



Environment Canada
Eureka Weather Station
Eureka NU
ATTN: JOHN MACIVER

Date: 11-JUL-16
PO No.:
WO No.: L1789152
Project Ref: EUREKA NU
Sample ID: EUWW 1-JUNE 25
Sampled By: John MacIver
Date Collected: 25-JUN-16
Lab Sample ID: L1789152-1
Matrix: Sewage/Waste Water

PAGE 1 of 7

Test Description	Result	Qualifier	Units of Measure	CDWQG MAC	Aesthetic Objective	Date Analyzed
Alkalinity species as HCO₃, CO₃, OH						
Bicarbonate (HCO ₃)	346		mg/L			06-JUL-16
Carbonate (CO ₃)	<0.60		mg/L			06-JUL-16
Hydroxide (OH)	<0.34		mg/L			06-JUL-16
Alkalinity, Total (as CaCO₃)						
Alkalinity, Total (as CaCO ₃)	284		mg/L			04-JUL-16
Nitrogen Total						
*Nitrate and Nitrite as N	<0.11		mg/L	10		06-JUL-16
Total Nitrogen	32.1		mg/L			06-JUL-16
Total Kjeldahl Nitrogen						
Total Kjeldahl Nitrogen	32.1		mg/L			05-JUL-16
Nitrite in Water by IC						
*Nitrite (as N)	<0.050	DLM	mg/L	1		04-JUL-16
Nitrate in Water by IC						
*Nitrate (as N)	<0.10	DLM	mg/L	10		04-JUL-16
Total and Fecal Coliform by MPN						
Total Coliform						
Total Coliforms	>110000	PEHR	MPN/100mL	0		27-JUN-16
Fecal Coliform						
Fecal Coliforms	>110000	PEHR	MPN/100mL			27-JUN-16
Phosphorus (P)-Total Dissolved	2.36		mg/L			05-JUL-16
Mercury (Hg)-Total	<0.00020	DLM	mg/L	0.001		29-JUN-16
Phosphorus (P)-Total	3.85		mg/L			10-JUL-16
Ammonia, Total (as N)	20.3		mg/L			28-JUN-16
Biochemical Oxygen Demand	92		mg/L			27-JUN-16
Chloride (Cl)	1270		mg/L		250	04-JUL-16
Conductivity	5390		umhos/cm			04-JUL-16
Hardness (as CaCO ₃)	817		mg/L		500	29-JUN-16
Oil and Grease	8.6		mg/L			28-JUN-16
Phenols (4AAP)	0.0366		mg/L			29-JUN-16
Phosphorus (P)-Total Reactive	2.16		mg/L			29-JUN-16
Sulfate (SO ₄)	659		mg/L		500	04-JUL-16
Total Organic Carbon	37.7		mg/L			30-JUN-16
Total Suspended Solids	51.4		mg/L			28-JUN-16

ADDRESS: 1329 Niakwa Road East, Unit 12, Winnipeg, MB R2J 3T4 Canada | Phone: +1 204 255 9720 | Fax: +1 204 255 9721
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Test Description	Result	Qualifier	Units of Measure	CDWQG MAC	Aesthetic Objective	Date Analyzed
pH	7.52		pH units			04-JUL-16
Total Metals by ICP-MS						
Aluminum (Al)-Total	0.097		mg/L		0.1	28-JUN-16
Antimony (Sb)-Total	<0.0010		mg/L	0.006		28-JUN-16
Arsenic (As)-Total	<0.0010		mg/L	0.01		28-JUN-16
Barium (Ba)-Total	0.0282		mg/L	1		28-JUN-16
Beryllium (Be)-Total	<0.0010		mg/L			28-JUN-16
Bismuth (Bi)-Total	<0.00050		mg/L			28-JUN-16
Boron (B)-Total	0.287		mg/L	5		28-JUN-16
Cadmium (Cd)-Total	<0.00020		mg/L	0.005		28-JUN-16
Calcium (Ca)-Total	187		mg/L			28-JUN-16
Cesium (Cs)-Total	<0.00050		mg/L			28-JUN-16
Chromium (Cr)-Total	<0.0020		mg/L	0.05		28-JUN-16
Cobalt (Co)-Total	0.00064		mg/L			28-JUN-16
Copper (Cu)-Total	0.0880		mg/L		1.0	28-JUN-16
Iron (Fe)-Total	0.44		mg/L		0.3	28-JUN-16
Lead (Pb)-Total	<0.0010		mg/L	0.01		28-JUN-16
Lithium (Li)-Total	0.0292		mg/L			28-JUN-16
Magnesium (Mg)-Total	85.2		mg/L			28-JUN-16
Manganese (Mn)-Total	0.0642		mg/L		0.05	28-JUN-16
Molybdenum (Mo)-Total	0.00060		mg/L			28-JUN-16
Nickel (Ni)-Total	0.0054		mg/L			28-JUN-16
Phosphorus (P)-Total	3.87		mg/L			28-JUN-16
Potassium (K)-Total	23.4		mg/L			28-JUN-16
Rubidium (Rb)-Total	0.0116		mg/L			28-JUN-16
Selenium (Se)-Total	<0.0050		mg/L	0.05		28-JUN-16
Silicon (Si)-Total	1.19		mg/L			28-JUN-16
Silver (Ag)-Total	<0.0010		mg/L			28-JUN-16
Sodium (Na)-Total	903		mg/L		200	28-JUN-16
Strontium (Sr)-Total	0.754		mg/L			28-JUN-16
Tellurium (Te)-Total	<0.0010		mg/L			28-JUN-16
Thallium (Tl)-Total	<0.0050		mg/L			28-JUN-16
Thorium (Th)-Total	<0.0010		mg/L			28-JUN-16
Tin (Sn)-Total	0.00256		mg/L			28-JUN-16
Titanium (Ti)-Total	0.0037		mg/L			28-JUN-16
Tungsten (W)-Total	<0.0020		mg/L			28-JUN-16
Uranium (U)-Total	0.00123		mg/L	0.02		28-JUN-16
Vanadium (V)-Total	<0.0020		mg/L			28-JUN-16
Zinc (Zn)-Total	0.088		mg/L		5.0	28-JUN-16
Zirconium (Zr)-Total	0.0011		mg/L			28-JUN-16


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Lab Sample ID: L1789152-1
Matrix: Sewage/Waste Water

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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 * 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.						
Approved by  Hua Wo Account Manager						

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Date: 11-JUL-16
PO No.:
WO No.: L1789152
Project Ref: EUREKA NU
Sample ID: EUWW 2-JUNE 26
Sampled By: John MacIver
Date Collected: 26-JUN-16
Lab Sample ID: L1789152-2
Matrix: Sewage/Waste Water

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Test Description	Result	Qualifier	Units of Measure	CDWQG MAC	Aesthetic Objective	Date Analyzed
Alkalinity species as HCO₃, CO₃, OH						
Bicarbonate (HCO ₃)	350		mg/L			06-JUL-16
Carbonate (CO ₃)	<0.60		mg/L			06-JUL-16
Hydroxide (OH)	<0.34		mg/L			06-JUL-16
Alkalinity, Total (as CaCO₃)						
Alkalinity, Total (as CaCO ₃)	287		mg/L			04-JUL-16
Nitrogen Total						
*Nitrate and Nitrite as N	<0.11		mg/L	10		06-JUL-16
Total Nitrogen	35.3		mg/L			06-JUL-16
Total Kjeldahl Nitrogen						
Total Kjeldahl Nitrogen	35.3		mg/L			05-JUL-16
Nitrite in Water by IC						
*Nitrite (as N)	<0.050	DLM	mg/L	1		04-JUL-16
Nitrate in Water by IC						
*Nitrate (as N)	<0.10	DLM	mg/L	10		04-JUL-16
Total and Fecal Coliform by MPN						
Total Coliform						
Total Coliforms	>110000		MPN/100mL	0		27-JUN-16
Fecal Coliform						
Fecal Coliforms	>110000		MPN/100mL			27-JUN-16
Phosphorus (P)-Total Dissolved	2.58		mg/L			05-JUL-16
Mercury (Hg)-Total	<0.00020	DLM	mg/L	0.001		29-JUN-16
Phosphorus (P)-Total	3.74		mg/L			10-JUL-16
Ammonia, Total (as N)	20.8		mg/L			28-JUN-16
Biochemical Oxygen Demand	109		mg/L			27-JUN-16
Chloride (Cl)	1370		mg/L		250	04-JUL-16
Conductivity	5660		umhos/cm			04-JUL-16
Hardness (as CaCO ₃)	832		mg/L		500	29-JUN-16
Oil and Grease	12.3		mg/L			28-JUN-16
Phenols (4AAP)	0.0413		mg/L			29-JUN-16
Phosphorus (P)-Total Reactive	2.48		mg/L			29-JUN-16
Sulfate (SO ₄)	654		mg/L		500	04-JUL-16
Total Organic Carbon	39.1		mg/L			30-JUN-16
Total Suspended Solids	39.0		mg/L			28-JUN-16

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Date Collected: 26-JUN-16
Lab Sample ID: L1789152-2
Matrix: Sewage/Waste Water

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Test Description	Result	Qualifier	Units of Measure	CDWQG MAC	Aesthetic Objective	Date Analyzed
pH	7.37		pH units			04-JUL-16
Total Metals by ICP-MS						
Aluminum (Al)-Total	0.089		mg/L		0.1	28-JUN-16
Antimony (Sb)-Total	<0.0010		mg/L	0.006		28-JUN-16
Arsenic (As)-Total	<0.0010		mg/L	0.01		28-JUN-16
Barium (Ba)-Total	0.0297		mg/L	1		28-JUN-16
Beryllium (Be)-Total	<0.0010		mg/L			28-JUN-16
Bismuth (Bi)-Total	<0.00050		mg/L			28-JUN-16
Boron (B)-Total	0.302		mg/L	5		28-JUN-16
Cadmium (Cd)-Total	<0.00020		mg/L	0.005		28-JUN-16
Calcium (Ca)-Total	188		mg/L			28-JUN-16
Cesium (Cs)-Total	<0.00050		mg/L			28-JUN-16
Chromium (Cr)-Total	<0.0020		mg/L	0.05		28-JUN-16
Cobalt (Co)-Total	0.00074		mg/L			28-JUN-16
Copper (Cu)-Total	0.103		mg/L		1.0	28-JUN-16
Iron (Fe)-Total	0.56		mg/L		0.3	28-JUN-16
Lead (Pb)-Total	0.0010		mg/L	0.01		28-JUN-16
Lithium (Li)-Total	0.0304		mg/L			28-JUN-16
Magnesium (Mg)-Total	88.4		mg/L			28-JUN-16
Manganese (Mn)-Total	0.0826		mg/L		0.05	28-JUN-16
Molybdenum (Mo)-Total	0.00067		mg/L			28-JUN-16
Nickel (Ni)-Total	0.0060		mg/L			28-JUN-16
Phosphorus (P)-Total	3.89		mg/L			28-JUN-16
Potassium (K)-Total	24.3		mg/L			28-JUN-16
Rubidium (Rb)-Total	0.0128		mg/L			28-JUN-16
Selenium (Se)-Total	<0.0050		mg/L	0.05		28-JUN-16
Silicon (Si)-Total	1.19		mg/L			28-JUN-16
Silver (Ag)-Total	<0.0010		mg/L			28-JUN-16
Sodium (Na)-Total	963		mg/L		200	28-JUN-16
Strontium (Sr)-Total	0.781		mg/L			28-JUN-16
Tellurium (Te)-Total	<0.0010		mg/L			28-JUN-16
Thallium (Tl)-Total	<0.0050		mg/L			28-JUN-16
Thorium (Th)-Total	<0.0010		mg/L			28-JUN-16
Tin (Sn)-Total	0.00293		mg/L			28-JUN-16
Titanium (Ti)-Total	0.0015		mg/L			28-JUN-16
Tungsten (W)-Total	<0.0020		mg/L			28-JUN-16
Uranium (U)-Total	0.00131		mg/L	0.02		28-JUN-16
Vanadium (V)-Total	<0.0020		mg/L			28-JUN-16
Zinc (Zn)-Total	0.100		mg/L		5.0	28-JUN-16
Zirconium (Zr)-Total	0.0017		mg/L			28-JUN-16

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Matrix: Sewage/Waste Water

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Guidelines & Objectives

Sample Parameter Qualifier key listed:

Qualifier	Description
PEHR	Parameter Exceeded Recommended Holding Time On Receipt: Proceed With Analysis As Requested.
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).

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).The aesthetic objective (not related to health) for sodium in drinking water is 200 mg/L. However, where sodium concentration of the drinking water exceeds 20 mg/L, it is recommended that any person on a sodium restricted diet consult with his/her physician or Medical Officer of Health concerning the use of that water.
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.



FOR LAB:

Sample C:

☐ Frozen

COMMENT:

L1789152-COFC

☐ NON ACCEPTABLE

☐ Incorrect Sample Container

WORK ORDER NO:

LAB NO.:

DATE RECEIVED:

TIME RECEIVED:

BY:

Date Sampled: JUNE 25 Time: 20 45 A.M. ☐ P.M. ☒ Date Required:

Location: EUREKA NU
(Town, Community, City)

Submitter's Name Printed: John MacTuer

Sample Submitted By:

Rural Municipality/LGC/UVD:

SAMPLE TYPE

DRINKING WATER

- ☐ Untreated Well
☐ Treated Well
☐ Treated Municipal
☐ Non-Treated Municipal
☐ Water-Surface-Raw
☐ Water-Surface-Treated

PURPOSE OF TEST

- ☐ Private ☐ Real Estate ☐ Water Main

PLEASE PRINT & PRESS FIRMLY

NON-DRINKING WATER

- ☒ Sewage/Waste Water
☐ Lake/River
☐ Swimming Pool
☐ Whirl Pool
☐ Other

NOTES & CONDITIONS

1. Quote number must be provided to insure proper pricing.
2. Failure to properly complete all portions of this form may delay analysis.
3. ALS's liability limited to cost of analysis.

SERVICE REQUESTED

☐ REGULAR ☐ PRIORITY

(50% SURCHARGE)

☐ EMERGENCY

(100% SURCHARGE)

LAB NUMBER	SAMPLE IDENTIFICATION	ALS CUSTOMER #:	QUOTE #:
	EU WW 1 = June 25 2016 20:45 PM	REPORT TO BE SENT TO NAME: _____ COMPANY: _____ ADDRESS: _____ CITY/TOWN: _____ / PROV.: _____ POSTAL CODE: _____ PHONE: _____ BY: MAIL <input type="checkbox"/> FAX <input type="checkbox"/> (FAX NUMBER) _____ PICKUP <input type="checkbox"/> E-MAIL <input type="checkbox"/> (EMAIL ADDRESS) _____	
	EU WW 2 = June 26 2016		
	EUREKA Weather Stn EUREKA NU X0A 0G0		
	Waste Water Decant Samples For Nunavut WATER BOARD		

Analyses required SEE ATTACHED

Samples By John MacTuer

BILLING ADDRESS

SAME AS REPORT TO ☐

NAME:

COMPANY:

ADDRESS:

CITY/TOWN:

POSTAL CODE:

PAYMENT PARTICULARS

☐ INVOICE NEEDED / CLIENT'S P.O. NO.

☐ INTERAC

☐ CASH

☐ CHEQUE

☐ VISA / MASTERCARD

Subtotal \$

G.S.T. \$

Total \$

* OUR POLICY IS NOT TO ACCEPT SAMPLES FROM THE PRIVATE CITIZEN WITHOUT PREPAYMENT

SAMPLING INSTRUCTIONS ON REVERSE SIDE

Manitoba Technology Centre Ltd.

Part of the **ALS Laboratory Group**

12 - 1329 Niakwa Rd. E., Winnipeg, MB Canada R2J 3T4

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