



MEADOWBANK DIVISION

Monitoring Program Summary Report

January 2018

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 January is summarized in Table 2-1 below.

Table 2-1: Freshwater Usage (m³)

Water Location	Source Lake	Jan	Feb	March	April	May	June	July
Camp	Third Portage Lake	3,237						
Mill (freshwater tank)	Third Portage Lake	51,594						
Emulsion plant	No-name Lake	93.2						
Total Freshwater Usage (m³)		54,924	0	0	0	0	0	0
Ore Water (m³)	Ore	2,606						
Reclaim Water Usage (m³)	Tailings Pond	219,263						

Water Location	Source Lake	Aug	Sept	Oct	Nov	Dec	Total
Camp	Third Portage Lake						
Mill (freshwater tank)	Third Portage Lake						
Emulsion plant	No-name Lake						
Total Freshwater Usage (m³)		0	0	0	0	0	54,924
Ore Water (m³)	Ore						2,606
Reclaim Water Usage (m³)	Tailings Pond						219,263

2.2 WASTE ROCK STORAGE FACILITY SEEPAGE

In January, 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 2018 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 2018 Freshet.

NP2- Winter water sampling through ice into NP-2 Lake has been done in January.

2.3 CENTRAL DIKE SEEPAGE

In January, 225,715 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 from the trench to the mill due to frozen conditions. Weekly inspections of the area were conducted this month.

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, no water was pumped out from Vault Pit to the Vault Attenuation Pond. No water 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 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 has been discharged from the Stormwater Management pond to the South Cell TSF.

Table 2.7.1: Seprotech Effluent Results

Parameters	Units	January 8 th , 2018
Ammonia (NH ₃)	mg N/L	0.55
Ammonia-Nitrogen (NH ₃ -NH ₄)	mg N/L	40.9
Total Kjeldahl Nitrogen	mg N/L	50
BOD-5	mg/L	9
COD	mg/L	66
Total Suspended Solids	mg/L	4
Nitrate	mg N/L	7.52
Nitrite	mg N/L	1.24
pH*	Units	6.9
Fecal Coliform	UFC/100 mL	30
Total Coliform	UFC/100 mL	<1000

*Parameter measured by STP operators

Table 2.7.2: LJ-Mix Effluent Results

Parameters	Units	January 8 th , 2017
Ammonia (NH ₃)	mg N/L	0.01
Ammonia-Nitrogen (NH ₃ -NH ₄)	mg N/L	12.8
Total Kjeldahl Nitrogen	mg N/L	17.4
BOD-5	mg/L	11
COD	mg/L	61
Total Suspended Solids	mg/L	12
Nitrate	mg N/L	16.8
Nitrite	mg N/L	0.26
pH*	Units	6
Fecal Coliform	UFC/100 mL	<100
Total Coliform	UFC/100 mL	6000

*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 EAST DIKE SEEPAGE EFFLUENT

Discharge from the East Dike Seepage occurred from for the entire month. A total of 16,638 m³ was discharged into Second Portage Lake in January.

Five (5) weekly effluent samples were collected at ST-8 in January. TSS monitoring results are presented in Table 2.9.1.below. No exceedance in relation to the water license was recorded.

Table 2.9.1: East Dike Seepage Results for TSS

Parameters	Units	Jan. 3 rd , 2018	Jan. 8 th , 2018	Jan. 15 th , 2018	Dec. 23 th , 2018	Dec. 29 th , 2018	Maximum Average concentration
Total Suspended Solids	mg/L	3	7	4	9	4	5.4

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 January 2018 Monthly Monitoring Results

Parameters	Units	January 3 rd , 2018
Aluminum	mg/L	0.055
Sulphate	mg/L	6
Arsenic	mg/L	0.0025
Copper	mg/L	0.0023
Nickel	mg/L	0.0005
Lead	mg/L	<0.0003
Zinc	mg/L	0.0050
Radium 226	mg/L	Not needed this month
Total Cyanide	mg/L	<0.001

2.10 NON CONTACT WATER

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

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 January. All spills reported internally (44) 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 (Including Amaruq Exploration Access Road and Whale Tail Project)

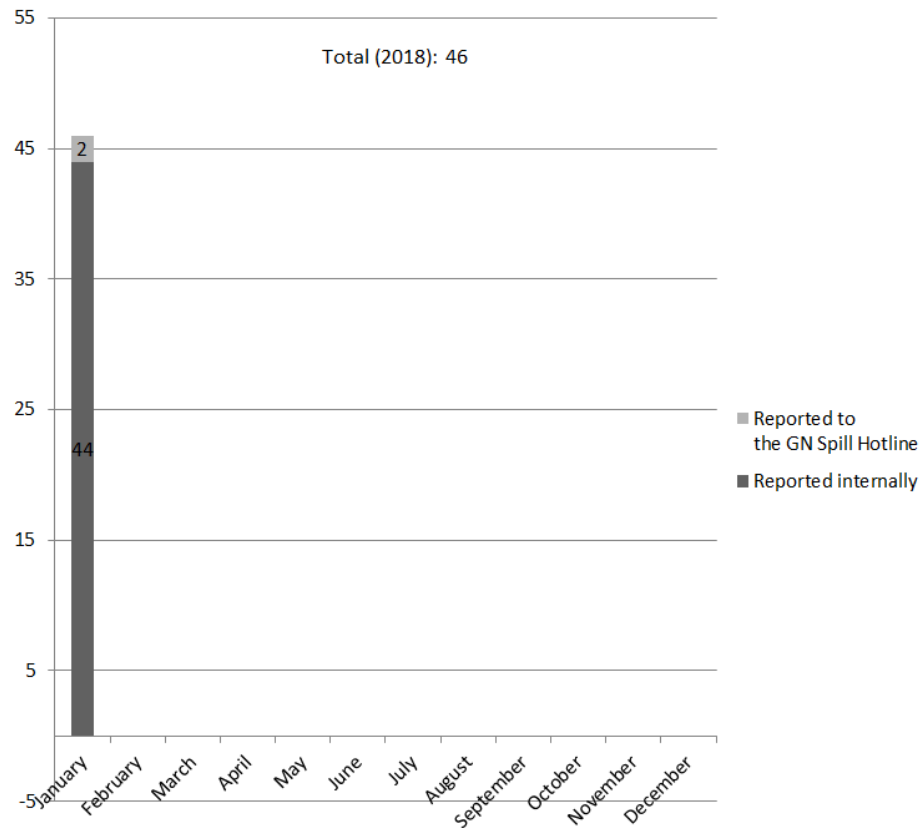


Table 3.1: Summary of Agnico Eagle Internal Spill Reports, January 2018

Spill Description						
Date of Spill	Hazardous Material	Qty	Units (L / Kg)	Location	Cause of spill	Clean-up action taken
January 2, 2018	Hydraulic oil	10	L	Pushback parking	Hydraulic hose failure	Spill was contained and contaminated soil picked up and disposed of appropriately
January 2, 2018	Hydraulic oil	20	L	Lube station	Overfilled. Unclosed valve.	Spill was contained and contaminated soil picked up and disposed of appropriately
January 3, 2018	Hydraulic oil	20	L	Portage pit	Hydraulic hose failure	Spill was contained and contaminated soil picked up and disposed of appropriately
January 4, 2018	Hydraulic oil	200	L	Portage pit	Busted hose	Spill was contained and contaminated soil picked up and disposed of appropriately
January 4, 2018	Hydraulic oil	54	L	Pushback parking	Busted hose	Spill was contained and contaminated soil picked up and disposed of appropriately
January 5, 2018	Engine oil	2	L	Camp main entrance area	Engine oil leak	Spill was contained and contaminated soil picked up and disposed of appropriately
January 5, 2018	Hydraulic oil	10	L	Phaser pit	Busted o'ring	Spill was contained and contaminated soil picked up and disposed of appropriately
January 5, 2018	Diesel fuel	5	L	Fuel farm	Leaking valves	Spill was contained and contaminated soil picked up and disposed of appropriately
January 5, 2018	Hydraulic oil	40	L	Service building	Leaks	Spill was contained and contaminated soil picked up and disposed of appropriately
January 6, 2018	Hydraulic oil	35	L	Primary crusher	Hydraulic block failure	Spill was contained and contaminated soil picked up and disposed of appropriately

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January 8, 2018	Hydraulic oil	60	L	Portage pit	Busted hose	Spill was contained and contaminated soil picked up and disposed of appropriately
January 8, 2018	Hydraulic oil	10	L	Vault pit	Broken steel pipe	Spill was contained and contaminated soil picked up and disposed of appropriately
January 8, 2018	Hydraulic oil	70	L	Primary crusher	Broken moter filter	Spill was contained and contaminated soil picked up and disposed of appropriately
January 9, 2018	Hydraulic oil	5	L	Service building	Hydraulic hose failure	Spill was contained and contaminated soil picked up and disposed of appropriately
January 10, 2018	Coolant	20	L	AWAR (Km 45)	Boken coolant hose	Spill was contained and contaminated soil picked up and disposed of appropriately
January 10, 2018	Hydraulic oil	60	L	Vault Camp	Rear wheel seal failure	Spill was contained and contaminated soil picked up and disposed of appropriately
January 11, 2018	Hydraulic oil	40	L	Vault Pit	Hydraulic hose failure	Spill was contained and contaminated soil picked up and disposed of appropriately
January 13, 2018	Hydraulic oil	70	L	Phaser Pit	Hydraulic hose failure	Spill was contained and contaminated soil picked up and disposed of appropriately
January 13, 2018	Hydraulic oil	20	L	Camp	Discharge hose dropped from the tote to the ground	Spill was contained and contaminated soil picked up and disposed of appropriately
January 15, 2018	Coolant	60	L	Pushback parking	Broken coolant hose	Spill was contained and contaminated soil picked up and disposed of appropriately
January 15, 2018	Engine oil	8	L	AEM Garage	Leak	Spill was contained and contaminated soil picked up and disposed of appropriately
January 15, 2018	Hydraulic oil	2	L	AP-5	Hose leak	Spill was contained and contaminated soil picked up and disposed of appropriately

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January 18, 2018	Coolant	60	L	Quarry #1	Broken hose collar	Spill was contained and contaminated soil picked up and disposed of appropriately
January 19, 2018	Diesel fuel	20	L	Pad C 849	Overfilled. Frozen fuel tank vent.	Spill was contained and contaminated soil picked up and disposed of appropriately
January 20, 2018	Compressor oil	50	L	Vault pit	Blown oil cooler	Spill was contained and contaminated soil picked up and disposed of appropriately
January 20, 2018	Hydraulic oil	15	L	Vault parking	Hydraulic hose failure	Spill was contained and contaminated soil picked up and disposed of appropriately
January 20, 2018	Coolant	50	L	Portage pit	Blown heater hose	Spill was contained and contaminated soil picked up and disposed of appropriately
January 21, 2018	Engine oil	1	L	Coreshack parking lot	Frozen air breather causing pressure	Spill was contained and contaminated soil picked up and disposed of appropriately
January 22, 2018	Hydraulic oil	1	L	Main site	Quick attach hydraulic hose failure	Spill was contained and contaminated soil picked up and disposed of appropriately
January 22, 2018	Diesel	1	L	Fuel station	Leak	Spill was contained and contaminated soil picked up and disposed of appropriately
January 23, 2018	Hydraulic oil	75	L	Box cut	Oil filter damaged by a small rock	Spill was contained and contaminated soil picked up and disposed of appropriately
January 23, 2018	Hydraulic oil	80	L	Phaser pit	Broken hydraulic pump	Spill was contained and contaminated soil picked up and disposed of appropriately
January 23, 2018	Steering fluid	5	L	Pushback parking	Busted steering hose	Spill was contained and contaminated soil picked up and disposed of appropriately
January 24, 2018	Hydraulic oil	20	L	Vault pit	Hydraulic hose failure	Spill was contained and contaminated soil picked up and disposed of appropriately

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January 24, 2018	Hydraulic oil	5	L	Vault pit	Hydraulic hose failure	Spill was contained and contaminated soil picked up and disposed of appropriately
January 24, 2018	Motor oil	3	L	AEM Garage Parking	Leak	Spill was contained and contaminated soil picked up and disposed of appropriately
January 24, 2018	Engine oil	5	L	Pushback parking	Hose failure	Spill was contained and contaminated soil picked up and disposed of appropriately
January 24, 2018	Hydraulic oil	20	L	Pushback parking	Busted o-ring on the coolant line	Spill was contained and contaminated soil picked up and disposed of appropriately
January 25, 2018	Hydraulic oil	20	L	Amaruq road (km 15)	Mechanical failure	Spill was contained and contaminated soil picked up and disposed of appropriately
January 26, 2018	Hydraulic oil	10	L	Vault parking	Hydraulic hose failure	Spill was contained and contaminated soil picked up and disposed of appropriately
January 27, 2018	Coolant	5	L	Service building genset area	Heating up of the Genset's gaskets and seals which lead them to expand	Spill was contained and contaminated soil picked up and disposed of appropriately
January 27, 2018	Hydraulic oil	75	L	Electrical trench	Loose excavator's hydraulic filter and fail under pressure	Spill was contained and contaminated soil picked up and disposed of appropriately
January 27, 2018	Hydraulic oil	15	L	Vault camp parking	Busted hydraulic oil hose	Spill was contained and contaminated soil picked up and disposed of appropriately
January 28, 2018	Coolant	5	L	Phaser pit	Coolant hose	Spill was contained and contaminated soil picked up and disposed of appropriately
January 29, 2018	Hydraulic oil	50	L	Tow haul parking lot	Leak, o-ring split	Spill was contained and contaminated soil picked up and disposed of appropriately
January 29, 2018	Fecal coliform	3300 CFU	CFU	Waste water treatment system	A faulty UV system could have led to	The faulty UV system has been replaced

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		/100 ml			this exceedance.	
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