



# **AGNICO EAGLE**

**MELIADINE GOLD PROJECT**

**ENVIRONMENTAL REPORT: JANUARY 2017**

**WATER LICENCE 2BB-MEL1424**

**SUBMITTED TO THE  
NUNAVUT WATER BOARD**

**Contact:**

**Manon Turmel**  
**Environmental Compliance Counselor**  
**AGNICO EAGLE Mines Ltd.**  
Phone : 1 (819) 759-3555 (ext. 8025)  
manon.turmel@agnicoeagle.com

**Jeffrey Pratt/Jessica Huza**  
**Senior Environmental Coordinator**  
**AGNICO EAGLE Mines Ltd.**  
Phone : 1 (819) 759-3555 (ext. 3928)  
Mobile : 1 (306) 960-2370  
Jeffrey.pratt@agnicoeagle.com / jessica.huza@agnicoeagle.com

**A. 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.***

MEL-1	Daily average (m <sup>3</sup> )
Drilling	0
Camp	35.08
Construction	8.16
MEL-2 (A8)	
Underground	2.01
January Average	30.54
Total January	946.79
Total 2017	946.79

MEL-1: 541943E, 6989174N

MEL-2 (A8): 540076E, 6987731N

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

No contaminated soil was brought to the landfarm in January.

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 soil samples were taken in January as Agnico Eagle is not planning to take soil out of the landfarm.

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

Landfill:

Latitude: 63.030631

Longitude: -92.22089

6. ***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**

Five (5) samples were collected during the month. All results were below allowable limits.

Following the December 5, 2016 exceedance, an investigation was completed. The following actions were completed to identify the cause:

1. Reviewed the STP operational data for the time period where the exceedance occurred. No abnormal operating parameters were noted.
2. Identified potential sources on site which could have contributed to the oil and grease loading to the STP. Most likely sources include the STP (from maintenance activities such as greasing mechanical components), the kitchen, or the laundry rinse water.

None of the above mentioned actions as part of the investigation led to the identification of the root cause for the exceedance. It is also possible that the incident occurred as the result of human error leading to incorrect waste disposal. As such, the follow-up measures are planned:

1. Increase awareness at site with respect to correct waste management practices.
2. Educate site personnel on the STP with regards its oil and grease limitations.

Station: STP-FINAL		January				
DATE	Limits	1/4/2017	1/9/2017	1/18/2017	1/23/2017	1/30/2017
Ammonia as N (mg/L)		18	32	41	62	44
Biochemical Oxygen Demand	80	50	30	30	14	35
Kjeldahl nitrogen		18	39	54	63	46
pH	6.0 - 9.5	7.28	7.19	7.33	7.62	7.01
Phosphorus (P)-Total		13	13	12	15	15
Total Suspended Solids	100	8	14	9	9	13
Transmittance %		36	25	25	20	25
Nitrite-N		3.57	0.971	3.9	2.27	2.16
Nitrate-N		22.8	23.6	19.7	16.2	30.7
Nitrate and Nitrite as N		26.4	24.6	23.6	18.5	32.8
Oil & Grease-(IR)	5	0.9	0.9	0.5	1.1	<0.50
Atypical		45000	220	4000	610	*
Fecal Coliforms (CFU/100mL)	1000	2	<2	<2	48	*
Heterotrophic Plate Count (AAHB) (CFU/100mL)		12,000	>30000	>3000	>3000	*
Total Coliforms (CFU/100mL)		<1000	180	100	210	*
* Samples rejected at lab due to past hold time.						

7. *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.*

➤ In January, no water was released from MEL-5 or MEL-6.

8. *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 January on any lake.

**B. Modify the monthly monitoring reports, starting April 2016, to include, at a minimum, waste water treatment options; and modifications of the freshet action plan.**

1. **Waste water treatment options:**

In January, no water was transferred from/to the P-cells due to frozen conditions.

2. **Modifications of the freshet action plan:** An updated version of the Freshet Action Plan will be submitted with the 2016 annual report.
3. **Seep:** There were no active seeps in January due to frozen conditions.

During the 2017 freshet, Agnico Eagle will assess seepage rates at DP1-B and DP3-A as requested by INAC Inspector on November 10, 2016.