli bacteria in 2024.

Figure 7: 2024 Distribution System Biological Sampling

Date	Number of Samples Taken	Samples Positive for Background Bacteria	Samples Positive for Coliforms	Samples Positive for E. Coli	Notes/ Measures Taken
Jan 3	3	0	0	0	
Jan 9	3	0	0	0	
Jan 16	3	0	0	0	
Jan 23	3	0	0	0	
Jan 30	3	0	0	0	
Feb 6	3	0	0	0	
Feb 13	3	0	0	0	
Feb 20	3	0	0	0	
Feb 27	4	0	0	0	
Mar 5	4	0	0	0	
Mar 12	4	0	0	0	
Mar 19	3	0	0	0	
Mar 26	4	0	0	0	
April 3	4	0	0	0	
April 9	4	0	0	0	
April 10	3	0	0	0	
April 23	4	0	0	0	
April 30	4	0	0	0	
May 7	4	0	0	0	
May 14	4	0	0	0	
May 21	4	0	0	0	
May 28	4	0	0	0	
June 4	4	0	0	0	
June 11	4	0	0	0	
June 18	4	0	0	0	
July 4	4	0	0	0	
July 9	3	0	0	0	
July 15	3	0	0	0	
July 24	3	0	0	0	
July 31	3	0	0	0	
Aug 2	3	0	0	0	
Aug 13	3	0	0	0	
Aug 21	3	0	0	0	
Aug 28	3	0	0	0	
Sept 3	3	0	0	0	
Sept 10	3	0	0	0	
Sept 18	3	0	0	0	
Sept 25	3	0	0	0	
Oct 3	3	0	0	0	
Oct 7	3	0	0	0	
Oct 17	3	0	0	0	
Oct 28	3	0	0	0	
Nov 13	3	0	0	0	
Nov 18	3	0	0	0	
Nov 25	3	0	0	0	
Dec 2	3	0	0	0	
Dec 11	3	0	0	0	
Dec 18	3	0	0	0	
Dec 27	3	0	0	0	
Totals	163	0	0	0	

Quarterly Raw and Distribution Sampling

The following are extensive water quality analysis results as completed by a provincially accredited lab, taken from the source water and within the distribution system. The samples were taken by District staff and sent off to CARO Analytical Services in Kelowna, BC. The results of this extensive analysis can be seen below. As seen in the tables all the treated water quality parameters are within the Guidelines for Canadian Drinking Water Quality.

Carus 4500 Orthophosphate

In response to what there appears to be possible corrosion in of copper pipes and fittings, the District of 100 Mile House in consultation with TRUE Engineering initiated a water study in March of 2022. This was undertaken to determine if the treated well water was causing degradation of copper in the distribution system. Water samples were taken from five locations with both older plumbing and on a newly constructed house that consisted of Pex piping. Of these locations some had water softeners, and some did not.

The water samples were investigated and found that copper and lead was present in the water upon first draw (sampled) and was no longer present after running the water for five minutes.

After consultation with of True Engineering and the approval of Interior Health it was determined that a pilot program would be started to help reduce the copper and lead levels in the drinking water. In June of 2024 an orthophosphate water treatment additive (Carus 4500) was introduced into the water distribution system. This was in hopes that it would form a coating on the piping and prevent any leaching of the copper and lead into the water. In January of 2025 it was decided to stop with the addition the orthophosphate as there was no negligible improvements.

It is recommended that in area that have older plumbing that you flush your cold water for five minutes reducing your exposure to lead and copper levels.

The District of 100 Mile House will continue to look for ways to improve our distribution water quality.

Nov 12, 2024

CARO ANALYTICAL SERVICES

CERTIFICATE OF ANALYSIS

REPORTED TO	100 Mile House, District of Box 340 -385 Horse Lake Road 100 Mile House, BC V0K 2E0		
ATTENTION	Paul Donnelly	**WORK ORDER**	24K0834
PO NUMBER	Drinking Water	**RECEIVED / TEMP**	2024-11-06 13:37 / 6.7°C
PROJECT	Drinking Water - Chemistry	**REPORTED**	2024-11-12 12:05
PROJECT INFO		**COC NUMBER**	No Number

Introduction:

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We've Got Chemistry

It's simple. We figure the more you enjoy working with our fun and engaged team members; the more likely you are to give us continued opportunities to support you.

Ahead of the Curve

Through research, regulation knowledge, and instrumentation, we are your analytical centre for the technical knowledge you need, BEFORE you need it, so you can stay up to date and in the know.

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If you have any questions or concerns, please contact me at hhannaoui@caro.ca

Authorized By:

Hanane El Hannaoui
Junior Account Manager

CARO ANALYTICAL SERVICES

TEST RESULTS

REPORTED TO	100 Mile House, District of	**WORK ORDER**	24K0834
PROJECT	Drinking Water - Chemistry	**REPORTED**	2024-11-12 12:05

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
WTP Raw Water (Wells 4 & 5) (24K0834-01) | Matrix: Water | Sampled: 2024-11-05 07:48						
Calculated Parameters						
Hardness, Total (as CaCO3)	**663**	None Required	0.500	mg/L	N/A	
Total Metals						
Aluminum, total	< 0.0050	OG < 0.1	0.0050	mg/L	2024-11-08	
Antimony, total	< 0.00020	MAC = 0.006	0.00020	mg/L	2024-11-08	
Arsenic, total	**0.00073**	MAC = 0.01	0.00050	mg/L	2024-11-08	
Barium, total	**0.0170**	MAC = 2	0.0050	mg/L	2024-11-08	
Beryllium, total	< 0.00010	N/A	0.00010	mg/L	2024-11-08	
Bismuth, total	< 0.00010	N/A	0.00010	mg/L	2024-11-08	
Boron, total	< 0.0500	MAC = 5	0.0500	mg/L	2024-11-08	
Cadmium, total	< 0.000010	MAC = 0.007	0.000010	mg/L	2024-11-08	
Calcium, total	**75.1**	None Required	0.20	mg/L	2024-11-08	
Chromium, total	**0.00175**	MAC = 0.05	0.00050	mg/L	2024-11-08	
Cobalt, total	< 0.00010	N/A	0.00010	mg/L	2024-11-08	
Copper, total	**0.00133**	MAC = 2	0.00040	mg/L	2024-11-08	
Iron, total	< 0.010	AO ≤ 0.3	0.010	mg/L	2024-11-08	
Lead, total	< 0.00020	MAC = 0.005	0.00020	mg/L	2024-11-08	
Lithium, total	**0.0116**	N/A	0.00010	mg/L	2024-11-08	
Magnesium, total	**115**	None Required	0.010	mg/L	2024-11-08	
Manganese, total	**0.00199**	MAC = 0.12	0.00020	mg/L	2024-11-08	
Molybdenum, total	**0.00518**	N/A	0.00010	mg/L	2024-11-08	
Nickel, total	**0.00095**	N/A	0.00040	mg/L	2024-11-08	
Phosphorus, total	< 0.050	N/A	0.050	mg/L	2024-11-08	
Potassium, total	**8.69**	N/A	0.10	mg/L	2024-11-08	
Selenium, total	**0.00581**	MAC = 0.05	0.00050	mg/L	2024-11-08	
Silicon, total	**11.7**	N/A	1.0	mg/L	2024-11-08	
Silver, total	< 0.000050	None Required	0.000050	mg/L	2024-11-08	
Sodium, total	**140**	AO ≤ 200	0.10	mg/L	2024-11-08	
Strontium, total	**0.241**	MAC = 7	0.0010	mg/L	2024-11-08	
Sulfur, total	**39.6**	N/A	3.0	mg/L	2024-11-08	
Tellurium, total	< 0.00050	N/A	0.00050	mg/L	2024-11-08	
Thallium, total	< 0.000020	N/A	0.000020	mg/L	2024-11-08	
Thorium, total	< 0.00010	N/A	0.00010	mg/L	2024-11-08	
Tin, total	< 0.00020	N/A	0.00020	mg/L	2024-11-08	
Titanium, total	< 0.0050	N/A	0.0050	mg/L	2024-11-08	
Tungsten, total	< 0.0010	N/A	0.0010	mg/L	2024-11-08	
Uranium, total	**0.00678**	MAC = 0.02	0.000020	mg/L	2024-11-08	
Vanadium, total	< 0.0050	N/A	0.0050	mg/L	2024-11-08	
Zinc, total	< 0.0040	AO ≤ 5	0.0040	mg/L	2024-11-08	
Zirconium, total	**0.00012**	N/A	0.00010	mg/L	2024-11-08	

CARO ANALYTICAL SERVICES

APPENDIX 1: SUPPORTING INFORMATION

REPORTED TO	100 Mile House, District of	**WORK ORDER**	24K0834
PROJECT	Drinking Water - Chemistry	**REPORTED**	2024-11-12 12:05

Analysis Description	Method Ref.	Technique	Accredited	Location
Hardness in Water	SM 2340 B* (2021)	Calculation: 2.497 [total Ca] + 4.118 [total Mg] (Est)	✓	N/A
Total Metals in Water	EPA 200.2 / EPA 6020B	HNO3+HCl Hot Block Digestion / Inductively Coupled Plasma-Mass Spectroscopy (ICP-MS)	✓	Richmond

Note: An asterisk in the Method Reference indicates that the CARO method has been modified from the reference method

Glossary of Terms:

RL	Reporting Limit (default)
<	Less than the specified Reporting Limit (RL) - the actual RL may be higher than the default RL due to various factors
AO	Aesthetic Objective
MAC	Maximum Acceptable Concentration (health based)
mg/L	Milligrams per litre
OG	Operational Guideline (treated water)
EPA	United States Environmental Protection Agency Test Methods
SM	Standard Methods for the Examination of Water and Wastewater, American Public Health Association

Guidelines Referenced in this Report:

Guidelines for Canadian Drinking Water Quality (Health Canada, September 2022)

Note: In some cases, the values displayed on the report represent the lowest guideline and are to be verified by the end user

General Comments:

The results in this report apply to the received samples analyzed in accordance with the Chain of Custody document. This analytical report must be reproduced in its entirety. CARO is not responsible for any loss or damage resulting directly or indirectly from error or omission in the conduct of testing. Liability is limited to the cost of analysis. Caro will dispose of all samples within 30 days of sample receipt, unless otherwise agreed. The quality control (QC) data is available upon request

Results in **Bold** indicate values that are above CARO's method reporting limits. Any results that are above regulatory limits are highlighted **red**. Please note that results will only be highlighted red if the regulatory limits are included on the CARO report. Any Bold and/or highlighted results do not take into account method uncertainty. If you would like method uncertainty or regulatory limits to be included on your report, please contact your Account Manager:hhannaoui@caro.ca

Please note any regulatory guidelines applied to this report are added as a convenience to the client, at their request, to help provide some initial context to analytical results obtained. Although CARO makes every effort to ensure accuracy of the associated regulatory guideline(s) applied, the guidelines applied cannot be assumed to be correct due to a variety of factors and as such CARO Analytical Services assumes no liability or responsibility for the use of those guidelines to make any decisions. The original source of the regulation should be verified and a review of the guideline(s) should be validated as correct in order to make any decisions arising from the comparison of the analytical data obtained to the relevant regulatory guideline for one's particular circumstances. Further, CARO Analytical Services assumes no liability or responsibility for any loss attributed from the use of these guidelines in any way.

September 19, 2024

CARO ANALYTICAL SERVICES

CERTIFICATE OF ANALYSIS

REPORTED TO	100 Mile House, District of Box 340 -385 Horse Lake Road 100 Mile House, BC V0K 2E0		
ATTENTION	Paul Donnelly -	**WORK ORDER**	24I1482
PO NUMBER	Drinking Water	**RECEIVED / TEMP**	2024-09-11 13:00 / 5.3°C
PROJECT	Drinking Water - Chemistry	**REPORTED**	2024-09-19 18:00
PROJECT INFO		**COC NUMBER**	No Number

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If you have any questions or concerns, please contact me at bwhitehead@caro.ca

Authorized By:

Brent Whitehead
Account Manager

CARO ANALYTICAL SERVICES

TEST RESULTS

REPORTED TO	100 Mile House, District of	**WORK ORDER**	24I1482
PROJECT	Drinking Water - Chemistry	**REPORTED**	2024-09-19 18:00

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
Sandhill Cres. Sample Station (24I1482-01) | Matrix: Water | Sampled: 2024-09-10 08:59						
Anions						
Chloride	**99.5**	AO ≤ 250	0.10	mg/L	2024-09-13	
Fluoride	**0.11**	MAC = 1.5	0.10	mg/L	2024-09-13	
Nitrate (as N)	**0.301**	MAC = 10	0.010	mg/L	2024-09-13	
Nitrite (as N)	< 0.010	MAC = 1	0.010	mg/L	2024-09-13	
Sulfate	**110**	AO ≤ 500	1.0	mg/L	2024-09-13	
Calculated Parameters						
Total Trihalomethanes	**0.0310**	MAC = 0.1	0.00400	mg/L	N/A	
Hardness, Total (as CaCO3)	**651**	None Required	0.500	mg/L	N/A	
Langelier Index	**0.8**	N/A	-5.0		2024-09-18	CT6
Nitrogen, Organic	**0.105**	N/A	0.0500	mg/L	N/A	
Solids, Total Dissolved	**867**	AO ≤ 500	10.0	mg/L	N/A	
General Parameters						
Alkalinity, Total (as CaCO3)	**561**	N/A	1.0	mg/L	2024-09-13	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	N/A	1.0	mg/L	2024-09-13	
Alkalinity, Bicarbonate (as CaCO3)	**561**	N/A	1.0	mg/L	2024-09-13	
Alkalinity, Carbonate (as CaCO3)	< 1.0	N/A	1.0	mg/L	2024-09-13	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	N/A	1.0	mg/L	2024-09-13	
Ammonia, Total (as N)	**0.057**	None Required	0.050	mg/L	2024-09-13	
Carbon, Total Organic	**3.28**	N/A	0.50	mg/L	2024-09-13	
Colour, True	< 5.0	AO ≤ 15	5.0	CU	2024-09-13	
Conductivity (EC)	**1510**	N/A	2.0	µS/cm	2024-09-13	
Cyanide, Total	< 0.0020	MAC = 0.2	0.0020	mg/L	2024-09-13	
Nitrogen, Total Kjeldahl	**0.162**	N/A	0.050	mg/L	2024-09-17	
pH	**7.95**	7.0-10.5	0.10	pH units	2024-09-13	HT2
Phosphorus, Total (as P)	**0.960**	N/A	0.0050	mg/L	2024-09-16	
Temperature, at pH	**20.7**	N/A		°C	2024-09-13	HT2
Turbidity	< 0.10	OG < 1	0.10	NTU	2024-09-12	
UV Transmittance @ 254 nm - Unfiltered	**90.6**	N/A	0.10	% T	2024-09-12	
Haloacetic Acids						
Monochloroacetic Acid	< 0.0020	N/A	0.0020	mg/L	2024-09-17	
Monobromoacetic Acid	< 0.0020	N/A	0.0020	mg/L	2024-09-17	
Dichloroacetic Acid	**0.0038**	N/A	0.0020	mg/L	2024-09-17	
Trichloroacetic Acid	**0.0024**	N/A	0.0020	mg/L	2024-09-17	
Dibromoacetic Acid	**0.0035**	N/A	0.0020	mg/L	2024-09-17	
Total Haloacetic Acids (HAA5)	**0.00967**	MAC = 0.08	0.00200	mg/L	N/A	
Surrogate: 2-Bromopropionic Acid	*92*		*70-130*	%	*2024-09-17*	
Total Metals						
Aluminum, total	< 0.0050	OG < 0.1	0.0050	mg/L	2024-09-16	
Antimony, total	< 0.00020	MAC = 0.006	0.00020	mg/L	2024-09-16	
Arsenic, total	**0.00163**	MAC = 0.01	0.00050	mg/L	2024-09-16	

CARO ANALYTICAL SERVICES

TEST RESULTS

REPORTED TO 100 Mile House, District of
PROJECT Drinking Water - Chemistry

WORK ORDER 24I1482
REPORTED 2024-09-19 18:00

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
Sandhill Cres. Sample Station (24I1482-01) | Matrix: Water | Sampled: 2024-09-10 08:59, Continued						
Total Metals, Continued						
Barium, total	**0.0120**	MAC = 2	0.0050	mg/L	2024-09-16	
Boron, total	< 0.0500	MAC = 5	0.0500	mg/L	2024-09-16	
Cadmium, total	< 0.000010	MAC = 0.007	0.000010	mg/L	2024-09-16	
Calcium, total	**63.9**	None Required	0.20	mg/L	2024-09-16	
Chromium, total	< 0.00050	MAC = 0.05	0.00050	mg/L	2024-09-16	
Cobalt, total	< 0.00010	N/A	0.00010	mg/L	2024-09-16	
Copper, total	**0.0420**	MAC = 2	0.00040	mg/L	2024-09-16	
Iron, total	< 0.010	AO ≤ 0.3	0.010	mg/L	2024-09-16	
Lead, total	< 0.00020	MAC = 0.005	0.00020	mg/L	2024-09-16	
Magnesium, total	**119**	None Required	0.010	mg/L	2024-09-16	
Manganese, total	**0.00716**	MAC = 0.12	0.00020	mg/L	2024-09-16	
Mercury, total	< 0.000010	MAC = 0.001	0.000010	mg/L	2024-09-15	
Molybdenum, total	**0.00808**	N/A	0.00010	mg/L	2024-09-16	
Nickel, total	**0.00114**	N/A	0.00040	mg/L	2024-09-16	
Potassium, total	**8.06**	N/A	0.10	mg/L	2024-09-16	
Selenium, total	**0.00619**	MAC = 0.05	0.00050	mg/L	2024-09-16	
Sodium, total	**123**	AO ≤ 200	0.10	mg/L	2024-09-16	
Strontium, total	**0.198**	MAC = 7	0.0010	mg/L	2024-09-16	
Uranium, total	**0.00741**	MAC = 0.02	0.000020	mg/L	2024-09-16	
Zinc, total	**0.0181**	AO ≤ 5	0.0040	mg/L	2024-09-16	
Volatile Organic Compounds (VOC)						
Benzene	< 0.5	MAC = 5	0.5	µg/L	2024-09-14	
Bromodichloromethane	**0.0102**	N/A	0.0010	mg/L	2024-09-14	
Bromodichloromethane	**10.2**	N/A	1.0	µg/L	2024-09-14	
Bromoform	**0.0031**	N/A	0.0010	mg/L	2024-09-14	
Bromoform	**3.1**	N/A	1.0	µg/L	2024-09-14	
Carbon tetrachloride	< 0.5	MAC = 2	0.5	µg/L	2024-09-14	
Chlorobenzene	< 1.0	AO ≤ 30	1.0	µg/L	2024-09-14	
Chloroethane	< 2.0	N/A	2.0	µg/L	2024-09-14	
Chloroform	**0.0069**	N/A	0.0010	mg/L	2024-09-14	
Chloroform	**6.9**	N/A	1.0	µg/L	2024-09-14	
Dibromochloromethane	**0.0108**	N/A	0.0010	mg/L	2024-09-14	
Dibromochloromethane	**10.8**	N/A	1.0	µg/L	2024-09-14	
1,2-Dibromoethane	< 0.3	N/A	0.3	µg/L	2024-09-14	
Dibromomethane	< 1.0	N/A	1.0	µg/L	2024-09-14	
1,2-Dichlorobenzene	< 0.5	AO ≤ 3	0.5	µg/L	2024-09-14	
1,3-Dichlorobenzene	< 1.0	N/A	1.0	µg/L	2024-09-14	
1,4-Dichlorobenzene	< 1.0	AO ≤ 1	1.0	µg/L	2024-09-14	
1,1-Dichloroethane	< 1.0	N/A	1.0	µg/L	2024-09-14	
1,2-Dichloroethane	< 1.0	MAC = 5	1.0	µg/L	2024-09-14	
1,1-Dichloroethylene	< 1.0	MAC = 14	1.0	µg/L	2024-09-14	
cis-1,2-Dichloroethylene	< 1.0	N/A	1.0	µg/L	2024-09-14	

CARO ANALYTICAL SERVICES

TEST RESULTS

REPORTED TO	100 Mile House, District of	**WORK ORDER**	24I1482
PROJECT	Drinking Water - Chemistry	**REPORTED**	2024-09-19 18:00

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
Sandhill Cres. Sample Station (24I1482-01) | Matrix: Water | Sampled: 2024-09-10 08:59, Continued						
Volatile Organic Compounds (VOC), Continued						
trans-1,2-Dichloroethylene	< 1.0	N/A	1.0	µg/L	2024-09-14	
Dichloromethane	< 3.0	MAC = 50	3.0	µg/L	2024-09-14	
1,2-Dichloropropane	< 1.0	N/A	1.0	µg/L	2024-09-14	
1,3-Dichloropropene (cis + trans)	< 1.0	N/A	1.0	µg/L	2024-09-14	
Ethylbenzene	< 1.0	AO ≤ 1.6	1.0	µg/L	2024-09-14	
Methyl tert-butyl ether	< 1.0	AO ≤ 15	1.0	µg/L	2024-09-14	
Styrene	< 1.0	N/A	1.0	µg/L	2024-09-14	
1,1,2,2-Tetrachloroethane	< 0.5	N/A	0.5	µg/L	2024-09-14	
Tetrachloroethylene	< 1.0	MAC = 10	1.0	µg/L	2024-09-14	
Toluene	< 1.0	MAC = 60	1.0	µg/L	2024-09-14	
1,1,1-Trichloroethane	< 1.0	N/A	1.0	µg/L	2024-09-14	
1,1,2-Trichloroethane	< 1.0	N/A	1.0	µg/L	2024-09-14	
Trichloroethylene	< 1.0	MAC = 5	1.0	µg/L	2024-09-14	
Trichlorofluoromethane	< 1.0	N/A	1.0	µg/L	2024-09-14	
Vinyl chloride	< 1.0	MAC = 2	1.0	µg/L	2024-09-14	
Xylenes (total)	< 2.0	AO ≤ 20	2.0	µg/L	2024-09-14	
Surrogate: Toluene-d8	*84*		*70-130*	%	*2024-09-14*	
Surrogate: 4-Bromofluorobenzene	*79*		*70-130*	%	*2024-09-14*	
Surrogate: 1,4-Dichlorobenzene-d4	*84*		*70-130*	%	*2024-09-14*	
Seventh Ave (24I1482-02) | Matrix: Water | Sampled: 2024-09-10 08:48						
Anions						
Chloride	**102**	AO ≤ 250	0.10	mg/L	2024-09-13	
Fluoride	**0.12**	MAC = 1.5	0.10	mg/L	2024-09-13	
Nitrate (as N)	**0.364**	MAC = 10	0.010	mg/L	2024-09-13	
Nitrite (as N)	< 0.010	MAC = 1	0.010	mg/L	2024-09-13	
Sulfate	**101**	AO ≤ 500	1.0	mg/L	2024-09-13	
Calculated Parameters						
Total Trihalomethanes	**0.0657**	MAC = 0.1	0.00400	mg/L	N/A	
Hardness, Total (as CaCO3)	**649**	None Required	0.500	mg/L	N/A	
Langelier Index	**0.8**	N/A	-5.0		2024-09-18	CT6
Nitrogen, Organic	**0.178**	N/A	0.0500	mg/L	N/A	
Solids, Total Dissolved	**866**	AO ≤ 500	10.0	mg/L	N/A	
General Parameters						
Alkalinity, Total (as CaCO3)	**567**	N/A	1.0	mg/L	2024-09-13	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	N/A	1.0	mg/L	2024-09-13	
Alkalinity, Bicarbonate (as CaCO3)	**567**	N/A	1.0	mg/L	2024-09-13	
Alkalinity, Carbonate (as CaCO3)	< 1.0	N/A	1.0	mg/L	2024-09-13	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	N/A	1.0	mg/L	2024-09-13	
Ammonia, Total (as N)	< 0.050	None Required	0.050	mg/L	2024-09-13	

CARO ANALYTICAL SERVICES

TEST RESULTS

REPORTED TO 100 Mile House, District of
PROJECT Drinking Water - Chemistry

WORK ORDER 24I1482
REPORTED 2024-09-19 18:00

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
Seventh Ave (24I1482-02) | Matrix: Water | Sampled: 2024-09-10 08:48, Continued						
General Parameters, Continued						
Carbon, Total Organic	**4.31**	N/A	0.50	mg/L	2024-09-13	
Colour, True	< 5.0	AO ≤ 15	5.0	CU	2024-09-13	
Conductivity (EC)	**1520**	N/A	2.0	µS/cm	2024-09-13	
Cyanide, Total	< 0.0020	MAC = 0.2	0.0020	mg/L	2024-09-13	
Nitrogen, Total Kjeldahl	**0.178**	N/A	0.050	mg/L	2024-09-17	
pH	**7.89**	7.0-10.5	0.10	pH units	2024-09-13	HT2
Phosphorus, Total (as P)	**0.927**	N/A	0.0050	mg/L	2024-09-16	
Temperature, at pH	**21.0**	N/A		°C	2024-09-13	HT2
Turbidity	**0.15**	OG < 1	0.10	NTU	2024-09-12	
UV Transmittance @ 254 nm - Unfiltered	**91.2**	N/A	0.10	% T	2024-09-12	
Haloacetic Acids						
Monochloroacetic Acid	< 0.0020	N/A	0.0020	mg/L	2024-09-17	
Monobromoacetic Acid	< 0.0020	N/A	0.0020	mg/L	2024-09-17	
Dichloroacetic Acid	**0.0092**	N/A	0.0020	mg/L	2024-09-17	
Trichloroacetic Acid	**0.0047**	N/A	0.0020	mg/L	2024-09-17	
Dibromoacetic Acid	**0.0049**	N/A	0.0020	mg/L	2024-09-17	
Total Haloacetic Acids (HAA5)	**0.0187**	MAC = 0.08	0.00200	mg/L	N/A	
Surrogate: 2-Bromopropionic Acid	*95*		*70-130*	%	*2024-09-17*	
Total Metals						
Aluminum, total	< 0.0050	OG < 0.1	0.0050	mg/L	2024-09-16	
Antimony, total	< 0.00020	MAC = 0.006	0.00020	mg/L	2024-09-16	
Arsenic, total	**0.00174**	MAC = 0.01	0.00050	mg/L	2024-09-16	
Barium, total	**0.0120**	MAC = 2	0.0050	mg/L	2024-09-16	
Boron, total	< 0.0500	MAC = 5	0.0500	mg/L	2024-09-16	
Cadmium, total	< 0.000010	MAC = 0.007	0.000010	mg/L	2024-09-16	
Calcium, total	**65.8**	None Required	0.20	mg/L	2024-09-16	
Chromium, total	< 0.00050	MAC = 0.05	0.00050	mg/L	2024-09-16	
Cobalt, total	< 0.00010	N/A	0.00010	mg/L	2024-09-16	
Copper, total	**0.0178**	MAC = 2	0.00040	mg/L	2024-09-16	
Iron, total	**0.018**	AO ≤ 0.3	0.010	mg/L	2024-09-16	
Lead, total	< 0.00020	MAC = 0.005	0.00020	mg/L	2024-09-16	
Magnesium, total	**118**	None Required	0.010	mg/L	2024-09-16	
Manganese, total	**0.00049**	MAC = 0.12	0.00020	mg/L	2024-09-16	
Mercury, total	< 0.000010	MAC = 0.001	0.000010	mg/L	2024-09-15	
Molybdenum, total	**0.00805**	N/A	0.00010	mg/L	2024-09-16	
Nickel, total	**0.00090**	N/A	0.00040	mg/L	2024-09-16	
Potassium, total	**8.12**	N/A	0.10	mg/L	2024-09-16	
Selenium, total	**0.00640**	MAC = 0.05	0.00050	mg/L	2024-09-16	
Sodium, total	**124**	AO ≤ 200	0.10	mg/L	2024-09-16	
Strontium, total	**0.204**	MAC = 7	0.0010	mg/L	2024-09-16	
Uranium, total	**0.00742**	MAC = 0.02	0.000020	mg/L	2024-09-16	
Zinc, total	**0.0163**	AO ≤ 5	0.0040	mg/L	2024-09-16	

CARO ANALYTICAL SERVICES

TEST RESULTS

REPORTED TO	100 Mile House, District of	**WORK ORDER**	24I1482
PROJECT	Drinking Water - Chemistry	**REPORTED**	2024-09-19 18:00

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
Seventh Ave (24I1482-02) | Matrix: Water | Sampled: 2024-09-10 08:48, Continued						
Volatile Organic Compounds (VOC)						
Benzene	< 0.5	MAC = 5	0.5	µg/L	2024-09-14	
Bromodichloromethane	**0.0215**	N/A	0.0010	mg/L	2024-09-14	
Bromodichloromethane	**21.5**	N/A	1.0	µg/L	2024-09-14	
Bromoform	**0.0044**	N/A	0.0010	mg/L	2024-09-14	
Bromoform	**4.4**	N/A	1.0	µg/L	2024-09-14	
Carbon tetrachloride	< 0.5	MAC = 2	0.5	µg/L	2024-09-14	
Chlorobenzene	< 1.0	AO ≤ 30	1.0	µg/L	2024-09-14	
Chloroethane	< 2.0	N/A	2.0	µg/L	2024-09-14	
Chloroform	**0.0220**	N/A	0.0010	mg/L	2024-09-14	
Chloroform	**22.0**	N/A	1.0	µg/L	2024-09-14	
Dibromochloromethane	**0.0178**	N/A	0.0010	mg/L	2024-09-14	
Dibromochloromethane	**17.8**	N/A	1.0	µg/L	2024-09-14	
1,2-Dibromoethane	< 0.3	N/A	0.3	µg/L	2024-09-14	
Dibromomethane	< 1.0	N/A	1.0	µg/L	2024-09-14	
1,2-Dichlorobenzene	< 0.5	AO ≤ 3	0.5	µg/L	2024-09-14	
1,3-Dichlorobenzene	< 1.0	N/A	1.0	µg/L	2024-09-14	
1,4-Dichlorobenzene	< 1.0	AO ≤ 1	1.0	µg/L	2024-09-14	
1,1-Dichloroethane	< 1.0	N/A	1.0	µg/L	2024-09-14	
1,2-Dichloroethane	< 1.0	MAC = 5	1.0	µg/L	2024-09-14	
1,1-Dichloroethylene	< 1.0	MAC = 14	1.0	µg/L	2024-09-14	
cis-1,2-Dichloroethylene	< 1.0	N/A	1.0	µg/L	2024-09-14	
trans-1,2-Dichloroethylene	< 1.0	N/A	1.0	µg/L	2024-09-14	
Dichloromethane	< 3.0	MAC = 50	3.0	µg/L	2024-09-14	
1,2-Dichloropropane	< 1.0	N/A	1.0	µg/L	2024-09-14	
1,3-Dichloropropene (cis + trans)	< 1.0	N/A	1.0	µg/L	2024-09-14	
Ethylbenzene	< 1.0	AO ≤ 1.6	1.0	µg/L	2024-09-14	
Methyl tert-butyl ether	< 1.0	AO ≤ 15	1.0	µg/L	2024-09-14	
Styrene	< 1.0	N/A	1.0	µg/L	2024-09-14	
1,1,2,2-Tetrachloroethane	< 0.5	N/A	0.5	µg/L	2024-09-14	
Tetrachloroethylene	< 1.0	MAC = 10	1.0	µg/L	2024-09-14	
Toluene	< 1.0	MAC = 60	1.0	µg/L	2024-09-14	
1,1,1-Trichloroethane	< 1.0	N/A	1.0	µg/L	2024-09-14	
1,1,2-Trichloroethane	< 1.0	N/A	1.0	µg/L	2024-09-14	
Trichloroethylene	< 1.0	MAC = 5	1.0	µg/L	2024-09-14	
Trichlorofluoromethane	< 1.0	N/A	1.0	µg/L	2024-09-14	
Vinyl chloride	< 1.0	MAC = 2	1.0	µg/L	2024-09-14	
Xylenes (total)	< 2.0	AO ≤ 20	2.0	µg/L	2024-09-14	
Surrogate: Toluene-d8	*94*		*70-130*	%	*2024-09-14*	
Surrogate: 4-Bromofluorobenzene	*79*		*70-130*	%	*2024-09-14*	
Surrogate: 1,4-Dichlorobenzene-d4	*83*		*70-130*	%	*2024-09-14*	
Moore Ave Sample Station (24I1482-03) | Matrix: Water | Sampled: 2024-09-10 09:25						

CARO ANALYTICAL SERVICES

TEST RESULTS

REPORTED TO 100 Mile House, District of
PROJECT Drinking Water - Chemistry

WORK ORDER 24I1482
REPORTED 2024-09-19 18:00

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
Moore Ave Sample Station (24I1482-03) | Matrix: Water | Sampled: 2024-09-10 09:25, Continued						
Anions						
Chloride	**102**	AO ≤ 250	0.10	mg/L	2024-09-13	
Fluoride	**0.12**	MAC = 1.5	0.10	mg/L	2024-09-13	
Nitrate (as N)	**0.334**	MAC = 10	0.010	mg/L	2024-09-13	
Nitrite (as N)	< 0.010	MAC = 1	0.010	mg/L	2024-09-13	
Sulfate	**104**	AO ≤ 500	1.0	mg/L	2024-09-13	
Calculated Parameters						
Total Trihalomethanes	**0.0918**	MAC = 0.1	0.00400	mg/L	N/A	
Hardness, Total (as CaCO3)	**641**	None Required	0.500	mg/L	N/A	
Langelier Index	**0.8**	N/A	-5.0		2024-09-18	CT6
Nitrogen, Organic	**0.0890**	N/A	0.0500	mg/L	N/A	
Solids, Total Dissolved	**857**	AO ≤ 500	10.0	mg/L	N/A	
General Parameters						
Alkalinity, Total (as CaCO3)	**556**	N/A	1.0	mg/L	2024-09-13	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	N/A	1.0	mg/L	2024-09-13	
Alkalinity, Bicarbonate (as CaCO3)	**556**	N/A	1.0	mg/L	2024-09-13	
Alkalinity, Carbonate (as CaCO3)	< 1.0	N/A	1.0	mg/L	2024-09-13	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	N/A	1.0	mg/L	2024-09-13	
Ammonia, Total (as N)	**0.054**	None Required	0.050	mg/L	2024-09-13	
Carbon, Total Organic	**4.90**	N/A	0.50	mg/L	2024-09-13	
Colour, True	< 5.0	AO ≤ 15	5.0	CU	2024-09-13	
Conductivity (EC)	**1510**	N/A	2.0	µS/cm	2024-09-13	
Cyanide, Total	< 0.0020	MAC = 0.2	0.0020	mg/L	2024-09-13	
Nitrogen, Total Kjeldahl	**0.143**	N/A	0.050	mg/L	2024-09-17	
pH	**7.94**	7.0-10.5	0.10	pH units	2024-09-13	HT2
Phosphorus, Total (as P)	**0.885**	N/A	0.0050	mg/L	2024-09-16	
Temperature, at pH	**21.3**	N/A		°C	2024-09-13	HT2
Turbidity	**0.16**	OG < 1	0.10	NTU	2024-09-12	
UV Transmittance @ 254 nm - Unfiltered	**91.2**	N/A	0.10	% T	2024-09-12	
Haloacetic Acids						
Monochloroacetic Acid	< 0.0020	N/A	0.0020	mg/L	2024-09-17	
Monobromoacetic Acid	< 0.0020	N/A	0.0020	mg/L	2024-09-17	
Dichloroacetic Acid	**0.0032**	N/A	0.0020	mg/L	2024-09-17	
Trichloroacetic Acid	**0.0070**	N/A	0.0020	mg/L	2024-09-17	
Dibromoacetic Acid	< 0.0020	N/A	0.0020	mg/L	2024-09-17	
Total Haloacetic Acids (HAA5)	**0.0103**	MAC = 0.08	0.00200	mg/L	N/A	
Surrogate: 2-Bromopropionic Acid	*96*		*70-130*	%	*2024-09-17*	
Total Metals						
Aluminum, total	< 0.0050	OG < 0.1	0.0050	mg/L	2024-09-16	
Antimony, total	< 0.00020	MAC = 0.006	0.00020	mg/L	2024-09-16	
Arsenic, total	**0.00258**	MAC = 0.01	0.00050	mg/L	2024-09-16	

CARO ANALYTICAL SERVICES

TEST RESULTS

REPORTED TO 100 Mile House, District of
PROJECT Drinking Water - Chemistry

WORK ORDER 24I1482
REPORTED 2024-09-19 18:00

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
Moore Ave Sample Station (24I1482-03) | Matrix: Water | Sampled: 2024-09-10 09:25, Continued						
Total Metals, Continued						
Barium, total	**0.0110**	MAC = 2	0.0050	mg/L	2024-09-16	
Boron, total	< 0.0500	MAC = 5	0.0500	mg/L	2024-09-16	
Cadmium, total	< 0.000010	MAC = 0.007	0.000010	mg/L	2024-09-16	
Calcium, total	**64.5**	None Required	0.20	mg/L	2024-09-16	
Chromium, total	< 0.00050	MAC = 0.05	0.00050	mg/L	2024-09-16	
Cobalt, total	< 0.00010	N/A	0.00010	mg/L	2024-09-16	
Copper, total	**0.0143**	MAC = 2	0.00040	mg/L	2024-09-16	
Iron, total	**0.016**	AO ≤ 0.3	0.010	mg/L	2024-09-16	
Lead, total	< 0.00020	MAC = 0.005	0.00020	mg/L	2024-09-16	
Magnesium, total	**117**	None Required	0.010	mg/L	2024-09-16	
Manganese, total	**0.00038**	MAC = 0.12	0.00020	mg/L	2024-09-16	
Mercury, total	< 0.000010	MAC = 0.001	0.000010	mg/L	2024-09-15	
Molybdenum, total	**0.00861**	N/A	0.00010	mg/L	2024-09-16	
Nickel, total	**0.00085**	N/A	0.00040	mg/L	2024-09-16	
Potassium, total	**8.03**	N/A	0.10	mg/L	2024-09-16	
Selenium, total	**0.00666**	MAC = 0.05	0.00050	mg/L	2024-09-16	
Sodium, total	**121**	AO ≤ 200	0.10	mg/L	2024-09-16	
Strontium, total	**0.197**	MAC = 7	0.0010	mg/L	2024-09-16	
Uranium, total	**0.00751**	MAC = 0.02	0.000020	mg/L	2024-09-16	
Zinc, total	**0.0071**	AO ≤ 5	0.0040	mg/L	2024-09-16	
Volatile Organic Compounds (VOC)						
Benzene	< 0.5	MAC = 5	0.5	µg/L	2024-09-14	
Bromodichloromethane	**0.0299**	N/A	0.0010	mg/L	2024-09-14	
Bromodichloromethane	**29.9**	N/A	1.0	µg/L	2024-09-14	
Bromoform	**0.0049**	N/A	0.0010	mg/L	2024-09-14	
Bromoform	**4.9**	N/A	1.0	µg/L	2024-09-14	
Carbon tetrachloride	< 0.5	MAC = 2	0.5	µg/L	2024-09-14	
Chlorobenzene	< 1.0	AO ≤ 30	1.0	µg/L	2024-09-14	
Chloroethane	< 2.0	N/A	2.0	µg/L	2024-09-14	
Chloroform	**0.0345**	N/A	0.0010	mg/L	2024-09-14	
Chloroform	**34.5**	N/A	1.0	µg/L	2024-09-14	
Dibromochloromethane	**0.0226**	N/A	0.0010	mg/L	2024-09-14	
Dibromochloromethane	**22.6**	N/A	1.0	µg/L	2024-09-14	
1,2-Dibromoethane	< 0.3	N/A	0.3	µg/L	2024-09-14	
Dibromomethane	< 1.0	N/A	1.0	µg/L	2024-09-14	
1,2-Dichlorobenzene	< 0.5	AO ≤ 3	0.5	µg/L	2024-09-14	
1,3-Dichlorobenzene	< 1.0	N/A	1.0	µg/L	2024-09-14	
1,4-Dichlorobenzene	< 1.0	AO ≤ 1	1.0	µg/L	2024-09-14	
1,1-Dichloroethane	< 1.0	N/A	1.0	µg/L	2024-09-14	
1,2-Dichloroethane	< 1.0	MAC = 5	1.0	µg/L	2024-09-14	
1,1-Dichloroethylene	< 1.0	MAC = 14	1.0	µg/L	2024-09-14	
cis-1,2-Dichloroethylene	< 1.0	N/A	1.0	µg/L	2024-09-14	

CARO ANALYTICAL SERVICES

TEST RESULTS

REPORTED TO 100 Mile House, District of
PROJECT Drinking Water - Chemistry

WORK ORDER 24I1482
REPORTED 2024-09-19 18:00

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
Moore Ave Sample Station (24I1482-03) | Matrix: Water | Sampled: 2024-09-10 09:25, Continued						
Volatile Organic Compounds (VOC), Continued						
trans-1,2-Dichloroethylene	< 1.0	N/A	1.0	µg/L	2024-09-14	
Dichloromethane	< 3.0	MAC = 50	3.0	µg/L	2024-09-14	
1,2-Dichloropropane	< 1.0	N/A	1.0	µg/L	2024-09-14	
1,3-Dichloropropene (cis + trans)	< 1.0	N/A	1.0	µg/L	2024-09-14	
Ethylbenzene	< 1.0	AO ≤ 1.6	1.0	µg/L	2024-09-14	
Methyl tert-butyl ether	< 1.0	AO ≤ 15	1.0	µg/L	2024-09-14	
Styrene	< 1.0	N/A	1.0	µg/L	2024-09-14	
1,1,2,2-Tetrachloroethane	< 0.5	N/A	0.5	µg/L	2024-09-14	
Tetrachloroethylene	< 1.0	MAC = 10	1.0	µg/L	2024-09-14	
Toluene	< 1.0	MAC = 60	1.0	µg/L	2024-09-14	
1,1,1-Trichloroethane	< 1.0	N/A	1.0	µg/L	2024-09-14	
1,1,2-Trichloroethane	< 1.0	N/A	1.0	µg/L	2024-09-14	
Trichloroethylene	< 1.0	MAC = 5	1.0	µg/L	2024-09-14	
Trichlorofluoromethane	< 1.0	N/A	1.0	µg/L	2024-09-14	
Vinyl chloride	< 1.0	MAC = 2	1.0	µg/L	2024-09-14	
Xylenes (total)	< 2.0	AO ≤ 20	2.0	µg/L	2024-09-14	
Surrogate: Toluene-d8	*88*		*70-130*	%	*2024-09-14*	
Surrogate: 4-Bromofluorobenzene	*76*		*70-130*	%	*2024-09-14*	
Surrogate: 1,4-Dichlorobenzene-d4	*92*		*70-130*	%	*2024-09-14*	

Sample Qualifiers:

CT6 Results were based on lab temperature & lab pH.

HT2 The 15 minute recommended holding time (from sampling to analysis) has been exceeded - field analysis is recommended.

CARO ANALYTICAL SERVICES

APPENDIX 1: SUPPORTING INFORMATION

REPORTED TO	100 Mile House, District of	**WORK ORDER**	24I1482
PROJECT	Drinking Water - Chemistry	**REPORTED**	2024-09-19 18:00

Analysis Description	Method Ref.	Technique	Accredited	Location
Alkalinity in Water	SM 2320 B* (2021)	Titration with H2SO4	✓	Kelowna
Ammonia, Total in Water	SM 4500-NH3 G* (2021)	Automated Colorimetry (Phenate)	✓	Kelowna
Anions in Water	SM 4110 B (2020)	Ion Chromatography	✓	Kelowna
Carbon, Total Organic in Water	SM 5310 B (2022)	Combustion, Infrared CO2 Detection	✓	Kelowna
Colour, True in Water	SM 2120 C (2021)	Spectrophotometry (456 nm)	✓	Kelowna
Conductivity in Water	SM 2510 B (2021)	Conductivity Meter	✓	Kelowna
Cyanide, SAD in Water	ASTM D7511-12	Flow Injection with In-Line UV Digestion and Amperometry	✓	Kelowna
Haloacetic Acids in Water	EPA 552.3*	Liquid-Liquid Microextraction, Derivatization and GC-ECD	✓	Richmond
Hardness in Water	SM 2340 B* (2021)	Calculation: 2.497 [total Ca] + 4.118 [total Mg] (Est)	✓	N/A
Langelier Index in Water	SM 2330 B (2021)	Calculation		N/A
Mercury, total in Water	EPA 245.7*	BrCl2 Oxidation / Cold Vapor Atomic Fluorescence Spectrometry (CVAFS)	✓	Richmond
Nitrogen, Total Kjeldahl in Water	SM 4500-Norg D* (2021)	Block Digestion and Flow Injection Analysis	✓	Kelowna
pH in Water	SM 4500-H+ B (2021)	Electrometry	✓	Kelowna
Phosphorus, Total in Water	SM 4500-P B.5* (2011) / SM 4500-P F (2021)	Persulfate Digestion / Automated Colorimetry (Ascorbic Acid)	✓	Kelowna
Solids, Total Dissolved in Water	SM 1030 E (2021)	SM 1030 E		N/A
Total Metals in Water	EPA 200.2 / EPA 6020B	HNO3+HCl Hot Block Digestion / Inductively Coupled Plasma-Mass Spectroscopy (ICP-MS)	✓	Richmond
Transmittance at 254 nm - Unfiltered in Water	SM 5910 B* (2021)	Ultraviolet Absorption	✓	Kelowna
Trihalomethanes in Water	EPA 5030B / EPA 8260D	Purge&Trap / GC-MSD (SIM)	✓	Richmond
Turbidity in Water	SM 2130 B (2020)	Nephelometry	✓	Kelowna
Volatile Organic Compounds in Water	EPA 5030B / EPA 8260D	Purge&Trap / GC-MSD (SIM)	✓	Richmond

Note: An asterisk in the Method Reference indicates that the CARO method has been modified from the reference method

Glossary of Terms:

RL	Reporting Limit (default)
% T	Percent Transmittance
<	Less than the specified Reporting Limit (RL) - the actual RL may be higher than the default RL due to various factors
°C	Degrees Celcius
AO	Aesthetic Objective
CU	Colour Units (referenced against a platinum cobalt standard)
MAC	Maximum Acceptable Concentration (health based)
mg/L	Milligrams per litre
NTU	Nephelometric Turbidity Units
OG	Operational Guideline (treated water)
pH units	pH < 7 = acidic, ph > 7 = basic
µg/L	Micrograms per litre
µS/cm	Microsiemens per centimetre

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ANALYTICAL SERVICES

APPENDIX 1: SUPPORTING INFORMATION

REPORTED TO	100 Mile House, District of	**WORK ORDER**	24I1482
PROJECT	Drinking Water - Chemistry	**REPORTED**	2024-09-19 18:00

ASTM	ASTM International Test Methods
EPA	United States Environmental Protection Agency Test Methods
SM	Standard Methods for the Examination of Water and Wastewater, American Public Health Association

General Comments:

The results in this report apply to the received samples analyzed in accordance with the Chain of Custody document. This analytical report must be reproduced in its entirety. CARO is not responsible for any loss or damage resulting directly or indirectly from error or omission in the conduct of testing. Liability is limited to the cost of analysis. Caro will dispose of all samples within 30 days of sample receipt, unless otherwise agreed. The quality control (QC) data is available upon request

Results in **Bold** indicate values that are above CARO's method reporting limits. Any results that are above regulatory limits are highlighted red. Please note that results will only be highlighted red if the regulatory limits are included on the CARO report. Any Bold and/or highlighted results do not take into account method uncertainty. If you would like method uncertainty or regulatory limits to be included on your report, please contact your Account Manager:bwhitehead@caro.ca

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June 11/24

CERTIFICATE OF ANALYSIS

REPORTED TO	100 Mile House, District of Box 340 -385 Horse Lake Road 100 Mile House, BC V0K 2E0		
ATTENTION	Paul Donnelly	**WORK ORDER**	24F1545
PO NUMBER	Drinking Water	**RECEIVED / TEMP**	2024-06-12 08:27 / 4.6°C
PROJECT	Drinking Water - Chemistry	**REPORTED**	2024-06-21 09:23
PROJECT INFO		**COC NUMBER**	No Number

Introduction:

CARO Analytical Services is a testing laboratory full of smart, engaged scientists driven to make the world a safer and healthier place. Through our clients' projects we become an essential element for a better world. We employ methods conducted in accordance with recognized professional standards using accepted testing methodologies and quality control efforts. CARO is accredited by the Canadian Association for Laboratories Accreditation (CALA) to ISO/IEC 17025:2017 for specific tests listed in the scope of accreditation approved by CALA.

Big Picture Sidekicks

You know that the sample you collected after snowshoeing to site, digging 5 meters, and racing to get it on a plane so you can submit it to the lab for time sensitive results needed to make important and expensive decisions (whew) is VERY important. We know that too.

We've Got Chemistry

It's simple. We figure the more you enjoy working with our fun and engaged team members; the more likely you are to give us continued opportunities to support you.

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By engaging our services, you are agreeing to CARO Analytical Service's Standard Terms and Conditions outlined here: https://www.caro.ca/terms-conditions

If you have any questions or concerns, please contact me at bwhitehead@caro.ca

Authorized By:

Brent Whitehead
Account Manager

CARO ANALYTICAL SERVICES

TEST RESULTS

REPORTED TO	100 Mile House, District of	**WORK ORDER**	24F1545
PROJECT	Drinking Water - Chemistry	**REPORTED**	2024-06-21 09:23

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
Sandhill Sample Station (24F1545-01) | Matrix: Water | Sampled: 2024-06-11 11:35						
Calculated Parameters						
Total Trihalomethanes	**0.0219**	MAC = 0.1	0.00400	mg/L	N/A	
Haloacetic Acids						
Monochloroacetic Acid	< 0.0020	N/A	0.0020	mg/L	2024-06-14	
Monobromoacetic Acid	**0.0032**	N/A	0.0020	mg/L	2024-06-14	
Dichloroacetic Acid	**0.0021**	N/A	0.0020	mg/L	2024-06-14	
Trichloroacetic Acid	< 0.0020	N/A	0.0020	mg/L	2024-06-14	
Dibromoacetic Acid	**0.0024**	N/A	0.0020	mg/L	2024-06-14	
Total Haloacetic Acids (HAA5)	**0.00770**	MAC = 0.08	0.00200	mg/L	N/A	
Surrogate: 2-Bromopropionic Acid	*102*		*70-130*	%	*2024-06-14*	
Volatile Organic Compounds (VOC)						
Bromodichloromethane	**0.0062**	N/A	0.0010	mg/L	2024-06-15	
Bromoform	**0.0029**	N/A	0.0010	mg/L	2024-06-15	
Chloroform	**0.0047**	N/A	0.0010	mg/L	2024-06-15	
Dibromochloromethane	**0.0081**	N/A	0.0010	mg/L	2024-06-15	
Surrogate: Toluene-d8	*95*		*70-130*	%	*2024-06-15*	
Surrogate: 4-Bromofluorobenzene	*79*		*70-130*	%	*2024-06-15*	
Bulk Water Stn (24F1545-02) | Matrix: Water | Sampled: 2024-06-11 10:40						
Calculated Parameters						
Total Trihalomethanes	**0.0795**	MAC = 0.1	0.00400	mg/L	N/A	
Haloacetic Acids						
Monochloroacetic Acid	< 0.0020	N/A	0.0020	mg/L	2024-06-14	
Monobromoacetic Acid	**0.0035**	N/A	0.0020	mg/L	2024-06-14	
Dichloroacetic Acid	**0.0120**	N/A	0.0020	mg/L	2024-06-14	
Trichloroacetic Acid	**0.0068**	N/A	0.0020	mg/L	2024-06-14	
Dibromoacetic Acid	**0.0050**	N/A	0.0020	mg/L	2024-06-14	
Total Haloacetic Acids (HAA5)	**0.0272**	MAC = 0.08	0.00200	mg/L	N/A	
Surrogate: 2-Bromopropionic Acid	*100*		*70-130*	%	*2024-06-14*	
Volatile Organic Compounds (VOC)						
Bromodichloromethane	**0.0264**	N/A	0.0010	mg/L	2024-06-15	
Bromoform	**0.0044**	N/A	0.0010	mg/L	2024-06-15	
Chloroform	**0.0291**	N/A	0.0010	mg/L	2024-06-15	
Dibromochloromethane	**0.0196**	N/A	0.0010	mg/L	2024-06-15	
Surrogate: Toluene-d8	*101*		*70-130*	%	*2024-06-15*	
Surrogate: 4-Bromofluorobenzene	*79*		*70-130*	%	*2024-06-15*	

APPENDIX 1: SUPPORTING INFORMATION

REPORTED TO	100 Mile House, District of	**WORK ORDER**	24F1545
PROJECT	Drinking Water - Chemistry	**REPORTED**	2024-06-21 09:23

Analysis Description	Method Ref.	Technique	Accredited	Location
Haloacetic Acids in Water	EPA 552.3*	Liquid-Liquid Microextraction, Derivatization and GC-ECD	✓	Richmond
Trihalomethanes in Water	EPA 5030B / EPA 8260D	Purge&Trap / GC-MSD (SIM)	✓	Richmond

Note: An asterisk in the Method Reference indicates that the CARO method has been modified from the reference method

Glossary of Terms:

RL	Reporting Limit (default)
<	Less than the specified Reporting Limit (RL) - the actual RL may be higher than the default RL due to various factors
MAC	Maximum Acceptable Concentration (health based)
mg/L	Milligrams per litre
EPA	United States Environmental Protection Agency Test Methods

Guidelines Referenced in this Report:

Guidelines for Canadian Drinking Water Quality (Health Canada, September 2022)

Note: In some cases, the values displayed on the report represent the lowest guideline and are to be verified by the end user

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CARO ANALYTICAL SERVICES

CERTIFICATE OF ANALYSIS

REPORTED TO	100 Mile House, District of Box 340 -385 Horse Lake Road 100 Mile House, BC V0K 2E0		
ATTENTION	Paul Donnelly	**WORK ORDER**	24D1509
PO NUMBER	Drinking Water	**RECEIVED / TEMP**	2024-04-11 08:10 / 6.8°C
PROJECT	Drinking Water - Chemistry	**REPORTED**	2024-04-22 10:41
PROJECT INFO		**COC NUMBER**	No Number

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If you have any questions or concerns, please contact me at bwhitehead@caro.ca

Authorized By:

Brent Whitehead
Account Manager

CARO ANALYTICAL SERVICES

TEST RESULTS

REPORTED TO	100 Mile House, District of	**WORK ORDER**	24D1509
PROJECT	Drinking Water - Chemistry	**REPORTED**	2024-04-22 10:41

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
Sandhill Sample Station (24D1509-01) | Matrix: Water | Sampled: 2024-04-10 12:00						
Anions						
Chloride	**106**	AO ≤ 250	0.10	mg/L	2024-04-12	
Fluoride	**0.12**	MAC = 1.5	0.10	mg/L	2024-04-12	
Nitrate (as N)	**0.329**	MAC = 10	0.010	mg/L	2024-04-12	
Nitrite (as N)	< 0.010	MAC = 1	0.010	mg/L	2024-04-12	
Sulfate	**112**	AO ≤ 500	1.0	mg/L	2024-04-12	
Calculated Parameters						
Total Trihalomethanes	**0.0214**	MAC = 0.1	0.00400	mg/L	N/A	
Hardness, Total (as CaCO3)	**611**	None Required	0.500	mg/L	N/A	
Langelier Index	**0.9**	N/A	-5.0		2024-04-16	CT6
Nitrogen, Organic	**0.168**	N/A	0.0500	mg/L	N/A	
Solids, Total Dissolved	**874**	AO ≤ 500	10.0	mg/L	N/A	
General Parameters						
Alkalinity, Total (as CaCO3)	**566**	N/A	1.0	mg/L	2024-04-12	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	N/A	1.0	mg/L	2024-04-12	
Alkalinity, Bicarbonate (as CaCO3)	**566**	N/A	1.0	mg/L	2024-04-12	
Alkalinity, Carbonate (as CaCO3)	< 1.0	N/A	1.0	mg/L	2024-04-12	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	N/A	1.0	mg/L	2024-04-12	
Ammonia, Total (as N)	< 0.050	None Required	0.050	mg/L	2024-04-16	
Carbon, Total Organic	**4.93**	N/A	0.50	mg/L	2024-04-15	
Colour, True	< 5.0	AO ≤ 15	5.0	CU	2024-04-13	
Conductivity (EC)	**1420**	N/A	2.0	µS/cm	2024-04-12	
Cyanide, Total	< 0.0020	MAC = 0.2	0.0020	mg/L	2024-04-12	
Nitrogen, Total Kjeldahl	**0.168**	N/A	0.050	mg/L	2024-04-17	
pH	**7.92**	7.0-10.5	0.10	pH units	2024-04-12	HT2
Phosphorus, Total (as P)	**0.0391**	N/A	0.0050	mg/L	2024-04-15	
Temperature, at pH	**21.6**	N/A		°C	2024-04-12	HT2
Turbidity	**0.28**	OG < 1	0.10	NTU	2024-04-12	
UV Transmittance @ 254 nm - Unfiltered	**91.2**	N/A	0.10	% T	2024-04-12	
Haloacetic Acids						
Monochloroacetic Acid	< 0.0020	N/A	0.0020	mg/L	2024-04-20	
Monobromoacetic Acid	**0.0024**	N/A	0.0020	mg/L	2024-04-20	
Dichloroacetic Acid	**0.0065**	N/A	0.0020	mg/L	2024-04-20	
Trichloroacetic Acid	**0.0022**	N/A	0.0020	mg/L	2024-04-20	
Dibromoacetic Acid	**0.0030**	N/A	0.0020	mg/L	2024-04-20	
Total Haloacetic Acids (HAA5)	**0.0142**	MAC = 0.08	0.00200	mg/L	N/A	
Surrogate: 2-Bromopropionic Acid	*106*		*70-130*	%	*2024-04-20*	
Total Metals						
Aluminum, total	< 0.0050	OG < 0.1	0.0050	mg/L	2024-04-15	
Antimony, total	< 0.00020	MAC = 0.006	0.00020	mg/L	2024-04-15	
Arsenic, total	**0.00144**	MAC = 0.01	0.00050	mg/L	2024-04-15	

CARO ANALYTICAL SERVICES

TEST RESULTS

REPORTED TO	100 Mile House, District of	**WORK ORDER**	24D1509
PROJECT	Drinking Water - Chemistry	**REPORTED**	2024-04-22 10:41

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
Sandhill Sample Station (24D1509-01) | Matrix: Water | Sampled: 2024-04-10 12:00, Continued						
Total Metals, Continued						
Barium, total	**0.0124**	MAC = 2	0.0050	mg/L	2024-04-15	
Boron, total	< 0.0500	MAC = 5	0.0500	mg/L	2024-04-15	
Cadmium, total	< 0.000010	MAC = 0.007	0.000010	mg/L	2024-04-15	
Calcium, total	**67.9**	None Required	0.20	mg/L	2024-04-15	
Chromium, total	< 0.00050	MAC = 0.05	0.00050	mg/L	2024-04-15	
Cobalt, total	< 0.00010	N/A	0.00010	mg/L	2024-04-15	
Copper, total	**0.0158**	MAC = 2	0.00040	mg/L	2024-04-15	
Iron, total	< 0.010	AO ≤ 0.3	0.010	mg/L	2024-04-15	
Lead, total	< 0.00020	MAC = 0.005	0.00020	mg/L	2024-04-15	
Magnesium, total	**107**	None Required	0.010	mg/L	2024-04-15	
Manganese, total	**0.00058**	MAC = 0.12	0.00020	mg/L	2024-04-15	
Mercury, total	< 0.000010	MAC = 0.001	0.000010	mg/L	2024-04-16	
Molybdenum, total	**0.00784**	N/A	0.00010	mg/L	2024-04-15	
Nickel, total	**0.00096**	N/A	0.00040	mg/L	2024-04-15	
Potassium, total	**7.79**	N/A	0.10	mg/L	2024-04-15	
Selenium, total	**0.00680**	MAC = 0.05	0.00050	mg/L	2024-04-15	
Sodium, total	**126**	AO ≤ 200	0.10	mg/L	2024-04-15	
Strontium, total	**0.200**	MAC = 7	0.0010	mg/L	2024-04-15	
Uranium, total	**0.00736**	MAC = 0.02	0.000020	mg/L	2024-04-15	
Zinc, total	**0.0100**	AO ≤ 5	0.0040	mg/L	2024-04-15	
Volatile Organic Compounds (VOC)						
Bromodichloromethane	**0.0068**	N/A	0.0010	mg/L	2024-04-17	
Bromoform	**0.0015**	N/A	0.0010	mg/L	2024-04-17	
Chloroform	**0.0058**	N/A	0.0010	mg/L	2024-04-17	
Dibromochloromethane	**0.0073**	N/A	0.0010	mg/L	2024-04-17	
Surrogate: Toluene-d8	*96*		*70-130*	%	*2024-04-17*	
Surrogate: 4-Bromofluorobenzene	*82*		*70-130*	%	*2024-04-17*	
Seventh Sample Station (24D1509-02) | Matrix: Water | Sampled: 2024-04-10 11:35						
Anions						
Chloride	**105**	AO ≤ 250	0.10	mg/L	2024-04-12	
Fluoride	**0.11**	MAC = 1.5	0.10	mg/L	2024-04-12	
Nitrate (as N)	**0.324**	MAC = 10	0.010	mg/L	2024-04-12	
Nitrite (as N)	< 0.010	MAC = 1	0.010	mg/L	2024-04-12	
Sulfate	**110**	AO ≤ 500	1.0	mg/L	2024-04-12	
Calculated Parameters						
Total Trihalomethanes	**0.0606**	MAC = 0.1	0.00400	mg/L	N/A	
Hardness, Total (as CaCO3)	**607**	None Required	0.500	mg/L	N/A	
Langelier Index	**0.9**	N/A	-5.0		2024-04-16	CT6
Nitrogen, Organic	**0.209**	N/A	0.0500	mg/L	N/A	

CARO ANALYTICAL SERVICES

TEST RESULTS

REPORTED TO 100 Mile House, District of
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Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
Seventh Sample Station (24D1509-02) | Matrix: Water | Sampled: 2024-04-10 11:35, Continued						
Calculated Parameters, Continued						
Solids, Total Dissolved	**868**	AO ≤ 500	10.0	mg/L	N/A	
General Parameters						
Alkalinity, Total (as CaCO3)	**567**	N/A	1.0	mg/L	2024-04-12	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	N/A	1.0	mg/L	2024-04-12	
Alkalinity, Bicarbonate (as CaCO3)	**567**	N/A	1.0	mg/L	2024-04-12	
Alkalinity, Carbonate (as CaCO3)	< 1.0	N/A	1.0	mg/L	2024-04-12	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	N/A	1.0	mg/L	2024-04-12	
Ammonia, Total (as N)	< 0.050	None Required	0.050	mg/L	2024-04-16	
Carbon, Total Organic	**6.38**	N/A	0.50	mg/L	2024-04-15	
Colour, True	< 5.0	AO ≤ 15	5.0	CU	2024-04-13	
Conductivity (EC)	**1420**	N/A	2.0	µS/cm	2024-04-12	
Cyanide, Total	< 0.0020	MAC = 0.2	0.0020	mg/L	2024-04-12	
Nitrogen, Total Kjeldahl	**0.209**	N/A	0.050	mg/L	2024-04-17	
pH	**7.93**	7.0-10.5	0.10	pH units	2024-04-12	HT2
Phosphorus, Total (as P)	**0.0370**	N/A	0.0050	mg/L	2024-04-15	
Temperature, at pH	**21.7**	N/A		°C	2024-04-12	HT2
Turbidity	**0.27**	OG < 1	0.10	NTU	2024-04-12	
UV Transmittance @ 254 nm - Unfiltered	**92.1**	N/A	0.10	% T	2024-04-12	
Haloacetic Acids						
Monochloroacetic Acid	< 0.0020	N/A	0.0020	mg/L	2024-04-20	
Monobromoacetic Acid	< 0.0020	N/A	0.0020	mg/L	2024-04-20	
Dichloroacetic Acid	**0.0116**	N/A	0.0020	mg/L	2024-04-20	
Trichloroacetic Acid	**0.0053**	N/A	0.0020	mg/L	2024-04-20	
Dibromoacetic Acid	**0.0045**	N/A	0.0020	mg/L	2024-04-20	
Total Haloacetic Acids (HAA5)	**0.0214**	MAC = 0.08	0.00200	mg/L	N/A	
Surrogate: 2-Bromopropionic Acid	*96*		*70-130*	%	*2024-04-20*	
Total Metals						
Aluminum, total	< 0.0050	OG < 0.1	0.0050	mg/L	2024-04-15	
Antimony, total	< 0.00020	MAC = 0.006	0.00020	mg/L	2024-04-15	
Arsenic, total	**0.00136**	MAC = 0.01	0.00050	mg/L	2024-04-15	
Barium, total	**0.0118**	MAC = 2	0.0050	mg/L	2024-04-15	
Boron, total	< 0.0500	MAC = 5	0.0500	mg/L	2024-04-15	
Cadmium, total	< 0.000010	MAC = 0.007	0.000010	mg/L	2024-04-15	
Calcium, total	**67.8**	None Required	0.20	mg/L	2024-04-15	
Chromium, total	< 0.00050	MAC = 0.05	0.00050	mg/L	2024-04-15	
Cobalt, total	< 0.00010	N/A	0.00010	mg/L	2024-04-15	
Copper, total	**0.0170**	MAC = 2	0.00040	mg/L	2024-04-15	
Iron, total	< 0.010	AO ≤ 0.3	0.010	mg/L	2024-04-15	
Lead, total	< 0.00020	MAC = 0.005	0.00020	mg/L	2024-04-15	
Magnesium, total	**106**	None Required	0.010	mg/L	2024-04-15	
Manganese, total	**0.00040**	MAC = 0.12	0.00020	mg/L	2024-04-15	

CARO ANALYTICAL SERVICES

TEST RESULTS

REPORTED TO 100 Mile House, District of
PROJECT Drinking Water - Chemistry

WORK ORDER 24D1509
REPORTED 2024-04-22 10:41

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
Seventh Sample Station (24D1509-02) | Matrix: Water | Sampled: 2024-04-10 11:35, Continued						
Total Metals, Continued						
Mercury, total	< 0.000010	MAC = 0.001	0.000010	mg/L	2024-04-18	
Molybdenum, total	**0.00771**	N/A	0.00010	mg/L	2024-04-15	
Nickel, total	**0.00105**	N/A	0.00040	mg/L	2024-04-15	
Potassium, total	**7.76**	N/A	0.10	mg/L	2024-04-15	
Selenium, total	**0.00700**	MAC = 0.05	0.00050	mg/L	2024-04-15	
Sodium, total	**124**	AO ≤ 200	0.10	mg/L	2024-04-15	
Strontium, total	**0.200**	MAC = 7	0.0010	mg/L	2024-04-15	
Uranium, total	**0.00736**	MAC = 0.02	0.000020	mg/L	2024-04-15	
Zinc, total	**0.0156**	AO ≤ 5	0.0040	mg/L	2024-04-15	
Volatile Organic Compounds (VOC)						
Bromodichloromethane	**0.0209**	N/A	0.0010	mg/L	2024-04-17	
Bromoform	**0.0028**	N/A	0.0010	mg/L	2024-04-17	
Chloroform	**0.0211**	N/A	0.0010	mg/L	2024-04-17	
Dibromochloromethane	**0.0158**	N/A	0.0010	mg/L	2024-04-17	
Surrogate: Toluene-d8	*96*		*70-130*	%	*2024-04-17*	
Surrogate: 4-Bromofluorobenzene	*86*		*70-130*	%	*2024-04-17*	
Moore Sample Station (24D1509-03) | Matrix: Water | Sampled: 2024-04-10 12:30						
Anions						
Chloride	**107**	AO ≤ 250	0.10	mg/L	2024-04-12	
Fluoride	**0.10**	MAC = 1.5	0.10	mg/L	2024-04-12	
Nitrate (as N)	**0.321**	MAC = 10	0.010	mg/L	2024-04-12	
Nitrite (as N)	< 0.010	MAC = 1	0.010	mg/L	2024-04-12	
Sulfate	**112**	AO ≤ 500	1.0	mg/L	2024-04-12	
Calculated Parameters						
Total Trihalomethanes	**0.0533**	MAC = 0.1	0.00400	mg/L	N/A	
Hardness, Total (as CaCO3)	**617**	None Required	0.500	mg/L	N/A	
Langelier Index	**0.8**	N/A	-5.0		2024-04-16	CT6
Nitrogen, Organic	**0.186**	N/A	0.0500	mg/L	N/A	
Solids, Total Dissolved	**882**	AO ≤ 500	10.0	mg/L	N/A	
General Parameters						
Alkalinity, Total (as CaCO3)	**573**	N/A	1.0	mg/L	2024-04-12	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	N/A	1.0	mg/L	2024-04-12	
Alkalinity, Bicarbonate (as CaCO3)	**573**	N/A	1.0	mg/L	2024-04-12	
Alkalinity, Carbonate (as CaCO3)	< 1.0	N/A	1.0	mg/L	2024-04-12	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	N/A	1.0	mg/L	2024-04-12	
Ammonia, Total (as N)	< 0.050	None Required	0.050	mg/L	2024-04-16	
Carbon, Total Organic	**5.29**	N/A	0.50	mg/L	2024-04-15	
Colour, True	< 5.0	AO ≤ 15	5.0	CU	2024-04-13	
Conductivity (EC)	**1430**	N/A	2.0	µS/cm	2024-04-12	

CARO ANALYTICAL SERVICES

TEST RESULTS

REPORTED TO 100 Mile House, District of
PROJECT Drinking Water - Chemistry

WORK ORDER 24D1509
REPORTED 2024-04-22 10:41

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
Moore Sample Station (24D1509-03) | Matrix: Water | Sampled: 2024-04-10 12:30, Continued						
General Parameters, Continued						
Cyanide, Total	< 0.0020	MAC = 0.2	0.0020	mg/L	2024-04-12	
Nitrogen, Total Kjeldahl	**0.186**	N/A	0.050	mg/L	2024-04-17	
pH	**7.89**	7.0-10.5	0.10	pH units	2024-04-12	HT2
Phosphorus, Total (as P)	**0.0354**	N/A	0.0050	mg/L	2024-04-15	
Temperature, at pH	**21.9**	N/A		°C	2024-04-12	HT2
Turbidity	**0.36**	OG < 1	0.10	NTU	2024-04-12	
UV Transmittance @ 254 nm - Unfiltered	**91.7**	N/A	0.10	% T	2024-04-12	
Haloacetic Acids						
Monochloroacetic Acid	< 0.0020	N/A	0.0020	mg/L	2024-04-20	
Monobromoacetic Acid	**0.0021**	N/A	0.0020	mg/L	2024-04-20	
Dichloroacetic Acid	**0.0103**	N/A	0.0020	mg/L	2024-04-20	
Trichloroacetic Acid	**0.0053**	N/A	0.0020	mg/L	2024-04-20	
Dibromoacetic Acid	**0.0046**	N/A	0.0020	mg/L	2024-04-20	
Total Haloacetic Acids (HAA5)	**0.0223**	MAC = 0.08	0.00200	mg/L	N/A	
Surrogate: 2-Bromopropionic Acid	*104*		*70-130*	%	*2024-04-20*	
Total Metals						
Aluminum, total	< 0.0050	OG < 0.1	0.0050	mg/L	2024-04-15	
Antimony, total	< 0.00020	MAC = 0.006	0.00020	mg/L	2024-04-15	
Arsenic, total	**0.00131**	MAC = 0.01	0.00050	mg/L	2024-04-15	
Barium, total	**0.0120**	MAC = 2	0.0050	mg/L	2024-04-15	
Boron, total	< 0.0500	MAC = 5	0.0500	mg/L	2024-04-15	
Cadmium, total	< 0.000010	MAC = 0.007	0.000010	mg/L	2024-04-15	
Calcium, total	**67.8**	None Required	0.20	mg/L	2024-04-15	
Chromium, total	< 0.00050	MAC = 0.05	0.00050	mg/L	2024-04-15	
Cobalt, total	< 0.00010	N/A	0.00010	mg/L	2024-04-15	
Copper, total	**0.0241**	MAC = 2	0.00040	mg/L	2024-04-15	
Iron, total	**0.023**	AO ≤ 0.3	0.010	mg/L	2024-04-15	
Lead, total	< 0.00020	MAC = 0.005	0.00020	mg/L	2024-04-15	
Magnesium, total	**109**	None Required	0.010	mg/L	2024-04-15	
Manganese, total	**0.00055**	MAC = 0.12	0.00020	mg/L	2024-04-15	
Mercury, total	< 0.000010	MAC = 0.001	0.000010	mg/L	2024-04-17	
Molybdenum, total	**0.00759**	N/A	0.00010	mg/L	2024-04-15	
Nickel, total	**0.00095**	N/A	0.00040	mg/L	2024-04-15	
Potassium, total	**7.84**	N/A	0.10	mg/L	2024-04-15	
Selenium, total	**0.00679**	MAC = 0.05	0.00050	mg/L	2024-04-15	
Sodium, total	**128**	AO ≤ 200	0.10	mg/L	2024-04-15	
Strontium, total	**0.204**	MAC = 7	0.0010	mg/L	2024-04-15	
Uranium, total	**0.00741**	MAC = 0.02	0.000020	mg/L	2024-04-15	
Zinc, total	**0.0089**	AO ≤ 5	0.0040	mg/L	2024-04-15	
Volatile Organic Compounds (VOC)						
Bromodichloromethane	**0.0184**	N/A	0.0010	mg/L	2024-04-17	

CARO ANALYTICAL SERVICES

TEST RESULTS

REPORTED TO	100 Mile House, District of	**WORK ORDER**	24D1509
PROJECT	Drinking Water - Chemistry	**REPORTED**	2024-04-22 10:41

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
Moore Sample Station (24D1509-03) | Matrix: Water | Sampled: 2024-04-10 12:30, Continued						
Volatile Organic Compounds (VOC), Continued						
Bromoform	**0.0026**	N/A	0.0010	mg/L	2024-04-17	
Chloroform	**0.0179**	N/A	0.0010	mg/L	2024-04-17	
Dibromochloromethane	**0.0145**	N/A	0.0010	mg/L	2024-04-17	
Surrogate: Toluene-d8	*108*		*70-130*	%	*2024-04-17*	
Surrogate: 4-Bromofluorobenzene	*93*		*70-130*	%	*2024-04-17*	

Sample Qualifiers:

CT6 Results were based on lab temperature & lab pH.

HT2 The 15 minute recommended holding time (from sampling to analysis) has been exceeded - field analysis is recommended.

CARO ANALYTICAL SERVICES

APPENDIX 1: SUPPORTING INFORMATION

REPORTED TO	100 Mile House, District of	**WORK ORDER**	24D1509
PROJECT	Drinking Water - Chemistry	**REPORTED**	2024-04-22 10:41

Analysis Description	Method Ref.	Technique	Accredited	Location
Alkalinity in Water	SM 2320 B* (2021)	Titration with H2SO4	✓	Kelowna
Ammonia, Total in Water	SM 4500-NH3 G* (2021)	Automated Colorimetry (Phenate)	✓	Kelowna
Anions in Water	SM 4110 B (2020)	Ion Chromatography	✓	Kelowna
Carbon, Total Organic in Water	SM 5310 B (2022)	Combustion, Infrared CO2 Detection	✓	Kelowna
Colour, True in Water	SM 2120 C (2021)	Spectrophotometry (456 nm)	✓	Kelowna
Conductivity in Water	SM 2510 B (2021)	Conductivity Meter	✓	Kelowna
Cyanide, SAD in Water	ASTM D7511-12	Flow Injection with In-Line UV Digestion and Amperometry	✓	Kelowna
Haloacetic Acids in Water	EPA 552.3*	Liquid-Liquid Microextraction, Derivatization and GC-ECD	✓	Richmond
Hardness in Water	SM 2340 B* (2021)	Calculation: 2.497 [total Ca] + 4.118 [total Mg] (Est)	✓	N/A
Langelier Index in Water	SM 2330 B (2021)	Calculation		N/A
Mercury, total in Water	EPA 245.7*	BrCl2 Oxidation / Cold Vapor Atomic Fluorescence Spectrometry (CVAFS)	✓	Richmond
Nitrogen, Total Kjeldahl in Water	SM 4500-Norg D* (2021)	Block Digestion and Flow Injection Analysis	✓	Kelowna
pH in Water	SM 4500-H+ B (2021)	Electrometry	✓	Kelowna
Phosphorus, Total in Water	SM 4500-P B.5* (2011) / SM 4500-P F (2021)	Persulfate Digestion / Automated Colorimetry (Ascorbic Acid)	✓	Kelowna
Solids, Total Dissolved in Water	SM 1030 E (2021)	SM 1030 E		N/A
Total Metals in Water	EPA 200.2 / EPA 6020B	HNO3+HCl Hot Block Digestion / Inductively Coupled Plasma-Mass Spectroscopy (ICP-MS)	✓	Richmond
Transmittance at 254 nm - Unfiltered in Water	SM 5910 B* (2021)	Ultraviolet Absorption	✓	Kelowna
Trihalomethanes in Water	EPA 5030B / EPA 8260D	Purge&Trap / GC-MSD (SIM)	✓	Richmond
Turbidity in Water	SM 2130 B (2020)	Nephelometry	✓	Kelowna

Note: An asterisk in the Method Reference indicates that the CARO method has been modified from the reference method

Glossary of Terms:

RL	Reporting Limit (default)
% T	Percent Transmittance
<	Less than the specified Reporting Limit (RL) - the actual RL may be higher than the default RL due to various factors
°C	Degrees Celcius
AO	Aesthetic Objective
CU	Colour Units (referenced against a platinum cobalt standard)
MAC	Maximum Acceptable Concentration (health based)
mg/L	Milligrams per litre
NTU	Nephelometric Turbidity Units
OG	Operational Guideline (treated water)
pH units	pH < 7 = acidic, ph > 7 = basic
µS/cm	Microsiemens per centimetre
ASTM	ASTM International Test Methods
EPA	United States Environmental Protection Agency Test Methods
SM	Standard Methods for the Examination of Water and Wastewater, American Public Health Association

CARO ANALYTICAL SERVICES

APPENDIX 1: SUPPORTING INFORMATION

REPORTED TO	100 Mile House, District of	**WORK ORDER**	24D1509
PROJECT	Drinking Water - Chemistry	**REPORTED**	2024-04-22 10:41

General Comments:

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Results in **Bold** indicate values that are above CARO's method reporting limits. Any results that are above regulatory limits are highlighted **red**. Please note that results will only be highlighted red if the regulatory limits are included on the CARO report. Any Bold and/or highlighted results do not take into account method uncertainty. If you would like method uncertainty or regulatory limits to be included on your report, please contact your Account Manager:bwhitehead@caro.ca

Please note any regulatory guidelines applied to this report are added as a convenience to the client, at their request, to help provide some initial context to analytical results obtained. Although CARO makes every effort to ensure accuracy of the associated regulatory guideline(s) applied, the guidelines applied cannot be assumed to be correct due to a variety of factors and as such CARO Analytical Services assumes no liability or responsibility for the use of those guidelines to make any decisions. The original source of the regulation should be verified and a review of the guideline(s) should be validated as correct in order to make any decisions arising from the comparison of the analytical data obtained to the relevant regulatory guideline for one's particular circumstances. Further, CARO Analytical Services assumes no liability or responsibility for any loss attributed from the use of these guidelines in any way.