



WHALE TAIL PROJECT

Monitoring Program Summary Report

September 2019

Type A Water License 2AM-WTP1826

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SECTION 1 • BACKGROUND

As required under Part I, Item 23 of Type A Water License 2AM-WTP1826, this report documents the water management and monitoring activities at the mine site for the month. This includes water usage, water and seepage monitoring around site, sewage treatment plan discharge and Whale Tail North Basin dewatering.

In addition, a summary of spills/actions for the month is reported.

SECTION 2 • WATER MANAGEMENT

2.1 WATER USAGE

All water withdrawals related to Exploration activities is currently managed by Part C Item 1 of the Exploration Water License 2BB-MEA1828. All of the information regarding the use under this License 2BB-MEA1828 will be provided via the Annual Report required by Part B Item 6.

Agnico Eagle is authorized as per Part E Item 1 of the Water License 2AM-WTP1826 to intake water from Nemo Lake for a total year to date of 240,000 m³/year. A total volume of 4,205 m³ was withdrawn from Nemo Lake in September. Details are provided in Table 2.1.1 below.

Table 2.1.1: September 2019 – Freshwater Consumption

Water Location	Source Lake	Jan	Feb	March	April	May
Camp	Nemo	1 306	1 396	1 179	1 192	1 806
Construction/Operation	Nemo	1 283	2 188	3 076	2 206	2 831
Dust Suppression	Nemo / WTHR Pond	0	0	0	0	0
Total Freshwater Usage (m³)		2 589	3 584	4 255	3 398	4 637

Water Location	Source Lake	June	July	Aug	Sept	Total
Camp	Nemo	1 940	1 882	1 825	1 760	14 286
Construction/Operation	Nemo	2 829	3 431	3 094	2 445	23 382
Dust Suppression	Nemo / WTHR Pond	0	0	0	0	0
Total Freshwater Usage (m³)		4 769	5 313	4 919	4 205	37 668

2.2 LAKE WATER MONITORING

Lake around the Whale Tail Project were monitored on a monthly basis during the open water season. In September, monthly samples were taken at Lake A47 (ST-WT-6), Lake A45 (ST-WT-13), Lake A16 (ST-WT-14) and Lake A15 (ST-WT-15).

2.3 WHALE TAIL DIKE SEEPAGE MONITORING

In September, the Whale Tail North dewatering continued and seepage water was still observed at the toe of the structure. The dewatering exposed additional seepage streams, but the existing seepage streams rate were stable. Seepage was estimated at 400 m³/h based on V Notch measurement and visual observation.

Geophysical survey results became available identifying three main flow paths in the bedrock under the dike as the seepage source. Agnico continue to closely monitor the Whale Tail dike performance and is evaluating option to intercept the seepage as well as to reduce the seepage rate.

On September 6, a meeting was held between Agnico and NWB to discuss Whale Tail Project Water Management Strategy. The strategy include, among other, the Whale Tail Dike (WTD) Seepage discharge to Whale Tail South Basin. Agnico will intercept non-contact water seeping from WTD before reaching Whale Tail North Basin and then discharge this non-contact water to Whale Tail South Basin. Water will be discharge without treatment if it meets TSS water quality limit. If needed, water will be treated via the Water Treatment Plan and then discharge back to Whale Tail South. As dewatering of the Whale Tail North Basin is not completed and Whale Tail Dike construction activity are still ongoing, Agnico will manage water from WTD seepage as part of the dewatering of the Whale Tail North Basin and will be monitored for Water License 2AM-WTP1826 Part D Item 7. Discharge is planned to start in October.

Seepage water quality is also monitored as per the requirement of the Water License. The sampling station is named ST-WT-17 and is minimally sampled on a monthly basis for Group 1.

2.4 SEEPAGE INTO MAMMOTH LAKE

As required by Part H, Item 8b of Water License 2AM-WTP1826, Agnico Eagle Mine Limited – Meadowbank Division ("Agnico") informed regulators via email on August 25 that during an inspection held on August 24th at 10:30hrs of the Whale Tail Waste Rock Storage Facility (WRSF) Dike, a water flow was observed at the toe of the dike entering Mammoth Lake. Work was immediately initiated to pump out the WRSF collection pond which decreased the water flow on August 24. By August 26, Agnico had actively pumped the water from the WRSF pond back to Quarry 1 and approximately 50% of the water was pumped in two (2) days. By September 1, the available water was pumped back to Quarry 1 and only a small amount of water that could not be pumped efficiently due to the local topography remained in the pond. A sump has since been further excavated within the footprint of the WRSF pond to pump out the remaining standing water to Quarry 1. As a mitigation measure, the WRSF will be kept dry until the investigation is done and corrective actions are completed. By September 1, no apparent flow was observed at the toe of the dike.

Daily field measurements have been taken since the notification of the flow. Field measurements showed low turbidity and there were no concerns with pH noted. Acute lethality samples were taken on August 26 from the source as well as the receiving waterbody (Mammoth Lake). Results showed no mortalities in both samples. Samples were also taken for water quality specifically for Metal and Diamond Mining Effluent Regulations (Canada) related parameters. On September 20, a follow up report was sent to regulators. A second follow up report will be provided to regulators in November.

2.5 SEWAGE TREATMENT PLANT

Effluent from the Exploration Camp Sewage Treatment Plan (STP) is discharged to the Whale Tail Lake North Basin and is monitored as per the Water License 2BB-MEA1828 Part D Item

10. All of the information regarding this discharge will be provided via the Annual Report required by 2BB-MEA1828 Part B Item 6.

The Sewage Treatment Plan located in the permanent camp associated with the Water License 2AM-WTP1826 was commissioned on April 12, 2019. Effluent is discharge in the future Whale Tail Attenuation Pond. As per Water License Schedule I Sampling Station ST-WT-11, effluent is to be sample four time per calendar year. Agnico is currently sampling the STP on a monthly basis and thus sample was taken in September. A total of 1,591 m³ was discharged during the month.

2.6 WHALE TAIL NORTH BASIN DEWATERING

Dewatering of the Whale Tail North Basin to Whale Tail South Basin (ST-DD-7) was stopped on July 18 and did not restarted since.

Dewatering of the Whale Tail North Basin to Mammoth Lake (ST-DD-9), via the temporary diffuser, discharged from September 1 to September 28. A total volume of 865,282 m³ was discharged during the month.

As per Water License Part D Item 7, the effluent from Whale Tail North dewatering, either to Whale Tail South or Mammoth Lake shall not exceed the following quality limits:

Parameter	Maximum Monthly Mean	Short Term Maximum
Total Suspended Solids	15.0 mg/L	22.5 mg/L
Turbidity	15 NTU	30 NTU
pH	6.0 to 9.0	6.0 to 9.0
Total Aluminum	1.5 mg/L	3.0 mg/L

The pH and Aluminum concentrations were as follows for ST-DD-9:

- pH 24 hour minimum/maximum: 6.31 / 8.04 (Limit is 6-9 units)
- pH 30 days minimum/maximum: 6.98 / 7.16 (Limit is 6-9 units)
- Al 24 hour maximum concentration: 0.120 mg/L (Limit is 3.0 mg/L)
- Al 30 days maximum concentration: 0.0745 mg/L (Limit is 1.5 mg/L)

The turbidity and Total Suspended Solids (TSS) concentrations were as follows:

- NTU 24 hour maximum concentration: 16.90 NTU (Maximum Limit is 30 NTU)
- NTU 30 days mean maximum concentration: 8.45 NTU (Maximum Limit is 15 NTU)
- TSS 24 hour maximum concentration: 18 mg/L (Maximum Limit is 22.5 mg/L)
- TSS 30 days mean maximum concentration: 8.65 mg/L (Maximum Limit is 15 mg/L)

Table 2.6.1 summarizes the dewatering monitoring results for pH, aluminum, turbidity and TSS for the month. No non-compliance was observed in September.

Table 2.6.1: Whale Tail North Basin Dewatering Monitoring ST-DD-9

Date	ST-DD-9				License Requirement			
	Turbidity ¹	TSS ²	pH ¹	Total Al ²	NTU 30-day Mean	TSS 30-day Mean	pH 30-day Mean	Al 30-day Mean
	NTU	mg/L		mg/L	15	15	6.0 - 9.0	3
01-09-2019	2.88	3	7.19		8.45	8.65	6.98	
02-09-2019	3.71	4	6.86	0.042	7.94	8.50	6.99	0.0745
03-09-2019	4.39	5	7.26		7.82	8.38	7.00	
04-09-2019	6.33	6	7.31		7.40	8.16	7.01	
05-09-2019	1.62	4	7.08		6.83	7.80	7.01	
06-09-2019	3.12	7	7.15		6.20	7.77	7.03	
07-09-2019	1.80	5	6.31		5.64	7.63	7.01	
08-09-2019	7.88	6	7.08		5.45	7.52	7.02	
09-09-2019	1.92	8	6.83	<0.005	5.00	7.52	7.00	0.0484
10-09-2019	1.96	16	7.43		4.58	7.80	7.02	
11-09-2019	1.98	6	7.26		4.19	7.73	7.02	
12-09-2019	3.73	NA	6.71		3.67	7.80	7.01	
13-09-2019	1.46	11	6.44		3.30	7.87	7.00	
14-09-2019	2.70	15	7.27		2.98	8.17	7.02	
15-09-2019	2.35	14	7.16		2.99	8.39	7.04	
16-09-2019	16.90	18	7.01		3.50	8.28	7.06	
17-09-2019	15.70	13	7.41	0.120	3.95	7.65	7.08	0.0380
18-09-2019	2.68	9	8.04		3.94	7.96	7.14	
19-09-2019	1.68	5	7.25		3.88	7.59	7.16	
20-09-2019	2.50	6	7.37		3.85	7.30	7.16	
21-09-2019	3.26	5	7.29		3.83	7.22	7.16	
22-09-2019	2.11	3	6.54		3.75	7.07	7.15	
23-09-2019	2.01	7	6.83		3.72	7.25	7.15	
24-09-2019	4.28	8	6.92		3.79	7.39	7.13	
25-09-2019	1.39	7	6.57		3.74	7.50	7.11	
26-09-2019	1.46	6	6.90		3.74	7.57	7.10	
27-09-2019	3.01	3	6.73		3.74	7.50	7.07	
28-09-2019	1.48	5	6.89		3.67	7.54	7.05	
29-09-2019	No Discharge				3.72	7.59	7.04	
30-09-2019	No Discharge				3.80	7.59	7.04	
1 - Measures taken in the field								
2- Results from the certified laboratory								
Half-detection limit use in the mean calculation								

2.7 QUARRY 1 DISCHARGE

Water discharge from Quarry 1 was ongoing during the whole month. A total volume of 238,312 m³ of water was discharged without WTP, as water quality was below the regulatory limits, and discharged back to Mammoth Lake in one permanent diffuser.

As per Water License Part F Item 4, the effluent from this discharge shall not exceed the limits detailed in Table 2.7.1 below. No non-compliance observed during the month of September related to this discharge to the receiving environment.

Table 2.7.1: Quarry 1 Discharge (ST-WT-Quarry-1)

Parameter	Maximum Authorized Monthly Mean Concentration	Maximum Authorized Concentration Grab Sample	Unit	Sample Date					Monthly Average
				Sept 2	Sept 11	Sept 17	Sept 22	Sept 29	
Conventional Constituents									
pH	6.0 to 9.5	6.0 to 9.5	N/A	7.32	7.10	6.97	7.70	7.30	7.28
Total suspended solids	15	30	mg/L	9	10	6	5	2	6
Total Dissolved Solids	1400	1400	mg/L	335	339	298	302	346	324
Nutrients									
Total Ammonia	16	32	mg N/L	0.93	0.91	0.7	0.6	1.13	0.85
Total phosphorus	0.3	0.6	mg P/L	0.04	0.03	0.01	0.03	0.02	0.03
Total Metals									
Aluminum	0.5	1	mg/L	0.204	0.170	0.137	0.054	0.079	0.129
Arsenic	0.1	0.2	mg/L	0.0129	0.0137	0.0127	0.0094	0.0106	0.0119
Cadmium	0.002	0.004	mg/L	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	0.00001
Chromium	0.02	0.04	mg/L	0.0032	0.0036	0.0043	0.0013	0.0011	0.0027
Copper	0.1	0.2	mg/L	0.0036	0.0036	0.0035	0.0019	0.0038	0.0033
Iron	1	2	mg/L	0.46	0.43	0.33	0.15	0.30	0.33
Lead	0.05	0.1	mg/L	0.0007	<0.0003	<0.0003	<0.0003	<0.0003	0.0007
Mercury	0.004	0.008	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000005
Nickel	0.25	0.5	mg/L	0.0177	0.0183	0.0142	0.0096	0.0157	0.0151
Zinc	0.1	0.2	mg/L	0.002	<0.001	<0.001	<0.001	0.002	0.0011
Other									
Total oil and grease	3	6	mg/L	< 1	1	2	< 1	< 1	0.9

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 September.

All spills reported internally (11) were managed appropriately on site according to Agnico's spill contingency plan. Three (3) spills were reported to regulators in September. Spills were contained and cleaned, contaminated material was disposed to the appropriate area, 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

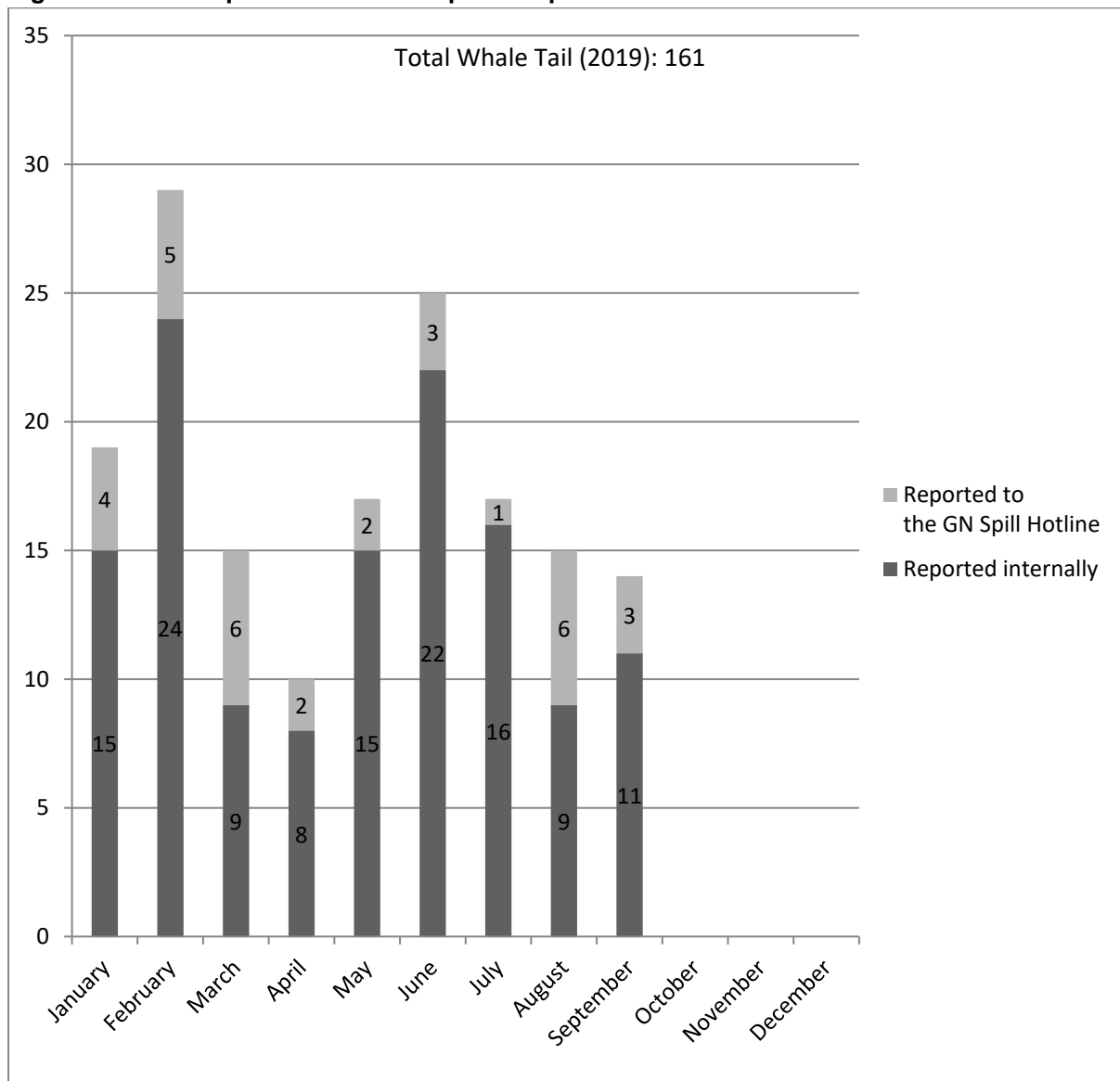


Table 3.1: Summary of Agnico Eagle Internal and Reported Spill Reports, September 2019

Date of Spill	Hazardous Material	Qty	Units (L / Kg)	Location	Cause of spill	Clean-up action taken
September 3, 2019	Hydraulic Oil	60	L	Quarry 2	Loose fitting on the hydraulic line	Contaminated soil picked up and disposed of appropriately
September 4, 2019	Coolant	60	L	Whale Tail Pit	Coolant hose failure	Put absorbent pads, call mechanic and call loader to pick up spill. Contaminated soil picked up and disposed of appropriately
September 5, 2019	Hydraulic Oil	2,500	L	Quarry 2	Track came off BAC 10 causing the tensioner cylinder to fully extend and drain all the oil in the machine.	Spill was contained and contaminated soil picked up and disposed of appropriately
September 8, 2019	Hydraulic Oil	50	L	Whale Tale pit / Lake Bed	Hydraulic hose failure	The operator noticed the leak right away and stopped the excavator. Contaminated material and soil picked up and disposed off appropriately
September 10, 2019	Coolant	86	L	Whale Tail Haul Road KM 154 to 157	Broken clamp on a rubber elbow of cooler	Water/Coolant absorbent pad were put on the spill. The contaminated soil was removed using a loader and will be disposed properly.
September 10, 2019	Coolant	240	L	Haul truck parking	Radiator hose clamp got loose causing the hose to unplugged from the radiator	Picked up by loader the contaminated material and disposed in right location
September 11, 2019	Hydraulic Oil	40	L	Whale Tail Pit South	Hydraulic hose failure	Stop machine immediately and identify situation. Contaminated soil picked up and disposed of appropriately
September 12, 2019	Diesel	50	L	Pump shack by Quarry 1	Spill in front of fuel tank.	Cleaned spill with a shovel and disposed adequately of the contaminated material

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September 16, 2019	Hydraulic Oil	25	L	Whale Tail Pit	Hydraulic hose failure	Stop excavator and reported right away to supervisor. Contaminated soil picked up and disposed of appropriately
September 17, 2019	Hydraulic Oil	80	L	Whale Tail Pit	Hydraulic hose failure	Stopped the equipment right away and called the supervisor and mechanics. Contaminated soil picked up and disposed of appropriately
September 17, 2019	Hydraulic Oil	30	L	Whale Tail Pit	Hydraulic hose failure on engine pump	Stopped engine and call dispatch and mechanics. Contaminated soil picked up and disposed of appropriately
September 20, 2019	Diesel	4	L	WRSF	Carburetor over flow	Contaminated soil picked up and disposed of appropriately
September 25, 2019	Diesel	25	L	Whale Tail Dike	Fuel truck operator was fueling and splash back	Contaminated soil picked up and disposed of appropriately
September 27, 2019	Diesel	3,500	L	Road 3	Fuel truck went off the road	Spill was contained and contaminated soil picked up and disposed of in the landfarm