Meliadine Gold Mine
NWB 2AM-MEL1631
April 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 April 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	43,273	42,794	-	-	-	-	-	-	-	-	172,983
Dust suppression[2]	m^3	0	0	0	0	-	-	-	-	-	-	-	-	0
Dust suppression (CP1)[3]	m^3	0	0	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	0	-	-	-	-	-	-	-	-	0
MEL-26	m^3	0	0	0	0	-	-	-	-	-	-	-	-	0
MEL-25	m^3	0	0	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	6,070	5,777	-	-	-	-	-	-	-	-	21,467
Sewage Sludge	Amount (m^3)	100	100	120	120	-	-	-	-	-	-	-	-	440
	Disposal Location	WRSF3	WRSF3	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	3.25	7.28	-	-	-	-	-	-	-	-	12.35

[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	156,820	166,561	-	-	-	-	-	-	-	-	668,762
Waste Rock	Removed from open pit mining	175,380	534,627	845,427	701,244	-	-	-	-	-	-	-	-	2,256,678
	Removed from underground mining	71,281[6]	67,267	73,926	87,413	-	-	-	-	-	-	-	-	299,888
	Used as underground dry rockfill	49,823	31,805	10,566	31,716	-	-	-	-	-	-	-	-	123,910
Tailings	Send to TSF	144,379	107,392	111,857	125,769	-	-	-	-	-	-	-	-	489,397
	Used as paste underground backfill	46,567	47,043	44,963	40,792	-	-	-	-	-	-	-	-	179,365

[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. 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 April 2024

Date and time of occurrence	Contaminant	Estimated quantity	Exact location of incident	Description of incident	Describe immediate corrective actions
Thursday, April 04, 2024 11:00:00 AM	Hydraulic Oil	70 L	Fusion Pad	A spill of hydraulic oil occurred as the result of a leaking hydraulic lock valve on a Komatsu HB365 excavator.	Operator stopped the engine. The machine was immobilized for repair. Spill pads were used and disposed of as hazmat. Contaminated snow was recovered and placed in the Snow Cell.
Monday, April 08, 2024 2:00:00 AM	Engine Oil	30 L	TIR01	A worker was using an excavator (PC1250) to load hauling material. The fuel pump broke suddenly and engine oil was released.	Absorbent pads were deployed to collect the spill and were disposed of in the appropriate bin. Contaminated material was scrapped and disposed of at the landfarm.
Wednesday, April 10, 2024 4:00:00 AM	Hydraulic Oil	5 L	Inside Dome 3	A tank overfilled while refueling inside Dome 3.	Spill pads were deployed to recover the spill and disposed of in the appropriate bin.
Thursday, April 11, 2024 10:30:00 PM	Hydraulic Oil	10 L	WRSF3	Mechanics refilled the hydraulic oil of the dozer when the equipment was cold. When the operator started working, the heat warmed up the oil and the oil dilated, resulting in the spill.	The machine was stopped. Absorbent pads were deployed to contain the spill and were disposed of in the appropriate bin. Contaminated material was placed in the Landfarm.
Friday, April 12, 2024 9:00:00 AM	Hydraulic Oil	20 L	OP2	A hydraulic oil hose failed on a grader resulting in a 20L spill of hydraulic oil onto the ground.	The machine was stopped. Absorbent pads were deployed to contain the spill and were disposed of in the appropriate bin along with contaminated muck.

Monday, April 15, 2024 2:00:00 PM	Copper Sulfate	0.02 Kg	North Garage Door of the Mill	While bringing a pallet of Copper sulfate bags inside the mill, a small amount of Copper sulfate powder was spilled due to a punctured bag.	Area was barricaded and the process plant supervisor was contacted. Around 10 gallons of contaminated snow was put into the Process Plant Detox Area Sump Pump.
Wednesday, April 17, 2024 1:00:00 PM	Hydraulic oil	30 L	TIR01	While in operation, oil sprayed from the hose reel of a drill.	The machine was stopped. Absorbent pads were deployed to contain the spill and were disposed of in the appropriate bin.
Thursday, April 18, 2024 2:00:00 PM	Diesel	20 L	East Side of Processor Plant in front of Compressor Room	A worker found a spill of diesel in front of the compressor room garage door. At the time of discovery, there was no equipment in the area.	The area was remediated and contaminated snow and gravel was placed in the Landfarm A.
Friday, April 19, 2024 7:00:00 AM	Greywater	120 L	Wing 9 under Washing Station	An estimated 120 L of greywater spilled onto the ground underneath accommodation Wing 9. The spill was caused by a joint failure on drainpipe beneath the floor of the janitorial sink. An employee identified the spill during a routine inspection around the Wing 9 lift station.	The water supply in the wing was isolated to prevent further spillage. The snowpack under the wing was removed, the impacted area was excavated, and the recovered material was brought to Landfarm A and the Waste Rock Storage Facility 3 (WRSF3). The janitorial sink drainpipe was then cleaned, primed, and glued back to prevent future failures.
Wednesday, April 24, 2024 9:30:00 PM	Hydraulic Oil	40 L	TIR01	The fitting on the hydraulic hose of a drill failed resulting in a spill of 40 liters of hydraulic oil.	The machine was stopped. Absorbent pads were deployed to contain the spill and were disposed of in the appropriate bin, along with contaminated ground.
Thursday, April 25, 2024 12:30:00 PM	Lubricant	10 L	Lake B5	A dozer being operated by Orbit Garant Drilling was pulling a freshwater sea-can to a drill rig when the sea-can slid into the back of the dozer. The dozer began slowly leaking lubricant while completing the sea-can move. When the leak was	Due to the leak from the dozer not being noticed right away, the spill was spread along the 1-kilometer path leading to a regional exploration drilling site. Orbit Garant workers retraced the path of the dozer to hand excavate a portion of the

				noticed, approximately 10 L of lubricant was estimated to have been released onto the snow on the frozen surface of Lake B5, approximately 1.8 kilometers west of the Meliadine Gold Mine industrial pad.	contaminated snow into drums. The remaining contaminated snow along the path was removed using a skid steer. The contaminated snow was disposed of in the contaminated snow cell on site.
Sunday, April 28, 2024 3:30:00 PM	Diesel	19 L	KCG Maintenace Shop Yard	19 liters of fuel spilled from the overflow valve on the fuel truck after the truck was slightly overfilled.	The truck was stopped. Contaminated soil was disposed of at the Landfarm A.
Monday, April 29, 2024 9:30:00 AM	Hydraulic Fluid	46 L	Exploration Helipad	An employee was clearing snow around helipad with skid steer. While turning to dump snow, the equipment suddenly stopped. Worker looked under the skid steer and noticed fluid leaking.	The machine was stopped. Absorbent pads were deployed to contain the spill and contaminated materials were disposed of as hazmat.
Tuesday, April 30, 2024 9:30:00 AM	Diesel	0.50 L	TIR01 (Top of Main Ramp)	When the pickup stopped, fuel sloshed out of the fuel filling port from underneath the cap.	The cap was properly tightened. Absorbent pads were deployed to clean-up the spill and were disposed of in the appropriate bin.
Tuesday, April 30, 2024 10:00:00 AM	Hydraulic Fluid	46 L	Exploration Garage	The hydraulic hose was replaced on the skid steer. When the equipment was started again, hydraulic fluid was leaking again.	Absorbent pads were deployed to collect the spill and were disposed of in the appropriate bin. Contaminated material was scrapped and disposed of at the landfarm.

Appendix – Monitoring Analytical Data

MEL-11		4/9/2024
WQ02- Conventional Parameters		
pH	**pH units**	7.20
Turbidity	**NTU**	0.3
Conductivity	**ms/cm**	0.130
Hardness, as CaCO3	**mg/L**	-
Total alkalinity, as CaCO3	**mg/L**	30
Carbonate, as CaCO3	**mg/L**	< 1.0
Bicarbonate, as CaCO3	**mg/L**	30
TDS	**mg/L**	70
TDS, calculated	**mg/L**	66
TSS	**mg/L**	< 1
Total organic carbon	**mg/L**	3.3
Dissolved organic carbon	**mg/L**	3.3
WQ03- Major Ions		
Chloride	**mg/L**	18
Cyanide	**mg/L**	< 0.00050
Cyanide (free)	**mg/L**	< 0.0020
Cyanide (WAD)	**mg/L**	< 0.00050
Silica	**mg/L**	0.82
Sulfate	**mg/L**	8.0
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**	0.20
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**	0.00057
Barium	**mg/L**	0.0109
Beryllium	**mg/L**	< 0.00010
Boron	**mg/L**	< 0.050
Cadmium	**mg/L**	< 0.000010
Chromium	**mg/L**	< 0.0010
Copper	**mg/L**	0.00077
Iron	**mg/L**	0.015
Lead	**mg/L**	< 0.00020
Lithium	**mg/L**	< 0.0020
Manganese	**mg/L**	0.0043

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**	0.0506
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**	0.00063
Barium	**mg/L**	0.0124
Beryllium	**mg/L**	< 0.00010
Boron	**mg/L**	< 0.050
Cadmium	**mg/L**	< 0.000010
Calcium (Dissolved)	**mg/L**	11.0
Chromium	**mg/L**	< 0.0010
Copper	**mg/L**	0.00079
Iron	**mg/L**	0.0077
Lead	**mg/L**	< 0.00020
Lithium	**mg/L**	< 0.0020
Magnesium (Dissolved)	**mg/L**	1.94
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**	7.95
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
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**	-
F1 (C6-C10)	**mg/L**	-
F2 (C10-C16)	**mg/L**	0.13
F3 (C16-C34)	**mg/L**	< 0.2
F4 (C34-C50)	**mg/L**	< 0.2