



**AGNICO EAGLE**  
MELIADINE

**Meliadine Gold Mine  
NWB 2BB-MEL1424  
January 2024 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 m <sup>3</sup> )
MEL-2	Raw water supply intake at Pump, A8 or other Lakes	Active (Volume m <sup>3</sup> )
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
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:** Monthly water usage for camp, drilling, and other purposes

	Purpose	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Cumulative 2023
MEL-1 (m <sup>3</sup> /day)	Camp	0.00	-	-	-	-	-	-	-	-	-	-	-	-
MEL-2 (m <sup>3</sup> /day)	Drilling	0.00	-	-	-	-	-	-	-	-	-	-	-	-
Daily Average (m <sup>3</sup> /day)		0.00	-	-	-	-	-	-	-	-	-	-	-	-
Total (m <sup>3</sup> )		0.00	-	-	-	-	-	-	-	-	-	-	-	0.00

**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.

**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 15<sup>th</sup>, 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 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 2024 drilling on ice campaign on Lake A8 on January 22<sup>nd</sup>, 2024. Results were provided in Appendix.

Water quality samples will also be collected during and after the 2024 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.**

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## Appendix – Monitoring Analytical Data

Sample date		1/22/2024	1/22/2024	1/22/2024
Sample name		A8-BEFORE DRILLING-1	A8-BEFORE DRILLING-2	A8-BEFORE DRILLING-3
Parameter	Unit			
<b>WQ02- Conventional Parameters</b>				
pH	pH units	7.75	7.72	7.77
Conductivity	umhos/cm	840	620	620
TSS	mg/L	20	1	1
<b>WQ06- Total Metals</b>				
Aluminum	mg/L	0.0643	0.0060	0.0034
Antimony	mg/L	< 0.00050	< 0.00050	< 0.00050
Arsenic	mg/L	0.0150	0.00810	0.00677
Barium	mg/L	0.0841	0.0595	0.0534
Beryllium	mg/L	< 0.00010	< 0.00010	< 0.00010
Cadmium	mg/L	0.000020	0.000050	< 0.000010
Chromium	mg/L	< 0.0010	< 0.0010	< 0.0010
Cobalt	mg/L	< 0.00020	< 0.00020	< 0.00020
Copper	mg/L	0.00163	0.00126	0.00104
Iron	mg/L	0.391	0.074	0.063
Lead	mg/L	0.00074	0.00025	< 0.00020
Lithium	mg/L	0.0225	0.0189	0.0172
Manganese	mg/L	0.0490	0.0600	0.0708
Mercury	mg/L	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	< 0.0010	< 0.0010	< 0.0010
Nickel	mg/L	0.0018	0.0015	0.0013
Selenium	mg/L	< 0.00010	< 0.00010	< 0.00010
Strontium	mg/L	0.671	0.552	0.480
Sulphur	mg/L	12.5	10.5	9.0
Thallium	mg/L	< 0.000010	< 0.000010	< 0.000010
Tin	mg/L	< 0.0050	< 0.0050	< 0.0050
Titanium	mg/L	< 0.0050	< 0.0050	< 0.0050
Uranium	mg/L	0.00026	0.00022	0.00016
Vanadium	mg/L	< 0.0050	< 0.0050	< 0.0050
Zinc	mg/L	0.0100	< 0.0050	< 0.0050
<b>WQ07- Dissolved Metals</b>				
Aluminum	mg/L	< 0.0030	< 0.0030	< 0.0030
Antimony	mg/L	< 0.00050	< 0.00050	< 0.00050
Arsenic	mg/L	0.00760	0.00656	0.00631
Barium	mg/L	0.0900	0.0584	0.0604
Beryllium	mg/L	< 0.00010	< 0.00010	< 0.00010
Cadmium	mg/L	< 0.000010	< 0.000010	< 0.000010
Chromium	mg/L	< 0.0010	< 0.0010	< 0.0010
Cobalt	mg/L	< 0.00020	< 0.00020	< 0.00020
Copper	mg/L	0.00162	0.00108	0.00105

Iron	mg/L	0.0145	0.0134	0.0153
Lead	mg/L	< 0.00020	< 0.00020	< 0.00020
Lithium	mg/L	0.0243	0.0177	0.0182
Manganese	mg/L	0.0111	0.0172	0.0377
Mercury	mg/L	< 0.00001	< 0.00001	< 0.00001
Molybdenum	mg/L	< 0.0010	< 0.0010	< 0.0010
Nickel	mg/L	0.0018	0.0014	0.0015
Selenium	mg/L	< 0.00010	< 0.00010	< 0.00010
Strontium	mg/L	0.733	0.534	0.549
Sulphur	mg/L	13.9	9.8	9.9
Thallium	mg/L	< 0.000010	< 0.000010	< 0.000010
Tin	mg/L	< 0.0050	< 0.0050	< 0.0050
Titanium	mg/L	< 0.0050	< 0.0050	< 0.0050
Uranium	mg/L	0.00027	0.00017	0.00018
Vanadium	mg/L	< 0.0050	< 0.0050	< 0.0050
Zinc	mg/L	0.0137	< 0.0050	< 0.0050