



MEADOWBANK DIVISION

## **Monitoring Program Summary Report**

**July 2019**

Type A Water License 2AM-MEA1526

Table of Contents

SECTION 1 • BACKGROUND ..... 3

SECTION 2 • WATER MANAGEMENT ..... 4

2.1 WATER USAGE .....4

2.2 WASTE ROCK STORAGE FACILITY SEEPAGE .....4

2.3 CENTRAL DIKE SEEPAGE .....4

2.4 ASSAY ROAD SEEPAGE .....4

2.5 SEEPAGE AND RUNOFF FROM THE LANDFILL.....5

2.6 SEEPAGE AT PIT WALL AND PIT WALL FREEZE/THAW AND PERMAFROST AGGRADATION .....5

2.7 SEWAGE TREATMENT PLANT .....5

2.8 VAULT ATTENUATION POND EFFLUENT .....6

2.9 PHASER ATTENUATION POND .....6

2.10 EAST DIKE SEEPAGE EFFLUENT.....6

2.11 NON CONTACT WATER.....6

2.12 IN-PIT DISPOSAL .....6

SECTION 3 • SPILL MANAGEMENT ..... 8

## **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 is 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 July 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
Camp	Third Portage Lake	3 577	3 238	3 539	3 188	3 624
Mill (freshwater tank)	Third Portage Lake	214 981	182 096	112 326	142 405	147 851
Emulsion plant	No-name Lake	50	13	48	57	83
<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>Ore Water (m<sup>3</sup>)</b>	Ore	4 610	3 045	2 727	4 539	6 203
<b>Reclaim Water Usage (m<sup>3</sup>)</b>	Tailings Pond	7 180	29 023	91 207	69 216	82 018

Water Location	Source Lake	June	July	Total
Camp	Third Portage Lake	3 418	3 194	23 778
Mill (freshwater tank)	Third Portage Lake	218 935	256 935	1 275 529
Emulsion plant	No-name Lake	16	64	331
<b>Total Freshwater Usage (m<sup>3</sup>)</b>		<b>222 369</b>	<b>260 193</b>	<b>1 299 638</b>
<b>Ore Water (m<sup>3</sup>)</b>	Ore	6 927	7 251	<b>35 302</b>
<b>Reclaim Water Usage (m<sup>3</sup>)</b>	Tailings Pond	17 693	41 309	<b>337 646</b>

### 2.2 WASTE ROCK STORAGE FACILITY SEEPAGE

In July, 18,223 m<sup>3</sup> of water was pumped back to the North Cell TSF from the ST-16 sump. Of that amount, 4,857 m<sup>3</sup> and 9,011 m<sup>3</sup> were transferred from respectively the WEP1 and WEP2 sumps to the ST-16 sump.

As per the 2019 Freshet Action Plan, Agnico Eagle completed in July freshet inspections at the Portage and Vault RSFs. Open water sampling at WEP1 (Station ST-30), WEP2 (Station ST-31) were also completed during the month.

### 2.3 CENTRAL DIKE SEEPAGE

In July, 405,888 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 July, 17,273 m<sup>3</sup> of water was pumped back from the mill trench back to the mill. Inspections of the area were conducted during the month. Trench sampling and wells monitoring for CN downstream has been taken according to the Freshet Action Plan, when possible.

## 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 July, 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 July.

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 July, 49,131m<sup>3</sup> of water was discharged from the Stormwater Management pond to the South Cell TSF.

**Table 2.7.1: Seprotech Effluent Results**

Parameters	Units	July 1, 2019
Ammonia (NH <sub>3</sub> )	mg N/L	0.22
Ammonia-Nitrogen (NH <sub>3</sub> -NH <sub>4</sub> )	mg N/L	27.4
Total Kjeldahl Nitrogen	mg N/L	32.8
BOD-5	mg/L	13
COD	mg/L	82
Total Suspended Solids	mg/L	12
Nitrate	mg N/L	6.69
Nitrite	mg N/L	0.96
pH*	Units	7.40
Fecal Coliform	UFC/100 mL	10
Total Coliform	UFC/100 mL	NA

\*Parameter measured by STP operators

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

Parameters	Units	July 1, 2019
Ammonia (NH <sub>3</sub> )	mg N/L	<0.05
Ammonia-Nitrogen (NH <sub>3</sub> -NH <sub>4</sub> )	mg N/L	11.0
Total Kjeldahl Nitrogen	mg N/L	13
BOD-5	mg/L	8
COD	mg/L	64
Total Suspended Solids	mg/L	40
Nitrate	mg N/L	20.0
Nitrite	mg N/L	0.07
pH*	Units	6.70

Fecal Coliform	UFC/100 mL	10,000
Total Coliform	UFC/100 mL	<10,000

\*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 out from the Phaser Attenuation Pond in July.

No water transferred from BB Phaser Pit sumps to the Phaser Attenuation Pond during the month.

## 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

In July, Agnico Eagle completed inspections at ST-5 and ST-6 as per the 2019 Freshet Action Plan. Portage Area East (ST-5) and West diversion ditches (ST-6) water quality results are shown in Tables 2.11.1 and 2.11.2, respectively.

TSS results for both stations did not exceed the maximum average concentration (15 mg/L) and maximum allowable grab sample concentration (30 mg/L) permitted by the Water License, Part F, Item 6.

**Table 2.11.1: Portage Area East Diversion Ditch (ST-5) Results**

Parameters	Units	July 2, 2019
Total Suspended Solids	mg N/L	15

**Table 2.11.2: Portage Area West Diversion Ditch (ST-6) Results**

Parameters	Units	July 2, 2019
Total Suspended Solids	mg N/L	14

## 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.

In-Pit disposal in Goose Pits started on July 5.

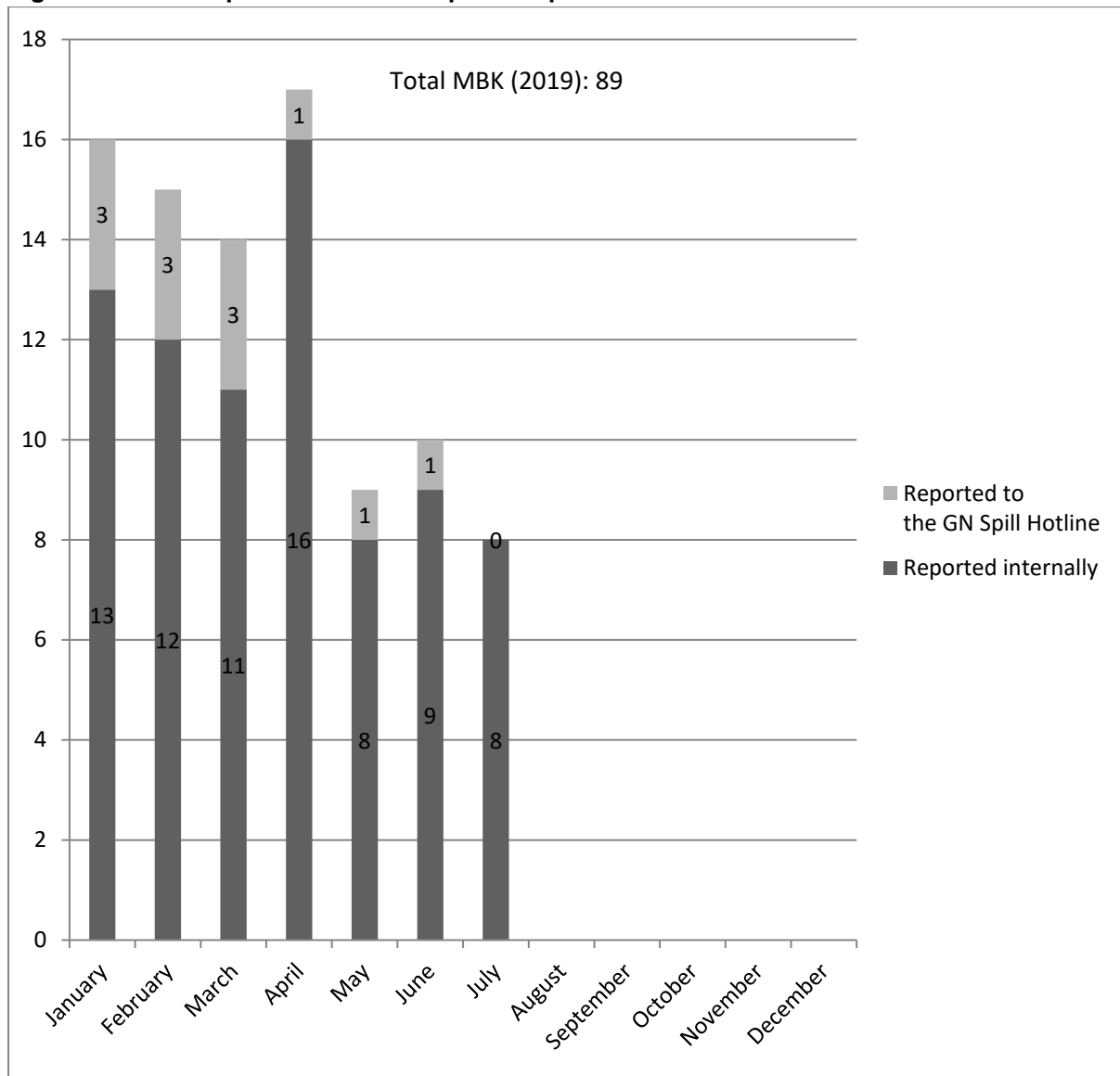
Submission on July 24 and 26 of management plans (Interim Closure and Reclamation Plan, Pore Water Quality, Groundwater, Waste and Tailings) required by Water License 2AM-MEA1526 Amendment – Reasons for Decision for the Meadowbank In-Pit Tailings disposal Section VI Part B.

## 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 July.

All spills reported internally (8) were managed appropriately on site according to Agnico's spill contingency plan. No spill was reported to regulators in July. 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, July 2019**

Date of Spill	Hazardous Material	Qty	Units (L / Kg)	Location	Cause of spill	Clean-up action taken
July 3, 2019	Hydraulic Oil	15	L	Portage Pit E	O-ring failure	Mechanic was call to fix the hose. Contaminated material picked up and disposed off adequately
July 5, 2019	Diesel	2	L	Tankfarm - Haul truck refuelling	Hose in the reel of the Haul Truck Fuel Pumping Station was reported that it was leaking inside the reel box	The Mine Dispatch advised the Building Maintenance Supervisor who went and yellow flagged the access to the Pump first and then sent his plumber to change the leaking hose for a new one. There was a small leak done when removing the hose. All contaminated soil and material picked up and disposed of appropriately
July 6, 2019	Hydraulic Oil	25	L	Transfer tower	Hydraulic hose failure	Picked up oil with absorbent pads. All contaminated soil and material picked up and disposed of appropriately
July 6, 2019	Hydraulic Oil	10	L	Landfill	Hydraulic hose failure	Picked up oil with absorbent pads. All contaminated soil and material picked up and disposed in Hazardous material area
July 20, 2019	Diesel	25	L	Spud barge Baker Lake	Small ball valve close to the manifold was resting on the wood blocks supporting the main fuel pipe and it was all wet underneath	Contaminated soil was removed with shovel and place in drum
July 26, 2019	Hydraulic Oil	20	L	Maintenance	Caps blew on equipment	Recapped the lines and did not use that circuit. Spill was contained and contaminated soil picked up and disposed of appropriately

Type A Water License 2AM-MEA1526  
Monitoring Program Summary Report

July 26, 2019	Hydraulic Oil	10	L	Marginal stock pile	While pushing the dozer operator noticed oil on the ground and shut off the machine	Spill was contained and contaminated soil picked up and disposed of appropriately
July 28, 2019	Hydraulic Oil	65	L	Pit E	Hydraulic hose failure	Shut down equipment. Spill was contained and contaminated soil picked up and disposed of appropriately