Agnico Eagle Meliadine
Water License 2BB-MEL1424
December 2017 Monthly Monitoring
Summary Report

January 30, 2018

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.***

Table 2: Water quantities utilized

MEL-1[1]	Daily average (m^3)
Camp	30.46
Construction	0.00
MEL-2 (A8)[2]	
Underground	3.01
Drilling	0.00
Not MEL-1 or MEL-2	
Drilling	7.84
December Daily Average	41.30
Total December	1,280
Total 2017	18,287

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

In December 2017, no material entered the landfarm.

[1] MEL-1: 541943E, 6989174N
[2] MEL-2 (A8): 540076E, 6987731N

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 December 2017 from 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.***

   Table 3: GPS Coordinates of the landfill and landfarm

	Landfill	Landfarm
Latitude	63.03063°	63.02386°
Longitude	-92.22089°	-92.18639°

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 D Item 11:***
   pH
   Biochemical Oxygen Demand – BOD5
   Total Suspended Solids (TSS)
   Fecal Coliforms
   Oil and Grease (and visual)

   Four samples were collected during the month. The summary of the results is provided in Table 4 below.

   The STP upgrade and maintenance program was initiated in November, and continued in Decemer. The effluent from the exploration camp was trucked to and treated at the main camp STP. In December 2017 no effluent was discharged from the Explo STP.

   Table 4: Effluent testing results at STP-FINAL (MEL-7) sampling station

Parameters	Limits	12/4/2017	12/12/2017	12/14/2017	12/18/2017
Biochemical Oxygen Demand	80				
pH	6.0 - 9.5				
Total Suspended Solids	100 mg/L				
Atypical		950	30	170	180
Fecal Coliforms (CFU/100mL)	1000	20	<2	<2	<10
Heterotrophic Plate Count (AAHB) (CFU/100mL)		4,300	450	500	209
Total Coliforms (CFU/100mL)		30	90	70	90

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 December, no water was released from the Bermed Fuel Containment Facilities (Monitoring station MEL-5) and the Landfarm Treatment Facility (Monitoring Station 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 on-ice drilling was conducted during the month of December.

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

   In December, underground mine development water was stored for future treatment. Domestic wastewater from the exploration camp was treated using the BIODISK/BIONEST treatment system; the discharge of treated water into the environment was suspended on November 15 to allow for the upgrade and maintenance of the system. All wastewater from the exploration camp was trucked to the main camp for treatment.