Meliadine Gold Mine
NWB 2BB-MEL1424
January 2023 Monthly Report

Prepared for:
Nunavut Water Board

Prepared by:
Agnico Eagle Mines Limited – Meliadine Division

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 Station	Description	Status
MEL-1	Raw water supply intake at Meliadine Lake	Active (Volume m³)
MEL-2	Raw water supply intake at Pump, A8 or other Lakes	Active (Volume m³)
MEL-5	Point of discharge for the Bermed Fuel Containment Facilities	Inactive
MEL-6	Effluent from the Landfarm Treatment Facility prior to release	Inactive
MEL-7	Final Effluent Discharge from the BIODISK treatment system	Active (no direct discharge)
MEL-8	Point of discharge or runoff from the Non-Hazardous Waste landfill	Inactive

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 (average)

MEL-1[1]	Camp	m^3/day	0.00
	Pump Shack	m^3/day	0.00
	Construction	m^3/day	0.00
MEL-2	Drilling	m^3/day	0.00
Daily Average		m^3/day	0.00
Total January 2023		m^3	0
Total 2023		m^3	0

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

No material was deposited in the Type B landfarm during the month. Any new contaminated soil generated will be deposited in the landfarm approved in the Type A Water License.

[1] MEL-1: 541943E, 6989174N

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 material was deposited in the Type B landfarm during the month. Any new contaminated soil generated will be deposited in the landfarm approved in the Type A Water License.

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.***

   No more waste from camp operations and exploration is deposited in locations related to Licence 2BB-MEL1424.

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)

   From November 2017 to April 2019, all treated sewage from the Exploration Camp STP was trucked and deposited in CP1. From April 15th, 2019 to early June 2019, due to inconsistency in the amount of people at the exploration camp resulting in unsteady STP effluent results, AEM decided to transfer all treated water from the exploration STP to the main camp STP for a second treatment before being discharged in CP1. Since early June 2019, the treated sewage from the exploration camp is deposited in CP1 as sampling results went back to normal.

   If the Exploration Camp STP operators suspect any upsets in the Exploration Camp STP prior to receiving accredited lab results, the effluent will be placed in the arctic corridor lift station for additional treatment in the main camp sewage treatment plant.

   Agnico Eagle continued to monitor the quality of the effluent whenever the Exploration Camp STP is operational. Since the Exploration Camp was closed in January and the STP was not in operation, no samples were collected during the month.

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.***

   No water was discharged from the Fuel Containment Facilities (Monitoring station MEL-5) nor the Landfarm Treatment Facility (Monitoring Station MEL-6) during the month.

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.

   A water quality sample was collected before the 2023 drilling on ice campaign on Lake A8 on January 8th. Results are provided in Appendix.

   Water quality samples will also be collected during and after the 2023 drilling on ice campaign and results will be provided as applicable.

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.***

   From November 2017 to April 2019, all treated sewage from the Exploration Camp STP was trucked and deposited in CP1. From April 15th, 2019 to June 2019, due to inconsistency in the amount of people at the exploration camp resulting in unsteady STP effluent results, AEM decided to transfer all treated water from the exploration STP to the main camp STP for a second treatment before being discharged in CP1. Since early June 2019, the treated sewage from the exploration camp is deposited in CP1 as sampling results went back to normal.

Appendix – Monitoring Analytical Data

	Sample date	1/8/2023
	Sample name	A8
	Sample type	N
	Depth range	-
Parameter	**Unit**	
WQ02- Conventional Parameters		
pH	**pH units**	7.71
Specific conductivity	**umhos/cm**	660
TSS	**mg/L**	1
WQ06- Total Metals		
Aluminum	**mg/L**	0.0045
Antimony	**mg/L**	< 0.00050
Arsenic	**mg/L**	0.00826
Barium	**mg/L**	0.0724
Beryllium	**mg/L**	< 0.00010
Cadmium	**mg/L**	< 0.000010
Chromium	**mg/L**	< 0.0010
Cobalt	**mg/L**	< 0.00020
Copper	**mg/L**	0.00166
Iron	**mg/L**	0.032
Lead	**mg/L**	< 0.00020
Lithium	**mg/L**	0.0188
Manganese	**mg/L**	0.0152
Mercury	**mg/L**	< 0.00001
Molybdenum	**mg/L**	< 0.0010
Nickel	**mg/L**	0.0021
Selenium	**mg/L**	< 0.00010
Strontium	**mg/L**	0.569
Sulphur	**mg/L**	11.5
Thallium	**mg/L**	< 0.000010
Tin	**mg/L**	< 0.0050
Titanium	**mg/L**	< 0.0050
Uranium	**mg/L**	0.00025
Vanadium	**mg/L**	< 0.0050
Zinc	**mg/L**	< 0.0050
WQ07- Dissolved Metals		
Aluminum	**mg/L**	< 0.0030
Antimony	**mg/L**	< 0.00050
Arsenic	**mg/L**	0.00704
Barium	**mg/L**	0.0677
Beryllium	**mg/L**	< 0.00010
Cadmium	**mg/L**	0.000013
Chromium	**mg/L**	< 0.0010

Cobalt	**mg/L**	< 0.00020
Copper	**mg/L**	0.00147
Iron	**mg/L**	0.0088
Lead	**mg/L**	< 0.00020
Lithium	**mg/L**	0.0173
Manganese	**mg/L**	0.0043
Mercury	**mg/L**	< 0.00001
Molybdenum	**mg/L**	< 0.0010
Nickel	**mg/L**	0.0016
Selenium	**mg/L**	< 0.00010
Strontium	**mg/L**	0.539
Sulphur	**mg/L**	10.5
Thallium	**mg/L**	< 0.000010
Tin	**mg/L**	< 0.0050
Titanium	**mg/L**	< 0.0050
Uranium	**mg/L**	0.00021
Vanadium	**mg/L**	< 0.0050
Zinc	**mg/L**	< 0.0050