



MEADOWBANK DIVISION

Monitoring Program Summary Report

January 2019

Type A Water License 2AM-MEA1526

Table of Contents

SECTION 1 • BACKGROUND 3

SECTION 2 • WATER MANAGEMENT 4

2.1 WATER USAGE4

2.2 WASTE ROCK STORAGE FACILITY SEEPAGE4

2.3 CENTRAL DIKE SEEPAGE4

2.4 ASSAY ROAD SEEPAGE4

2.5 SEEPAGE AND RUNOFF FROM THE LANDFILL.....4

2.6 SEEPAGE AT PIT WALL AND PIT WALL FREEZE/THAW AND PERMAFROST AGGRADATION5

2.7 SEWAGE TREATMENT PLANT5

2.8 VAULT ATTENUATION POND EFFLUENT6

2.9 PHASER ATTENUATION POND6

2.10 EAST DIKE SEEPAGE EFFLUENT.....6

2.11 NON CONTACT WATER.....7

SECTION 3 • SPILL MANAGEMENT 8

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 January is summarized in Table 2-1 below.

Table 2-1: Freshwater Usage (m³)

Water Location	Source Lake	Jan	Total
Camp	Third Portage Lake	3,577	3,577
Mill (freshwater tank)	Third Portage Lake	214,981	214,981
Emulsion plant	No-name Lake	50	50
Total Freshwater Usage (m³)		218,608	218,608
Ore Water (m³)	Ore	4,610	4,610
Reclaim Water Usage (m³)	Tailings Pond	7,180	7,180

2.2 WASTE ROCK STORAGE FACILITY SEEPAGE

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

Agnico Eagle completed in January 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 January. NP2-Winter water sampling through ice into NP-2 Lake was done as the ice condition permitted safe sampling.

2.3 CENTRAL DIKE SEEPAGE

In January, 171,003 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 January, no water was pumped back to the mill. No wells monitoring for CN downstream and trench sampling in January due to frozen condition.

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 January, ice wall continued 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 January.

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

Table 2.7.1: Seprotech Effluent Results

Parameters	Units	January 7, 2019
Ammonia (NH ₃)	mg N/L	0.24
Ammonia-Nitrogen (NH ₃ -NH ₄)	mg N/L	25.7
Total Kjeldahl Nitrogen	mg N/L	15.6
BOD-5	mg/L	11
COD	mg/L	78
Total Suspended Solids	mg/L	<1
Nitrate	mg N/L	7.20
Nitrite	mg N/L	0.94
pH*	Units	7.20
Fecal Coliform	UFC/100 mL	140
Total Coliform	UFC/100 mL	7,700

*Parameter measured by STP operators

Table 2.7.2: LJ-Mix Effluent Results

Parameters	Units	January 7, 2019
Ammonia (NH ₃)	mg N/L	0.03
Ammonia-Nitrogen (NH ₃ -NH ₄)	mg N/L	8.28
Total Kjeldahl Nitrogen	mg N/L	9.75
BOD-5	mg/L	2
COD	mg/L	56
Total Suspended Solids	mg/L	448
Nitrate	mg N/L	14.8
Nitrite	mg N/L	0.70
pH*	Units	7.10
Fecal Coliform	UFC/100 mL	10
Total Coliform	UFC/100 mL	4,400

*Parameter measured by STP operators

2.8 VAULT ATTENUATION POND EFFLUENT

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

2.9 PHASER ATTENUATION POND

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

2.10 EAST DIKE SEEPAGE EFFLUENT

In January, a total of 6,657 m³ was discharged into Second Portage Lake. Discharge was from January 1 to January 14 and from January 20 to 25.

Three (3) weekly effluent samples were collected at ST-8 in January 2019. 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 January 2019 are shown in Table 2.10.1 below. There have been no exceedances of MDMER criteria.

No sample was collected at the East Dike Discharge Effluent for the week of January 13 to January 19, 2019 as required by MDMER Division 2 Section 12(1). Due to unexpected event related to cold temperature, the discharge pipe had frozen around 03:30 on January 14, 2019. No regulatory sample were taken on January 13th as the 14th was the planned sampling date. Corrective work was undertaken to unfreeze the discharge pipe, but Agnico was not able to unfreeze it by the end of January 19th, thus preventing us from taking the weekly sample. The last sample collected from East Dike final discharge point was on January 7th. The TSS result was 2 mg/L and was below the authorized limit discharge as per Schedule 4. The discharge to the receiving environment was restarted on January 20th around 15h30 and the next regulatory sample was collected on January 22nd, 2019. This does not constitute a non-compliance as per the Water License as the requirement is for a monthly sample.

Agnico noticed TSS results trending up after the restart of the East Dike Discharge on January 20th, therefore the discharge to Second Portage Lake was preventively stopped, the task was complete January 25th and diverted all water to the pits, as done in the past. Agnico continues to monitor TSS and waits for an improvement of the water quality before restarting the East Dike final discharge point to Second Portage Lake.

Table 2.10.1: East Dike Seepage Results for TSS

Parameters	Units	Jan 02, 2019	Jan 07, 2019	Jan 14, 2019	Jan 22, 2019	Maximum Average Concentration
Total Suspended Solids	mg/L	1	2	NA	25	9.33

Monthly regular sampling pursuant to the Water License was also conducted at this location. Results are shown in Table 2.10.2 below. There have been no exceedances of MDMER for those criteria.

Table 2.10.2: January 2019 Monthly Monitoring Results

Parameters	Units	January 7, 2019
pH*		7.91
Aluminum	mg/L	0.032
Sulphate	mg/L	9.3
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	Analysis not yet complete
Total Cyanide	mg/L	0.002

*Parameter measured by environmental technicians

2.11 NON CONTACT WATER

No water sample at Portage Area East (ST-5) and West (ST-6) diversion ditches in January due to frozen condition.

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 January.

All spills reported internally (13) were managed appropriately on site according to Agnico's spill contingency plan. Three (3) were reported to regulators in January. 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

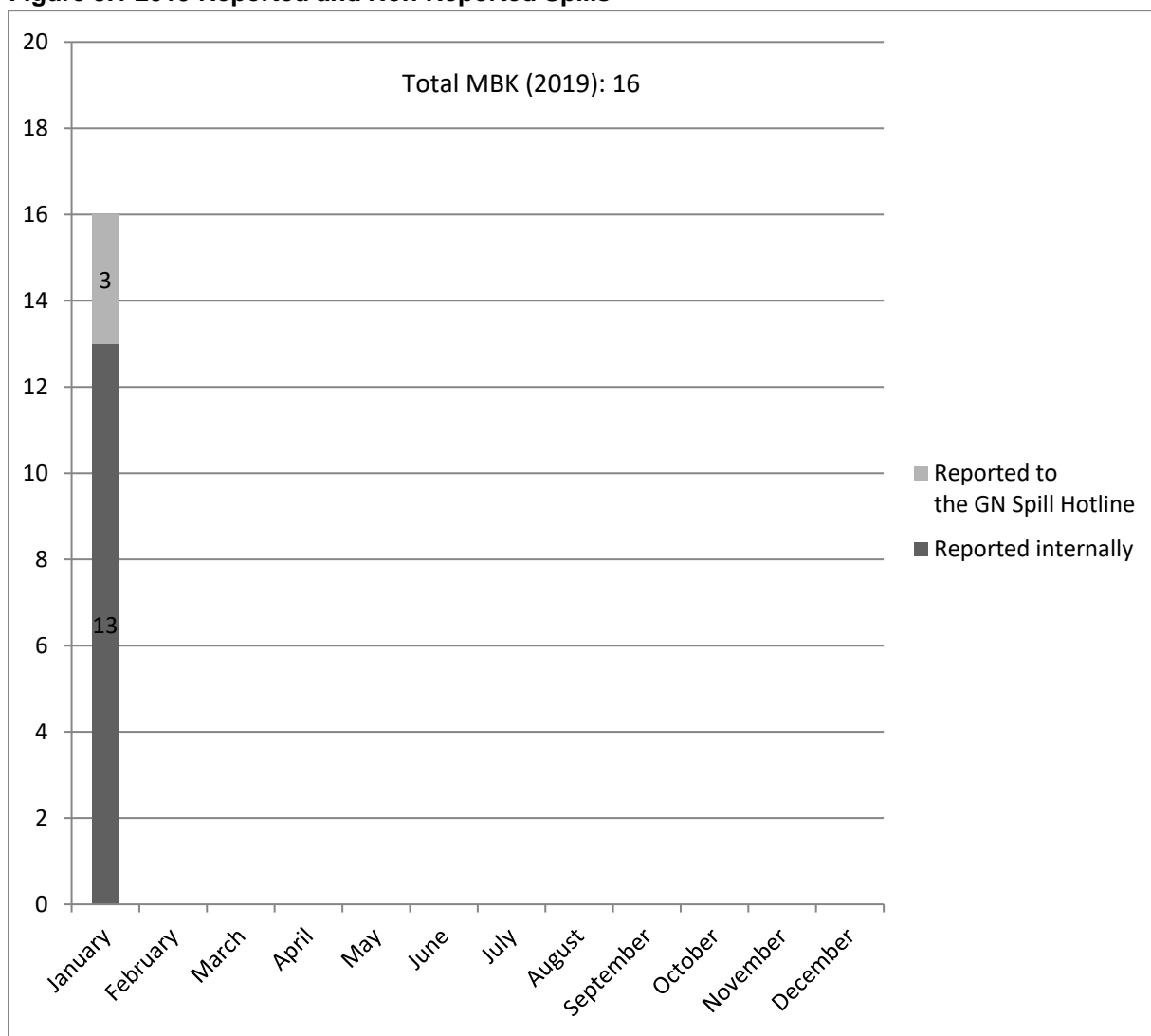


Table 3.1: Summary of Agnico Eagle Internal and Reported Spill Reports, January 2019

Date of Spill	Hazardous Material	Qty	Units (L / Kg)	Location	Cause of spill	Clean-up action taken
January 1, 2019	Steering Fluid	3	L	Vault Parking	Power steering hose failure	Used absorbent pad. Contaminated soil picked up and disposed of appropriately
January 1, 2019	Coolant	15	L	Vault Parking	Due to cold weather, coolant dripped by the clamp.	Used absorbent pad. Contaminated soil picked up and disposed of appropriately
January 3, 2019	Transmission oil	70	L	MBK Storage Area Row 3	Punctured tote with the fork lift	Used absorbent pad. Contaminated soil picked up and disposed of appropriately
January 6, 2019	Transmission oil	150	L	Portage Waste Rock Storage Facility	Equipment failure	Spill was contained and contaminated soil picked up and disposed of appropriately
January 6, 2019	Urea (DEF fluid)	90	L	Vault Kitchen Urea Station	Punctured tote	Removed the damaged tote and stopped the leak. Cleaned the spill with absorbent pad. Contaminated soil picked up and disposed of appropriately
January 8, 2019	Steering fluid	10	L	Vault Camp	Steering hose failure	Spill was contained and contaminated soil picked up and disposed of appropriately
January 8, 2019	Transmission oil	200	L	Meadowbank Pit E3	Hose busted on	Stopped the equipment and called for repair.

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

					transmission pump	Contaminated soil picked up and disposed of appropriately
January 9, 2019	Hydraulic Oil	30	L	Meadowbank Pit E3	Steering hydraulic fitting failure	Stopped the equipment and called for repair. Contaminated soil picked up and disposed of appropriately
January 11, 2019	Compressor Oil	35	L	Meadowbank Pit E3	Relief valve failure	Equipment was stopped. Absorbent pads were laid out over the spill then were collected and disposed of appropriately
January 16, 2019	Hydraulic Oil	180	L	Portage Pit	Hydraulic hose failure	Spill was contained and contaminated soil picked up and disposed of appropriately
January 17, 2019	Hydraulic Oil	80	L	Meadowbank South Cell Reclaim Barge	While pushing the dozer operator noticed oil on the ground and shut off the machine to assess the situation	Stopped the equipment and called for repair. Contaminated soil picked up and disposed of appropriately
January 17, 2019	Hydraulic Oil	60	L	Vault Pit	While loading the operator noticed oil dripping from his boom.	Stopped the equipment and called for repair. Contaminated soil picked up and disposed of appropriately
January 19, 2019	Coolant	5	L	Meadowbank Service Truck Parking	Equipment failure	Stopped the equipment and called for repair. Contaminated soil picked up and disposed of appropriately

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

January 19, 2019	Hydraulic Oil	2	L	Meadowbank BB Phaser pit	Hydraulic hose failure	Used absorbent pad. Contaminated soil picked up and disposed of appropriately
January 21, 2019	Diesel Exhaust fluid	60	L	Vault Kitchen Area	Due to cold weather, a tote punctured	Spill was contained and contaminated soil picked up and disposed of appropriately