



MEADOWBANK DIVISION

Monitoring Program Summary Report

April 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 April 2017 is summarized in Table 2-1 below.

Table 2-1: Freshwater Usage (m³)

Water Location	Source Lake	Jan	Feb	March	April	Total
Camp	Third Portage Lake	3,623	3,144	3,444	3,490	13,701
Mill (freshwater tank)	Third Portage Lake	45,068	41,345	33,328	53,001	172,742
Emulsion plant	No-name Lake	86	97	97	96	375
Total Freshwater Usage (m³)		48,777	44,586	36,869	56,587	186,818
Reclaim Water Usage (m³)	Tailings Pond	252,232	232,324	247,396	227,667	959,619

2.2 WASTE ROCK STORAGE FACILITY SEEPAGE

In April 2017, no water was pumped back to the North Cell TSF from the ST-16 sump as it is frozen.

Inspections/Monitoring as per the Freshet Action Plan will resume in 2017 Freshet. As well, sampling at WEP1 (Station ST-30), WEP2 (Station ST-31), ST-16, NP2, and the downstream lakes required under the Freshet Action Plan will resume in 2017 Freshet. NP2-Winter water sampling through ice into NP-2 Lake has been done in April.

2.3 CENTRAL DIKE SEEPAGE

In April 2017, 427,944 m³ of water was pumped from the ST-S-5 sump back into the South Cell TSF. Total year to date is 1,733,204 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 April 2017, no water was pumped from the interception trench back to the mill as it is all frozen.

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 April, water was observed seeping on the eastern wall and the north wall of the Vault Pit. It was not possible to assess flow. In April, no water was pumped out from Vault Pit to the Vault Attenuation Pond. A total of 7,200 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 April 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.

Table 2.7.1: Seprotech Effluent Results

Parameters	Units	April 3, 2017
Ammonia (NH ₃)	mg N/L	0.3
Ammonia-Nitrogen (NH ₃ -NH ₄)	mg N/L	51.11
Total Kjeldahl Nitrogen	mg N/L	58.69
BOD-5	mg/L	10
COD	mg/L	69
Total Suspended Solids	mg/L	2
Nitrate	mg N/L	0.95
Nitrite	mg N/L	1.61
pH*	Units	7.60
Fecal Coliform	UFC/100 mL	80
Total Coliform	UFC/100 mL	>8,000

*Parameter measured by STP operators

Table 2.7.2: LJ-Mix Effluent Results

Parameters	Units	April 3, 2017
Ammonia (NH ₃)	mg N/L	0.02
Ammonia-Nitrogen (NH ₃ -NH ₄)	mg N/L	9.51
Total Kjeldahl Nitrogen	mg N/L	11.07
BOD-5	mg/L	5
COD	mg/L	55
Total Suspended Solids	mg/L	18
Nitrate	mg N/L	13.7
Nitrite	mg N/L	0.26
pH*	Units	7.20
Fecal Coliform	UFC/100 mL	190
Total Coliform	UFC/100 mL	14,000

*Parameter measured by STP operators

2.8 VAULT ATTENUATION POND EFFLUENT

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

2.9 EAST DIKE SEEPAGE EFFLUENT

Discharge from the East Dike Seepage occurred for the entire month of April. A total of 12,141 m³ of water was discharged into Second Portage Lake in April 2017. Total year to date is 48,472 m³.

Four (4) weekly effluent samples were collected at ST-8 in April 2017. 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 April 2017 are shown in Table 2.9.2 below.

Table 2.9.2: April 2017 East Dike Seepage Results

Parameters	Units	3-April-17	12-April-17	17-April-17	24-April-17	Maximum Average Concentration
Total Suspended Solids	mg/L	8	11	11	4	8.5

Monthly regular sampling pursuant to the Water License was also conducted at this location. Results are shown in Table 2.9.3 below. There have been no exceedances of MMER or Water License criteria.

Table 2.9.3: April 2017 Monthly Monitoring Results

Parameters	Units	3-April-17
Aluminum	mg/L	0.042
Sulphate	mg/L	16.6
Arsenic	mg/L	<0.0005
Copper	mg/L	0.0018
Nickel	mg/L	0.0007
Lead	mg/L	<0.0003
Zinc	mg/L	<0.001
Radium 226	mg/L	<0.002
Total Cyanide	mg/L	0.002

2.10 NON CONTACT WATER

No water sampling at ST-5 and ST-6 was completed in April due to frozen condition.

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 April 2017. All spills reported internally (30) and to regulators (3) 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

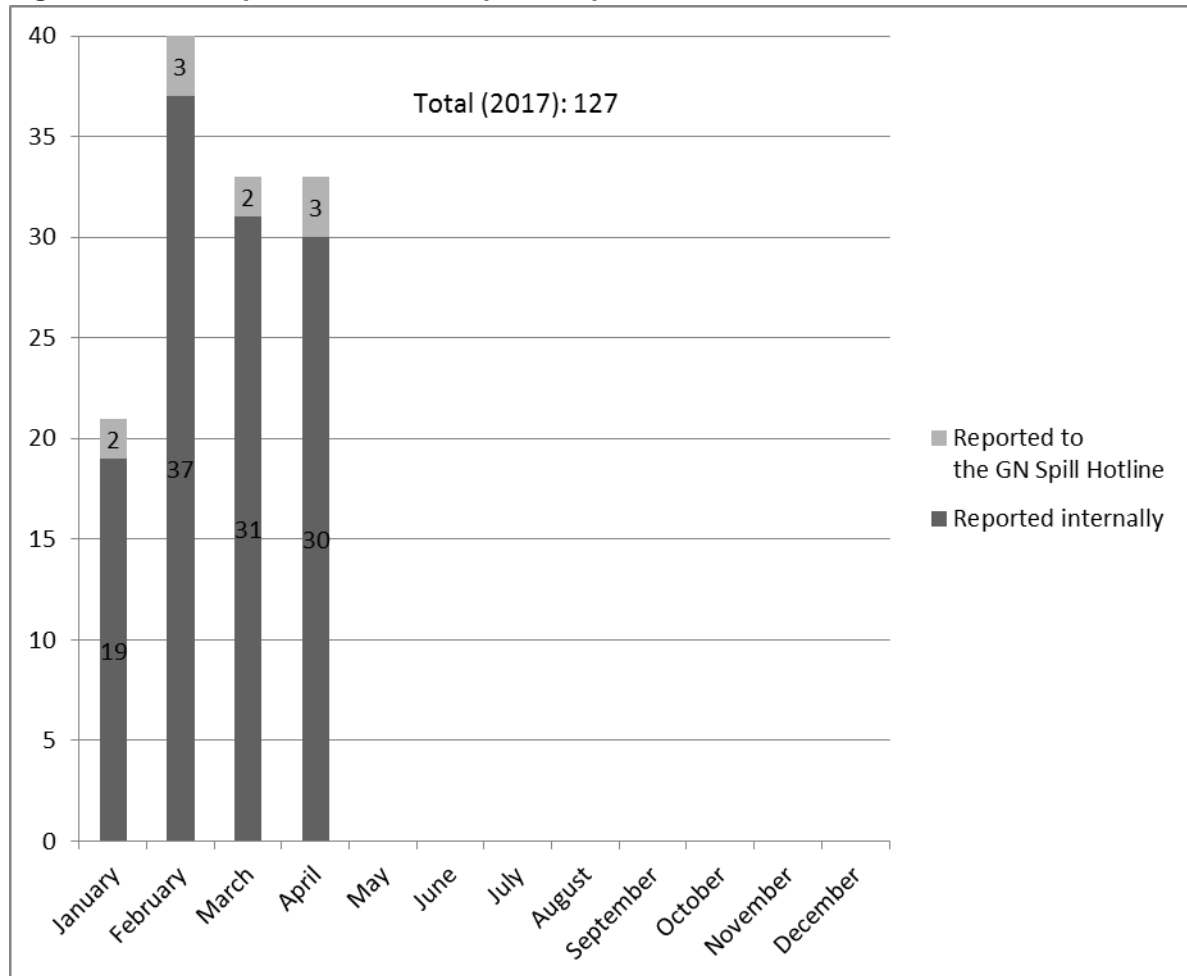


Table 3.1: Summary of Agnico Eagle Internal Spill Reports, April 2017

Date of Spill	Hazardous Material	Quantity	Units (L / Kg)	Location	Cause of spill	Clean-up action taken	Reported to Spill GN HotLine (Y/N)
April 1, 2017	Hydraulic oil	25	L	Portage Pit	Broken O'ring	Contaminated soil picked up and disposed of appropriately	N
April 3, 2017	Coolant	50	L	Vault Pit	Broken coolant hose	Contaminated soil picked up and disposed of appropriately	N
April 3, 2017	Hydraulic oil	30	L	Vault Pit	Broken hydraulic hose	Contaminated soil picked up and disposed of appropriately	N
April 5, 2017	Hydraulic oil	15	L	Vault Pit	Broken hydraulic hose	Contaminated soil picked up and disposed of appropriately	N
April 5, 2017	Hydraulic oil	80	L	Vault Pit	Broken hydraulic hose	Spill was contained and contaminated soil picked up and disposed of appropriately	N
April 6, 2017	Hydraulic Oil	4	L	Vault Pit	Broken hydraulic hose	Spill was contained and contaminated soil picked up and disposed of appropriately	N
April 7, 2017	Diesel	10	L	Vault Camp	Broken fuel tank	Spill was contained and contaminated soil picked up and disposed of appropriately	N
April 8, 2017	Hydraulic Oil	90	L	Vault Pit	Broken O'ring	Contaminated soil picked up and disposed of appropriately	N
April 8, 2017	Hydraulic Oil	125	L	Vault Pit	Broken hydraulic hose	Spill was contained and contaminated soil picked up and disposed of appropriately	Y

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April 8, 2017	Hydraulic Oil	40	L	Vault Camp	Broken O'ring	Contaminated soil picked up and disposed of appropriately	N
April 12, 2017	Hydraulic Oil	20	L	Portage Pit	Broken O'ring	Spill was contained and contaminated soil picked up and disposed of in the landfarm	N
April 14, 2017	Hydraulic Oil	90	L	Vault Pit	Broken hydraulic hose	Spill was contained and contaminated soil picked up and disposed of in the landfarm	N
April 14, 2017	Hydraulic Oil	50	L	Portage Pit	Broken hydraulic hose	Spill was contained and contaminated soil picked up and disposed of in the landfarm	N
April 15, 2017	Hydraulic Oil	25	L	Vault Pit	Failed components	Contaminated soil picked up and disposed of appropriately	N
April 15, 2017	Coolant	15	L	Vault Pit	Failed components	Contaminated soil picked up and disposed of appropriately	N
April 15, 2017	Coolant	25	L	Pushback Parking	Broken coolant hose	Contaminated soil picked up and disposed of appropriately	N
April 15, 2017	Transmission Fluid	25	L	Vault Parking	Broken coolant hose	Spill was contained and contaminated soil picked up and disposed of in the landfarm	N
April 17, 2017	Coolant	30	L	Portage Rock Storage Facility	Broken coolant hose	Contaminated snow picked up and disposed of adequately	N
April 17, 2017	Coolant	10	L	Vault Rock Storage Facility	Coolant was overfilled and overflowed out of the tank with engine temperature increasing	Contaminated snow picked up and disposed of adequately	N

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April 20, 2017	Hydraulic oil	30	L	Goose Pit	Failed components	Contaminated soil picked up and disposed of appropriately	N
April 20, 2017	Coolant	80	L	Vault Pit	Broken coolant hose	Contaminated soil picked up and disposed of appropriately	N
April 21, 2017	Engine oil	10	L	Maintenance shop	Dipstick popped out	Contaminated soil picked up and disposed of appropriately	N
April 21, 2017	Hydraulic oil	200	L	Vault Pit	Broken hydraulic hose	Spill was contained and contaminated soil picked up and disposed of appropriately	Y
April 22, 2017	Coolant	80	L	Vault Pit	Broken coolant hose	Contaminated soil picked up and disposed of appropriately	N
April 23, 2017	Hydraulic oil	10	L	Vault Parking	Wheel seal leak	Contaminated soil picked up and disposed of appropriately	N
April 23, 2017	Hydraulic oil	90	L	Vault Pit	Broken hydraulic hose	Contaminated soil picked up and disposed of appropriately	N
April 23, 2017	Hydraulic oil	5	L	Portage Pit	Broken hydraulic hose	Spill was contained and contaminated soil picked up and disposed of appropriately	N
April 25, 2017	Jet-A	50	L	MBK tarmac	The nozzle was left upside down and was dipping in the bottom of the trailer	Contaminated soil picked up and disposed of appropriately	N
April 26, 2017	Hydraulic oil	400	L	Portage waste dump	Broken hydraulic hose	Contaminated soil picked up and disposed of appropriately	Y

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April 27, 2017	Diesel	10	L	Pushback Parking	Failure on equipment anti- return device	Contaminated soil picked up and disposed of appropriately	N
April 27, 2017	Diesel	10	L	Maintenance Shop	Anti-return device on the equipment failure	Contaminated soil picked up and disposed of appropriately	N
April 29, 2017	Diesel	20	L	Portage Pit	Broken release valve	Contaminated soil picked up and disposed of appropriately	N
April 30, 2017	Grease	10	L	Vault Pit	Broken drive chain that punctured the housing	Contaminated soil picked up and disposed of appropriately	N