



# **AGNICO EAGLE**

## **MELIADINE GOLD PROJECT**

**ENVIRONMENTAL REPORT: APRIL 2016 - *AMENDED***

**WATER LICENCE 2BB-MEL1424**

**PRESENTED TO THE NUNAVUT WATER BOARD**

**Contact:**

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**This monthly report is delivered under water license 2BB-MEL1424, PART J, item 13.**

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

*Table 1: Monitoring stations*

Monitoring Program Station Number	Description	Status
MEL-1	Raw water supply intake at Meliadine Lake	Active (Volume cubic metres)
MEL-2	Raw water supply intake at Pump, A8 or other Lakes	Active (Volume cubic metres)
MEL-5	Point of discharge for the Bermed Fuel Containment Facilities	Active
MEL-6	Effluent from the Landfarm Treatment Facility prior to release	New
MEL-7	Final Effluent Discharge from the BIODISK treatment system	Active
MEL-8	Point of discharge or runoff from the Non-Hazardous Waste Landfill	(New) Active

- 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 daily average consumption of fresh water for the site was **65.62 m<sup>3</sup>/day** for the month of March; 5.9 m<sup>3</sup>/day for the drilling, 31.52 m<sup>3</sup>/day\*\*\* for the camp and 13.84 m<sup>3</sup>/day for the underground, and 19.59 m<sup>3</sup>/day for construction of P1 infrastructure.

Total used for P1 infrastructure construction 431 m<sup>3</sup>.

\*\*\* The volume includes the indirect water use.

- 3. The Licensee shall measure and record the volume of all soil from all locations entering the Landfarm Treatment Facility.**

No new material added.

- 4. The Licensee shall assess and record the concentration of F1 – F4 fractions in petroleum hydrocarbon contaminated soil, according to the CCME Canada-Wide Standard for Petroleum Hydrocarbons (PHC) in Soil that is entering the Land Treatment Unit from all sources and excavations.**

No new material added.

**5. The Licensee shall provide the GPS coordinates 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

**6. The Licensee shall provide the GPS coordinates (in decimal degrees) of all locations where wastes associated with camp operations and exploration activities are deposited.**

The landfill has not been constructed yet, so most of the waste continues to be managed in containers. These containers are transported by barge during the summer and disposed of in an approved southern facility.

**7. Licensee shall sample at Monitoring Program Station MEL-7, monthly during wastewater effluent discharge. Samples shall be analyzed for the parameters listed under Part G Item 11.**

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

All sewage treatment units are running correctly; population has been between 115 and 137 persons.

Work on STP upgrade: EQ tank capacity will need to be minimally double to optimize treatment at 200+ workers on site.

Grease trap bacteria and air dispenser install and in troubleshooting phase.

Soda ash addition is being routinely required in order to maintain pH within allowable limits at STP-Final/MEL-7.

No exceedances in the month of April.

**Station: STP-FINAL**

<b>DATE</b>	<b>Limits</b>	<b>April</b>			
		<b>4/4/2016</b>	<b>4/13/2016</b>	<b>4/18/2016</b>	<b>4/25/2016</b>
Ammonia as N		0.01	13.7	13.4	0.08
Biochemical Oxygen Demand	80	19.0	15.0	19.0	17
Heterotrophic Plate Count (AAHB)		>200	> 3 000	>30000	<2000
Nitrate-N		2.04	23.7	31.0	30.4
Nitrate and Nitrite as N		2.73	24.30	31.90	31.4
Nitrite-N		0.69	0.58	0.84	0.95
Oil & Grease-(IR)	5	<1	<1	<1	<1
Phosphorus (P)-Total		9.55	4.0	12.6	9.52
TKN		8.57	15.4	13.5	22.9
Total Suspended Solids	100	<1	<1	<1	<1
Transmittance %		54.0	49.0	48.0	46
pH	6.0 - 9.5	6.79	6.96	6.92	7.08
Fecal Coliforms	1000	0.0	< 2	<2	<2
Total Coliforms		-	-	1,200.0	<1000
Atypical		-	> 20 000	5100	89000

**8. The Licensee shall, prior to the release of effluent from the Bermed Fuel Containment Facilities at Monitoring Program Station Mel-5 and the Landfarm Treatment Facility at Monitoring Program Station MEL-6 for the purpose of demonstrating compliance, sample for the parameters listed under Part D item 15.**

➤ No release in April.

**9. The Licensee shall obtain representative samples of the water column below any ice where required under part F, Items 5 and 6. 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 drilling was done in April on lake.

**10. The inspector, Christine Wilson (INAC inspector), requested AEM to continue monitoring the ponded water at the rear of these facilities during times of flow with the same parameters as MEL-8 and the result must be included in the monthly monitoring report provided to the Nunavut Water Board (“the Board”) and the Inspector.**

➤ No sampling possible during the winter.

**As per Section 2 of INAC Water License Inspection Dated April 12, 2016:**

**III. Amend the 2BB-MEL1424 monitoring program to include, at a minimum, a regular compliance point at DP3-A and A54.**

Upon completion of the Freshet Action Plan locations for regular compliance sampling for DP3-A and A54 will be determined.

***IV. Modify the monthly monitoring reports, starting April 2016, to include, at a minimum, an updates of the construction of the containment structures, waste water treatment options; modifications of the freshet action plan, sampling, and analysis of those results.***

***An update of the construction of the containment structures:*** P1 Dykes construction started in March; as of April 30<sup>th</sup> the dykes are well underway with an estimated earthwork completion in early May. The dykes are currently holding small volumes of melt water from local snow. The volume of water being held does not have enough volume to commence pumping. To date no pumping has occurred. Pumps are on order and are expected on site in May.

***Waste water treatment options:*** Agnico is reviewing discharge options with ECCC and NWB. At this time if the water quality is at or below CCME then the water is not classified as “waste” and can be discharged.

Also, evaporators have been ordered and are expected to be on site mid-June, and commissioned by the end of June. Once commissioned, the evaporators will be utilized to evaporate pond water and to manage the capacity of the ponds.

***Modifications of the freshet action plan:*** The freshet action plan is in the final stages of editing and will be submitted on May 1<sup>st</sup>.

***Sampling and analysis of those results:*** Currently there has been no samples related to P1 containment facility