



MEADOWBANK DIVISION

Monitoring Program Summary Report

June 2017

Type A Water License 2AM-MEA1525

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SECTION 1 • BACKGROUND

As required under Part I, Item 20 of Type A Water License 2AM-MEA1525, 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, 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 June 2017 is summarized in Table 2-1 below.

Table 2-1: Freshwater Usage (m³)

Water Location	Source Lake	Jan	Feb	March	April	May	June	Total
Camp	Third Portage Lake	3 623	3 144	3 444	3 490	3 692	3 697	21 090
Mill (freshwater tank)	Third Portage Lake	45 068	41 345	33 328	53 001	53 152	39 661	265 555
Emulsion plant	No-name Lake	86	97	97	96	101	100	576
Total Freshwater Usage (m³)		48 777	44 586	36 869	56 587	56 944	43 459	287 221
Reclaim Water Usage (m³)	Tailings Pond	252 232	232 324	247 396	227 667	246 007	247 131	1 452 757

2.2 WASTE ROCK STORAGE FACILITY SEEPAGE

In June 2017, 20,881 m³ of water was pumped back to the North Cell TSF from the ST-16 sump. Of that amount, 8,345 and 5,154 m³ were transferred from respectively the WEP1 and WEP2 sumps to the ST-16 sump.

As per the 2017 Freshet Action Plan, Agnico Eagle completed in June the daily freshet inspections at the Portage and Vault RSFs, and NP-2 Lake. No major issues were observed. Open water sampling at WEP1 (Station ST-30) and WEP2 (Station ST-31) required under the Freshet Action Plan was completed in June. Open water sampling was also completed in June for ST-16, NP-2 and the downstream lakes.

2.3 CENTRAL DIKE SEEPAGE

In June 2017, 466,642 m³ of water was pumped from the ST-S-5 sump back into the South Cell TSF. Total year to date is 2,694,330 m³.

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 June 2017, 3,973 m³ of water was pumped back from well MW-203 back to the mill. Weekly inspections of the area were conducted this month. Well monitoring for CN downstream of the trench as well as open water monitoring required under the Freshet Action Plan were partially completed in June, because some sampling stations did not contain enough water to sample.

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 June, ice was still observed on the eastern wall of the Vault Pit, but the ice wall was melting due to the temperature increase. In June, 49,924 m³ were pumped out from Vault Pit to the Vault Attenuation Pond. A total of 86,268 m³ was pumped out from Portage Pit North to the South Cell TSF. No water was pumped out from the Portage Pit South.

2.7 SEWAGE TREATMENT PLANT

One (1) effluent wastewater sample was collected at the onsite sewage treatment plant (STP) in June 2017.

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 twice a year during summer months. In June, a total of 9,576 m³ has been discharged from the Stormwater Management pond to the South Cell TSF.

Table 2.7.1: Seprotech Effluent Results

Parameters	Units	June 5, 2017
Ammonia (NH ₃)	mg N/L	0.96
Ammonia-Nitrogen (NH ₃ -NH ₄)	mg N/L	59.00
Total Kjeldahl Nitrogen	mg N/L	6.10
BOD-5	mg/L	10
COD	mg/L	79
Total Suspended Solids	mg/L	16
Nitrate	mg N/L	0.37
Nitrite	mg N/L	2.09
pH*	Units	7.5
Fecal Coliform	UFC/100 mL	100
Total Coliform	UFC/100 mL	<1,000

*Parameter measured by STP operators

Table 2.7.2: LJ-Mix Effluent Results

Parameters	Units	June 5, 2017
Ammonia (NH ₃)	mg N/L	0.03
Ammonia-Nitrogen (NH ₃ -NH ₄)	mg N/L	5.40
Total Kjeldahl Nitrogen	mg N/L	7.80
BOD-5	mg/L	27
COD	mg/L	93
Total Suspended Solids	mg/L	19
Nitrate	mg N/L	8.95
Nitrite	mg N/L	2.45
pH*	Units	6.8
Fecal Coliform	UFC/100 mL	>600
Total Coliform	UFC/100 mL	300,000

*Parameter measured by STP operators

2.8 VAULT ATTENUATION POND EFFLUENT

Discharge from the Vault Attenuation Pond into Wally Lake started on June 18. A total of 197 564 m³ of water was discharged.

TSS monitoring results for June 2017 are shown in Table 2.8.1. below. No Actiflo Water Treatment Plant was necessary during the month as the TSS levels were below the effluent criteria stated in Part F, Item 4 of Water Licence 2AM-MEA1525. Two (2) weekly effluent samples were taken at ST-10 in June. Results are presented in table 2.8.2.

Table 2.8.1: June 2017 Vault attenuation pond effluent results for TSS

Parameters	Units	19-June-17	26-June-17	Maximum Average Concentration
Total Suspended Solids	mg/L	10	<1	5.25

Table 2.8.2: June 2017 Vault attenuation pond effluent results

Parameters	Units	19-June-17	26-June-17
Aluminum	mg/L	0.218	0.162
Sulphate	mg/L	26.1	31.5
Arsenic	mg/L	<0.0005	<0.0005
Copper	mg/L	0.0025	0.0033
Nickel	mg/L	0.0041	0.0043
Lead	mg/L	0.0009	0.0016
Zinc	mg/L	0.002	0.005
Radium 226	mg/L	ND	ND
Total Cyanide	mg/L	0.001	0.003

2.9 EAST DIKE SEEPAGE EFFLUENT

On May 9, East Dike Discharge exceeded TSS results regarding the maximum allowable grab sample concentration (30 mg/L) and maximum average concentration (15 mg/L) permitted by Water License, Part F, Item 6. The event was reported via an email sent to the NU Spill Line on May 11 2017. More details were provided in May report.

In June, there was still no discharge from the East Dike Seepage to Second Portage Lake. Agnico Eagle has put in place a daily TSS monitoring program to follow the water quality. Once the results are satisfying for Agnico Eagle and compliant with the MMER regulation for a period judged acceptable for confirmation that the TSS level meets discharge criteria, the water discharge will resume in Second Portage Lake.

2.10 NON CONTACT WATER

In June, Agnico Eagle completed inspections at ST-5 and ST-6 as per the 2017 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	4-June-16
Total Suspended Solids	mg/l	7

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

Parameters	Units	4-June-16
Total Suspended Solids	mg/l	1

SECTION 3 • SPILL MANAGEMENT

Figure 3.1 shows reported and non-reported spills for 2017 broken down per month and Table 3.1 summarizes Agnico spill reports for June 2017. All spills reported internally (34) 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 2017 Reported and Non-Reported Spills

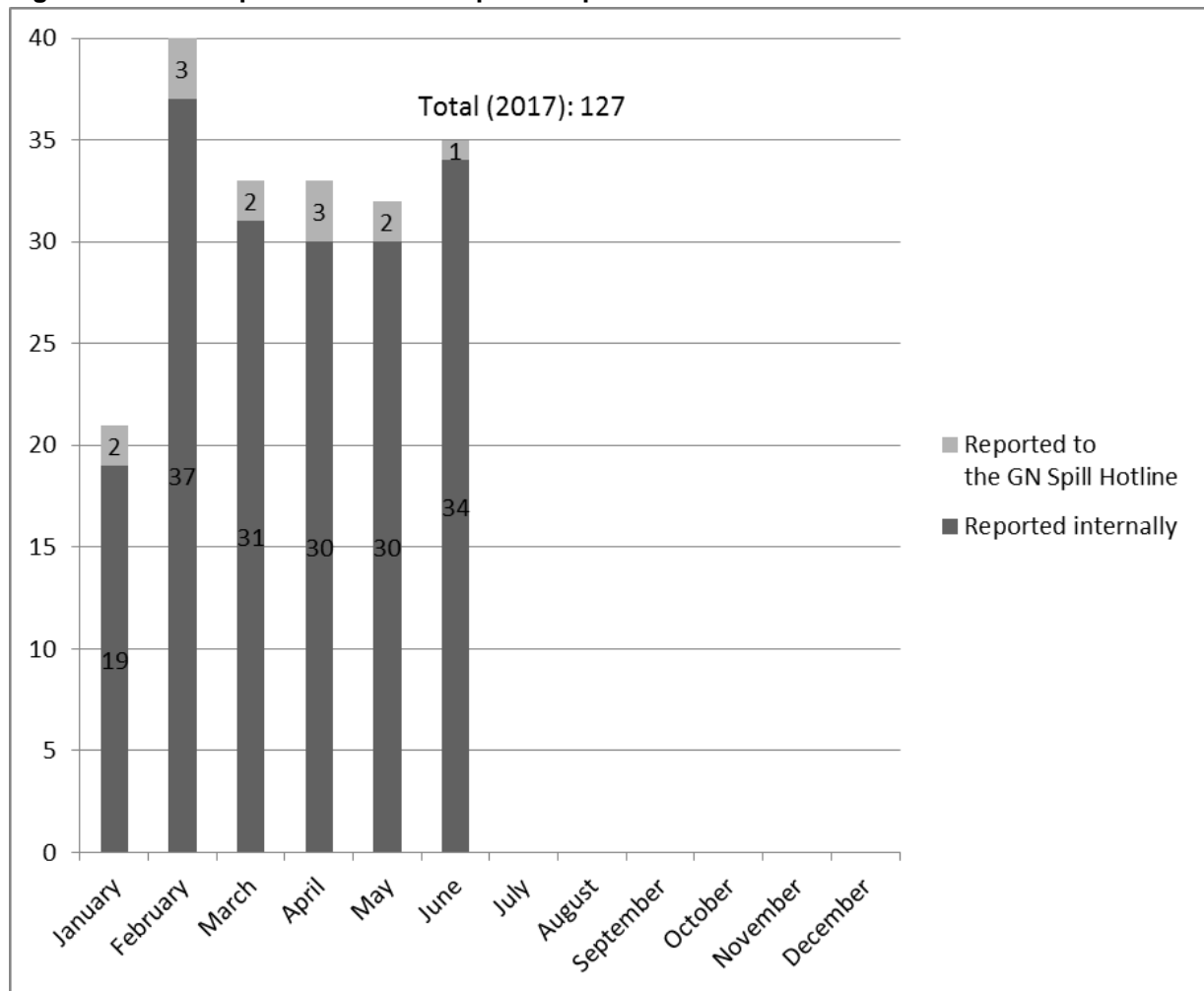


Table 3.1: Summary of Agnico Eagle Internal Spill Reports, June 2017

Date of Spill	Hazardous Material	Quantity	Units (L / Kg)	Location	Cause of spill	Clean-up action taken	Reported to Spill GN HotLine
June 1, 2017	Hydraulic oil	25	L	Portage pit	Broken hydraulic hose	Spill was contained and contaminated soil picked up and disposed of appropriately	No
June 2, 2017	Hydraulic oil	30	L	Vault pit	Broken hydraulic hose	Spill was contained and contaminated soil picked up and disposed of appropriately	No
June 2, 2017	Hydraulic oil	30	L	Vault pit	Broken hydraulic hose	Spill was contained and contaminated soil picked up and disposed of appropriately	No
June 4, 2017	Antifreeze	30	L	Vault road	Broken antifreeze line	Spill was contained and contaminated soil picked up and disposed of appropriately	No
June 5, 2017	Hydraulic oil	30	L	Vault rock storage facility	Broken hydraulic hose	Spill was contained and contaminated soil picked up and disposed of appropriately	No
June 5, 2017	Sulphur prill	0,2	Kg	Mill	Some sulphur prills spilled from a ripped bag when the employee opened the seacan	Spill was contained and contaminated soil picked up and disposed of appropriately	No
June 6, 2017	Hydraulic oil	60	L	Vault pit	Broken hydraulic hose	Spill was contained and contaminated soil picked up and disposed of appropriately	No
June 7, 2017	Coolant	20	L	Vault road	Broken coolant hose	Spill was contained and contaminated soil picked up and disposed of appropriately	No
June 8, 2017	Hydraulic oil	20	L	Pushback parking	The operator noticed a leak while cleaning the haul truck	Spill was contained and contaminated soil picked up and disposed of appropriately	No

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June 8, 2017	Hydraulic oil	30	L	Goose road	Broken hydraulic hose	Spill was contained and contaminated soil picked up and disposed of appropriately	No
June 9, 2017	Hydraulic oil	30	L	Primary crusher pad	Broken hydraulic hose	Spill was contained and contaminated soil picked up and disposed of appropriately	No
June 10, 2017	Hydraulic oil	10	L	Vault pit	Broken hydraulic hose	Spill was contained and contaminated soil picked up and disposed of appropriately	No
June 10, 2017	Hydraulic oil	30	L	Winter parking	Broken hydraulic hose	Spill was contained and contaminated soil picked up and disposed of appropriately	No
June 11, 2017	Coolant	95	L	Vault pit	Broken coolant hose	Spill was contained and contaminated soil picked up and disposed of appropriately	No
June 11, 2017	Hydraulic oil	40	L	Vault pit	Broken hydraulic hose	Spill was contained and contaminated soil picked up and disposed of appropriately	No
June 11, 2017	Hydraulic oil	25	L	Portage pit	Broken hydraulic hose	Spill was contained and contaminated soil picked up and disposed of appropriately	No
June 12, 2017	Hydraulic oil	50	L	Vault pit	Broken O'ring	Spill was contained and contaminated soil picked up and disposed of appropriately	No
June 12, 2017	Hydraulic oil	80	L	Vault pit	Broken hydraulic hose	Spill was contained and contaminated soil picked up and disposed of appropriately	No
June 13, 2017	Hydraulic oil	50	L	Vault pit	Broken O'ring	Spill was contained and contaminated soil picked up and disposed of appropriately	No
June 13, 2017	Hydraulic oil	50	L	Vault pit	Broken hydraulic hose	Spill was contained and contaminated soil picked up and disposed of appropriately	No

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June 13, 2017	Hydraulic oil	80	L	Vault pit	Broken hydraulic hose	Spill was contained and contaminated soil picked up and disposed of appropriately	No
June 14, 2017	Hydraulic oil	80	L	Vault pit	Broken O'ring	Spill was contained and contaminated soil picked up and disposed of appropriately	No
June 14, 2017	Hydraulic oil	50	L	Vault pit	Broken O'ring	Spill was contained and contaminated soil picked up and disposed of appropriately	No
June 15, 2017	Coolant	10	L	Pushback parking	Broken coolant hose	Spill was contained and contaminated soil picked up and disposed of appropriately	No
June 15, 2017	Hydraulic oil	190	L	Portage pit	Broken hydraulic hose	Spill was contained and contaminated soil picked up and disposed of appropriately	Yes
June 16, 2017	Hydraulic oil	20	L	Vault pit	Broken hydraulic hose	Spill was contained and contaminated soil picked up and disposed of appropriately	No
June 16, 2017	Engine oil	20	L	Pushback parking	Failed engine component	Spill was contained and contaminated soil picked up and disposed of appropriately	No
June 16, 2017	Hydraulic oil	30	L	Vault pit	Broken O'ring	Spill was contained and contaminated soil picked up and disposed of appropriately	No
June 16, 2017	Hydraulic oil	10	L	Vault pit	Broken hydraulic hose	Spill was contained and contaminated soil picked up and disposed of appropriately	No
June 17, 2017	Hydraulic oil	50	L	Vault pit	Failed component	Spill was contained and contaminated soil picked up and disposed of appropriately	No

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June 17, 2017	Hydraulic oil	10	L	Vault pit	Broken O'ring	Spill was contained and contaminated soil picked up and disposed of appropriately	No
June 18, 2017	Hydraulic oil	15	L	Vault kitchen	Broken hydraulic hose	Spill was contained and contaminated soil picked up and disposed of appropriately	No
June 24, 2017	Coolant	45	L	Vault parking	Broken coolant hose	Spill was contained and contaminated soil picked up and disposed of appropriately	No
June 27, 2017	Coolant	60	L	Vault pit	Broken coolant hose	Spill was contained and contaminated soil picked up and disposed of appropriately	No
June 30, 2017	Fuel	10	L	Vault camp	Possible crack on the fuel tank	Spill was contained and contaminated soil picked up and disposed of appropriately	No