Agnico-Eagle - Meliadine Gold Project
ATTN: PHILIP ROY
PO Box 99
Rankin Inlet NU X0C 0G0

Date Received: 20-MAR-15
Report Date: 31-MAR-15 08:03 (MT)
Version: FINAL

Client Phone: 867-759-3002

Certificate of Analysis

Lab Work Order #: L1589889
Project P.O. #: OP-220647
Job Reference:
C of C Numbers:
Legal Site Desc:

Judy Dalmaijer
Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1589889-1 STP - FINAL							
Sampled By: JM on 19-MAR-15 @ 06:55							
Matrix: Water							
Meliadine Sewage Treatment Plant							
% Transmittance by Spectrometry							
Transmittance, UV (254 nm)	36.0		1.0	% T		20-MAR-15	R3162628
Ammonia by colour							
Ammonia, Total (as N)	1.80	DLA	0.10	mg/L		20-MAR-15	R3163331
Biochemical Oxygen Demand (BOD)							
Biochemical Oxygen Demand	13.4		2.0	mg/L		20-MAR-15	R3164427
Fecal Coliform							
Fecal Coliforms	9		3	MPN/100mL		20-MAR-15	R3164616
Heterotrophic Plate Count							
Heterotrophic Plate Count	1070	PEHR	10	CFU/mL	20-MAR-15	20-MAR-15	R3163177
Nitrate in Water by IC							
Nitrate (as N)	20.7		0.020	mg/L		20-MAR-15	R3163306
Nitrate+Nitrite							
Nitrate and Nitrite as N	23.0		0.070	mg/L		23-MAR-15	
Nitrite in Water by IC							
Nitrite (as N)	2.30		0.010	mg/L		20-MAR-15	R3163306
Oil and Grease, Total							
Oil and Grease, Total	<2.0		2.0	mg/L	24-MAR-15	24-MAR-15	R3164289
Phosphorus, Total							
Phosphorus (P)-Total	11.0	DLA	0.050	mg/L		23-MAR-15	R3163181
Total Coliform							
Total Coliforms	93		3	MPN/100mL		20-MAR-15	R3164616
Total Kjeldahl Nitrogen							
Total Kjeldahl Nitrogen	12.4	DLA	1.0	mg/L	23-MAR-15	24-MAR-15	R3163908
Total Suspended Solids							
Total Suspended Solids	36.0		5.0	mg/L		25-MAR-15	R3165486
pH							
pH	6.55		0.10	pH units		24-MAR-15	R3164356
L1589889-2 STP - IN							
Sampled By: JM on 19-MAR-15 @ 06:50							
Matrix: Water							
Miscellaneous Parameters							
Biochemical Oxygen Demand	142	DLA	20	mg/L		20-MAR-15	R3164427
Total Suspended Solids	156		5.0	mg/L		25-MAR-15	R3165486

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Sample Parameter Qualifier Key:

Qualifier	Description
DLA	Detection Limit adjusted for required dilution
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
PEHR	Parameter Exceeded Recommended Holding Time On Receipt: Proceed With Analysis As Requested.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
BOD-WP	Water	Biochemical Oxygen Demand (BOD)	APHA 5210 B
The sample is incubated for 5 days at 20 degrees Celcius. Comparison of dissolved oxygen content at the beginning and end of incubation provides a measure of biochemical oxygen demand. If carbonaceous BOD is requested, TCMP is added to the sample to chemically inhibit nitrogenous oxygen demand. If soluble BOD is requested, the sample is filtered prior to analysis. Surface waters have a DL of 1 mg/L. Effluents are diluted according to their history and will have a sample DL of 6 mg/L or greater, depending on the dilutions used.			
FC-MPN-WP	Water	Fecal Coliform	APHA 9221E
The Most Probable Number (MPN) method is based on the Multiple Tube Fermentation technique. The results of examination of replicate tubes and dilutions of a sample are reported after confirmations specific to total coliform, fecal coliform and E. coli are performed. Results are reported in MPN/100 mL for water and MPN/gram for food and solid samples.			
HPC-PP-WP	Water	Heterotrophic Plate Count	APHA 9215B
This is a procedure for estimating the number of live heterotrophic bacteria in water and measuring changes during water treatment and distribution or in swimming pools. In the pour plate method, samples are diluted and plated on to media. After incubation, the colonies are counted and reported as CFU/mL.			
N-TOTKJ-WP	Water	Total Kjeldahl Nitrogen	Quickchem method 10-107-06-2-E Lachat
Samples are digested with a sulphuric acid solution, cooled, diluted with water, and analyzed for ammonia. Total Kjeldahl nitrogen is the sum of free-ammonia and organic nitrogen compounds which are converted to ammonium sulphate through this digestion process. Analysis is performed by Flow Injection Analysis (FIA). The pH of the digested sample is raised to a known, basic pH by neutralization with a concentrated buffer solution. This neutralization converts the ammonium cation to ammonia. The ammonia produced is heated with saliclyate and hypochlorite to produce blue colour which is proportional to the ammonia concentration.			
NH3-COL-WP	Water	Ammonia by colour	APHA 4500 NH3 F
Ammonia in water samples forms indophenol when reacted with hypochlorite and phenol. The intensity is amplified by the addition of sodium nitroprusside and measured colourmetrically.			
NO2+NO3-CALC-WP	Water	Nitrate+Nitrite	CALCULATION
NO2-IC-N-WP	Water	Nitrite in Water by IC	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
NO3-IC-N-WP	Water	Nitrate in Water by IC	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
OGG-TOT-WT	Water	Oil and Grease, Total	APHA 5520 B
Sample is extracted with hexane, extract is then evaporated and the residue is weighed to determine total oil and grease.			
P-T-COL-WP	Water	Phosphorus, Total	APHA 4500 P PHOSPHORUS
This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Phosphorus is determined colourimetrically after persulphate digestion of the sample.			
PH-WP	Water	pH	APHA 4500H
The pH of a sample is the determination of the activity of the hydrogen ions by potentiometric measurement using a standard hydrogen electrode and a reference electrode.			
SOLIDS-TOTSUS-WP	Water	Total Suspended Solids	APHA 2540 D (modified)
Total suspended solids in aquesous matrices is determined gravimetrically after drying the residue at 103 105°C.			
TC-MPN-WP	Water	Total Coliform	APHA 9221B
The Most Probable Number (MPN) method is based on the Multiple Tube Fermentation technique. The results of examination of replicate tubes and dilutions of a sample are reported after confirmations specific to total coliform, fecal coliform and E. coli are performed. Results are reported in MPN/100 mL for water and MPN/gram for food and solid samples.			
UV-%TRANS-WP	Water	% Transmittance by Spectrometry	APHA 5910B

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**

This method indicates the total concentration of UV-absorbing compounds found in water and wastewater. The analysis is carried out using procedures adapted from APHA 5910 B. The sample is filtered through a 0.45 um filter and measured for % transmittance in a quartz cell at 254 nm and reported as % Transmittance .The analysis is carried out without pH adjustment.

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, CANADA
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA

Chain of Custody Numbers:

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.

L1589889-COFC

ALS Environmental

Chain of Custody / Analytical Request
Canada Toll Free: 1 800 668 9878
www.alsglobal.com

COC # L1589889

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Report To		Report Format / Distribution	Service Requested (Rush for routine analysis subject to availability)
Company:	Agnico-Eagle	☑ Standard ☐ Other	◉ Regular (Standard Turnaround Times - Business Days)
Contact:	Philip Roy / Alexandre Gauthier / Justin MacMillan	☑ PDF ☐ Excel ☐ Digital ☐ Fax	○ Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT
Address:	Meliadine Gold Project, M+T Expediting	Email 1: philip.roy@agnicoeagle.com	○ Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT
	Rankin Inlet X0C 0G0	Email 2: ryan.vanengen@agnicoeagle.com	○ Same Day or Weekend Emergency - Contact ALS to Confirm TAT
		Email 3: justin.macmillan@agnicoeagle.com	
Phone:	Fax:	Email 4: alexandre.gauthier@agnicoeagle.com	Analysis Request
	☑ Yes ☐ No	Email 5:	
Invoice To	Same as Report ?	Client / Project Information	
Hardcopy of Invoice with Report?	☐ Yes ☑ No	Job #:	
Company:		PO / AFE: W 10547	
Contact:		LSD:	
Address:			
Phone:	Fax:	Quote #: Q 28906	
Lab Work Order # (lab use only)		ALS Contact: Judy Dalmaijer	Sampler: JM

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	AEM-STP-WP	BOD	TSS	Nb of containers or bottles
	STP-Final	19-Mar-15	6:55	Water	X			7
	STP-IN	19-Mar-15	6:50	Water		X	X	2

Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / Hazardous Details

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 provided on a separate Excel tab.
Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.

SHIPMENT RELEASE (client use)			SHIPMENT RECEPTION (lab use only)				SHIPMENT VERIFICATION (lab use only)			
Released by:	Date (dd-mmm-yy)	Time (hh-mm)	Received by:	Date:	Time:	Temperature:	Verified by:	Date:	Time:	Observations: Yes / No ? If Yes add SIF
Justin MacMillan	19-Mar-15	8:00	MB	Mar 20/15	~~13~~ 945	3.1 °C				

GENF 18.01 Front

MPM