AGNICO EAGLE
MELIADINE

Meliadine Gold Mine
NWB 2AM-MEL1631
January 2023 Monthly Report

Prepared for:
Nunavut Water Board

Prepared by:
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SECTION 1 • BACKGROUND

As required under Part I, Item 9 of amended 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 January 2023.

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 the monthly water usage in January 2023

	Monthly Usage (m^3)
Camp, Mill, Dust suppression (MEL-11)	36,021
Dust suppression (water obtained along AWAR/Meliadine River)	0
Total January	**36,021**
Year to date 2023	**36,021**

2.2 DEWATERING ACTIVITIES

No dewatering activities took place during the month.

2.3 MELIADINE DISCHARGE

No discharge to Meliadine Lake occurred during the month.

2.4 MELVIN BAY DISCHARGE

No discharge to Melvin Bay occurred during the month.

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 during the month.

2.6 SEWAGE TREATMENT PLANT

5,141 m^3 of treated wastewater was discharged into CP1 during the month. Approximately 17 m^3 of sludge was removed during the month and disposed of in WRSF3.

2.7 CONTAINMENTS

No discharge from the Itivia fuel containment facility (Station Mel-25) occurred during the month.

2.8 MONITORING ANALYTICAL DATA

One (1) sample related to the Water Licence was taken during the month. The analytical results from this sampling event are presented in the Appendix. No exceedances occurred in January 2023.

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 on January 13th, 2023 the landfill contained approximately 25,666 m³ of material.

Approximately 5 kg of sewage contaminated snow was placed in the Landfarm A during the month.

3.2 ORE

Approximately 155,514 tonnes of ore were processed through the Mill during the month.

3.3 WASTE ROCK STORAGE FACILITY

A total of 67,109 tonnes of waste rock was removed in the underground mine development process during the month while 50,606 tonnes of waste rock were removed from open pit mining. 51,834 tonnes were used as underground dry rockfill.

3.4 TAILINGS

133,227 dry tonnes of filtered tailings were sent to the Tailing Storage Facility during the month. 22,287 tonnes of tailings were used for paste underground backfill.

SECTION 4 SPILL MANAGEMENT

4.1 INTERNAL AND REPORTABLE SPILLS

Spills reported internally (9) are listed in the table 4.1 and were managed according to Agnico Eagle'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. Two (2) reportable spills occurred during the month (Refer to the gray shading in Table 4.1).

Table 4.1: Summary of Agnico Eagle's Spill Reports in January 2023

Date and time of occurrence	Contaminant	Estimated quantity	Unit	Exact location of incident	Description of incident	Describe immediate corrective actions
Tuesday, January 10, 2023 1:00:00 PM	Sewage	5.00	L	MSB Lift Station	An estimated 5L of sewage was spilled on the industrial pad at the multiple service building (MSB) lift station due to the vacuum truck operator not following the proper procedure	The impacted surface area was hand excavated and an estimated 5 kg of contaminated snow was brought to Landfarm A as per the Spill Contingency Plan.
Tuesday, January 10, 2023 4:00:00 PM	Hydraulic oil	5.00	L	New CIL	Failure of the hydraulic hose on the gene-lift caused 5 L of hydraulic oil to be released on the ground at the CIL construction area.	Spill pads were used to capture the leak and the hydraulic hose was replaced immediately. Contaminated snow was placed into a barrel for later disposal.
Wednesday, January 11, 2023 8:00:00 AM	Sewage	7	m^3	Main Camp Lift station	An estimated 7m^3 of sewage was spilled to the industrial pad due to an equipment failure at the main camp lift station causing it to overflow.	The area was scrapped using a loader. Approximately 20 m^3 of contaminated snow was brought to Tiriganiaq Open Pit 2 following approval from CIRNAC, in consultation with KivIA.
Saturday, January 14, 2023 10:00:00 AM	Hydraulic oil	20.00	L	KCG maintenance shop yard	During the 20-0901 drill maintenance, a centralizer hose failed and hydraulic oil spilled on the ground.	A spill pad was placed under the spilling area properly. Contaminated snow was recovered and placed in the Snow Cell.
Wednesday, January 18, 2023 10:30:00 PM	Engine Oil	94	L	Portal 1 at the Dome 3, behind the dome	Two oil barrels buried in the snow were punctured when heavy equipment was attempting to move other equipment in the area. Approximately 94 L of oil was spilled on the industrial pad.	The punctured barrels, contaminated snow and gravel were placed in Quatrex bags for storage and offsite disposal.

Friday, January 20, 2023 2:30:00 PM	Hydraulic oil	15.00	m^3	North side of SP4	An oil leak occurred on a drill on the north side of SP4.	The equipment was stopped. Spill pads where used to collect the drips and disposed of as hazmat. Contaminated snow was removed and placed in the contaminated snow cell.
Wednesday, January 25, 2023 3:30:00 PM	Transmission oil	1.00	L	TSF Cell 2	Approximately 1 L of transmission oil leaked from a pick-up truck.	Contaminated snow and ice was cleaned up with a shovel and pail and sent to Landfarm A.
Sunday, January 29, 2023 3:30:00 PM	Engine Oil	1.00	L	Intersection by fountain tire	A 5-gallon pail of absorbent rags and oil fell out of a pickup truck when the door was opened, spilling less than a liter of oil on the industrial pad.	The spilled material was cleaned up immediately and placed in a quatrex bag for disposal at the Hazmat lay-down area.
Tuesday, January 31, 2023 12:00:00 PM	Hydraulic oil	20.00	L	Drill SH-102 at Tiri01	A malfunction occurred on the Drill SH-102 motor in TIRI-01 and caused it to shut down. During the repair, the motor did not run for an extended amount of time (approx. 5 hrs). The extreme weather outside had a harsh effect on the equipment. When the drill crew restarted after the motor repair, the	The employee closed the hydraulic valve to stop leakage, pickup contaminated snow, installed absorbent pads to clean the inside of the drill and replaced the drip pan outside. Contaminated materials were placed in a Quatrex bag for disposal as hazmat.

					drill's water cooler for the oil tank (0w40) failed, and approximately 20 L of oil leaked from the cooler onto the side of the water hoses and made contact outside of the drip pan already in place. Most of the released oil was contained within the drill and drip pan outside.	

Appendix – Monitoring Analytical Data

MEL-11		1/8/2023
Parameter	**Unit**	
WQ02- Conventional Parameters		
pH	**pH units**	7.43
Turbidity	**NTU**	0.3
Specific conductivity	**umhos/cm**	130
Hardness, as CaCO3	**mg/L**	37.3
Total alkalinity, as CaCO3	**mg/L**	26
Carbonate, as CaCO3	**mg/L**	< 1.0
Bicarbonate, as CaCO3	**mg/L**	25
TDS	**mg/L**	65
TDS, calculated	**mg/L**	65
TSS	**mg/L**	< 1
Total organic carbon	**mg/L**	3.8
Dissolved organic carbon	**mg/L**	3.7
WQ03- Major Ions		
Chloride	**mg/L**	19
Cyanide	**mg/L**	< 0.00050
Cyanide (free)	**mg/L**	0.0043
Cyanide (WAD)	**mg/L**	< 0.00050
Silica	**mg/L**	0.61
Sulfate	**mg/L**	7.3
WQ04- Nutrients and Chlorophyll a		
Ammonia Nitrogen (as N)	**mg/L**	< 0.050
Nitrate (as N)	**mg/L**	< 0.10
Nitrite (as N)	**mg/L**	< 0.010
Total Kjeldahl nitrogen	**mg/L**	< 0.10
Total phosphorus	**mg/L**	< 0.020
Orthophosphate (P)	**mg/L**	< 0.010
WQ06- Total Metals		
Aluminum	**mg/L**	0.0095
Antimony	**mg/L**	< 0.00050
Arsenic	**mg/L**	0.00068
Barium	**mg/L**	0.0117
Beryllium	**mg/L**	< 0.00010
Boron	**mg/L**	< 0.050
Cadmium	**mg/L**	< 0.000010
Chromium	**mg/L**	< 0.0010
Copper	**mg/L**	0.00109
Iron	**mg/L**	0.027

Lead	**mg/L**	< 0.00020
Lithium	**mg/L**	< 0.0020
Manganese	**mg/L**	0.0057
Mercury	**mg/L**	< 0.00001
Molybdenum	**mg/L**	< 0.0010
Nickel	**mg/L**	0.0012
Selenium	**mg/L**	< 0.00010
Silver	**mg/L**	< 0.000020
Strontium	**mg/L**	0.0635
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
WQ07- Dissolved Metals		
Aluminum	**mg/L**	< 0.0030
Antimony	**mg/L**	< 0.00050
Arsenic	**mg/L**	0.00056
Barium	**mg/L**	0.0113
Beryllium	**mg/L**	< 0.00010
Boron	**mg/L**	< 0.050
Cadmium	**mg/L**	< 0.000010
Calcium (Dissolved)	**mg/L**	11.3
Chromium	**mg/L**	< 0.0010
Copper	**mg/L**	0.00105
Iron	**mg/L**	0.0060
Lead	**mg/L**	< 0.00020
Lithium	**mg/L**	< 0.0020
Magnesium (Dissolved)	**mg/L**	2.04
Manganese	**mg/L**	< 0.0010
Mercury	**mg/L**	< 0.00001
Molybdenum	**mg/L**	< 0.0010
Nickel	**mg/L**	< 0.0010
Potassium (Dissolved)	**mg/L**	1.32
Selenium	**mg/L**	< 0.00010
Silver	**mg/L**	< 0.000020
Sodium (Dissolved)	**mg/L**	8.60
Strontium	**mg/L**	0.0657
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
WQ10- 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