AGNICO EAGLE
MELIADINE

Meliadine Gold Mine
NWB 2AM-MEL1631
March 2022 Monthly Report

Prepared for:
Nunavut Water Board

Prepared by:
Agnico Eagle Mines Limited – Meliadine Division

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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 March 2022.

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 March 2022

	Monthly Usage (m^3)
Camp, Mill, Dust suppression (MEL-11)	41,186
Dust suppression (water obtained along AWAR/Meliadine River)	0
Total March	**41,186**
Year to date 2022	**108,878**

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

Approximately 4,750 m^3 of treated wastewater was discharged into CP1 during the month. Approximately 19.8 m^3 of sludge was removed during the month. The sludge is either disposed of in WRSF1 or 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 Appendix. No exceedance occurred in March 2022.

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 28th, 2022, the landfill contained approximately 19,623 m³ of material.

Approximately 0.3 m^3 of contaminated material was put into the Type A Landfarm during the month. According to the most recent survey done on January 1st, 2022, the Landfarm A contained approximately 442 m³ of material.

3.2 ORE

Approximately 163,140 tonnes of ore were processed through the Mill during the month.

3.3 WASTE ROCK STORAGE FACILITY

A total of 70,838 tonnes of waste rock was removed in the underground mine development process during the month while 47,120 tonnes of waste rock were removed from open pit mining. 12,197 tonnes were used as underground dry rockfill.

3.4 TAILINGS

118,617 dry tonnes of filtered tailings were sent to the Tailing Storage Facility during the month. 44,523 tonnes of tailings were used for paste underground backfill.

SECTION 4 SPILL MANAGEMENT

4.1 INTERNAL AND REPORTABLE SPILLS

Spills reported internally (26) 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. Twelve (12) 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 March 2022

Date and time of occurrence	If material not listed in dropdown or more details, enter here	Estimated quantity	Exact location of incident	Description of incident	Describe immediate corrective actions
Tuesday, March 01, 2022 12:30:00 PM	Hydraulic Oil	45.00 L	TIRI01B	A leak occurred from a parked idling equipment (dozer).	The equipment was stopped and spill pads were used to clean up the spill. The pads were disposed of according to procedure. Contaminated soil was recovered and disposed of in the Landfarm.
Wednesday, March 02, 2022 2:00:00 AM	Hydraulic Oil	70.00 L	E&I Parking Lot	A hose ruptured on an equipment (Manitou), leading to the oil reservoir to empty.	The equipment was turned off and the hose repaired. Absorbent pads were used to clean the spill and disposed of according to procedure. Contaminated snow was disposed of in the Snow Cell.
Wednesday, March 02, 2022 4:30:00 AM	Petroleum Products	10.00 L	E&I Parking lot	While doing a routine walk around an equipment (HTR18), the operator noticed the rear axel was leaking oil.	Absorbent pads were deployed to collect oil and disposed of according to procedure.
Wednesday, March 02, 2022 6:00:00 AM	Engine Oil	4.00 L	Parking in front of tool crib	The engine of an equipment (truck) broke, and engine oil spilled on the ground.	Absorbent pads were used to clean the liquid portion of the spill and disposed of in Quatrex bags. Contaminated snow was recovered and put into the Snow Cell.
Saturday, March 05, 2022 9:00:00 AM	Diesel Fuel	10.00 L	Drill Rig 10 on Lake A8	During an environmental inspection, a small amount of diesel fuel was observed by a 4000L overpack. The overpack released 10 L of diesel fuel on the surface of the lake ice. After further investigation it was determined that the	The overpack was moved forward to allow a loader to remove contaminated material. The contaminated ice and snow were disposed at the Snow Cell. Although the spill occurred on the lake ice, it is expected that minimal impacts occurred to the water body itself because all the contaminated ice

				spill occurred due to a combination of fuel expansion in the overpack due to drastic temperature changes and movement of the overpack itself. When the overpack was being moved, fuel was released out of the breather and contaminated snow located on the overpack. The snow then fell on the surface of the lake ice.	was removed, as demonstrated by the quality of the post clean-up surface sample and because the contaminated material was not near a drill hole.
Sunday, March 06, 2022 4:00:00 PM	Thickener Process Water	45 m^3	West side of the mill (industrial pad)	There was an overflow of approximately 45 m^3 of thickener process water on the industrial pad, outside the process plant. Investigation into the cause of the release identified ice build at the overflow discharge pipe. The ice buildup resulted in a blockage of the discharge causing the thickener tank to overflow.	A temporary berm was built to contain the spill and minimize the impacted area. An excavator, loader and haul truck were used to clean up the spilled material. All material collected was placed in the process plant sump where it will be returned to the process plant system.
Tuesday, March 08, 2022 10:00:00 AM	Hydraulic Oil	20.00 L	In front of KCG shop	When lowering the stabilization leg of the tire truck, a worker noticed an oil leak under the truck.	The truck was turn off and absorbent pads were used to clean-up the spill. The pads were disposed of as hazmat. Contaminated snow was recovered and disposed of in the Snow Cell.
Wednesday, March 09, 2022 3:30:00 AM	Grey Water	2 m^3	Underneath the Main Camp Kitchen	During a walk around outside the kitchen area, the camp coordinator noticed that a pipe had cracked and released 2 m^3 of greywater on the ground.	Water supply from the kitchen was cut off as soon as the spill was noticed. The topography of the area and the freezing conditions prevented the grey water from migrating off-site. Accessible spilled material was cleaned up however health and safety considerations limited equipment and

					personnel access (the space is confined due to the accumulation of snow) to the spill location. Additional cleanup of the area will be completed during the spring/summer months. The first layer of gravel will be scrapped.
Thursday, March 10, 2022 12:00:00 AM	Thickener Process Water	10.00 m^3	West side of the mill (industrial pad)	The investigation into the cause of the release identified a high-water level occurrence in the thickener tank which entrained ice down the thickener tank. Additionally, it is suspected there was vacuum effect on the suction of the pipe from the thickener launder to the process water tank due to the failing ice. This led to a back flow build-up in the pipes, as the upstream clarifier feed box and slurry flow from thickener recirculation were still active. As the thickener process water filled the tank, an overflow of approximately 10 m^3 occurred.	To immediately stop the spill, the thickener process water was directed to the carbon in leach (CIL) tanks. The filter presses were then stopped to reduce any additional water going to the feed wheel of the grinding thickener, ending the overflow. The topography of the area and the freezing conditions caused the thickener process water to pool and freeze on the west side of process road. A loader and haul truck were used to clean up the material. All material collected was placed in the process plants sump where it will be returned to the process plant system.
Friday, March 11, 2022 8:30:00 AM	Thickener Process Water	5.00 m^3	West side of the mill (industrial pad)	There was an overflow of approximately 5 m^3 of thickener process water on the industrial pad, outside the process plant. The investigation into the cause of the release identified ice build at the overflow discharge pipe. The ice buildup resulted in a blockage of the discharge causing	The topography of the area and the freezing conditions caused the thickener process water to pool and freeze on the west side of process road. A loader and haul truck were used to clean up the material. All material collected was placed in the process plants sump where it will be returned to the process plant system. Additionally, the overhead walkway on

				the thickener tank to overflow.	the top of the thickener tank was cleared of ice.
Saturday, March 12, 2022 10:30:00 PM	Petroleum Products	10.00 L	Outside the maintenance shop	A tractor caught on fire and an oil spill occurred.	Spill pads were used to clean-up the spill and disposed of as hazmat.
Monday, March 14, 2022 4:30:00 PM	Petroleum Products	20.00 L	Haul Road	The driveshaft of a haul truck broke and the transmission line failed, leading to a leak and spill of transmission fluid.	The contaminated material was recovered and brought to the Landfarm.
Friday, March 18, 2022 1:00:00 PM	Petroleum Products	2.00 L	In Front of the Water Management Shop	Driver side front axel of a haul truck was leaking oil (failure of the oil seal on the wheel).	The contaminated ice and snow were brought to the Snow Cell.
Friday, March 18, 2022 4:30:00 PM	Drill Cuttings	15.00 L	Drill Rig 3 on Lake A8	During an environmental inspection, drill cuttings were observed near the drill cuttings vacuum pump at drill rig 3. The operator of the drill cutting vacuum pump was notified that an outlet valve was open and was releasing drill cuttings on the surface of waterbody A8.	The outlet valve was closed immediately, eliminating the source of the spill. The contaminated ice and snow were disposed at the contaminated snow cell. To prevent a similar situation from occurring Orbit Garant is developing a Drill Cutting Vacuum Pump Operations Procedure to ensure proper operation of the drill cuttings vacuum pump. Additionally, it is now mandatory to use a spill containment under the outlet valves during drill cutting vacuuming operations.
Sunday, March 20, 2022 4:00:00 AM	Diesel Fuel	10.00 L	Rig SH-102 on Lake A8	During an environmental inspection, 10 L of diesel fuel was observed underneath the heating sea can at borehole M-22-3401 on the surface of the lake ice. The cause of the spill was identified to be human error as it is suspected the fuel hose was dropped during refueling	The drill was stopped and moved to allow a loader to remove the remaining contaminated material. The contaminated ice and snow were disposed at the Snow Cell. It is expected that minimal impacts occurred to the waterbody as the spill occurred on the lake ice, facilitating the recovery of the contaminated material – the contaminated ice was scrapped off.

				operations at the heated sea can.	Results of a composite surface lake ice sample collected after the clean-up showed concentrations below all Licence criteria for effluent release.
Sunday, March 20, 2022 2:30:00 PM	Hydraulic Oil	4.00 L	E&I parking lot	A hydraulic hose failed on a haul truck.	The truck was turned off and absorbent pads were used to clean the spill. The pads were disposed of according to procedure.
Tuesday, March 22, 2022 12:00:00 AM	STP Treated Water	8.00 L	Sewage Treatment Plant	STP treated water was spilled while transferring from the Exploration Camp STP to the Main Camp STP, because a hose was not properly connected.	Contaminated material was recovered and put into barrels for disposal at a later date (treatment at the STP).
Wednesday, March 23, 2022 9:30:00 AM	Diesel Fuel	35.00 L	Dion Dome	During fueling of the diesel fuel station of the frost fighter at the Dion Dome, approximately 30 L was spilled through the vent pipe. The initial investigation identified that the fuel pipe is higher than the vent pipe leading to the spill.	Spill pads and a small boom were used to contain the spill. Contaminated snow was recovered and disposed of in the Snow Cell.
Thursday, March 24, 2022 1:30:00 AM	Emulsion	2 kg	Emulsion Plant Pad	An estimated 2 kg of emulsion was identified during snow removal operations on the emulsion pad.	Emulsion plant personnel collected snow and ice with visible emulsion and placed it in the Dyno Equipment Shop to thaw. The melted material was collected in the floor sump and transferred to a tote for disposal as hazardous waste.
Thursday, March 24, 2022 3:00:00 AM	Hydraulic Oil	3.00 L	Portal 2 Ore Pad	An underground haul truck was proceeding to dump a high-grade load on the south side of the pile, when the truck shut down by itself because of low hydraulic level. The truck was leaking hydraulic oil to the ground.	Absorbent pads were used and disposed of as hazmat. The contaminated material was scraped off and disposed of in a Quatrex bag.

Thursday, March 24, 2022 1:30:00 PM	Diesel Fuel	50.00 L	6 Million Fuel Farm	The operator was refueling the fuel truck when he noticed fuel coming out of the back compartment. The the 2-inch hose nozzle was frozen open.	The fueling process was stopped with the emergency stop button. Absorbent pads were used and disposed of according to procedure. The contaminated snow was recovered and put in the Snow Cell.
Friday, March 25, 2022 12:30:00 PM	Untreated Sewage Water	25.00 L	KCG Wash Car	After emptying a sewage lift station tank, the vacuum truck operator disconnected the truck hose from the lift station, releasing 25 L of untreated sewage from the hose onto the ground.	The spilled material was placed into drums for proper disposal at a later date (treatment at the STP).
Sunday, March 27, 2022 6:00:00 AM	Drilling Recirculation Water	20.00 L	Drill Rig on Lake A8	During an environmental inspection of the Orbit drill rigs located on water body A8, a worker identified that drilling recirculation water (approx. 20L) overflowed from the recirculation tank to the surface of the ice.	No drilling recirculation water entered the water body as it was contained on the surface of the ice cover. Orbit Garant stopped drilling operations which stopped the flow to the drill recirculation water recovery tank and allowed realignment of the drill recirculation recovery tank. Orbit Garant employees promptly started the spill cleanup using ice chippers and shovels. The impacted snow and ice was placed into the decantation tank to be reused in the drilling process.
Monday, March 28, 2022 12:00:00 AM	Hydraulic Oil	20.00 L	Portal 1 Ore Pad	A hydraulic hose failed on a haul truck.	The haul truck was stopped. Absorbent pads were used to contain the spill and disposed of according to procedure. Contaminated snow/ice was recovered put into the Snow Cell.
Tuesday, March 29, 2022 10:30:00 AM	Drilling Recirculation Water	20.00 L	Drill Rig on Lake A8	During an environmental inspection of the Orbit drill rigs located on water	No drilling recirculation water entered the water body as it was contained on the surface of the ice cover.

				body A8, a worker identified that drilling recirculation water overflowed (approx. 20L) from the recirculation tank to the surface of the ice.	At the time of inspection, the decantation tank was no longer overflowing, and drilling recirculation water was no longer spilling onto the ice. The cleanup of the spill was completed as part of the final site cleanup as all drilling operations were complete at the site. During the drill site cleanup all impacted snow and ice was removed and sent to the drill cuttings disposal area with the remaining drill cuttings.
Wednesday, March 30, 2022 7:00:00 AM	Sewage Water	30.00	MSB lift Station	While transferring the content of the vacuum truck into the MSB lift station, the vacuum truck hose became loose and approximately 30 L of untreated sewage was spilled.	The operator immediately closed the valve to stop the flow of contents and relieve the pressure in the line. Contaminated material was scrapped and placed into drums for proper disposal at a later date.

Appendix – Monitoring Analytical Data

MEL-11	Sample date	3/15/2022
Parameter	**Unit**	
WQ02- Conventional Parameters		
pH	**pH units**	7.23
Turbidity	**NTU**	0.2
Specific conductivity	**umhos/cm**	160
Hardness, as CaCO3 (T)	**mg/L**	42.0
Hardness, as CaCO3 (D)	**mg/L**	42.2
Total alkalinity, as CaCO3	**mg/L**	28
Carbonate, as CaCO3	**mg/L**	< 1.0
Bicarbonate, as CaCO3	**mg/L**	28
TDS	**mg/L**	105
TDS, calculated	**mg/L**	75
TSS	**mg/L**	< 1
Total organic carbon	**mg/L**	4.5
Dissolved organic carbon	**mg/L**	4.4
WQ03- Major Ions		
Chloride	**mg/L**	22
Cyanide	**mg/L**	< 0.00050
Cyanide (free)	**mg/L**	0.0018
Cyanide (WAD)	**mg/L**	< 0.00050
Silica	**mg/L**	0.47
Sulfate	**mg/L**	8.7
WQ04- Nutrients and Chlorophyll a		
Ammonia Nitrogen	**mg/L**	0.074
Nitrate	**mg/L**	< 0.10
Nitrite	**mg/L**	< 0.010
Total Kjeldahl nitrogen	**mg/L**	0.21
Total phosphorus	**mg/L**	< 0.020
Orthophosphate (P)	**mg/L**	< 0.010
WQ06- Total Metals		
Aluminum	**mg/L**	0.0124
Antimony	**mg/L**	< 0.00050
Arsenic	**mg/L**	0.00065
Barium	**mg/L**	0.0144
Beryllium	**mg/L**	< 0.00010
Boron	**mg/L**	< 0.050
Cadmium	**mg/L**	< 0.000010
Chromium	**mg/L**	< 0.0010
Copper	**mg/L**	0.00139
Iron	**mg/L**	0.021
Lead	**mg/L**	< 0.00020
Lithium	**mg/L**	< 0.0020

Manganese	**mg/L**	0.0056
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**	0.0749
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**	0.00061
Barium	**mg/L**	0.0144
Beryllium	**mg/L**	< 0.00010
Boron	**mg/L**	< 0.050
Cadmium	**mg/L**	< 0.000010
Calcium (Dissolved)	**mg/L**	13.0
Chromium	**mg/L**	< 0.0010
Copper	**mg/L**	0.00117
Iron	**mg/L**	0.0075
Lead	**mg/L**	< 0.00020
Lithium	**mg/L**	< 0.0020
Magnesium (Dissolved)	**mg/L**	2.36
Manganese	**mg/L**	< 0.0010
Mercury	**mg/L**	< 0.00001
Molybdenum	**mg/L**	< 0.0010
Nickel	**mg/L**	0.0010
Potassium (Dissolved)	**mg/L**	1.44
Selenium	**mg/L**	< 0.00010
Silver	**mg/L**	< 0.000020
Sodium (Dissolved)	**mg/L**	10.3
Strontium	**mg/L**	0.0772
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