

CERTIFICATE OF ANALYSIS

REPORTED TO North Canyon Improvement District
Box 60
Canyon, BC V0B 1C0

ATTENTION Bob Adams

PO NUMBER

PROJECT N.C.I.D. Drinking Water

PROJECT INFO 05347

WORK ORDER 2513814

RECEIVED / TEMP 2025-09-26 12:50 / 4.1°C

REPORTED 2025-10-07 14:06

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.

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.

By engaging our services, you are agreeing to CARO Analytical Service's Standard Terms and Conditions outlined here:
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If you have any questions or concerns, please contact me at hhannaoui@caro.ca

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TEST RESULTS

REPORTED TO PROJECT North Canyon Improvement District
N.C.I.D. Drinking Water

WORK ORDER REPORTED 2513814
2025-10-07 14:06

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
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Goat River Well (2513814-01) | Matrix: Drinking Water | Sampled: 2025-09-25 09:15

Anions

Chloride	2.48	AO ≤ 250	0.10	mg/L	2025-09-27	
Fluoride	< 0.10	MAC = 1.5	0.10	mg/L	2025-09-27	
Nitrate (as N)	0.204	MAC = 10	0.010	mg/L	2025-09-27	
Nitrite (as N)	< 0.010	MAC = 1	0.010	mg/L	2025-09-27	
Sulfate	8.3	AO ≤ 500	1.0	mg/L	2025-09-27	

Calculated Parameters

Hardness, Total (as CaCO ₃)	56.0	None Required	0.500	mg/L	N/A	
Langelier Index	-1.8	N/A	-5.0		2025-10-07	CT6
Nitrate+Nitrite (as N)	0.204	N/A	0.0100	mg/L	N/A	
Nitrogen, Total	0.268	N/A	0.0500	mg/L	N/A	
Solids, Total Dissolved	72.2	AO ≤ 500	1.00	mg/L	N/A	

General Parameters

Alkalinity, Total (as CaCO ₃)	58.2	N/A	1.0	mg/L	2025-09-30	
Alkalinity, Phenolphthalein (as CaCO ₃)	< 1.0	N/A	1.0	mg/L	2025-09-30	
Alkalinity, Bicarbonate (as CaCO ₃)	58.2	N/A	1.0	mg/L	2025-09-30	
Alkalinity, Carbonate (as CaCO ₃)	< 1.0	N/A	1.0	mg/L	2025-09-30	
Alkalinity, Hydroxide (as CaCO ₃)	< 1.0	N/A	1.0	mg/L	2025-09-30	
Ammonia, Total (as N)	< 0.050	None Required	0.050	mg/L	2025-10-03	
Carbon, Total Organic	0.60	N/A	0.50	mg/L	2025-09-29	
Colour, True	< 5.0	AO ≤ 15	5.0	CU	2025-09-27	
Conductivity (EC)	136	N/A	2.0	µS/cm	2025-09-30	
Cyanide, Total	< 0.0020	MAC = 0.2	0.0020	mg/L	2025-09-29	
Nitrogen, Total Kjeldahl	0.064	N/A	0.050	mg/L	2025-10-03	
pH	6.84	7.0-10.5	0.10	pH units	2025-09-30	HT2
Temperature, at pH	22.0	N/A		°C	2025-09-30	HT2
Turbidity	< 0.10	OG < 1	0.10	NTU	2025-09-27	
UV Transmittance @ 254 nm - Unfiltered	98.8	N/A	0.10	% T	2025-09-27	

Microbiological Parameters

Coliforms, Total	< 1	MAC = 0	1	CFU/100 mL	2025-09-26	HT3
Background Colonies	1	N/A	1	CFU/100 mL	2025-09-26	HT1
E. coli	< 1	MAC = 0	1	CFU/100 mL	2025-09-26	HT3

Total Metals

Aluminum, total	< 0.0050	OG < 0.1	0.0050	mg/L	2025-10-03	
Antimony, total	< 0.00020	MAC = 0.006	0.00020	mg/L	2025-10-03	
Arsenic, total	< 0.00050	MAC = 0.01	0.00050	mg/L	2025-10-03	
Barium, total	0.0115	MAC = 2	0.0050	mg/L	2025-10-03	
Boron, total	< 0.0500	MAC = 5	0.0500	mg/L	2025-10-03	
Cadmium, total	< 0.000010	MAC = 0.007	0.000010	mg/L	2025-10-03	
Calcium, total	14.2	None Required	0.20	mg/L	2025-10-03	
Chromium, total	< 0.00050	MAC = 0.05	0.00050	mg/L	2025-10-03	

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Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
Goat River Well (2513814-01) Matrix: Drinking Water Sampled: 2025-09-25 09:15, Continued						
<i>Total Metals, Continued</i>						
Cobalt, total	< 0.00010	N/A	0.00010	mg/L	2025-10-03	
Copper, total	0.00090	MAC = 2	0.00040	mg/L	2025-10-03	
Iron, total	0.011	AO ≤ 0.1	0.010	mg/L	2025-10-03	
Lead, total	< 0.00020	MAC = 0.005	0.00020	mg/L	2025-10-03	
Magnesium, total	5.00	None Required	0.010	mg/L	2025-10-03	
Manganese, total	0.00025	MAC = 0.12	0.00020	mg/L	2025-10-03	
Mercury, total	< 0.000010	MAC = 0.001	0.000010	mg/L	2025-09-29	
Molybdenum, total	0.00037	N/A	0.00010	mg/L	2025-10-03	
Nickel, total	< 0.00040	N/A	0.00040	mg/L	2025-10-03	
Potassium, total	0.77	N/A	0.10	mg/L	2025-10-03	
Selenium, total	0.00052	MAC = 0.05	0.00050	mg/L	2025-10-03	
Sodium, total	5.06	AO ≤ 200	0.10	mg/L	2025-10-03	
Strontium, total	0.0465	MAC = 7	0.0010	mg/L	2025-10-03	
Uranium, total	0.00107	MAC = 0.02	0.000020	mg/L	2025-10-03	
Zinc, total	0.0081	AO ≤ 5	0.0040	mg/L	2025-10-03	

Reservoir (2513814-02) | Matrix: Drinking Water | Sampled: 2025-09-25 09:45

Anions

Chloride	0.73	AO ≤ 250	0.10	mg/L	2025-09-27	
Fluoride	< 0.10	MAC = 1.5	0.10	mg/L	2025-09-27	
Nitrate (as N)	0.146	MAC = 10	0.010	mg/L	2025-09-27	
Nitrite (as N)	< 0.010	MAC = 1	0.010	mg/L	2025-09-27	
Sulfate	9.3	AO ≤ 500	1.0	mg/L	2025-09-27	

Calculated Parameters

Hardness, Total (as CaCO ₃)	85.6	None Required	0.500	mg/L	N/A	
Langelier Index	-0.8	N/A	-5.0		2025-10-07	CT6
Nitrate+Nitrite (as N)	0.146	N/A	0.0100	mg/L	N/A	
Nitrogen, Total	0.198	N/A	0.0500	mg/L	N/A	
Solids, Total Dissolved	99.6	AO ≤ 500	1.00	mg/L	N/A	

General Parameters

Alkalinity, Total (as CaCO ₃)	85.9	N/A	1.0	mg/L	2025-09-30	
Alkalinity, Phenolphthalein (as CaCO ₃)	< 1.0	N/A	1.0	mg/L	2025-09-30	
Alkalinity, Bicarbonate (as CaCO ₃)	85.9	N/A	1.0	mg/L	2025-09-30	
Alkalinity, Carbonate (as CaCO ₃)	< 1.0	N/A	1.0	mg/L	2025-09-30	
Alkalinity, Hydroxide (as CaCO ₃)	< 1.0	N/A	1.0	mg/L	2025-09-30	
Ammonia, Total (as N)	< 0.050	None Required	0.050	mg/L	2025-10-03	
Carbon, Total Organic	< 0.50	N/A	0.50	mg/L	2025-09-29	
Colour, True	< 5.0	AO ≤ 15	5.0	CU	2025-09-27	
Conductivity (EC)	181	N/A	2.0	µS/cm	2025-09-30	
Cyanide, Total	< 0.0020	MAC = 0.2	0.0020	mg/L	2025-09-29	

TEST RESULTS

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WORK ORDER REPORTED 2513814
2025-10-07 14:06

Analyte	Result	Guideline	RL Units	Analyzed	Qualifier
Reservoir (2513814-02) Matrix: Drinking Water Sampled: 2025-09-25 09:45, Continued					
General Parameters, Continued					
Nitrogen, Total Kjeldahl	0.052	N/A	0.050 mg/L	2025-10-03	
pH	7.32	7.0-10.5	0.10 pH units	2025-09-30	HT2
Temperature, at pH	22.1	N/A	°C	2025-09-30	HT2
Turbidity	0.16	OG < 1	0.10 NTU	2025-09-27	
UV Transmittance @ 254 nm - Unfiltered	99.7	N/A	0.10 % T	2025-09-27	
Microbiological Parameters					
Coliforms, Total	< 1	MAC = 0	1 CFU/100 mL	2025-09-26	HT3
Background Colonies	4	N/A	1 CFU/100 mL	2025-09-26	HT1
E. coli	< 1	MAC = 0	1 CFU/100 mL	2025-09-26	HT3
Total Metals					
Aluminum, total	0.0069	OG < 0.1	0.0050 mg/L	2025-10-03	
Antimony, total	< 0.00020	MAC = 0.006	0.00020 mg/L	2025-10-03	
Arsenic, total	0.00365	MAC = 0.01	0.00050 mg/L	2025-10-03	
Barium, total	< 0.0050	MAC = 2	0.0050 mg/L	2025-10-03	
Boron, total	< 0.0500	MAC = 5	0.0500 mg/L	2025-10-03	
Cadmium, total	< 0.000010	MAC = 0.007	0.000010 mg/L	2025-10-03	
Calcium, total	28.8	None Required	0.20 mg/L	2025-10-03	
Chromium, total	0.00060	MAC = 0.05	0.00050 mg/L	2025-10-03	
Cobalt, total	< 0.00010	N/A	0.00010 mg/L	2025-10-03	
Copper, total	< 0.00040	MAC = 2	0.00040 mg/L	2025-10-03	
Iron, total	< 0.010	AO ≤ 0.1	0.010 mg/L	2025-10-03	
Lead, total	< 0.00020	MAC = 0.005	0.00020 mg/L	2025-10-03	
Magnesium, total	3.32	None Required	0.010 mg/L	2025-10-03	
Manganese, total	< 0.00020	MAC = 0.12	0.00020 mg/L	2025-10-03	
Mercury, total	< 0.000010	MAC = 0.001	0.000010 mg/L	2025-09-29	
Molybdenum, total	0.00087	N/A	0.00010 mg/L	2025-10-03	
Nickel, total	< 0.00040	N/A	0.00040 mg/L	2025-10-03	
Potassium, total	1.26	N/A	0.10 mg/L	2025-10-03	
Selenium, total	< 0.00050	MAC = 0.05	0.00050 mg/L	2025-10-03	
Sodium, total	3.14	AO ≤ 200	0.10 mg/L	2025-10-03	
Strontium, total	0.0543	MAC = 7	0.0010 mg/L	2025-10-03	
Uranium, total	0.00139	MAC = 0.02	0.000020 mg/L	2025-10-03	
Zinc, total	< 0.0040	AO ≤ 5	0.0040 mg/L	2025-10-03	

Sample Qualifiers:

CT6	Results were based on lab temperature & lab pH.
HT1	The sample was prepared and/or analyzed past the recommended holding time.
HT2	The 15 minute recommended holding time (from sampling to analysis) has been exceeded - field analysis is recommended.
HT3	Microbiological analysis was initiated beyond the maximum holding time of 30 hours. Results may not be valid.

APPENDIX 1: SUPPORTING INFORMATION

REPORTED TO PROJECT North Canyon Improvement District
N.C.I.D. Drinking Water

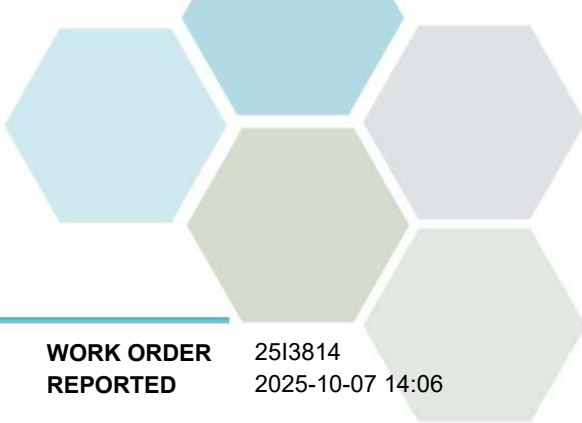
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Analysis Description	Method Ref.	Technique	Accredited	Location
Alkalinity in Water	SM 2320 B* (2021)	Titration with H2SO4	✓	Kelowna
Ammonia, Total in Water	SM 4500-NH3 G* (2021)	Automated Colorimetry (Phenate)	✓	Kelowna
Anions in Water	SM 4110 B (2020)	Ion Chromatography	✓	Kelowna
Carbon, Total Organic in Water	SM 5310 B (2022)	Combustion, Infrared CO2 Detection	✓	Kelowna
Coliforms, Total in Water	SM 9222* (2015)	Membrane Filtration / Chromocult Agar	✓	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
E. coli in Water	SM 9222* (2015)	Membrane Filtration / Chromocult Agar	✓	Kelowna
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
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
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
CFU/100 mL	Colony Forming Units per 100 millilitres
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



APPENDIX 1: SUPPORTING INFORMATION

REPORTED TO	North Canyon Improvement District	WORK ORDER	2513814
PROJECT	N.C.I.D. Drinking Water	REPORTED	2025-10-07 14:06

General Comments:

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