



Meliadine Gold Project  
NWB 2AM-MEL1631  
April 2021 Monthly Report

**Prepared for:**

Nunavut Water Board

**Prepared by:**

Agnico Eagle Mines Limited – Meliadine Division

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## SECTION 1 • BACKGROUND

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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 April 2021.

## SECTION 2 • WATER MANAGEMENT

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### 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 April 2021**

	Monthly Usage (m <sup>3</sup> )
Camp and Mill (MEL-11)	32,763
Dust suppression	0
Total April	<b>32,763</b>
Year to date 2021	<b>140,365</b>

### 2.2 DEWATERING ACTIVITIES

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

### 2.3 MELIADINE DISCHARGE

Discharge from the EWTP into Meliadine Lake via the Final Discharge Point (MEL-14) started June 5<sup>th</sup>, 2020 and stopped October 4<sup>th</sup>, 2020. A total of 13,836 m<sup>3</sup> was discharged throughout October 2020.

### 2.4 MELVIN BAY DISCHARGE

Discharge to sea via the Final Discharge Point (MEL-26) started August 10<sup>th</sup> 2020 and stopped October 8<sup>th</sup>, 2020. A total of approximately 5,275 m<sup>3</sup> 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 April 2021.

### 2.6 SEWAGE TREATMENT PLANT

In April 2021, 5,195 m<sup>3</sup> 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 27<sup>th</sup> and ended in July 2020. Approximately 3,780 m<sup>3</sup> was discharged through the discharge period.

## 2.8 MONITORING ANALYTICAL DATA

In April 2021, a sample related to the Water Licence was taken. See below the analytical results from this sampling event at station MEL-11. No exceedance occurred in April 2021.

MEL-11	Sample date	4/18/2021
Parameter	Unit	
<b>WQ02- Conventional Parameters</b>		
pH	pH units	7.42
Turbidity	NTU	0.2
Specific conductivity	umhos/cm	150
Total alkalinity, as CaCO <sub>3</sub>	mg/L	25
Hardness, as CaCO <sub>3</sub> (T)	mg/L	40.4
Hardness, as CaCO <sub>3</sub> (D)	mg/L	40.3
Carbonate, as CaCO <sub>3</sub>	mg/L	< 1.0
Bicarbonate, as CaCO <sub>3</sub>	mg/L	25
TDS	mg/L	70
TSS	mg/L	< 1
Total organic carbon	mg/L	4.1
Dissolved organic carbon	mg/L	4.2
<b>WQ03- Major Ions</b>		
Calcium	mg/L	12.4
Chloride	mg/L	24
Cyanide	mg/L	< 0.0050
Cyanide (free)	mg/L	0.0029
Cyanide (WAD)	mg/L	< 0.0010
Magnesium	mg/L	2.27
Potassium	mg/L	1.47
Sodium	mg/L	9.67
Sulfate	mg/L	8.1
<b>WQ04- Nutrients and Chlorophyll a</b>		
Total ammonia	mg/L	< 0.050
Nitrate	mg/L	< 0.10
Nitrite	mg/L	< 0.010
Nitrate + nitrite	mg/L	< 0.10
Total Kjeldahl nitrogen	mg/L	0.31
Total phosphorus	mg/L	< 0.020
Orthophosphate	mg/L	< 0.010
<b>WQ06- Total Metals</b>		
Aluminum	mg/L	0.0042
Antimony	mg/L	< 0.00050
Arsenic	mg/L	0.00056
Barium	mg/L	0.0143

Beryllium	mg/L	< 0.00010
Boron	mg/L	< 0.050
Cadmium	mg/L	< 0.000010
Calcium	mg/L	12.4
Chromium	mg/L	< 0.0010
Copper	mg/L	0.00110
Iron	mg/L	0.024
Lead	mg/L	< 0.00020
Lithium	mg/L	< 0.0020
Manganese	mg/L	0.0063
Mercury	mg/L	< 0.00001
Molybdenum	mg/L	< 0.0010
Nickel	mg/L	0.0011
Selenium	mg/L	< 0.00010
Silver	mg/L	< 0.000020
Strontium	mg/L	0.0821
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
<b>WQ07- Dissolved Metals</b>		
Aluminum	mg/L	< 0.0030
Antimony	mg/L	< 0.00050
Arsenic	mg/L	0.00049
Barium	mg/L	0.0140
Beryllium	mg/L	< 0.00010
Boron	mg/L	< 0.050
Cadmium	mg/L	< 0.000010
Chromium	mg/L	< 0.0010
Copper	mg/L	0.00106
Iron	mg/L	0.0094
Lead	mg/L	< 0.00020
Lithium	mg/L	< 0.0020
Manganese	mg/L	< 0.0010
Mercury	mg/L	< 0.00001
Molybdenum	mg/L	< 0.0010
Nickel	mg/L	0.0010
Selenium	mg/L	< 0.00010
Silver	mg/L	< 0.000020
Strontium	mg/L	0.0814
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
<b>WQ10- Volatile Organics</b>		
Benzene	mg/L	< 0.00020
Ethylbenzene	mg/L	< 0.00020
Toluene	mg/L	< 0.00020
Xylenes	mg/L	< 0.00040
m,p-Xylenes	mg/L	< 0.00040
o-Xylene	mg/L	< 0.00020
F1 (C6-C10)-BTEX	mg/L	< 0.025
F1 (C6-C10)	mg/L	< 0.025
F2 (C10-C16)	mg/L	< 0.1
F3 (C16-C34)	mg/L	< 0.2
F4 (C34-C50)	mg/L	< 0.2

## **SECTION 3 • MATERIAL MANAGEMENT**

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### **3.1 LANDFILL / LANDFARM**

The volume of material placed into the landfill is evaluated through periodic surveys. According to the most recent survey done February 26<sup>th</sup>, 2021 the landfill contained approximately 20,544 m<sup>3</sup> of material.

In April 2021, approximately 5.25 m<sup>3</sup> of contaminated soil was transferred to the Type A Landfarm as a result of spills cleanup.

### **3.2 ORE**

Approximately 116,023 tonnes of ore were processed through the Mill in April 2021.

### **3.3 WASTE ROCK STORAGE FACILITY**

In April 2021, a total of 64,579 tonnes of waste rock was removed in the mine development process. 23,472 tonnes were used as underground dry rockfill.

### **3.4 TAILINGS**

75,071 dry tonnes of filtered tailings were sent to the Tailing Storage Facility in April 2021. 40,952 tonnes of tailings were used for paste underground backfill.

## **SECTION 4 SPILL MANAGEMENT**

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### **4.1 INTERNAL AND REPORTABLE SPILLS**

Spills reported internally (10) 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. One reportable spill occurred in April 2021.

**Table 4.1: Summary of Agnico's Spill Reports in April 2021**

<b>Date and time of occurrence</b>	<b>If material not listed in dropdown or more details, enter here</b>	<b>Estimated quantity (l)</b>	<b>Exact location of incident</b>	<b>Description of incident</b>	<b>Describe immediate corrective actions</b>
Tuesday, April 13, 2021 1:00:00 AM	Diesel Fuel		6 Million Primary Containment	Fuel spill was found in the fully lined secondary containment of a fuel tank during a weekly fuel spill inspection. No impact to the environment was caused as the fuel was contained in the containment berm, specifically designed, and approved to retain any potential leakage from the tank.	The contaminated snow was recovered and placed into the snow cell.
Monday, April 19, 2021 6:30:00 AM	Engine Oil	0.30	Drill 1 SH-102	Leak from the drill rig.	A drip pan was placed to recover the leaking oil. The contaminated snow was recovered as soon as possible and put into a Quatex hazmat bag and in a 20 L pail.
Wednesday, April 21, 2021 12:00:00 AM	Diesel Fuel	0.50	East Side of Process Plant	Leak from the cap of a skid steer's fuel tank, which was not sealed properly. The cap had been patched with plastic and tape.	With the grader, all the contaminated material was recovered and brought to Landfarm A. The fuel cap of the skid steer was changed.
Thursday, April 22, 2021 1:00:00 PM	Diesel Fuel	50.00	6 Million Fueling Area	Fueling nozzle of the fuel truck started dripping on the ground, as the nozzle was frozen slightly open when the fuel hose was put away after use. The spill happened while refilling the fuel truck's tank at the 6M.	The spill was cleaned with spill pads. The pads were placed in a pail and transferred to the hazmat laydown for proper storage.
Friday, April 23, 2021 4:00:00 PM	Hydraulic Oil	150.00	WRSF1 to TIRI01	Hydraulic line ruptured underneath a haul truck. The oil leaked from WRSF1 to TIRI01.	The equipment was stopped as soon as the leak was observed. Spill pads and drip pan were placed underneath the equipment. The contaminated material



					was recovered and brought to Landfarm A. Spill pads were disposed of according to procedure.
Saturday, April 24, 2021 6:00:00 AM	Cooling Fluid	40.00	Haul Road	While traveling the excavator on the haul road, the water pump broke down and cooling fluid spilled under the excavator.	The equipment was stopped, and the water pump was replaced right away. Contaminated material (0.5 m <sup>3</sup> ) was removed from the haul road and disposed of in Landfarm A.
Saturday, April 24, 2021 2:30:00 PM	Transmission Oil	85.00	WRSF1	Transmission hose failure on a haul truck.	The equipment was stopped, and the hose was replaced. Contaminated snow was put into the snow cell and contaminated material was disposed of in Landfarm A.
Sunday, April 25, 2021 5:30:00 AM	Hydrochloric Acid	1.50	Chemical Pad	Leak from a storage sea-can.	Sea-can was brought to the mill for verification and contaminated snow was put into the snow cell.
Monday, April 26, 2021 11:00:00 AM	Cooling Fluid	10.00	OP2 Ore Stockpile	Hose failure on a haul truck.	Equipment was stopped and spill pads were used. Spill pads were disposed of in Quatrex bags at the hazmat laydown.
Monday, April 26, 2021 1:00:00 PM	Diesel Fuel	2.00	North End of Power House	Fuel dripped from an equipment during work around the power house.	Contaminated material was scraped off and disposed of in a Quatrex bag.