



AGNICO EAGLE

EXPLORATION

MELIADINE GOLD PROJECT

ENVIRONMENTAL REPORT: AUGUST 2013

PRESENTED TO THE NUNAVUT WATER BOARD

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This monthly report is delivered under water license 2BB-MEL0914, PART J, items 13.

1. The Licensee shall maintain Monitoring Stations at the following locations:

Table 1: Monitoring stations

Monitoring Program Station Number	Description
MEL-1	Raw water supply intake at Meliadine Lake
MEL-2	Raw water supply intake at Pump Lake
MEL-3	Immediately downstream of old grey water sump prior to effluent entering wetland area, when flow is observed
MEL-3a	Immediately downstream of upgraded sump prior to the effluent entering upgraded wetland area, when flow is observed
MEL-4	At a point immediately upstream of the discharge from the wetland area / upgraded wetland area to Meliadine Lake
MEL-5	Point of discharge for the Bermed fuel containment facilities
MEL-6	Point of discharge for the contaminated soil storage
MEL-7	Final effluent discharge from the BIODISK treatment system
MEL-8	Point of discharge or runoff from the Non-Hazardous Waste Landfill

- 2. The Licensee shall measure and record, in cubic metres, the daily quantities of water utilized for camp, drilling and other purposes from all sources.**

The consumption of fresh water for the site was 15.6m³/day for the month of August 2013; 0 m³/day for the drills and 15.6m³/day for the camp.

- 3. The Licensee shall provide the GPS co-ordinates of all locations where sources of water are utilized for all purposes. In UTM nad 1983 zone 15.**

➤ Camp water source: East 541943.0 ; North 6989174.0

- 4. Licensee shall sample at Monitoring Program Station MEL-3, MEL-3a, MEL-4 and MEL-7, monthly during Sewage treatment, effluent discharge and during periods of flow at the point of entry into Meliadine Lake. Samples shall be analyzed for the following parameters:**

Biochemical Oxygen Demand – BOD₅
Total Suspended Solids
Oil and Grease (and visual)
Fecal Coliforms
pH

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MEL-4

Waterbody	Units	Mel 4			
Year		2013			
Date Sampled		24/06/2013	23/07/2013	29/07/2013	19/08/2013
GPS Coordinates		542092-6989012	542092-6989012	542092-6989012	542092-6989012
LAB		ALS	ALS	ALS	ALS
Field Measurements					
Water Temperature	oC	5.8	15.2		12.1
pH	pH units	7.8	8.4		7.6
Conductivity	(µS/cm)	0.0	0.03 mS		0.03 mS
Laboratory-Measured					
Fecal Coliforms	MPN/100mL	<3	380.0	<3	<3
Total Coliforms	mg/L	<3	380.0	23.0	93.0
E. Coli	mg/L	<3	140.0	<3	<3
Total Oil and Grease	mg/L	<1.0			
Ion balance	%	Low EC	Low EC	Low EC	Low EC
Biochemical Oxygen Demand	mg/L	<6.0	<6.0	<6.0	<6.0
Ammonia as N	mg/L	0.0	0.4	<0.010	<0.010
Mercury (Hg)-Total	mg/L	<0.000020	<0.000020	<0.000020	<0.000020
Phosphorus (P)-Total	mg/L	0.0	0.3	0.0	0.1
Phosphorus (P)-Total Reactive	mg/L	0.0	0.3	<0.010	0.0
Total Kjeldahl Nitrogen	mg/L	<0.20	0.7	0.2	0.3
Total Suspended Solids	mg/L	<5.0	5.0	5.0	
Phosphorus (P)-Total	mg/L	0.0	0.3	0.0	30.0
Alkalinity, Total (as CaCO3)	mg/L	13.9	22.0	16.5	17.1
Bicarbonate (HCO3)	mg/L	17.0	27.0	20.2	20.9
Carbonate (CO3)	mg/L	<0.60	<12	<0.60	<0.60
Hydroxide (OH)	mg/L	<0.34	<6.8	<0.34	<0.34
Calcium (Ca)-Dissolved	mg/L	5.1	6.8	6.6	6.6
Magnesium (Mg)-Dissolved	mg/L	0.9	1.1	1.1	0.9
Potassium (K)-Dissolved	mg/L	0.7	1.5	0.8	0.8
Sodium (Na)-Dissolved	mg/L	3.7	5.5	4.3	4.3
Chloride	mg/L	6.8	9.1	7.7	8.1
Conductivity	umhos/cm	59.0	84.0	67.0	74.0
Fluoride	mg/L	<0.10	<0.10	<0.10	<0.10
Hardness (as CaCO3)	mg/L	16.8	22.2	18.8	22.8
Nitrate-N	mg/L	<0.050	0.1	<0.050	<0.050
Nitrate and Nitrite as N	mg/L	<0.071	<0.071	<0.071	<0.071
Nitrite-N	mg/L	<0.050	<0.050	<0.050	<0.050
Sulfate	mg/L	2.9	3.6	3.2	3.3
TDS (Calculated)	mg/L	34.0	55.0	43.8	40.0
Aluminum (Al)-Total	mg/L	0.0	0.0	0.0	0.1
Antimony (Sb)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020
Arsenic (As)-Total	mg/L	0.0	0.0	0.0	0.0
Barium (Ba)-Total	mg/L	0.0	0.0	0.0	0.0
Beryllium (Be)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020
Bismuth (Bi)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020
Boron (B)-Total	mg/L	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Total	mg/L	<0.000010	<0.000010	<0.000010	<0.000010
Calcium (Ca)-Total	mg/L	5.2	7.0	5.9	7.1
Cesium (Cs)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010
Chromium (Cr)-Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt (Co)-Total	mg/L	<0.00020	<0.00020	<0.00020	0.0
Copper (Cu)-Total	mg/L	0.0	0.0	0.0	0.0
Iron (Fe)-Total	mg/L	<0.10	<0.10	<0.10	0.3
Lead (Pb)-Total	mg/L	<0.000090	0.0	<0.000090	0.0
Lithium (Li)-Total	mg/L	<0.0020	<0.0020	<0.0020	<0.0020
Magnesium (Mg)-Total	mg/L	0.9	1.2	1.0	1.2
Manganese (Mn)-Total	mg/L	0.0	0.0	0.0	0.0
Molybdenum (Mo)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020
Nickel (Ni)-Total	mg/L	<0.0020	<0.0020	<0.0020	<0.0020
Phosphorus (P)-Total	mg/L	<0.10	0.3	<0.10	<0.10
Potassium (K)-Total	mg/L	0.7	1.5	0.8	0.9
Rubidium (Rb)-Total	mg/L	0.0	0.0	0.0	0.0
Selenium (Se)-Total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010
Silicon (Si)-Total	mg/L	0.3	0.4	0.3	0.5
Silver (Ag)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010
Sodium (Na)-Total	mg/L	4.1	5.8	4.0	4.7
Strontium (Sr)-Total	mg/L	0.0	0.0	0.0	0.0
Tellurium (Te)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020
Thallium (Tl)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010
Thorium (Th)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010
Tin (Sn)-Total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti)-Total	mg/L	<0.00050	0.0	0.0	0.0
Tungsten (W)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010
Uranium (U)-Total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010
Vanadium (V)-Total	mg/L	<0.00020	<0.00020	<0.00020	0.0
Zinc (Zn)-Total	mg/L	0.0	<0.0020	0.0	0.0
Zirconium (Zr)-Total	mg/L	<0.00040	<0.00040	<0.00040	<0.00040
Ortho-Phosphate (O-PO4)	mg/L				
Oil & Grease	mg/L	<1.0	<1.0	<1.0	<1.0
Turbidity	NTU	1.2	0.8	1.1	1.0
pH	pH units	7.3	7.5	7.4	7.6

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MEL-7

All the parameters respected the license requirement during August.

Station: STP-OUT (MEL-7)		August			
DATE	Limits	05/08/2013	12/08/2013	19/08/2013	26/08/2013
Ammonia as N (mg/L)		1.1	1.9	1.4	2.4
Biochemical Oxygen Demand (mg/L)	80	<6.0	<6.0	<6.0	<6.0
Heterotrophic Plate Count (AAHB) (CFU/ml)		380.0	>3000	810.00	1460.00
Nitrate-N (mg/L)		5.5	16.2	15.6	15.9
Nitrate and Nitrite as N (mg/L)		5.6	16.7	15.7	16.1
Nitrite-N (mg/L)		0.1	0.5	0.2	0.1
Oil & Grease-IR (mg/L)	5	<1.0	<1.0	<1.0	<1.0
Phosphorus (P)-Total (mg/L)		3.8	13.7	12.5	14.3
TKN (mg/L)		2.3	5.0	4.4	4.8
Total Suspended Solids (mg/L)	100	<5.0	8.0	8.0	<5.0
Transmittance (%T)		65.0	48.4	49.6	46.9
pH (pH units)	6.5-9	7.0	6.8	7.4	7.0
Fecal Coliforms (MPN/100ml)	1000	<3	<3	<3	4
Total Coliforms (MPN/100ml)		<3	>110000	<3	1600

- 5. The Licensee shall, prior to the release of effluent from the Bermed Fuel Containment Facilities at Monitoring Program Station MEL-5 and the contaminated soil storage at MEL-6 for the purpose of demonstrating compliance, sample for the parameters listed under Part D, item 17.**

➤ No release in August

- 6. The Licensee shall obtain representative samples of the water column below any ice where required under part F, item 7. Monitoring shall include but not limited to the following:**

Total Suspended Solids

pH

Electrical Conductivity, and

Total trace Metals as determined by a standard ICP Scan (to include at a minimum, the following elements: Al, Sb, Ba, Be, Cd, Cr, Co, Cu, Fe, Pb, Li, Mn, Mo, Ni, Se, Sn, Sr, Tl, Ti, U, V, Zn), and Trace Arsenic and Mercury.

No sampling on ice in August.

7. The Licensee shall analyze the samples obtained at Monitoring Program Station MEL-8 for the following parameters:

pH

Total Suspended Solids (TSS)

Oil & Grease

Total Trace metals as determined by a standard ICP Scan (to include at a minimum, the following elements: Al, Ba, Cd, Cr, Cu, Pb, Ni, Se, Sn, Zn); and

Trace Arsenic and Mercury

The Non-Hazardous Waste Landfill is not constructed yet.
