



Meliadine Gold Project
NWB 2AM-MEL1631
June 2018 Monthly Report

Prepared for:

Nunavut Water Board

Prepared by:

Agnico Eagle Mines Limited – Meliadine Division

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Table of Contents

SECTION 1 • BACKGROUND	3
SECTION 2 • WATER MANAGEMENT	3
2.1 WATER USAGE	3
2.2 DEWATERING ACTIVITIES	3
2.3 CP1	3
2.4 SEEPAGE AND RUNOFF FROM THE LANDFILL.....	3
2.5 SEWAGE TREATMENT PLANT	3
2.6 CONTAINMENTS.....	3
SECTION 3 • MATERIAL MANAGEMENT.....	4
3.1 LANDFILL / LANDFARM.....	4
3.2 ORE	4
3.3 WASTE ROCK STORAGE FACILITY.....	4
3.4 TAILINGS	4
SECTION 4 • SPILL MANAGEMENT	5
4.1 INTERNAL AND REPORTABLE SPILLS	5

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 June 2018.

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 June 2018

	Monthly Usage (m ³)
Camp (MEL-11)	2,421
Construction – Batch Plant (MEL-26 – A8)	187
Dust suppression	0
Total May	2,608
Year to date 2018	12,126

2.2 DEWATERING ACTIVITIES

No dewatering activities occurred in June 2018.

2.3 CP1

Discharge from CP1 into Meliadine Lake via the Final Discharge Point (MEL-14) commenced on June 21st 2018. The total amount of water discharged in June was 133,797 m³.

No reclaim water was obtained from CP1 and it is not planned in the near future to use reclaimed water.

2.4 SEEPAGE AND RUNOFF FROM THE LANDFILL

The 2AM-MEL1631 landfill and landfarm were commissioned in November 2017. No seepage or runoff was observed in June 2018.

2.5 SEWAGE TREATMENT PLANT

In June 2018, 2,439 m³ of water were discharged into CP1. 31 m³ was removed during the month.

2.6 CONTAINMENTS

Water was discharged from the Itivia fuel containment facility as per the station Mel-25. A total volume of 2,205 m³ was discharged post-treatment (filtration for TSS removal) to the tundra. As per Part F, item 5, the following water quality results are presented. No exceedances in the license criteria occurred.

Table 1: Mel-25 Water Quality Results

Sampling Date		6/9/2018 12:10	6/10/2018 11:30	6/12/2018 10:00	6/17/2018 10:40	6/27/2018 14:00	6/29/2018 14:00
	UNITS	MEL-25	MEL-25	MEL-25	MEL-25	Mel-25	MEL-25
pH	pH	7.84	8.2	7.9	8.18	7.18	8.14
Total Suspended Solids	mg/L	19	16	3.8	5	40	2
Total Lead (Pb)	mg/L	0.00072	0.00066	-	<0.00050	<0.00050	<0.00050
Benzene	ug/L	<0.20	<0.20	-	<0.20	<0.20	<0.20
Ethylbenzene	ug/L	0.54	<0.20	-	<0.20	<0.20	<0.20
Toluene	ug/L	1.5	<0.20	-	<0.20	<0.20	<0.20
Oil and grease	mg/L	-	-	-	-	-	-

Oil and grease was inadvertently missed on the samples but an initial sample of water was collected prior to treatment and discharge on May 24th 2018. The oil and grease was measured at 0.5 mg/L. In addition, a sample collected by the contractor ASDR on June 29th 2018 analyzed for the hydrocarbon fractions C10-C50. The result was 0.10 mg/L. This can be considered a good proxy for the missed Oil and Grease analysis.

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, the landfill contained approximately 7,500 m³ of material.

Approximately 280 m³ of contaminated soil and rock were placed into the landfarm in June 2018 as a result of the construction fuel tank leak and the tipped over frost fighter spill clean-up operation.

3.2 ORE

Approximately 6,147 tonnes of ore and 6,870 tonnes of marginal ore has been stockpiled in June.

3.3 WASTE ROCK STORAGE FACILITY

In June a total of 53,761 tonnes of rock was mined underground in the process of mine development.

3.4 TAILINGS

No tailings have been stored to date.

SECTION 4 • SPILL MANAGEMENT

4.1 INTERNAL AND REPORTABLE SPILLS

All spills reported internally (12), and externally (4- highlighted) listed in the table 4.1 below were managed according to Agnico's spill contingency plan.

Spills were contained and cleaned, contaminated material was disposed in appropriate manner, and the clean-up actions were monitored closely by the Environment Department.

While conducting routine inspections of the Itivia construction site on June 3rd and June 18th, turbid surface run-off water was observed crossing over a roadway and through a culvert into Melvin Bay. Samples were collected for laboratory analysis to assess the TSS concentration and other water quality parameters. The laboratory results showed that TSS concentrations exceeded those outlined in the Type A water license for discharge/release into a water body. On June 8th small drip going into a non-fish bearing lake from an hydraulic line in drill shack was found. On June 12th, a line disconnected at a sewage lift station near the sewage treatment plant due to ground thawing creating an effluent discharge that leaked on the ground.

These spills were reported as per the obligations under the Nunavut Water Board License 2AM-MEL1631, Part D, item 18 pursuant to subsection 12(3) of the Nunavut Waters and Nunavut Surface Rights Tribunal Act.

Table 4.1: Summary of Agnico's Spill Reports in May 2018

Date and time of occurrence	Material spilled/released	Estimated quantity (l)	Exact location of incident	Description of incident	Describe immediate corrective actions
1-Jun-18	Petroleum products	2.00	By pass road culvert installation	Worker was operating a 10T compactor, compacting material around a newly installed culvert on the bypass road parallel to the Rankin Inlet (Itivia Project) tank farm when he noticed hydraulic fluid escaping from a hose.	He immediately shut down the equipment and deployed the spill kit to contain run off (which was minimal). Approximately 1 cu ft of contaminated material was recovered and properly disposed of.
3-Jun-18	Contaminated water	N/A	eastern entrance to the bypass road at Melvin Bay	While conducting a routine inspection of the Itivia construction site on June 3 rd , turbid surface run-off water was observed flowing into Melvin Bay from the eastern entrance to the bypass road.	Installed absorbent logs, Samples collected and sent to the laboratory for analysis. Turbid water diluted with seawater in Melvin Bay
6-Jun-18	Chemical	1.00	North side of construction office	I arrived at the loader parking at 6:05 and during my inspection, I saw the spill under my loader. I immediately called Marimee from environment and a mechanic person. We moved the loader to the garage and we clean up the spill right away.	Me and Marimee took the spill kit and absorb majority of the spill with wipes. After we took a shovel and took spill left on the ground and put it in a bucket. Finally we transfer the contaminated ground at the landfarm.
8-Jun-18	Petroleum products	Unknown	B8	Small drip from hydraulic line in drill shack-unknown amount of time hose was leaking on manipulator head (replaced 3 weeks ago)	Contaminated soil picked up and disposed of appropriately
9-Jun-18	Petroleum products	3.00	Other	Small sheen was observed in the tracks of the bulldozer sitting in the orbit garage laydown with small moving flow	Install booms in water puddles-soak up material with rags

12-Jun-18	Contaminated water	3,000.00	MSB LIFT STATION	As the ground started to thaw, the building sank into the ground which induced strain on the connection for the discharge line. This resulted in the line disconnecting and when the lift station level reached its preset level started the pumps and the effluent discharged inside the building and eventually leaked onto the ground.	The lift station was stopped, the water supply the building was closed off and warning was sent site wide to refrain from using the facilities. The sewage was picked up with a vacuum truck and disposed in the sewage treatment plant.
14-Jun-18	Petroleum products	95.00	Industrial Pad	It seems that there were several spills without being reported to the environment department at the time of supplying the fuel tank.	Contaminated soil picked up and disposed of in the landfarm
14-Jun-18	Petroleum products	0.05	Camp	Power steering fluid leak from pickup truck	Contaminated soil picked up and disposed of in the landfarm
14-Jun-18	Petroleum products	25.00	Industrial Pad	The foreman asked the worker to remove the tarp and underneath the worker saw fuel on the ground.	Contaminated soil picked up and disposed of in the landfarm
15-Jun-18	Petroleum products	3.00	Process Plant	Almiq was notified that a diesel tank with Almiq's name on it was leaking by Rene Cloutier, Denise Larouche and Jacques Dubois. The cap on the diesel tank was not screwed tightly and diesel leaked from the top.	Spill was contained and contaminated soil picked up and disposed of in the landfarm.
16-Jun-18	Petroleum products	5.00	Portal	Change out of hydraulic pump bolt. Change length of bolt in between 2 pumps - while pulling back the pump from second pump, a service pail was used but was not enough to contain all of the oil.	Spill was contained and contaminated soil picked up and disposed of appropriately
18-Jun-18	Petroleum products	5.00	Itivia	While disconnecting the fuel arm from the jasper tanker. One of the seals on the connection got caught and caused a leak. Secondary containment caught most of fluid released, but due to remaining volume and pressure it spilt beyond containment.	
18-Jun-18	Contaminated water	N/A	eastern entrance to the bypass road at Melvin Bay	While conducting a routine inspection of the Itivia construction site on June 3rd, turbid surface run-off water was observed flowing into Melvin Bay from the eastern entrance to the bypass road.	Installed absorbant logs, Samples collected and sent to the laboratory for analysis. Turbid water diluted with seawater in Melvin Bay
18-Jun-18	Petroleum products	10.00	Industrial Pad	While working the machine starts leaking, workers stop activities, stop the leak and they reported it to their supervisor	Contaminated soil picked up and disposed of in the landfarm
25-Jun-18	Petroleum products	50.00	emulsion plant road	While moving rock fill loader sunk in soft material and drain valve of fuel tank struck a rock and crack.	Operator stopped, called supervisor. Absorbents were deployed and equipment immediately dispatched to clean up. Mobile maintenance was called to fix machine in place.
30-Jun-18	Petroleum products	3.00	Site road	Shaft union broke and hit the oil pan and create a hole in the oil pan.	Install matting tow equipment to the garage, spill been cleaned.