



MEADOWBANK DIVISION

## **Monitoring Program Summary Report**

**May 2019**

Type A Water License 2AM-MEA1526

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## **SECTION 1 • BACKGROUND**

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As required under Part I, Item 20 of Type A Water License 2AM-MEA1526 (Amendment No.3), this report documents the water management and monitoring activities at the mine site for the month. This includes water usage, Vault Attenuation Pond discharge water quality, Phaser Attenuation Pond, East Dike Seepage discharge water quality, RSF Seepage, Central Dike Seepage, Assay Road Seepage, and sewage treatment plant discharge water quality (which are directed to the onsite storm water management pond).

In addition, a summary of spills/actions for the month is reported.

## SECTION 2 • WATER MANAGEMENT

### 2.1 WATER USAGE

Fresh and reclaim water usage for May is summarized in Table 2-1 below.

**Table 2-1: Freshwater Usage (m<sup>3</sup>)**

Water Location	Source Lake	Jan	Feb	March	April	May	Total
Camp	Third Portage Lake	3 577	3 238	3 539	3 188	3 624	17 166
Mill (freshwater tank)	Third Portage Lake	214 981	182 096	112 326	142 405	147 851	799 659
Emulsion plant	No-name Lake	50	13	48	57	83	251
<b>Total Freshwater Usage (m<sup>3</sup>)</b>		<b>218 608</b>	<b>185 347</b>	<b>115 913</b>	<b>145 650</b>	<b>151 558</b>	<b>817 076</b>
<b>Ore Water (m<sup>3</sup>)</b>	Ore	4 610	3 045	2 727	4 539	6 203	<b>21 124</b>
<b>Reclaim Water Usage (m<sup>3</sup>)</b>	Tailings Pond	7 180	29 023	91 207	69 216	82 018	<b>278 644</b>

### 2.2 WASTE ROCK STORAGE FACILITY SEEPAGE

No water was pumped back to the North Cell TSF from the ST-16 sump in May due to frozen condition.

Agnico Eagle completed in May inspections at the Portage and Vault RSFs. No open water sampling at WEP1 (Station ST-30) and WEP2 (Station ST-31) were completed during the month due to frozen condition.

The KIA requested that Agnico continue monitoring until there is a 5 year period of non-detect cyanide results. To date (5 previous year - 2014-2018), the monitoring indicated that yearly average for CN levels does not exceed the CCME guideline, the MDMER or Water License limit for effluent discharge into the environment for NP2, NP1 and downstream lakes, Dogleg and Second Portage. Thus, based on the analysis of the previous result, Agnico Eagle suspended the current program in 2019.

### 2.3 CENTRAL DIKE SEEPAGE

In May, 168,080 m<sup>3</sup> of water was pumped from the ST-S-5 sump back into Portage Pit.

Sampling was conducted monthly at ST-S-5 and the South Cell TSF (ST-21) as per the requirements of the NWB water license.

Daily visual inspections were also completed by the Engineering Department.

### 2.4 ASSAY ROAD SEEPAGE

In May, no water was pumped back to the mill. No wells monitoring for CN downstream and trench sampling in May due to frozen condition.

## 2.5 SEEPAGE AND RUNOFF FROM THE LANDFILL

The landfill was inspected weekly and no seepage or runoff was observed.

## 2.6 SEEPAGE AT PIT WALL AND PIT WALL FREEZE/THAW AND PERMAFROST AGGRADATION

In May, ice wall continued to be observed into Vault Pit. There is no more mining activities in Vault Pit.

## 2.7 SEWAGE TREATMENT PLANT

One (1) effluent wastewater sample was collected at the onsite sewage treatment plant (STP) in May.

The Seprotech STP results are shown in Table 2.7.1 below; the LJ-Mix STP results are shown in Table 2.7.2. The effluent is discharged to the Stormwater Management pond, which is pumped to the South Cell TSF during summer months. In May, no water was discharged from the Stormwater Management pond to the South Cell TSF.

**Table 2.7.1: Seprotech Effluent Results**

Parameters	Units	May 8, 2019
Ammonia (NH <sub>3</sub> )	mg N/L	0.15
Ammonia-Nitrogen (NH <sub>3</sub> -NH <sub>4</sub> )	mg N/L	23.8
Total Kjeldahl Nitrogen	mg N/L	19.1
BOD-5	mg/L	5
COD	mg/L	67
Total Suspended Solids	mg/L	8
Nitrate	mg N/L	14.0
Nitrite	mg N/L	1.29
pH*	Units	7.10
Fecal Coliform	UFC/100 mL	NA
Total Coliform	UFC/100 mL	NA

\*Parameter measured by STP operators

**Table 2.7.2: LJ-Mix Effluent Results**

Parameters	Units	May 8, 2019
Ammonia (NH <sub>3</sub> )	mg N/L	0.08
Ammonia-Nitrogen (NH <sub>3</sub> -NH <sub>4</sub> )	mg N/L	24.3
Total Kjeldahl Nitrogen	mg N/L	3.23
BOD-5	mg/L	4
COD	mg/L	52
Total Suspended Solids	mg/L	7
Nitrate	mg N/L	20.7
Nitrite	mg N/L	0.81
pH*	Units	7.40
Fecal Coliform	UFC/100 mL	NA

Total Coliform	UFC/100 mL	NA
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\*Parameter measured by STP operators

## **2.8 VAULT ATTENUATION POND EFFLUENT**

No discharge from Vault Attenuation Pond since October 9, 2017. There is currently no plan to restart the discharge in 2019.

## **2.9 PHASER ATTENUATION POND**

No water was pumped from the Phaser Attenuation Pond in May due to frozen condition.

## **2.10 EAST DIKE SEEPAGE EFFLUENT**

East Dike Seepage discharge was stopped on March 30, 2019 and diverted back to the Pit. There is currently no plan to restart the discharge to Second Portage Lake in 2019 as the water can accumulate in the pits without any operational constraint.

## **2.11 NON CONTACT WATER**

No water sample at Portage Area East (ST-5) and West (ST-6) diversion ditches in May due to frozen condition.

## **2.12 IN-PIT DISPOSAL**

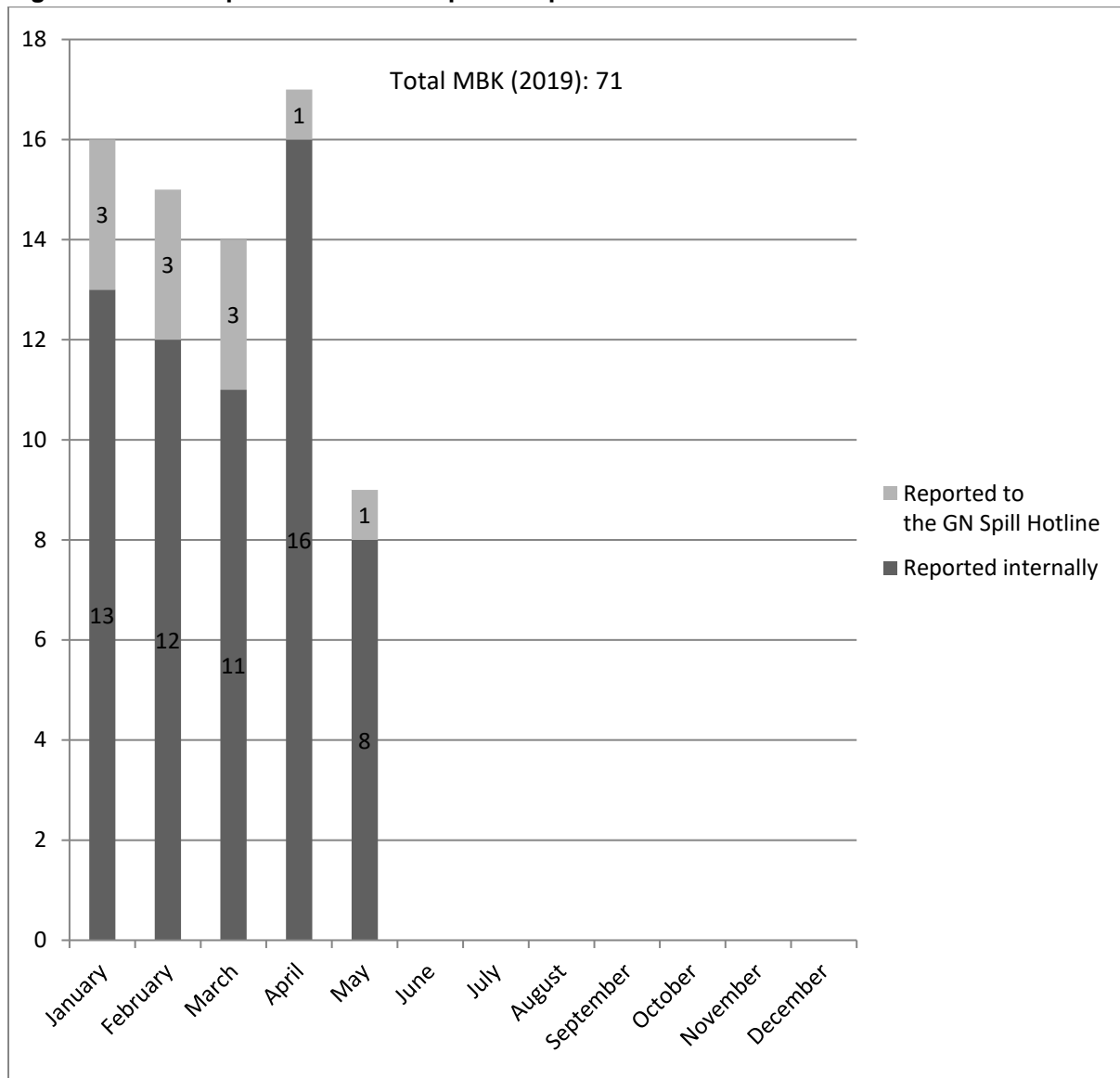
Received on May 24, 2019 from NWB the Ministers Approval regarding the Amendment No.3 to Type A Water Licence No. 2AM-MEA1526 to authorize Water Uses and Waste Deposits associated with the In-Pit Tailings Disposal Proposal.

## SECTION 3 • SPILL MANAGEMENT

Figure 3.1 shows reported and non-reported spills for 2019 broken down per month and Table 3.1 summarizes Agnico Eagle spill reports for May.

All spills reported internally (8) were managed appropriately on site according to Agnico's spill contingency plan. One (1) was reported to regulators in May. Spills were contained and cleaned, contaminated material was disposed to the appropriate area (landfarm, TSF if required), and the clean-up actions were monitored closely by the Environment Department. There was no off site impact to any watercourses.

**Figure 3.1 2019 Reported and Non-Reported Spills**



**Table 3.1: Summary of Agnico Eagle Internal and Reported Spill Reports, May 2019**

<b>Date of Spill</b>	<b>Hazardous Material</b>	<b>Qty</b>	<b>Units (L / Kg)</b>	<b>Location</b>	<b>Cause of spill</b>	<b>Clean-up action taken</b>
May 3, 2019	Hydraulic Oil	10	L	End of the maintenance shop	Unknown	Contaminated material was cleaned up and disposed of appropriately
May 4, 2019	Diesel	70	L	Baker Lake tank farm	When employee unhooked the arm off the tanker, the API dry connect did not close all the way and by the time employee got it closed manually he lost some fuel	Absorbent pad used. Spill was contained and contaminated soil picked up and disposed of appropriately
May 8, 2019	Hydraulic oil	5	L	Haul truck parking	Hydraulic hose leak	Contaminated soil picked up and disposed of appropriately
May 8, 2019	Tailings	996	m <sup>3</sup>	Tailings Storage Facility	After a planned electrical shutdown of the Tailings Storage Facility (TSF) "pig launcher" station, during restart of the system by the Mill control room, the wrong valve was opened remotely, discharging tailings at the top of Saddle Dam 4, by the station	Upon discovery of the spillage, the valve was immediately closed. The tailings were contained within the existing berm surrounding the area and another berm was added at the low point as a precautionary measure. The area will be cleaned-off and soil/slurry/snow removed will be put back into the TSF. There were no off site impacts or discharge to any receiving watercourses
May 10, 2019	Hydraulic oil	85	L	Portage - Pit E	O-ring hydraulic hose failure	Contaminated soil picked up and disposed of appropriately
May 11, 2019	Hydraulic oil	75	L	Maintenance area (Bay #8)	O-ring hydraulic hose failure	Contaminated soil picked up and disposed of appropriately
May 16, 2019	Diesel fuel	40	L	Cold storage	Unknown	Contaminated soil picked up and disposed of appropriately



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May 20, 2019	Coolant	20	L	Primary crusher	Coolant hose failure	Contaminated soil picked up and disposed of appropriately
May 21, 2019	Hydraulic Oil	30	L	Marginal stock pile	Hydraulic hose failure	Mechanic was call to fix the hose. Contaminated material picked up and disposed off adequately