



MEADOWBANK DIVISION

Monitoring Program Summary Report

October 2018

Type A Water License 2AM-MEA1526

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SECTION 1 • BACKGROUND

As required under Part I, Item 20 of Type A Water License 2AM-MEA1526 (Amendment No.2), 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 October is summarized in Table 2-1 below.

Table 2-1: Freshwater Usage (m³)

Water Location	Source Lake	Jan	Feb	March	April	May	June
Camp	Third Portage Lake	3 237	3 058	3 404	3 320	3 527	3 304
Mill (freshwater tank)	Third Portage Lake	51 594	165 733	92 668	152 367	136 952	49 471
Emulsion plant	No-name Lake	93	68	88	91	94	47
Total Freshwater Usage (m³)		54 924	168 859	96 161	155 778	140 573	52 822
Ore Water (m³)	Ore	2 606	2 047	2 078	1 500	2 854	3 177
Reclaim Water Usage (m³)	Tailings Pond	219 263	122 845	156 278	89 402	149 282	229 403

Water Location	Source Lake	July	Aug	Sept	Oct	Nov	Dec	Total
Camp	Third Portage Lake	3 330	3 270	3 265	3 319			33 034
Mill (freshwater tank)	Third Portage Lake	47 009	43 408	49 672	30 397			819 271
Emulsion plant	No-name Lake	68	66	60	87,0			762
Total Freshwater Usage (m³)		50 407	46 744	52 997	33 803	0	0	853 067
Ore Water (m³)	Ore	2 895	3 315	2 430	3 002			25 904
Reclaim Water Usage (m³)	Tailings Pond	284 365	289 366	198 531	223 479			1 962 214

2.2 WASTE ROCK STORAGE FACILITY SEEPAGE

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

Agnico Eagle completed in October inspections at the Portage and Vault RSFs. No open water sampling at WEP1 (Station ST-30), WEP2 (Station ST-31), ST-16, NP-2 and the downstream lakes were completed in October. NP2-Winter water sampling through ice into NP-2 Lake will be done once the ice condition permit safe sampling.

2.3 CENTRAL DIKE SEEPAGE

In October, 191,783 m³ of water was pumped from the ST-S-5 sump back into the South Cell TSF.

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 October, 6,101 m³ of water was pumped back from the mill trench back to the mill. Inspections of the area were conducted this month. Wells monitoring for CN downstream occurred in some unfrozen well. No trench sampling in October.

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 October, ice wall continue to be observed into Vault Pit.

2.7 SEWAGE TREATMENT PLANT

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

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 October, no water was discharged from the Stormwater Management pond to the South Cell TSF.

Table 2.7.1: Seprotech Effluent Results

Parameters	Units	October 3, 2018
Ammonia (NH ₃)	mg N/L	0.55
Ammonia-Nitrogen (NH ₃ -NH ₄)	mg N/L	37.4
Total Kjeldahl Nitrogen	mg N/L	42.7
BOD-5	mg/L	7
COD	mg/L	95
Total Suspended Solids	mg/L	10
Nitrate	mg N/L	6.78
Nitrite	mg N/L	1.08
pH*	Units	7.30
Fecal Coliform	UFC/100 mL	320**
Total Coliform	UFC/100 mL	12,000**

*Parameter measured by STP operators

**Sampling date – October 17, 2018

Table 2.7.2: LJ-Mix Effluent Results

Parameters	Units	October 3, 2018
Ammonia (NH ₃)	mg N/L	0.20
Ammonia-Nitrogen (NH ₃ -NH ₄)	mg N/L	19.7
Total Kjeldahl Nitrogen	mg N/L	23.2
BOD-5	mg/L	15
COD	mg/L	66
Total Suspended Solids	mg/L	9
Nitrate	mg N/L	13.4
Nitrite	mg N/L	0.42
pH*	Units	7.00

Fecal Coliform	UFC/100 mL	900**
Total Coliform	UFC/100 mL	18,000**

*Parameter measured by STP operators

**Sampling date – October 17, 2018

2.8 VAULT ATTENUATION POND EFFLUENT

No discharge occurred from the Vault Attenuation Pond into Wally Lake in October.

2.9 PHASER ATTENUATION POND

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

2.10 EAST DIKE SEEPAGE EFFLUENT

In October, a total of 18,835 m³ was discharged into Second Portage Lake.

Five (5) weekly effluent samples were collected at ST-8 in October 2018. TSS results did not exceed the maximum allowable grab sample concentration (30 mg/L) and maximum average concentration (15 mg/L) permitted by Water License, Part F, Item 6. TSS monitoring results for September 2018 are shown in Table 2.9.1 below. There have been no exceedances of MMER criteria.

Table 2.9.1: East Dike Seepage Results for TSS

Parameters	Units	Oct 01, 2018	Oct 08, 2018	Oct 15, 2018	Oct 22, 2018	Oct 29, 2018	Maximum Average Concentration
Total Suspended Solids	mg/L	<1	<1	5	2	<1	1.7

Monthly regular sampling pursuant to the Water License was also conducted at this location. Results are shown in Table 2.9.2 below. There have been no exceedances of MMER for those criteria.

Table 2.9.2 October 2018 Monthly Monitoring Results

Parameters	Units	October 15, 2018
pH*		7.38
Aluminum	mg/L	<0.005
Sulphate	mg/L	8.9
Arsenic	mg/L	<0.0005
Copper	mg/L	<0.0005
Nickel	mg/L	<0.0005
Lead	mg/L	<0.0003

Zinc	mg/L	<0.001
Radium 226	mg/L	Analyze not yet complete
Total Cyanide	mg/L	<0.001

*Parameter measured by environmental technicians

2.11 NON CONTACT WATER

Only Portage Area East (ST-5) was sampled in October. West diversion ditches (ST-6) was frozen. Water quality results for Portage Area East are shown in Tables 2.10.1. TSS results 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 2.10.1: Portage Area East Diversion Ditch (ST-5) Results

Parameters	Units	October 2, 2018
Total Suspended Solids	mg/L	8

SECTION 3 • SPILL MANAGEMENT

Figure 3.1 shows reported and non-reported spills for 2018 broken down per month and Table 3.1 summarizes Agnico Eagle spill reports for October.

All spills reported internally (10) and to regulators (2) were managed appropriately on site according to Agnico's spill contingency plan. 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 2018 Reported and Non-Reported Spills

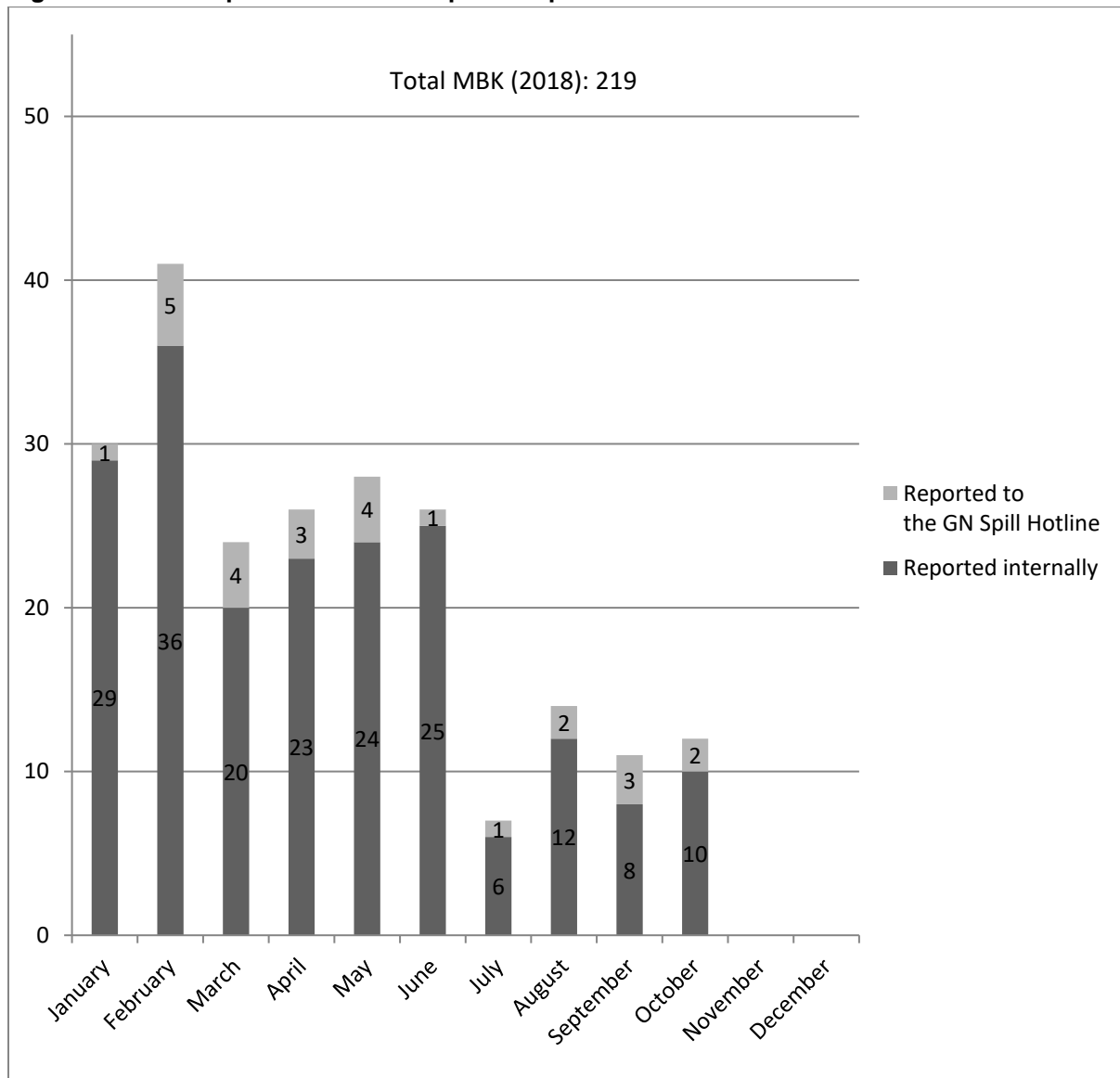


Table 3.1: Summary of Agnico Eagle Internal and Reported Spill Reports, October 2018

Date of Spill	Hazardous Material	Qty	Units (L / Kg)	Location	Cause of spill	Clean-up action taken
October 4, 2018	Hydraulic oil	40	L	MBK Portage Pit	Hydraulic hose failure	Spill was contained and contaminated soil picked up and disposed of appropriately
October 5, 2018	Coolant	50	L	MBK Push back parking	Coolant hose failure	Spill was contained and contaminated soil picked up and disposed of appropriately
October 9, 2018	Hydraulic oil	80	L	Vault	Hydraulic hose failure	Spill was contained and contaminated soil picked up and disposed of appropriately
October 10, 2018	Hydraulic oil	25	L	MBK Portage Pit	Hydraulic hose failure during trimming	Spill was contained and contaminated soil picked up and disposed of appropriately
October 10, 2018	Hydraulic oil	25	L	MBK Portage Pit	Hydraulic hose failure	Spill was contained and contaminated soil picked up and disposed of appropriately
October 11, 2018	Hydraulic oil	260	L	MBK Portage Pit	Hydraulic hose failure	Spill was contained and contaminated soil picked up and disposed of appropriately
October 14, 2018	Hydraulic oil	500	L	MBK Portage Rock Storage Facility	Hydraulic hose failure	Spill was contained and contaminated soil picked up and disposed of appropriately
October 15, 2018	Coolant	12	L	MBK Row #1 Inventory seacan pad	Radiator failure	Spill was contained and contaminated soil picked up and disposed of appropriately

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October 21, 2018	Hydraulic oil	85	L	MBK Primary crusher	Hydraulic hose failure	Spill was contained and contaminated soil picked up and disposed of appropriately
October 21, 2018	Hydraulic oil	10	L	Vault Pit	Hydraulic hose failure	Spill was contained and contaminated soil picked up and disposed of appropriately
October 26, 2018	Coolant	30	L	MBK Genset units	The electrician was going around the genset units for his inspections when he noticed a coolant spill on the ground beside the berm under the radiator unit	Spill was contained and contaminated soil picked up and disposed of appropriately
October 30, 2018	Hydraulic oil	40	L	MBK Dome	Hydraulic hose failure	Spill was contained and contaminated soil picked up and disposed of appropriately