



Meliadine Gold Project  
NWB 2BB-MEL1424  
August 2020 Monthly Report

**Prepared for:**  
Nunavut Water Board

**Prepared by:**  
Agnico Eagle Mines Limited – Meliadine Division

September 30<sup>th</sup>, 2020

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	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 <sup>1</sup>	Camp	m <sup>3</sup> /day	16.47
	Pump Shack	m <sup>3</sup> /day	0.00
	Construction	m <sup>3</sup> /day	0.00
MEL-2 (A8) <sup>2</sup>	Underground	m <sup>3</sup> /day	0.00
	Drilling	m <sup>3</sup> /day	0.00
Not MEL-1 or MEL-2	Drilling	m <sup>3</sup> /day	60.35
Daily Average		m <sup>3</sup> /day	76.82
Total August 2020		m <sup>3</sup>	2,381.53
Total 2020		m <sup>3</sup>	11,454.58

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

In August 2020, no material was deposited in the Type B landfarm. Any new contaminated soil generated will be deposited in the landfarm approved in the Type A Water License.

<sup>1</sup> MEL-1: 541943E, 6989174N

<sup>2</sup> 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 material was removed in August 2020.

- 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 CP-1. Since early June 2019, the treated sewage from the exploration camp is deposited in CP-1 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 continued to monitor the quality of the effluent; 4 samples were collected during the month. The summary of the results is provided in Table 3 below.

Table 3: Effluent testing results at STP-FINAL (MEL-7) sampling station, August 2020

MEL-7	MEL-7 EFFLUENT QUALITY LIMITS	Sample date	8/3/2020	8/10/2020	8/17/2020	8/24/2020	8/31/2020
Parameter		Unit					
pH	6.0 - 9.5	pH units	7.14	7.08	7.7	7.42	7.31
Specific conductivity		umhos/cm	470	440	580	550	530

Total alkalinity, as CaCO <sub>3</sub>		mg/L	37	38	150	120	82
Total suspended solids	100	mg/L	5	6	11	11	15
Volatile TSS		mg/L	5	6	9	11	14
Biochemical Oxygen Demand, 5 Day	80	mg/L	4	4	15	15	11
Chemical oxygen demand		mg/L	57	53	100	92	86
Nitrate		mg/L	11.9	11.3	3.51	2.54	6.83
Nitrate + nitrite		mg/L	12.1	11.5	3.65	2.67	7.04
Nitrite		mg/L	0.278	0.239	0.135	0.13	0.211
Total ammonia		mg/L	5.3	4.2	24	18	11
Total Kjeldahl nitrogen		mg/L	9	5.8	28	22	15
Total phosphorus		mg/L	7.5	7.4	11	7.3	7.9
Total oil and grease	5	mg/L	2.3	1.5	< 0.50	1.2	< 0.50
Aerobic heterotrophic bacteria		CFU/mL	< 0	< 30000	< 0	23000	370
Atypical colonies		CFU/100mL	72	82	24000	300	54
Escherichia coli		CFU/100mL	< 0	< 0	1182	36	< 0
Fecal Coliform	1000	CFU/100mL	< 0	< 0	1182	140	< 0
Total Coliform		CFU/100mL	88	210	32000	2700	2

**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 July 2020, no water was discharged from the Fuel Containment Facilities (Monitoring station MEL-5) nor 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.***

On-ice drilling was conducted in March and April 2019; samples are collected before, during and after drilling and sent for analysis. The complete set of analyses results was submitted with the May 2019 report.

- 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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