

MELIADINE GOLD PROJECT

ENVIRONMENTAL REPORT: OCTOBER 2013

PRESENTED TO THE NUNAVUT WATER BOARD

ENVIRONMENTAL REPORT OCTOBER 2013

Contact:

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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 <u>11.0m³/day</u> for the month of October 2013; 0m³/day for the drills, 9.3m³/day for the camp and 1.7m³/day for the underground

- 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
- Underground water source: East 540076.0; North 6987731.0
- 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

MEL-7All the parameters respected the license requirement until October 21 (last available data).

Station: STP-OUT (MEL-7)			October				
DATE	Limits	17/09/2013	23/09/2013	01/10/2013	08/10/2013	15/10/2013	21/10/2013
Ammonia as N (mg/L)		2.3	2.7	5.6	0.1	0.2	1.2
Biochemical Oxygen Demand (mg/L)	80	<6.0	10.5	<6.0	<6.0	<6.0	<6.0
Heterotrophic Plate Count (AAHB) (CFU/ml)		-	>3000	>3000	310.0	370	>3000
Nitrate-N (mg/L)		2.7	2.2	17.5	14.2	5.1	16.5
Nitrate and Nitrite as N (mg/L)		2.71	2.4	17.90	14.2	5.14	16.70
Nitrite-N (mg/L)		< 0.050	0.2	0.4	< 0.050	0.1	0.2
Oil & Grease-(IR) (mg/L)	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Phosphorus (P)-Total (mg/L)		3.0	1.4	11.8	9.0	3.9	12.4
TKN (mg/L)		3.0	3.8	8.9	4.1	2.0	4.4
Total Suspended Solids (mg/L)	100	5.0	13.0	8.0	34.0	<5.0	6.0
Transmitance (%T)		-	81.3	40.1	66.9	68.0	51.3
pH (pH units)	6.5-9	7.3	7.6	7.0	6.4	7.2	7.0
Fecal Coliforms (MPN/100ml)	1000	4.0	38.0	<3	93.0	<3	<3
Total Coliforms (MPN/100ml)		4,300.0	2,000.0	9.0	93.0	<3	<3

- 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 October.
- 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: AI, 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 October.

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

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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.