



Meliadine Gold Project
NWB 2AM-MEL1631
November 2020 Monthly Report

Prepared for:

Nunavut Water Board

Prepared by:

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SECTION 1 • BACKGROUND

As required under Part I, Item 10 of Type A Water License 2AM-MEL1631, this report documents the water management and monitoring activities at the mine site and provides a summary of spills/actions for the month of November 2020.

SECTION 2 • WATER MANAGEMENT

2.1 WATER USAGE

Table 2.1 details monthly water usage approved under Water License 2AM-MEL1631:

Table 2.1: Summary of Agnico's monthly water usage in November 2020

	Monthly Usage (m ³)
Camp and Mill (MEL-11)	23,494.88
Construction – Batch Plant (MEL-26 – A8)	0
Dust suppression	0
Total November	23,494.88
Year to date 2020	262,438.96

2.2 DEWATERING ACTIVITIES

Dewatering of the Lake H-19 and H-20 started August 17th 2019 and stopped October 5th 2019.

2.3 MELIADINE DISCHARGE

Discharge from the EWTP into Meliadine Lake via the Final Discharge Point (MEL-14) started June 5th, 2020 and stopped October 3rd, 2020. A total of 13,829 m³ was discharged throughout October 2020.

2.4 MELVIN BAY DISCHARGE

Discharge to sea via the Final Discharge Point (MEL-26) started August 10th 2020 and stopped October 8th, 2020. A total of approximately 5,275 m³ was discharged throughout October 2020.

2.5 SEEPAGE AND RUNOFF FROM THE LANDFILL AND LANDFARM

The 2AM-MEL1631 landfill and landfarm were commissioned in November 2017. No seepage or runoff was observed in November 2020.

2.6 SEWAGE TREATMENT PLANT

In November 2020, 4,512 m³ of treated wastewater was discharged into CP1. The majority of the sludge is disposed of in the WRSF.

2.7 CONTAINMENTS

Discharged from the Itivia fuel containment facility (Station Mel-25) started June 27th and ended in July. Approximately 3,780 m³ was discharged through the discharge period.

2.8 MONITORING ANALYTICAL DATA

In November 2020, a sample related to the Water Licence was taken. See below the analytical results from this sampling event. No exceedance occurred in November 2020.

MEL-11	Sample date	11/14/2020
Parameter	Unit	
WQ01- Field Measured		
Conductivity	uS/cm	122.2
Dissolved oxygen	%	97.3
pH	-	7.29
Temperature	°C	4.3
WQ02- Conventional Parameters		
Dissolved organic carbon	mg/L	3.4
Hardness, as CaCO ₃ (D)	mg/L	31.3
Hardness, as CaCO ₃ (T)	mg/L	32.5
pH	pH units	7.13
Specific conductivity	umhos/cm	120
Total alkalinity, as CaCO ₃	mg/L	21
Total dissolved solids	mg/L	75
Total organic carbon	mg/L	3.6
Total suspended solids	mg/L	< 1
Turbidity	NTU	0.2
WQ03- Major Ions		
Bicarbonate, as CaCO ₃	mg/L	21
Carbonate, as CaCO ₃	mg/L	< 1.0
Chloride	mg/L	18
Cyanide	mg/L	< 0.0050
Cyanide (free)	mg/L	< 0.0010
Cyanide (WAD)	mg/L	< 0.0010
Silica	mg/L	0.31
Sulphate	mg/L	6.2
WQ04- Nutrients and Chlorophyll a		
Nitrate	mg/L	< 0.10
Nitrate + nitrite	mg/L	< 0.10
Nitrite	mg/L	< 0.010
Orthophosphate	mg/L	< 0.010
Total ammonia	mg/L	0.11
Total Kjeldahl nitrogen	mg/L	0.19

Total phosphorus	mg/L	< 0.020
WQ06- Total Metals		
Aluminum	mg/L	0.0046
Antimony	mg/L	< 0.00050
Arsenic	mg/L	0.00044
Barium	mg/L	0.0095
Beryllium	mg/L	< 0.00010
Bismuth	mg/L	< 0.0010
Boron	mg/L	< 0.05
Cadmium	mg/L	< 0.000010
Calcium	mg/L	9.94
Chromium	mg/L	< 0.0010
Cobalt	mg/L	< 0.00020
Copper	mg/L	0.00095
Iron	mg/L	0.015
Lead	mg/L	< 0.00020
Lithium	mg/L	< 0.0020
Magnesium	mg/L	1.86
Manganese	mg/L	0.0031
Mercury	mg/L	< 0.00001
Molybdenum	mg/L	< 0.0010
Nickel	mg/L	< 0.0010
Potassium	mg/L	1.2
Selenium	mg/L	< 0.00010
Silicon	mg/L	0.113
Silver	mg/L	< 0.000020
Sodium	mg/L	7.98
Strontium	mg/L	0.063
Sulphur	mg/L	< 3
Thallium	mg/L	< 0.000010
Tin	mg/L	< 0.0050
Titanium	mg/L	< 0.0050
Uranium	mg/L	< 0.00010
Vanadium	mg/L	< 0.0050
Zinc	mg/L	< 0.0050
Zirconium	mg/L	< 0.00010
WQ07- Dissolved Metals		
Antimony	mg/L	< 0.00050
Arsenic	mg/L	0.00039
Barium	mg/L	0.0092
Beryllium	mg/L	< 0.00010
Bismuth	mg/L	< 0.0010
Boron	mg/L	< 0.05

Cadmium	mg/L	< 0.000010
Calcium (E200.8)	mg/L	9.57
Chromium	mg/L	< 0.0010
Cobalt	mg/L	< 0.00020
Copper	mg/L	0.00087
Iron	mg/L	0.0055
Lead	mg/L	< 0.00020
Lithium	mg/L	< 0.0020
Magnesium (E200.8)	mg/L	1.79
Manganese	mg/L	0.001
Mercury	mg/L	< 0.00001
Molybdenum	mg/L	< 0.0010
Nickel	mg/L	< 0.0010
Potassium (E200.8)	mg/L	1.2
Selenium	mg/L	0.0001
Silicon	mg/L	< 0.1
Silver	mg/L	< 0.000020
Sodium (E200.8)	mg/L	7.78
Strontium	mg/L	0.062
Sulphur	mg/L	< 3.0
Thallium	mg/L	< 0.000010
Tin	mg/L	< 0.0050
Titanium	mg/L	< 0.0050
Uranium	mg/L	< 0.00010
Vanadium	mg/L	< 0.0050
Zinc	mg/L	< 0.0050
Zirconium	mg/L	< 0.00010
WQ10- Volatile Organics		
Benzene	ug/L	< 0.20
Ethylbenzene	ug/L	< 0.20
F1 (C6-C10)	ug/L	< 25
F1 (C6-C10)-BTEX	ug/L	< 25
F2 (C10-C16)	ug/L	< 100
F3 (C16-C34)	ug/L	< 200
F4 (C34-C50)	ug/L	< 200
m,p-Xylenes	ug/L	< 0.40
o-Xylene	ug/L	< 0.20
Reached baseline at C50	ug/L	YES
Toluene	ug/L	< 0.20
Xylenes	ug/L	< 0.40

SECTION 3 • MATERIAL MANAGEMENT

3.1 LANDFILL / LANDFARM

The volume of material placed into the landfill is evaluated through periodic surveys. According to the most recent survey done November 10th 2020 the landfill contained approximately 18,214 m³ of material.

In November 2020, no contaminated soil was transferred to the Type A Landfarm as a result of spills cleanup.

3.2 ORE

Approximately 123,204 tonnes of ore were processed through the Mill in November 2020.

3.3 WASTE ROCK STORAGE FACILITY

In November 2020, a total of 55,810 tonnes of waste rock was removed in the mine development process. 28,010 tonnes were used as underground dry rockfill. 33,936 tonnes was stockpiled for progressive closure cover.

3.4 TAILINGS

77,737 dry tonnes of filtered tailings were sent to the Tailing Storage Facility in November 2020. 45,467 tonnes of tailings were used for paste underground backfill.

SECTION 4 SPILL MANAGEMENT

4.1 INTERNAL AND REPORTABLE SPILLS

All spills reported internally (4) are listed in the table 4.1 and were managed according to Agnico's spill contingency plan. Spills were contained and cleaned up, contaminated material was disposed of in an appropriate manner, and the clean-up actions were monitored closely by the Environment Department. 1 reportable spill occurred in November 2020.

Table 4.1: Summary of Agnico's Spill Reports in November 2020

Date and time of occurrence	If material not listed in dropdown or more details, enter here	Estimated quantity (l)	Exact location of incident	Description of incident	Describe immediate corrective actions
Monday, November 02, 2020 11:00:00 PM	Hydraulic Oil	80.00	WRSF3	A hose was not crimped the right way on the haul truck from the factory. When the haul truck started, the hose disconnected, and the spill occurred.	The engine was stopped, and spill pads were used of to clean the spill and disposed of in Quadrex bags.
Tuesday, November 03, 2020 11:30:00 AM	Hydraulic Oil	2.00	Road to crusher at Tiri2	A worker was working with the telehandler when the hydraulic hose burst.	The spotter acted quickly and installed spill pads all over the area. The contaminated spill pads were disposed of adequately.
Tuesday, November 17, 2020 7:00:00 PM	Burnt Product Diesel Fuel	1.00	Corner of B7 Lake	A fire within the pump shack of a drill rig was extinguished, leading to potentially contaminated material being released onto the snow and ice on the shore of Lake B7.	On November 19 the Orbit Garant drilling team was able to plow all of the contaminated snow and ice into a large pile. This material was then brought to the Snow Cell on site where it will be stored until the summer and treated through the oil-water separator.
Monday, November 30, 2020 2:00:00 PM	Sewage Water	20.00	STP Main Camp	Sucker truck operators arrived at the STP to transfer 2-3 loads from the old EQ tank to the new EQ tank to help with the initial startup. They hooked their hose onto the line at the base of the old EQ tank and opened the 3" ball valve on the tank to start feeding into the sucker truck. They accomplished one load into the new EQ tank but on the second load when they went to close the ball valve on the EQ tank it would not close all the way. A frost fighter was	The spill froze between two sea-cans. The valve was repaired, and the contaminated snow was taken to the snow cell.

				brought over to warm up the valve to see if freezing was the issue. On their second attempt they were still unable to 100% close the valve. They then made the decision to install a threaded plug to stop the EQ tank from leaking until a new valve could be installed. In the process of them removing their hose from the sucker truck to install the plug the pressure was greater than expected and they were covered in sewage waste.	
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