



WHALE TAIL PROJECT

Monitoring Program Summary Report

August 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 A total volume of 4,919 m³ was withdrawn from Nemo Lake in August. Details are provided in Table 2.1.1 below.

Table 2.1.1: August 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	Total
Camp	Nemo	1 940	1 882	1 825	12 526
Construction/Operation	Nemo	2 829	3 683	3 094	21 190
Dust Suppression	Nemo / WTHR Pond	0	0	0	0
Total Freshwater Usage (m³)		4 769	5 565	4 919	33 716

2.2 LAKE WATER MONITORING

Lake around the Whale Tail Project were monitored on a monthly basis during the open water season. In August, 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 August, the Whale tail North dewatering continued and additional streams of seepage water were observed. A flow of 360 m³/h is now measured in the V-Notch. Geophysical survey was conducted along the entire length of the dike to identify flow paths. Results will be available in September. Additional thermistors were also installed to increase understanding of the seepage mechanism. The Meadowbank Dike Review Board (MDRB) and the designer will conduct a site visit in September. Agnico continue to closely monitor the Whale Tail dike performance.

Seepage water quality is 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. Results will be provided to regulators once available from our external certified laboratory.

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 August. A total of 1,725 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 during the month of August.

Dewatering of the Whale Tail North Basin to Mammoth Lake (ST-DD-9), via the temporary diffuser, occurred during the whole month. A total volume of 747,074 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: 6.40 / 7.54 (Limit is 6-9 units)
- pH 30 days minimum/maximum: 6.88 / 6.98 (Limit is 6-9 units)
- Al 24 hour maximum concentration: 0.172 mg/L (Limit is 3.0 mg/L)
- Al 30 days maximum concentration: 0.1121 mg/L (Limit is 1.5 mg/L)

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

- NTU 24 hour maximum concentration: 22.01 NTU (Maximum Limit is 30 NTU)
- NTU 30 days mean maximum concentration: 14.57 NTU (Maximum Limit is 15 NTU)
- TSS 24 hour maximum concentration: 30 mg/L (Maximum Limit is 22.5 mg/L)
- TSS 30 days mean maximum concentration: 9.80 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. One non-compliance was observed in August. TSS results for August 18 (30 mg/L) was above the Short Term Maximum limit of 22.5 mg/L. Agnico is of the opinion that the high result is related to a punctual event given the results before and after August 18.

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
01-08-2019	14.24	5	6.80		10.14	6.58	6.89	
02-08-2019	14.53	9	7.31		10.72	6.85	6.89	
03-08-2019	18.48	8	6.60		11.42	6.69	6.89	
04-08-2019	No Discharge				11.77	6.60	6.90	
05-08-2019	18.96	12	6.92	0.133	12.56	6.88	6.91	0.0845
06-08-2019	18.52	14	6.96		13.32	7.40	6.93	
07-08-2019	22.01	8	6.67		14.22	7.52	6.94	
08-08-2019	18.60	9	6.74		14.40	7.58	6.93	

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09-08-2019	13.80	9	7.03		14.37	7.63	6.93	
10-08-2019	15.30	8	7.19		14.41	7.64	6.94	
11-08-2019	14.50	8	6.88		14.41	7.66	6.94	
12-08-2019	13.80	8	7.37	0.172	14.44	7.72	6.97	0.1121
13-08-2019	19.20	6	6.99		14.57	7.86	6.96	
14-08-2019	12.70	9	6.73		14.53	7.90	6.94	
15-08-2019	12.40	7	6.59		14.51	7.90	6.94	
16-08-2019	1.91	8	6.55		14.07	7.79	6.93	
17-08-2019	1.69	21	6.64		13.58	8.24	6.93	
18-08-2019	2.22	30	6.65		13.13	9.03	6.92	
19-08-2019	2.74	<1	6.40	0.023	12.69	8.81	6.89	0.0941
20-08-2019	3.46	15	6.65		12.32	9.22	6.88	
21-08-2019	3.59	14	7.36		11.94	9.60	6.90	
22-08-2019	3.71	7	7.25		11.63	9.67	6.90	
23-08-2019	4.69	NA	6.79		11.16	9.80	6.90	
24-08-2019	2.71	2	6.92		10.87	9.55	6.90	
25-08-2019	2.44	4	7.35		10.54	9.45	6.90	
26-08-2019	2.72	4	7.19	<0.005	10.35	9.34	6.91	0.0941
27-08-2019	1.39	4	7.25		10.11	9.20	6.92	
28-08-2019	3.01	5	7.50		9.90	9.09	6.94	
29-08-2019	3.64	4	7.54		9.69	8.88	6.96	
30-08-2019	2.35	6	7.46		9.29	8.73	6.98	
31-08-2019	1.50	NA	6.99		8.85	8.87	6.98	
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 month. On August 19 and 20, water was treated via the WTP and then discharged to Mammoth Lake temporary diffuser. A total volume of 13,430 m³ of water from Quarry 1 was discharged during this two (2) days. Started on August 26, water was discharged without WTP, as water quality was below the regulatory limits, and discharged back to Mammoth Lake in one permanent diffuser. A total volume of 46,443 m³ of water was discharged.

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 August 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
				19-08-2019*	26-08-2019	
Conventional Constituents						
pH	6.0 to 9.5	6.0 to 9.5	N/A	6.69	7.54	7.54
Total suspended solids	15	30	mg/L	15	8	8
Total Dissolved Solids	1400	1400	mg/L	322	318	318
Nutrients						
Total Ammonia	16	32	mg N/L	0.99	1.04	1.04
Total phosphorus	0.3	0.6	mg P/L	0.04	0.01	0.01
Total Metals						
Aluminum	0.5	1	mg/L	0.536	0.268	0.268
Arsenic	0.1	0.2	mg/L	0.0147	0.0168	0.0168
Cadmium	0.002	0.004	mg/L	< 0.00002	< 0.00002	0.00001
Chromium	0.02	0.04	mg/L	0.0034	0.0041	0.0041
Copper	0.1	0.2	mg/L	0.0030	0.0033	0.0033
Iron	1	2	mg/L	1.18	0.46	0.46
Lead	0.05	0.1	mg/L	< 0.0003	< 0.0003	0.000015
Mercury	0.004	0.008	mg/L	< 0.00001	< 0.00001	0.000005
Nickel	0.25	0.5	mg/L	0.0176	0.0203	0.0203
Zinc	0.1	0.2	mg/L	< 0.001	< 0.001	0.0005
Other						
Total oil and grease	3	6	mg/L	1	<1	0.5

*Raw Water for informal purpose only. Not taken into account for the monthly average

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 August.

All spills reported internally (9) were managed appropriately on site according to Agnico's spill contingency plan. Six (6) spills were reported to regulators in August. 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 only one spill that may have impact Mammoth Lake (refer to Section 2.4 above).

Figure 3.1 2019 Reported and Non-Reported Spills

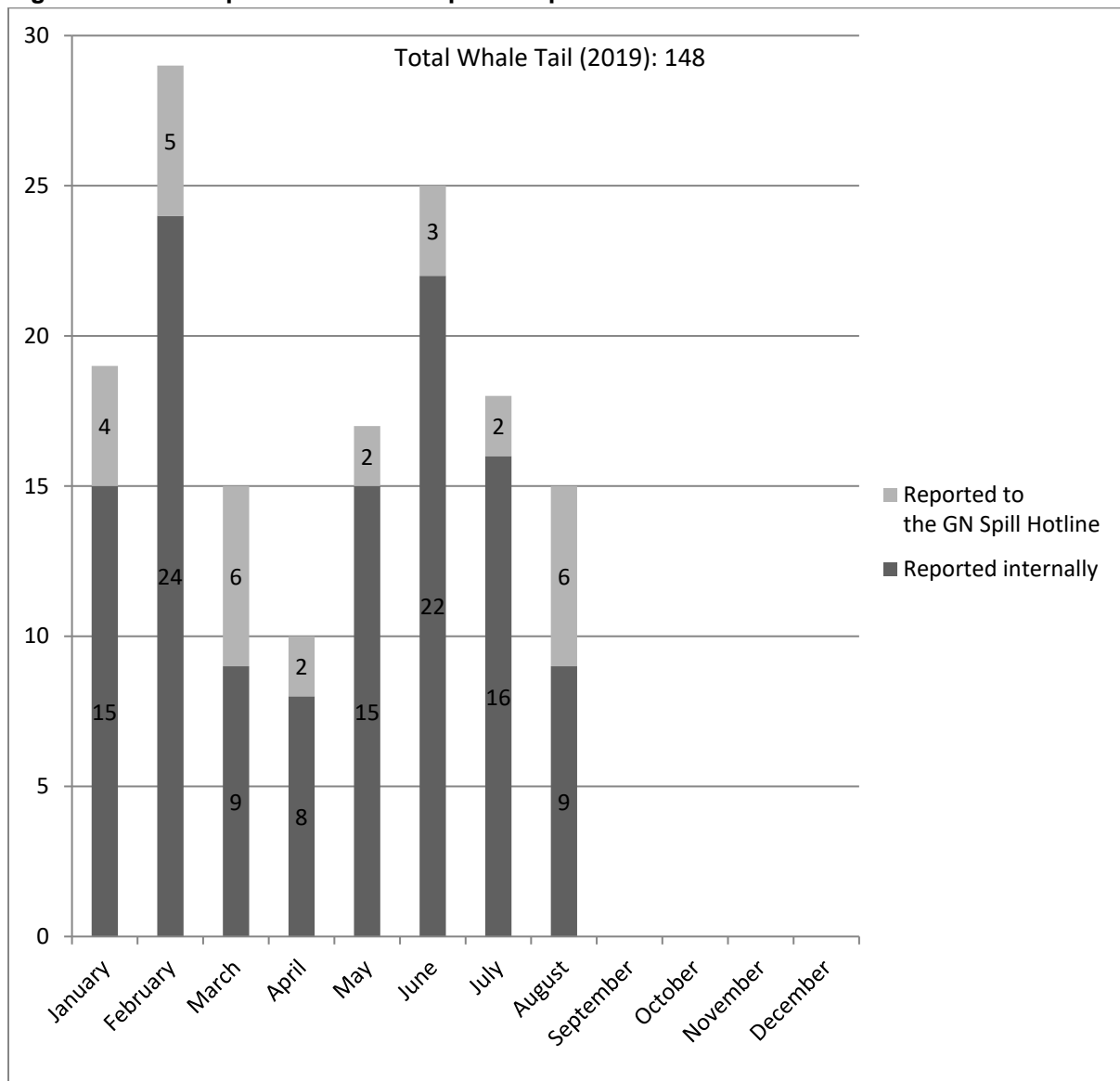


Table 3.1: Summary of Agnico Eagle Internal and Reported Spill Reports, August 2019

Date of Spill	Hazardous Material	Qty	Units (L / Kg)	Location	Cause of spill	Clean-up action taken
August 1, 2019	Hydraulic Oil	30	L	5151MSW93	O-Ring failure	Equipment stopped and mechanic called for repair. Pick up the spill and brought to the yellow bin behind maintenance shop
August 8, 2019	Hydraulic Oil	18	L	Orbit Garant garage	Equipment was parked for few months at the Orbit Garant garage and released hydraulic oil	Contaminated soil picked up and disposed of appropriately
August 9, 2019	Hydraulic Oil	200	L	Quarry 2	Hydraulic hose failure	Contaminated soil picked up and disposed of appropriately
August 12, 2019	Coolant	10	L	Maintenance Shop	Coolant hose failure	Spill was contained and contaminated soil picked up and disposed of appropriately.
August 12, 2019	Fecal Coliform	NA	L	Bionest STP Exploration Camp	Results of 9000 CFU/100ml of Fecal Coliform for sample taken on August 12 and 2000 CFU/100ml for sample taken on August 19 were received for a treated waste water effluent discharge. Prior results (August 5 < 2 CFU/100ml) was below limit.	Follow up with STP operator.
August 15, 2019	Hydraulic Oil	4	L	Whale Tail	Hydraulic hose failure	Spill was contained and contaminated soil picked up and disposed of appropriately

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August 15, 2019	Diesel	1	L	Whale Tail	Fuel tank breather malfunctioned	Spill was contained and contaminated soil picked up and disposed of appropriately
August 15, 2019	Hydraulic oil	10	L	Waste Rock Storage	Hydraulic hose failure	Spill was contained and contaminated soil picked up and disposed of appropriately
August 16, 2019	Diesel	40	L	By Road 7, near Nemo road	Tank has been filled up to its maximum capacity and fuel expanded with the temperature.	Spill was contained and contaminated soil picked up and disposed of appropriately
August 21, 2019	Hydraulic Oil	200	L	Whale Tail Pit	O-ring failure	Operator called his supervisor right away and shut down the machine. Spill was contained and contaminated soil picked up and disposed of appropriately
August 21, 2019	Hydraulic Oil	200	L	Whale Tail Pit	O-ring failure	Equipment stopped and mechanic called for repair. Pick up the spill and brought to the yellow bin behind maintenance shop
August 24, 2019	Water from WRSF Pond	10,000	m ³	WRSF DIKE	During an inspection of the Waste Rock Storage Facility (WRSF) dike, a water flow was observed at the toe of the dike	Work was initiated to pump out the WRSF collection pond to decrease the water flow
August 29, 2019	Hydraulic Oil	20	L	Muck Pad	Hydraulic rig failure	Contaminated soil picked up and disposed of appropriately
August 31, 2019	Hydraulic Oil	120	L	Quarry 2	Hydraulic hose failure	Contaminated soil picked up and disposed of appropriately
August 31, 2019	Diesel	60	L	Road 07	Broken attachment on fuel tank	Contaminated soil picked up and disposed of appropriately