AGNICO EAGLE
MELIADINE

Meliadine Gold Mine
NWB 2BB-MEL1424
May 2022 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	Inactive (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	37.46
Daily Average		m^3/day	37.46
Total May 2022		m^3	1,161
Total 2022		m^3	6,503

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 STP was not in operation in May 2022, 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.

   Water quality samples related to drilling campaigns were collected during the winter 2021-2022 (before, during and after drilling) and sent for analysis.

   Lake A8 was sampled before drilling in December 2021 and January 2022, during drilling in March 2022 and after drilling in May 2022. Results for before and during drilling samples were appended to the March 2022 report. Results for the after drilling sample are provided in Appendix.

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	5/8/2022
	Sample name	A8 - AFTER DRILLING
Parameter	**Unit**	
WQ02- Conventional Parameters		
pH	**pH units**	7.84
Specific conductivity	**umhos/cm**	790
Hardness, as CaCO3	**mg/L**	287
Hardness, as CaCO3 (dissolved)	**mg/L**	285
TSS	**mg/L**	6
WQ05- General Organics		
Total oil and grease	**mg/L**	2.8
WQ06- Total Metals		
Aluminum	**mg/L**	0.0774
Antimony	**mg/L**	< 0.00050
Arsenic	**mg/L**	0.0107
Barium	**mg/L**	0.0837
Beryllium	**mg/L**	< 0.00010
Bismuth	**mg/L**	< 0.0010
Boron	**mg/L**	< 0.050
Cadmium	**mg/L**	0.000018
Calcium (total)	**mg/L**	94.1
Chromium	**mg/L**	< 0.0010
Cobalt	**mg/L**	< 0.00020
Copper	**mg/L**	0.00257
Iron	**mg/L**	0.222
Lead	**mg/L**	0.00078
Lithium	**mg/L**	0.0225
Magnesium (total)	**mg/L**	12.6
Manganese	**mg/L**	0.0122
Mercury	**mg/L**	< 0.00001
Molybdenum	**mg/L**	< 0.0010
Nickel	**mg/L**	0.0020
Potassium (total)	**mg/L**	5.34
Selenium	**mg/L**	< 0.00010
Silicon	**mg/L**	0.73
Silver	**mg/L**	< 0.000020
Sodium (total)	**mg/L**	28.8
Strontium	**mg/L**	0.641
Sulphur	**mg/L**	12.0
Thallium	**mg/L**	< 0.000010
Tin	**mg/L**	< 0.0050
Titanium	**mg/L**	< 0.0050

Uranium	**mg/L**	0.00020
Vanadium	**mg/L**	< 0.0050
Zinc	**mg/L**	0.0196
Zirconium	**mg/L**	< 0.00010
WQ07- Dissolved Metals		
Aluminum	**mg/L**	0.0052
Antimony	**mg/L**	< 0.00050
Arsenic	**mg/L**	0.00812
Barium	**mg/L**	0.0773
Beryllium	**mg/L**	< 0.00010
Bismuth	**mg/L**	< 0.0010
Boron	**mg/L**	< 0.050
Cadmium	**mg/L**	< 0.000010
Calcium (Dissolved)	**mg/L**	93.3
Chromium	**mg/L**	< 0.0010
Cobalt	**mg/L**	< 0.00020
Copper	**mg/L**	0.00180
Iron	**mg/L**	0.0140
Lead	**mg/L**	< 0.00020
Lithium	**mg/L**	0.0222
Magnesium (Dissolved)	**mg/L**	12.5
Manganese	**mg/L**	0.0098
Mercury	**mg/L**	< 0.00001
Molybdenum	**mg/L**	< 0.0010
Nickel	**mg/L**	0.0017
Potassium (Dissolved)	**mg/L**	5.22
Selenium	**mg/L**	< 0.00010
Silicon	**mg/L**	0.64
Silver	**mg/L**	< 0.000020
Sodium (Dissolved)	**mg/L**	28.3
Strontium	**mg/L**	0.655
Sulphur	**mg/L**	13.0
Thallium	**mg/L**	< 0.000010
Tin	**mg/L**	< 0.0050
Titanium	**mg/L**	< 0.0050
Uranium	**mg/L**	0.00019
Vanadium	**mg/L**	< 0.0050
Zinc	**mg/L**	0.0112
Zirconium	**mg/L**	< 0.00010