



MEADOWBANK DIVISION

Monitoring Program Summary Report

July 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 July is summarized in Table 2-1 below.

Table 2-1: Freshwater Usage (m³)

Water Location	Source Lake	Jan	Feb	March	April	May	June	July	Total
Camp	Third Portage Lake	3,237	3,058	3,404	3,320	3,527	3,304	3,330	23,180
Mill (freshwater tank)	Third Portage Lake	51,594	165,733	92,668	152,367	136,952	49,471	47,009	695,794
Emulsion plant	No-name Lake	93.2	68	88	91	94	47	68	550
Total Freshwater Usage (m³)		54,924	168,859	96,161	155,778	140,573	52,822	50,407	719,524
Reclaim Water Usage (m³)	Tailings Pond	219,263	122,845	156,278	89,402	149,282	229,403	284,365	1,250,838

2.2 WASTE ROCK STORAGE FACILITY SEEPAGE

In July, 2,523 m³ of water was pumped back to the North Cell TSF from the ST-16 sump. Of that amount, 376 m³ and 925 m³ were transferred from respectively the WEP1 and WEP2 sumps to the ST-16 sump.

As per the 2018 Freshet Action Plan, Agnico Eagle completed in July the freshet inspections at the Portage and Vault RSFs. Open water sampling at WEP1 (Station ST-30), WEP2 (Station ST-31), ST-16, NP-2 and the downstream lakes were also completed in July.

2.3 CENTRAL DIKE SEEPAGE

In July, 195,987 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 July, 4,148 m³ of water was pumped back from the mill trench back to the mill. Weekly inspections of the area were conducted this month. Trench sampling and wells monitoring for CN downstream has been taking according to the Freshet Action Plan.

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 was observed into Vault pit. In order to increase the melting rate of this ice wall, water from the Vault pit sump as well as water from Vault Attenuation pond have been sprayed on it. Once melting complete, a total of 73,884 m³ were pumped from Vault pit to Vault attenuation pond.

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, a total of 16,380 m³ has been discharged from the Stormwater Management pond to the South Cell TSF.

Table 2.7.1: Seprotech Effluent Results

Parameters	Units	July 9, 2018
Ammonia (NH ₃)	mg N/L	0.14
Ammonia-Nitrogen (NH ₃ -NH ₄)	mg N/L	28.1
Total Kjeldahl Nitrogen	mg N/L	34.3
BOD-5	mg/L	12
COD	mg/L	67
Total Suspended Solids	mg/L	19
Nitrate	mg N/L	10
Nitrite	mg N/L	0.71
pH*	Units	6.8
Fecal Coliform	UFC/100 mL	140
Total Coliform	UFC/100 mL	6,000

*Parameter measured by STP operators

Table 2.7.2: LJ-Mix Effluent Results

Parameters	Units	July 9, 2018
Ammonia (NH ₃)	mg N/L	0.54
Ammonia-Nitrogen (NH ₃ -NH ₄)	mg N/L	48.8
Total Kjeldahl Nitrogen	mg N/L	56.4
BOD-5	mg/L	14
COD	mg/L	86
Total Suspended Solids	mg/L	22
Nitrate	mg N/L	4.85
Nitrite	mg N/L	0.95
pH*	Units	NA
Fecal Coliform	UFC/100 mL	490
Total Coliform	UFC/100 mL	4,000

*Parameter measured by STP operators

2.8 VAULT ATTENUATION POND EFFLUENT

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

As describes in Section 2.6 above, a total volume of 73,884 m³ were pumped from Vault pit to Vault Attenuation Pond.

2.9 PHASER ATTENUATION POND

In July, 23,928 m³ of water was pumped to the Vault Attenuation Pond from the Phaser Attenuation Pond. Of that amount, 6,447 m³ and 2,915 m³ were transferred from respectively the Phaser Pit and BB Phaser Pit sumps to the Phaser Attenuation Pond.

2.10 EAST DIKE SEEPAGE EFFLUENT

Due to an increase in internal TSS levels in the East Dike effluent, the discharge has been preventively stopped and diverted to the pit beginning of June and didn't restart in July. While the discharge is diverted to the pits, the station name is ST-S-1 as per the Water License Type A.

Monthly regular sampling pursuant to the Water License was conducted at ST-S-1. Results are shown in Table 2.9.2 below.

Table 2.9.2 July 2018 Monthly Monitoring Results (ST-S-1)

Parameters	Units	July 16, 2018
pH*		7.90
Alkalinity	mg CaCO ₃ /L	27
Aluminium	mg/L	0.026
Silver	mg/L	<0.0001
Arsenic	mg/L	0.0034
Ammonia nitrogen	mg N/L	0.08
Barium	mg/L	0.0047
Cadmium	mg/L	<0.00002
Chloride	mg/L	0.9
Chrome	mg/L	0.0007
Copper	mg/L	0.0006
Total Cyanide	mg/L	0.001
Hardness	mg CaCO ₃ /L	32
Iron	mg/L	0.07
Fluoride	mg/L	0.09
Total Suspended Solids	mg/L	9
Manganese	mg/L	0.0034

Mercury	mg/L	<0.00001
Molybdenum	mg/L	<0.0005
Ammonia NH3 (non-ionized)	mg N/L	<0.01
Nickel	mg/L	0.0012
Nitrate	mg N/L	0.11
Nitrite	mg N/L	<0.01
Lead	mg/L	<0.0003
Selenium	mg/L	0.005
Dissolved Solids	mg/L	49
Sulfate	mg SO4/L	7.1
Thallium	mg/L	<0.0002
Zinc	mg/L	0.001

*Parameter measured by environmental technicians

2.11 NON CONTACT WATER

In July, Agnico Eagle completed inspections at ST-5 and ST-6 as per the 2018 Freshet Action Plan. Portage Area East (ST-5) and West diversion ditches (ST-6) water quality results are shown in Tables 2.10.1 and 2.10.2, respectively. 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	July 3, 2018
Total Suspended Solids	mg/L	<1

Table 2.10.2: Portage Area West Diversion Ditch (ST-6) Results

Parameters	Units	July 3, 2018
Total Suspended Solids	mg/L	<1

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 July. As the Whale Tail Project NWB Water License Type A 2AM-WTP1826 has been received, Agnico will start to report the spills via the monthly report require under this license. To be consistency, all spills related to the Whale Tail Project or the Amaruq Exploration Access Road from January to June 2018 will be removed from this report and reported under the new 2AM-WTP1826 monthly report.

All spills reported internally (7) and to regulators (1) 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

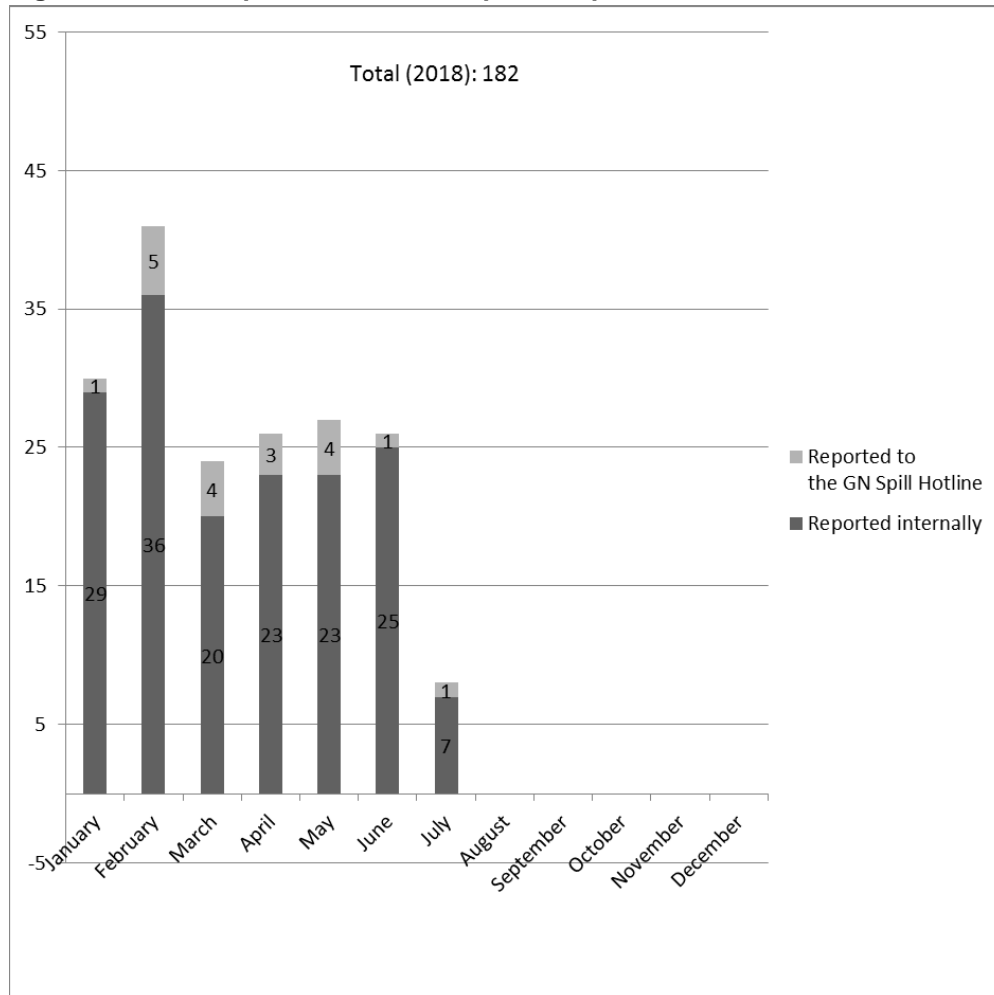


Table 3.1: Summary of Agnico Eagle Internal Spill Reports, July 2018

2018 Reported Spills (Internal and Reported to Regulators)						
Date of Spill	Hazardous Material	Qty	Units (L / Kg)	Location	Cause of spill	Clean-up action taken
July 1, 2018	Hydraulic oil	85	L	Vault pit	Hydraulic hose failure	Spill was contained and contaminated soil picked up and disposed of appropriately
July 12, 2018	Motor Oil	15	L	Maintenance Meadowbank	Leak from pick up engine	Spill was contained and contaminated soil picked up and disposed of appropriately
July 14, 2018	Hydraulic oil	20	L	Mine Meadowbank - Pit E5	Hydraulic hose failure	Spill was contained and contaminated soil picked up and disposed of appropriately
July 16, 2018	Transmission oil	95	L	Open Pit Meadowbank	Hydraulic hose failure	Spill was contained and contaminated soil picked up and disposed of appropriately
July 17, 2018	Hydraulic oil	360	L	Vault pit	Broken hydraulic hose.	Spill was contained and contaminated soil picked up and disposed of appropriately
July 21, 2018	Hydraulic oil	10	L	Mine Meadowbank - Pit E5	Hydraulic hose failure	Spill was contained and contaminated soil picked up and disposed of appropriately
July 22, 2018	Hydraulic oil	40	L	Vault pit	Hydraulic hose failure	Spill was contained and contaminated soil picked up and disposed of appropriately
July 27, 2018	Coolant	20	L	Meadowbank Portage RSF	Coolant hose failure	Spill was contained and contaminated soil picked up and disposed of appropriately