Meliadine Gold Project
NWB 2AM-MEL1631
November 2019 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 2019.

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 2019

	Monthly Usage (m^3)
Camp and Mill (MEL-11)	**31,935.00**
Construction – Batch Plant (MEL-26 – A8)	0
Dust suppression	0
Total November	**31,935.00**
Year to date 2019	**263,301.22**

2.2 DEWATERING ACTIVITIES

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

2.3 MELIADINE DISCHARGE

Discharge from the EWTP into Meliadine Lake via the Final Discharge Point (MEL-14) started in July, a total of 11,581 was discharged in October including the dewatering of H-19 and H-20 which stopped October 5th.

2.4 MELVIN BAY DISCHARGE

Discharge to sea via the Final Discharge Point (MEL-26) started August 1st, a total of 4,164 m3 was discharged in October and stopped October 11th.

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 2019.

2.6 SEWAGE TREATMENT PLANT

In November 2019, 3,631 m^3 of treated wastewater was discharged into CP1. 39 m^3 of sludge was removed during the month. The majority of the sludge is disposed of in the Tailings Storage Facility as approved, the sludge can also be utilized as nutrient in the site landfarm or shipped to the south with Agnico Eagle's hazmat if needed.

2.7 CONTAINMENTS

Discharged from the Itivia fuel containment facility (Station Mel-25) occurred during the summer and approximately 12,062 m^3 was discharged through the year.

2.8 MONITORING ANALYTICAL DATA

In November, numerous samples related to the water Licence were sampled. See below the analytical results from these monitoring stations. No exceedances occurred in November.

MEL-11	Sample Date	11/4/2019
Parameter	**Unit**	
Field Measured		
pH	pH units	6.93
Conductivity	uS/cm	92.6
Temperature	°C	4.1
Dissolved oxygen	mg/L	12.74
Dissolved oxygen	%	97.8
Conventional Parameters		
pH	pH units	7.4
Specific conductivity	umhos/cm	100
Hardness, as CaCO3 (D)	mg/L	27
Hardness, as CaCO3 (T)	mg/L	27.4
Total alkalinity, as CaCO3	mg/L	20
Total dissolved solids	mg/L	95
Total suspended solids	mg/L	< 1
Total organic carbon	mg/L	3.3
Dissolved organic carbon	mg/L	3
Turbidity	NTU	0.2
Major Ions		
Bicarbonate, as CaCO3	mg/L	20
Calcium	mg/L	8.44
Carbonate, as CaCO3	mg/L	< 1.0
Chloride	mg/L	13
Cyanide	mg/L	< 0.0050
Cyanide (free)	mg/L	0.0017|< 0.0010

Cyanide (free)	mg/L	0.0017|< 0.0010
Magnesium	mg/L	1.44
Potassium	mg/L	1.07
Sodium	mg/L	5.81
Sulphate	mg/L	4.8
Silica	mg/L	0.85
Nutrients and Chlorophyll a		
Nitrate	mg/L	< 0.10
Nitrite	mg/L	< 0.010
Nitrate + nitrite	mg/L	< 0.10
Total ammonia	mg/L	< 0.050
Total Kjeldahl nitrogen	mg/L	0.23
Total phosphorus	mg/L	< 0.020
Orthophosphate	mg/L	< 0.010
Total Metals		
Aluminum	mg/L	0.0084
Antimony	mg/L	< 0.00050
Arsenic	mg/L	0.00036
Barium	mg/L	0.0081
Beryllium	mg/L	< 0.00010
Bismuth	mg/L	< 0.0010
Boron	mg/L	< 0.05
Cadmium	mg/L	< 0.000010
Calcium	mg/L	8.41
Chromium	mg/L	< 0.0010
Cobalt	mg/L	< 0.00020
Copper	mg/L	0.00088
Iron	mg/L	0.02
Lead	mg/L	< 0.00020
Lithium	mg/L	< 0.0020
Magnesium	mg/L	1.55
Manganese	mg/L	0.0026
Mercury	mg/L	< 0.00001
Molybdenum	mg/L	< 0.0010
Nickel	mg/L	< 0.0010
Potassium	mg/L	1.06
Selenium	mg/L	< 0.00010
Silicon	mg/L	0.155
Silver	mg/L	< 0.000020
Sodium	mg/L	5.98
Strontium	mg/L	0.043
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
Dissolved Metals		
Aluminum	mg/L	< 0.0030
Antimony	mg/L	< 0.00050
Arsenic	mg/L	0.00034
Barium	mg/L	0.0083
Beryllium	mg/L	< 0.00010
Bismuth	mg/L	< 0.0010
Boron	mg/L	< 0.05
Cadmium	mg/L	< 0.000010
Chromium	mg/L	< 0.0010
Cobalt	mg/L	< 0.00020
Copper	mg/L	0.00076
Iron	mg/L	0.0081
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
Silicon	mg/L	0.136
Silver	mg/L	< 0.000020
Strontium	mg/L	0.0441
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
Volatile Organics		
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
Reached baseline at C50	mg/L	YES

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 12th, the landfill contained approximately 16,340 m^3 of material.

In November 2019, approximately 0.5m^3 of contaminated soil was transferred to the Type A Landfarm as a result of minor spills cleanup.

3.2 ORE

Approximately 104,435 tonnes of ore were processed through the Mill in November. 6,632 tonnes of ore were stockpiled.

3.3 WASTE ROCK STORAGE FACILITY

In November, a total of 30,560 tonnes of waste rock was removed in the mine development process. 1,099 tonnes were used as underground dry rockfill. No waste was stockpiled for progressive closure cover.

3.4 TAILINGS

59,226 dry tonnes of filtered tailings were sent to the Tailing Storage Facility in November 2019. 45,209 tonnes of tailings were used for paste underground backfill.

SECTION 4 SPILL MANAGEMENT

4.1 INTERNAL AND REPORTABLE SPILLS

All spills reported internally (8) are listed in the table 4.1 below 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.

2 reportable spills occurred in November 2019.

Table 4.1: Summary of Agnico's Spill Reports in November 2019

Date and time of occurrence	Material	Estimated quantity (l)	Location	Description of incident	Describe immediate corrective actions
Friday, November 01, 2019 12:30:00 AM	TSS	N/A	MEL-26 Melvin Bay Discharge	During the discharge to sea, two regulatory samples were collected at compliance point (MEL-26) in October 2019. The results from the samples for TSS are 14 mg/L and 17 mg/L, which are below the MDMER "Maximum authorized concentration in a grab sample". However, the discharge to sea ceased mid-October following the second sample due to winter conditions. As a result, no additional samples were collected in October resulting in the monthly mean being above the maximum allowable value of 15 mg/L (actual measured value was 15.5 mg/L).	As per MDMER 24(1)(a), Agnico Eagle notified the inspector and decided to follow up on the incident by submitting a spill report for due diligence. The discharge to sea ceased prior to the reception of the sample results so no mitigation measures were taken following the event.
Saturday, November 02, 2019 2:30:00 PM	Oil	3.00	Outside dome 1 Garage	While taking out a diamond drill control unit out of the garage, unit was tilted and some oil from the platform of the unit spilled outside.	Operation stopped, and oil was picked-up right away
Sunday, November 03, 2019 4:30:00 PM	Hydrolic oil	4.00	Oxygen Plant Pad Expansion	An O-Ring on a hydraulic hose was broken and hydraulic oil leaked onto the ground.	Spill pads were used. The oily snow was collected and brought to the landfarm.
Thursday, November 07, 2019 12:00:00 PM	Sewage	25.00		When hooking up the sucker truck line to the lift station at the MSB the hose clamp was improperly affixed to the connection. When the operator	The operator was quick to respond and closed the line immediately and called to inform supervisor. Contaminates were scrapped from

				started to pump the hose broke free. This resulted in a spill of approximately 25L at the lift station on the ground.	ground with backhoe. Approximately 500L of contaminated snow/ice and gravel were removed and placed into Landfarm A.
Monday, November 11, 2019 2:00:00 PM	Hydraulic Oil	15.00	SP-2 Rock Stockpile	Flange bolts on a hydraulic hose became loose due to cold weather, hydraulic oil started leaking.	Spill pads were placed under equipment, the leak was fixed, and oil contaminated soil was brought to the landfarm. The spill pads were disposed of in a quatrex bag.
Tuesday, November 12, 2019 7:30:00 PM	Hydraulic Oil	30.00	MSB outside (between door 5 & 6)	The hydraulic hose for the right boom lift cylinder was leaking.	Spill pads were used, and the machine was brought inside the shop to replace the hose by steel piping (OEM part).
Friday, November 15, 2019 8:00:00 AM	Oil	1.00	MSB parking lot	Engine oil filter came loose, and some oil spilled after parking equipment.	Operator noticed the spill during pre-op. Supervisor was notified, spill was cleaned and disposed of in proper areas.
Monday, November 25, 2019 3:30:00 PM	Emulsion	330.00	Portal 1	While transferring a full tote of emulsion from the flat rack to the boom-truck, the tote slid off of the forks of the telehandler and fell onto its side. Approximately one third of the tote spilled out onto the ground. No water bodies were impacted by this spill.	The operators involved removed the contaminated material which was placed into quatrex bags. The contaminated material was sent to the emulsion plant. Emulsion suitable for salvage will be reused. Unsuitable material will be neutralized using an emulsion destruction process and shipped as hazmat.