Meliadine Gold Mine
NWB 2AM-MEL1631
February 2024 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 February 2024.

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 2024

Usage	Unit	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	2024 Total
MEL-11[1]	m^3	46,859	40,057	-	-	-	-	-	-	-	-	-	-	86,916
Dust suppression[2]	m^3	0	0	-	-	-	-	-	-	-	-	-	-	0
Dust suppression (CP1)[3]	m^3	0	0	-	-	-	-	-	-	-	-	-	-	0

2.2 DEWATERING ACTIVITIES

No dewatering activities took place during the month.

2.3 WATER DISCHARGE

Table 2.3 details monthly water discharge, including:

- discharge from the EWTP to Meliadine Lake via the Final Discharge Point (MEL-14);
- discharge of treated saline effluent to Melvin Bay via the Final Discharge Point (MEL-26), and
- discharge from the Itivia fuel containment facility (MEL-25).

[1] Camp, Mill, Dust suppression

[2] Water obtained along AWAR/Meliadine River

[3] Reclaim water obtained from CP1 or other Contact Water management facilities and used for dust suppression on site

Table 2.3: Summary of the monthly water discharge in 2024

Location	Unit	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	2024 Total
MEL-14	m^3	0	0	-	-	-	-	-	-	-	-	-	-	0
MEL-26	m^3	0	0	-	-	-	-	-	-	-	-	-	-	0
MEL-25	m^3	0	0	-	-	-	-	-	-	-	-	-	-	0

No discharge activities took place during the month.

2.4 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.

As per the approved Landfill (Stage 4) Berm Raise Design Report and Monitoring station MEL-24 description Modification, water accumulated inside the landfill is pumped towards Pond H13, which is the current location seepage from the landfill flows towards.

2.5 SEWAGE TREATMENT PLANT

Table 2.5 details monthly discharge from the Sewage Treatment Plant (STP), including the treated wastewater discharge to CP1 and sludge removed and disposed of in the WRSF.

Table 2.5: Summary of the monthly disposal/discharge from the STP in 2024

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	2024 Total
Wastewater Discharge (m^3)		4,350	5,270	-	-	-	-	-	-	-	-	-	-	9,620
Sewage Sludge	Amount (m^3)	100	100	-	-	-	-	-	-	-	-	-	-	200
	Disposal Location	WRSF3	WRSF3	-	-	-	-	-	-	-	-	-	-	-

2.6 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 Appendix.

SECTION 3 • MATERIAL MANAGEMENT

3.1 LANDFILL / LANDFARM

Table 3.1 details quarterly Landfill and Landfarm survey results, as well as the amount of material placed in the Landfarm every month.

Table 3.1: Summary of the monthly disposal in the Landfarm and quarterly survey volumes of Landfill and Landfarm

Location	Unit	Q1			Q2			Q3			Q4			2024 Total
		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	
Landfill (Survey)	m^3	28,127			-			-			-			-
Landfarm (Survey)	m^3	604[4]			-			-			-			-
Landfarm[5]	m^3	1.8	0.02	-	-	-	-	-	-	-	-	-	-	1.82

[4] Latest Landfarm survey was conducted in October 2023. Surveys of the Landfarm are generally not conducted during the winter months, as the presence of snow would not allow a representative survey of the soil quantity.
[5] Amount of contaminated solid material (soil) placed in the Landfarm or lined sorting area.

3.2 ORE, WASTE ROCK STORAGE FACILITY, TAILINGS

Table 3.2 details monthly material management, including processed ore, waste rock, and tailings.

Table 3.2: Summary of the monthly material management in 2024

Material (tonnes)		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Cumulative 2024
Processed Ore		190,946	154,435	-	-	-	-	-	-	-	-	-	-	345,381
Waste Rock	Removed from open pit mining	175,380	534,627	-	-	-	-	-	-	-	-	-	-	710,007
	Removed from underground mining	71,281[6]	67,267	-	-	-	-	-	-	-	-	-	-	710,007
	Used as underground dry rockfill	49,823	31,805	-	-	-	-	-	-	-	-	-	-	81,628
Tailings	Send to TSF	144,379	107,392	-	-	-	-	-	-	-	-	-	-	251,771
	Used as paste underground backfill	46,567	47,043	-	-	-	-	-	-	-	-	-	-	93,610

[6] January waste rock removed from underground mining was updated in February report

SECTION 4 SPILL MANAGEMENT

4.1 INTERNAL AND REPORTABLE SPILLS

Spills reported internally 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. One (1) reportable spill occurred during the month (Refer to the gray shading in Table 4.1).

Table 4.1: Summary of Agnico Eagle's Spill Reports in February 2024

Date and time of occurrence	Contaminant	Estimated quantity	Exact location of incident	Description of incident	Describe immediate corrective actions
Friday, February 02, 2024 7:00:00 PM	Coolant	35 L	Tiri01 Pit	A spill incident occurred as a result of a ruptured heater hose on the PC1250 excavator, leading to the release of 35 liters of coolant onto the ground.	The equipment was promptly stopped, and immediate measures were taken to contain the spill, including deploying a bucket to gather the bulk of the spill and spill containment pads to absorb any residual droplets. Absorbents were disposed of in an oily solid bin at KCG maintenance garage.
Monday, February 05, 2024 11:30:00 AM	Hydraulic oil	1 L	E&I Foldaway	Mechanics performed maintenance on the manlift, during which they topped up the hydraulic fluid to its maximum level. Subsequently, when lowering the boom on a cliff, the manlift overflowed, resulting in a spill of 1 liter of hydraulic fluid onto the ground.	One shovel scoop was disposed of in a waste fuel drum.
Friday, February 09, 2024 9:00:00 AM	Diesel Fuel	15 L	MSB parking	A worker observed fuel leakage from pick-up 49.	Absorbent pads were used to collect the spill and were disposed of in an oily solids bin at the Maintenance garage. Contaminated material was scrapped and disposed of at the Landfarm A.
Thursday, February 15, 2024 1:30:00 AM	Diesel Fuel	20 L	6 Million Gas station	During refueling, as the haul truck operator completed filling the truck, the nozzle clicked	The haul truck operator used absorbent pads to clean up the spills. Absorbent pads were

				off indicating full capacity. However, there was a delay in the pump shutting off, resulting in an unintentional spillage of approximately 20 liters onto the ground.	disposed of in a quatrex bag at the Hazmat laydown. It should be noted the spill occurred in the lined containment of the refueling station.
Thursday, February 15, 2024 2:30:00 AM	Diesel Fuel	50 L	6 Million Gas station	When refueling a haul truck, the truck overflowed, and diesel spilled by the overflow tube.	The operator stopped fueling and cleaned the spill with absorbent pads. Absorbent pads were disposed in an oily solids bin. It should be noted the spill occurred in the lined containment of the refueling station.
Monday, February 19, 2024 3:00:00 AM	Diesel Fuel	10 L	6 Million Gas station	The haul truck operator was refueling the truck when the nozzle failed to stop dispensing fuel upon reaching full capacity.	The pump was immediately stopped. Absorbent pads were deployed to contain the spill and were disposed in an oily solids bin at the Hazmat laydown. It should be noted the spill occurred in the lined containment of the refueling station.
Wednesday, February 28, 2024 4:30:00 PM	Sewage	7 L	MSB Lift Station	A spill of 7 liters of sewage occurred at the MSB lift station. Following normal operation of the vacuum truck to offload sewage into the MSB lift station, the operator tried to switch the truck's mode from discharge to vacuum function. However, the power take-off (PTO) mechanism was frozen, preventing the mode change. When the operator attempted to clear the residual sewage in the hose by vacuuming, the truck discharged instead, resulting in the spill.	After the release, the vacuum truck operator began cleaning up the affected area. The sewage impacted snow was hand excavated and the recovered material was put back into the MSB lift station.

Appendix – Monitoring Analytical Data

MEL-11		2/12/2024
Parameter	**Unit**	
WQ02- Conventional Parameters		
pH	**pH units**	7.24
Turbidity	**NTU**	0.3
Conductivity	**umhos/cm**	120
Hardness, as CaCO3	**mg/L**	32.7
Total alkalinity, as CaCO3	**mg/L**	25
Carbonate, as CaCO3	**mg/L**	< 1.0
Bicarbonate, as CaCO3	**mg/L**	25
TDS	**mg/L**	70
TDS, calculated	**mg/L**	58
TSS	**mg/L**	< 1
Total organic carbon	**mg/L**	3.2
Dissolved organic carbon	**mg/L**	3.2
WQ03- Major Ions		
Chloride	**mg/L**	15
Cyanide	**mg/L**	< 0.00050
Cyanide (free)	**mg/L**	< 0.0020
Cyanide (WAD)	**mg/L**	< 0.00050
Silica	**mg/L**	0.74
Sulfate	**mg/L**	6.8
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**	0.19
Total phosphorus	**mg/L**	< 0.020
Orthophosphate (P)	**mg/L**	< 0.010
WQ06- Total Metals		
Aluminum	**mg/L**	< 0.0030
Antimony	**mg/L**	< 0.00050
Arsenic	**mg/L**	0.00063
Barium	**mg/L**	0.0111
Beryllium	**mg/L**	< 0.00010
Boron	**mg/L**	< 0.050
Cadmium	**mg/L**	< 0.000010
Chromium	**mg/L**	< 0.0010
Copper	**mg/L**	0.00078
Iron	**mg/L**	0.011
Lead	**mg/L**	< 0.00020
Lithium	**mg/L**	< 0.0020
Manganese	**mg/L**	0.0041

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**	0.0564
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**	0.00062
Barium	**mg/L**	0.0111
Beryllium	**mg/L**	< 0.00010
Boron	**mg/L**	< 0.050
Cadmium	**mg/L**	< 0.000010
Calcium (Dissolved)	**mg/L**	10.4
Chromium	**mg/L**	< 0.0010
Copper	**mg/L**	0.00084
Iron	**mg/L**	0.0090
Lead	**mg/L**	< 0.00020
Lithium	**mg/L**	< 0.0020
Magnesium (Dissolved)	**mg/L**	1.80
Manganese	**mg/L**	< 0.0010
Mercury	**mg/L**	< 0.00001
Molybdenum	**mg/L**	< 0.0010
Nickel	**mg/L**	< 0.0010
Potassium (Dissolved)	**mg/L**	1.28
Selenium	**mg/L**	0.00014
Silver	**mg/L**	< 0.000020
Sodium (Dissolved)	**mg/L**	7.63
Strontium	**mg/L**	0.0547
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