



EDI ENVIRONMENTAL DYNAMICS INC.
 2195 - 2nd Ave
 Whitehorse YT Y1A 3T8
 ATTN: Lyndsay Doetzel


Date: 16-AUG-16
PO No.:
WO No.: L1808090
Project Ref: MOUNT NANSEN 16-Y-0089
Sample ID: WQ-PW
Sampled By:
Date Collected: 03-AUG-16
Lab Sample ID: L1808090-1
Matrix: Water

Test Description	Result	Qualifier	Units of Measure	CDWQG MAC	Aesthetic Objective	Date Analyzed
Physical Tests						
Colour, True	<5.0		CU			06-AUG-16
Conductivity	354		uS/cm			10-AUG-16
Hardness (as CaCO3)	182		mg/L		500	15-AUG-16
pH	7.93		pH		6.5-8.5	10-AUG-16
Total Dissolved Solids	197		mg/L		500	15-AUG-16
Turbidity	0.12		NTU			05-AUG-16
Anions and Nutrients						
Alkalinity, Total (as CaCO3)	162		mg/L			10-AUG-16
Chloride (Cl)	<0.50		mg/L		250	04-AUG-16
Fluoride (F)	0.112		mg/L	1.5		04-AUG-16
Nitrate (as N)	0.124		mg/L	10		04-AUG-16
Nitrite (as N)	<0.0010		mg/L	1		04-AUG-16
Sulfate (SO4)	32.7		mg/L		500	04-AUG-16
Anion Sum	3.93		meq/L			15-AUG-16
Cation Sum	3.87		meq/L			15-AUG-16
Cation - Anion Balance	-0.8		%			15-AUG-16
Total Metals						
Aluminum (Al)-Total	<0.010		mg/L		0.1	12-AUG-16
Antimony (Sb)-Total	<0.00050		mg/L	0.006		12-AUG-16
Arsenic (As)-Total	0.00041		mg/L	0.01		12-AUG-16
Barium (Ba)-Total	0.084		mg/L	1		12-AUG-16
Boron (B)-Total	<0.10		mg/L	5		12-AUG-16
Cadmium (Cd)-Total	<0.00020		mg/L	0.005		12-AUG-16
Calcium (Ca)-Total	41.9		mg/L			12-AUG-16
Chromium (Cr)-Total	<0.0020		mg/L	0.05		12-AUG-16
Copper (Cu)-Total	<0.0010		mg/L		1.0	12-AUG-16
Iron (Fe)-Total	<0.030		mg/L		0.3	12-AUG-16
Lead (Pb)-Total	0.00059		mg/L	0.01		12-AUG-16
Magnesium (Mg)-Total	18.9		mg/L			12-AUG-16
Manganese (Mn)-Total	<0.0020		mg/L		0.05	12-AUG-16
Mercury (Hg)-Total	<0.00020		mg/L	0.001		05-AUG-16
Potassium (K)-Total	0.93		mg/L			12-AUG-16
Selenium (Se)-Total	<0.0010		mg/L	0.05		12-AUG-16
Sodium (Na)-Total	4.6		mg/L		200	12-AUG-16
Uranium (U)-Total	0.00180		mg/L	0.02		12-AUG-16
Zinc (Zn)-Total	<0.050		mg/L		5.0	12-AUG-16



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Test Description	Result	Qualifier	Units of Measure	CDWQG MAC	Aesthetic Objective	Date Analyzed
CDWQG = Health Canada Guideline Limits updated	DECEMBER 2015					
<p>* CDWQG for Nitrate+Nitrite-N is the limit for nitrate only. If present as Nitrate then the limit is 10mg/L < or N.D. = less than detection limit. * Turbidity guideline based on membrane filtration. For guidelines on conventional treatment and slow sand or diatomaceous earth filtration please see Summary Table of Guidelines for Canadian Drinking Water Quality - A blank entry designates no known limit. - A shaded value in the Results column exceeds CDWQG MAC and/ or Aesthetic Objective.</p>						
<p>Approved by  _____ Can Dang Account Manager</p>						

Guidelines & Objectives

Health Canada MAC Health Related Criteria Limits

Nitrate/Nitrite-N*	Criteria limit is 10 mg/L (1.0 mg/L if present as all Nitrite-N). High concentrations may contribute to blue baby syndrome in infants.
Lead*	A cumulative body poison, uncommon in naturally occurring hard waters.
Fluoride*	Present in fluoridated water supplies at 0.8 mg/L to reduce dental caries. Elevated levels causes fluorosis (mottling of teeth).
Total Coliforms*	Criteria is 0 CFU/100mL. Adverse health effects.
E. Coli*	Criteria is 0 CFU/100 mL. Certain E. Coli bacteria can be life threatening.

*Health Canada Canadian Drinking Water Quality Guidelines (MAC limit)

Aesthetic Objective Concentration Levels

Alkalinity	Acid neutralizing capacity. Usually a measure of carbonate and bicarbonates and calculated and reported as calcium carbonate.
Balance	Quality control parameter ratioing cations to anions
Bicarbonate	See Alkalinity. Report as the anion HCO ₃ -1
Carbonate	See Alkalinity. Reported at the anion CO ₃ -2
Calcium	See Hardness. Common major cation of water chemistry.
Chloride	Common major anion of water chemistry.
Conductance	Physical test measuring water salinity (dissolved ions or solids)
Hardness	Classical measure or capacity of water to precipitate soap (chiefly calcium and magnesium ions). Causes scaling tendency in water if carbonates/bicarbonates are present (if >200 mg/L). For drinking water purposes waters with results <200 mg/L are considered acceptable, results >200 mg/L are considered poor but can be tolerated. Results >500 mg/L are unacceptable.
Hydroxide	See alkalinity
Magnesium	See hardness. Common major cation of water chemistry. Elevated levels (>125 mg/L) may exert a cathartic or diuretic action.
pH	Measure of water acidity/alkalinity. Normal range is 7.0-8.5.
Potassium	Common major cation of water chemistry.
Sodium	Common major cation of water chemistry. Measure of salinity (saltiness).
Sulphate	Common major anion of water chemistry. Elevated levels may exert a cathartic or diuretic action.
Total Dissolved Solids	A measure of water salinity.
Iron	Causes staining to laundry and porcelain and astringent taste. Oxidizes to red-brown precipitate on exposure to air.
Manganese	Elevated levels may cause staining of laundry and porcelain.
Heterotrophic Plate Count	Criteria is 500 cfu/mL Measure of heterotrophic bacteria present.

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

mg/kg - milligrams per kilogram based on dry weight of sample

mg/kg wwt - milligrams per kilogram based on wet weight of sample

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.



Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

www.alsglobal.com



L1808090-COFC

COC Number: 14 -

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Report To		Report Format / Distribution			Select Service Level Below (Rush Turnaround Time (TAT) is not available for all tests)												
Company: EDI		Select Report Format: <input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> EXCEL <input type="checkbox"/> EDD (DIGITAL)			R <input checked="" type="checkbox"/> Regular (Standard TAT if received by 3 pm - business days)												
Contact: Lyndsay Doetzel		Quality Control (QC) Report with Report <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			P <input type="checkbox"/> Priority (2-4 bus. days if received by 3pm) 50% surcharge - contact ALS to confirm TAT												
Address: 2195 - 2nd Avenue Whithorse, YT Y1A 3T8		<input type="checkbox"/> Criteria on Report - provide details below if box checked			E <input type="checkbox"/> Emergency (1-2 bus. days if received by 3pm) 100% surcharge - contact ALS to confirm TAT												
Phone: 867-393-4882		Select Distribution: <input type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX			E2 <input type="checkbox"/> Same day or weekend emergency - contact ALS to confirm TAT and surcharge												
		Email 1 or Fax: ldoetzel@edynamics.com			Specify Date Required for E2,E or P:												
		Email 2: Emilio.Hamm@gov.yk.ca															
		Email 3: erik.pit@gov.yk.ca															
					Analysis Request												
Invoice To Same as Report To <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Invoice Distribution			Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below												
Copy of Invoice with Report <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Select Invoice Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX															
Company: EDI		Email 1 or Fax: sjenner@edynamics.com															
Contact: S Jenner		Email 2: ldoetzel@edynamics.com															
Project Information		Oil and Gas Required Fields (client use)			FULL-TOT-DW-WR												
ALS Quote #: Q55556		Approver ID:		Cost Center:													
Job #: MOUNT NANSEN 16-Y-0089		GL Account:		Routing Code:													
PO / AFE:		Activity Code:															
LSD:		Location:															
ALS Lab Work Order # (lab use only)		ALS Contact: Sean Sluggett		Sampler:													
ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)			Date (dd-mm-yy)	Time (hh:mm)	Sample Type	Number of Containers										
	WQ-PW			03 - Aug-16	15:00	Water	R	3									
Drinking Water (DW) Samples (client use)		Special Instructions / Specify Criteria to add on report (client use)			SAMPLE CONDITION AS RECEIVED (lab use only)												
Are samples taken from a Regulated DW System? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					Frozen <input type="checkbox"/> SIF Observations <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>												
Are samples for human drinking water use? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					Ice packs <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Custody seal intact <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>												
					Cooling Initiated <input checked="" type="checkbox"/>												
					INITIAL COOLER TEMPERATURES °C: 8.6 7.6 7.2 8.0 9.6 FINAL COOLER TEMPERATURES °C: 10.0												
SHIPMENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)												
Released by:	Date:	Time:	Received by:	Date:	Time:	Received by:	Date:	Time:									
REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION													WHITE - LABORATORY COPY		YELLOW - CLIENT COPY		
Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.																	
1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.																	