



WHALE TAIL PROJECT

Monitoring Program Summary Report

July 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 A total volume of 5,565 m³ was withdrawn from Nemo Lake in July. Details are provided in Table 2.1.1 below.

Table 2.1.1: July 2019 – Freshwater Consumption

Water Location	Source Lake	Jan	Feb	March	April	May	June
Camp	Nemo	1 306	1 396	1 179	1 192	1 806	1 940
Construction/Operation	Nemo	1 283	2 188	3 076	2 206	2 831	2 829
Dust Suppression	Nemo / WTHR Pond	0	0	0	0	0	0
Total Freshwater Usage (m³)		2 589	3 584	4 255	3 398	4 637	4 769

Water Location	Source Lake	June	July	Total
Camp	Nemo	1 940	1 882	12 641
Construction/Operation	Nemo	2 829	3 683	20 925
Dust Suppression	Nemo / WTHR Pond	0	0	0
Total Freshwater Usage (m³)		4 769	5 565	33 565

2.2 LAKE WATER MONITORING

Lake around the Whale Tail Project were monitored on a monthly basis during the open water season. In July, 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 July, the dewatering of the Whale Tail North had progressed enough to allow visual inspection of the downstream area of the structure. Several water streams were observed from Sta.0+680 to Sta. 0+440 indicating seepage. This seepage is currently collected in a trench and measured with a V-Notch system. A seepage rate of 280 m³/h is currently measured. Additional seepage streams are expected to become visible in the coming month as dewatering will progress. Agnico is closely following the performance of the structure and has developed an action plan to identify the seepage pathway and determine the impact of this seepage.

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

2.4 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. Regulatory sampling were taken in July. A total of 1,497 m³ was discharged during the month.

2.5 WHALE TAIL NORTH BASIN DEWATERING

Dewatering of the Whale Tail North Basin to Whale Tail South Basin (ST-DD-7) was stopped on May 29 following the elevated level of TSS in the effluent. Discharge to Whale Tail South was restarted from July 9 to July 18 and a total volume of 207,328 m³ was discharged during this period.

Dewatering of the Whale Tail North Basin to Mammoth Lake (ST-DD-9), via the temporary diffuser, occurred from July 1 to July 8 and from July 13 to July 31. A total volume of 427,192m³ 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-7:

- pH 24 hour minimum/maximum: 6.22 / 7.28 (Limit is 6-9 units)
- pH 30 days minimum/maximum: 6.69 / 6.86 (Limit is 6-9 units)
- Al 24 hour maximum concentration: 0.145 mg/L (Limit is 3.0 mg/L)
- Al 30 days maximum concentration: 0.114 mg/L (Limit is 1.5 mg/L)

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

- NTU 24 hour maximum concentration: 17.87 NTU (Maximum Limit is 30 NTU)
- NTU 30 days mean maximum concentration: 14.53 NTU (Maximum Limit is 15 NTU)
- TSS 24 hour maximum concentration: 11 mg/L (Maximum Limit is 22.5 mg/L)
- TSS 30 days mean maximum concentration: 6.50 mg/L (Maximum Limit is 15 mg/L)

Table 2.5.1 summarizes the dewatering monitoring results for pH, aluminum, turbidity and TSS for the month. No non-compliance was observed in July.

Table 2.5.1: Whale Tail North Basin Dewatering Monitoring ST-DD-7

Date	ST-DD-7				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
09-07-2019	9.90	6	7.01					
10-07-2019	12.50	7	6.70	0.145	11.20	6.50	6.86	
11-07-2019	16.10	3	6.84		12.83	5.33	6.85	0.145
12-07-2019	17.87	10	6.66		14.09	6.50	6.80	
13-07-2019	15.10	4	6.22		14.29	6.00	6.69	
14-07-2019	15.25	7	7.28		14.45	6.17	6.79	
15-07-2019	14.81	3	7.14	0.082	14.50	5.71	6.84	0.114
16-07-2019	13.86	4	6.72		14.46	5.50	6.82	
17-07-2019	14.71	11	6.83		14.46	6.11	6.82	
18-07-2019	15.18	6	6.85		14.53	6.10	6.83	
1 - Measures taken in the field								
2- Results from the certified laboratory								
Half-detection limit use in the mean calculation								

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

- pH 24 hour minimum/maximum: 6.49 / 7.27 (Limit is 6-9 units)
- pH 30 days minimum/maximum: 6.58 / 6.89 (Limit is 6-9 units)
- Al 24 hour maximum concentration: <0.005 mg/L (Limit is 3.0 mg/L)
- Al 30 days maximum concentration: 0.0552 mg/L (Limit is 1.5 mg/L)

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

- NTU 24 hour maximum concentration: 17.82 NTU (Maximum Limit is 30 NTU)
- NTU 30 days mean maximum concentration: 9.57 NTU (Maximum Limit is 15 NTU)
- TSS 24 hour maximum concentration: 12 mg/L (Maximum Limit is 22.5 mg/L)
- TSS 30 days mean maximum concentration: 6.50 mg/L (Maximum Limit is 15 mg/L)

Table 2.5.2 summarizes the dewatering monitoring results for pH, aluminum, turbidity and TSS for the month. No non-compliance was observed in July.

Table 2.5.2: 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
01-07-2019	No sampling				0.44	3.00	6.58	
02-07-2019	0.02	3	6.61	0.039	0.40	3.00	6.58	0.0147
03-07-2019	0.00	2	7.26		0.37	2.90	6.64	
04-07-2019	1.03	12	6.84		0.42	3.73	6.66	
05-07-2019	3.05	9	6.49		0.62	4.17	6.65	
06-07-2019	0.00	5	6.60		0.58	4.23	6.64	
07-07-2019	0.16	1	6.51		0.55	4.00	6.63	
08-07-2019	0.46	5	6.53	0.034	0.55	4.07	6.63	0.0195
09-07-2019	No discharge				0.55	4.07	6.63	
10-07-2019	No discharge				0.55	4.07	6.63	
11-07-2019	No discharge				0.55	4.07	6.63	
12-07-2019	No discharge				0.55	4.07	6.63	
13-07-2019	12.91	6	6.66		1.27	4.19	6.63	
14-07-2019	15.68	2	7.27		2.07	4.06	6.67	
15-07-2019	13.71	8	7.09	0.113	2.69	4.28	6.69	0.0382
16-07-2019	12.95	7	6.79		3.20	4.42	6.69	
17-07-2019	14.34	11	6.79		3.73	4.75	6.70	
18-07-2019	15.34	8	6.72		4.26	4.90	6.70	
19-07-2019	14.86	7	6.91		4.72	5.00	6.71	
20-07-2019	15.07	7	7.19		5.15	5.09	6.73	
21-07-2019	13.76	3	6.82		5.72	5.00	6.73	
22-07-2019	14.42	3	6.94	<0.005	6.30	5.04	6.75	0.0323
23-07-2019	12.20	5	7.23		6.80	5.21	6.78	
24-07-2019	17.82	6	6.67		7.54	5.38	6.79	
25-07-2019	NA	9	7.10		7.86	5.63	6.81	
26-07-2019	12.00	7	7.13		8.35	5.71	6.83	
27-07-2019	8.40	7	7.05		8.67	5.79	6.85	
28-07-2019	8.18	8	6.93		8.98	6.08	6.86	
29-07-2019	9.15	8	6.96	0.140	8.99	6.16	6.87	0.0552
30-07-2019	9.70	10	7.00		9.38	6.36	6.88	
31-07-2019	14.10	10	6.93		9.57	6.50	6.89	
1 - Measures taken in the field								
2- Results from the certified laboratory								
Half-detection limit use in the mean calculation								

2.6 QUARRY 1 DISCHARGE

Water from Quarry 1 was discharge from July 20 to July 30 following the approval from CIRNAC on July 18. Water was treated via the WTP and then discharged to Mammoth Lake temporary diffuser. A total volume of 110,805 m³ of water from Quarry 1 was discharged during this period.

As per Water License Part F Item 4, the effluent from this discharge shall not exceed the limits detailed in Table 2.6.1 below. No non-compliance observed during the month of July related to this discharge to the receiving environment.

Table 2.6.1: Quarry 1 Discharge (ST-WT-Quarry-1)

Parameter	Maximum Authorized Monthly Mean Concentration	Maximum Authorized Concentration Grab Sample	Unit	Sample Date				Monthly Average
				20-07-2019	21-07-2019	22-07-2019	29-07-2019	
Conventional Constituents								
pH	6.0 to 9.5	6.0 to 9.5	N/A	6.90	6.67	6.75	6.72	6.76
Total suspended solids	15	30	mg/L	3	5	4	4	4
Total Dissolved Solids	1400	1400	mg/L	163	170	174	< 1	126.9
Nutrients								
Total Ammonia	16	32	mg N/L	0.62	0.63	0.72	1.08	0.76
Total phosphorus	0.3	0.6	mg P/L	0.01	< 0.01	0.06	< 0.01	0.020
Total Metals								
Aluminum	0.5	1	mg/L	0.141	0.171	0.121	0.034	0.117
Arsenic	0.1	0.2	mg/L	0.0024	0.0032	0.0017	0.0036	0.0027
Cadmium	0.002	0.004	mg/L	< 0.00002	< 0.00002	< 0.00002	< 0.00002	0.00001
Chromium	0.02	0.04	mg/L	0.0014	0.0015	0.0009	0.0008	0.0012
Copper	0.1	0.2	mg/L	0.0025	0.0028	0.0026	0.0015	0.0024
Iron	1	2	mg/L	0.72	1.09	0.72	0.53	0.77
Lead	0.05	0.1	mg/L	< 0.0003	< 0.0003	< 0.0003	< 0.0003	0.000015
Mercury	0.004	0.008	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001	0.000005
Nickel	0.25	0.5	mg/L	0.0056	0.0064	0.0064	0.0061	0.0061
Zinc	0.1	0.2	mg/L	0.004	0.006	0.023	0.005	0.010
Other								
Total oil and grease	3	6	mg/L	< 1	NA	< 1	2	1

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 July.

All spills reported internally (16) were managed appropriately on site according to Agnico's spill contingency plan. Two (2) spills were reported to regulators in July. 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

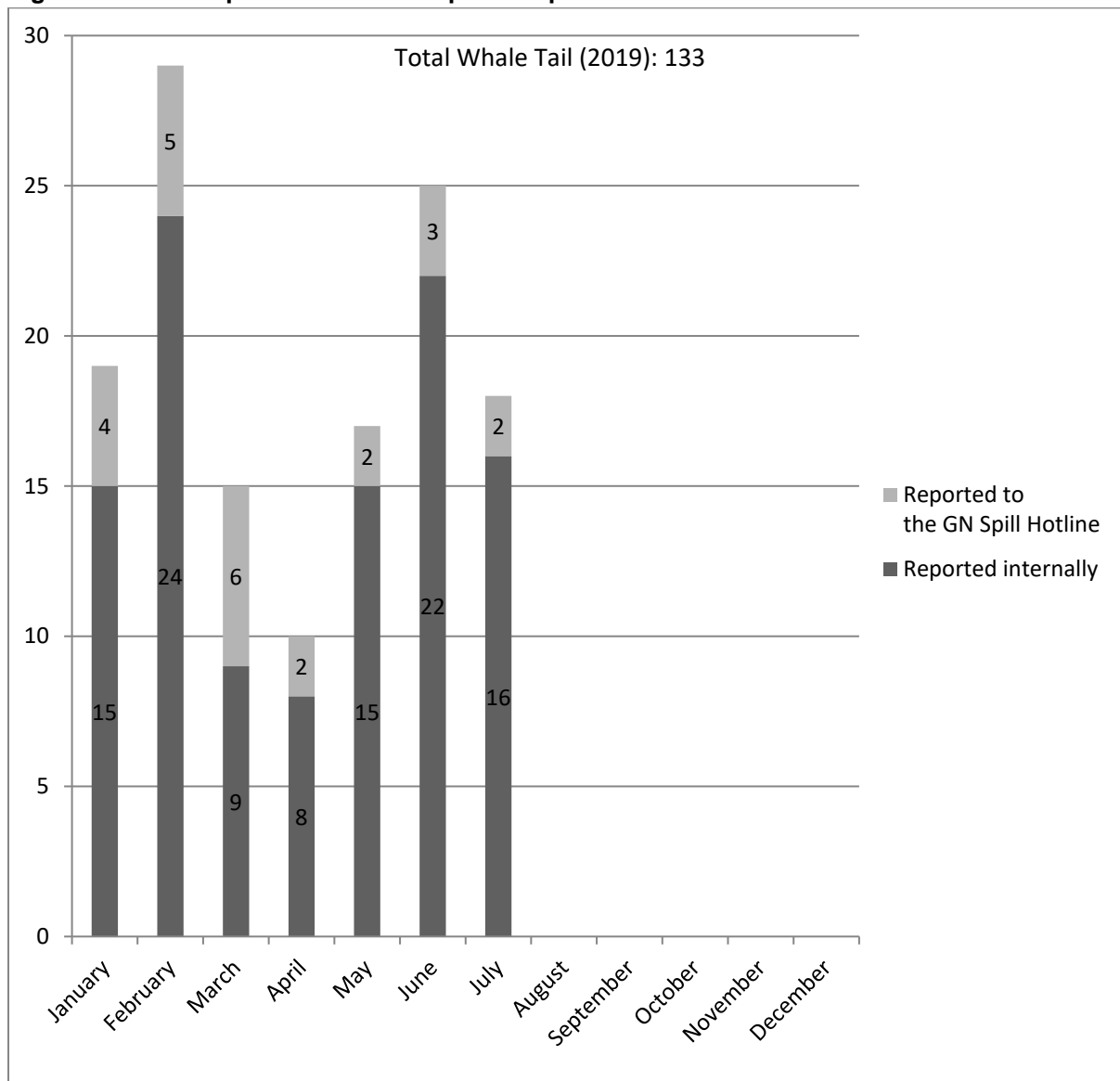


Table 3.1: Summary of Agnico Eagle Internal and Reported Spill Reports, July 2019

Date of Spill	Hazardous Material	Qty	Units (L / Kg)	Location	Cause of spill	Clean-up action taken
July 4, 2019	Waste oil	45	L	Maintenance	Coupler on the bottom of the truck came loose	Contaminated soil picked up and disposed of appropriately
July 8, 2019	Diesel	100	L	Quarry 2	Rock got stock between traction and fuel tank and broke the drain plug on fuel tank	The spill occurred on a blast pattern which will be collected and processed through the Mill
July 9, 2019	Diesel	80	L	Road 7	Fuel Tank vent cap malfunctioned, fuel came out of the vent cap	Contaminated soil picked up and disposed of appropriately
July 10, 2019	Petroleum Product	50	L	Whale Tail Haul Road KM173	Long haul truck was a complete loss due to fire. Most of the liquids were burnt in the fire. We estimate 50 liters spilled and did not ignite.	Spill pads were placed in small puddles beside the road once the fire was deemed "out". All contaminated soil and material picked up and disposed of appropriately
July 10, 2019	Hydraulic Oil	150	L	Portage Pit E	Hydraulic fitting failure	The drill was stopped and absorbent pads were put on the ground. Once the fitting was replaced, the drill was moved and the absorbent pads were picked up. The spill occurred on a blast pattern which will be collected and processed through the mill.
July 11, 2019	Hydraulic Oil	15	L	Maintenance	Ball valve seal failure	Contaminated soil picked up and disposed of appropriately
July 11, 2019	Coolant	15	L	Quarry 2	Pin hole in iron pipe causing a coolant spill	Contaminated soil picked up and disposed of appropriately

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July 12, 2019	Diesel	60	L	Quarry 2	Defective fuel vent on equipment	Contaminated soil picked up and disposed of appropriately
July 13, 2019	Diesel	30	L	Quarry 2	Fuel tank vent cap malfunctioned	Contaminated soil picked up and disposed of appropriately
July 13, 2019	Diesel	80	L	Quarry	During refueling, fuel began spreading onto the ground because the air vent was not working properly	Spill was contained and contaminated soil picked up and disposed of appropriately
July 20, 2019	Steering Fluid	20	L	RSF parking	Steering Accumulator failure	Spill was contained and contaminated soil picked up and disposed of appropriately
July 20, 2019	Hydraulic Oil	90	L	NPAG stock pile	Hydraulic hose failure	Called mechanic for repairs. Spill was contained and contaminated soil picked up and disposed of appropriately
July 21, 2019	Hydraulic Oil	20	L	Quarry 2	Hydraulic hose failure	Spill was contained and contaminated soil picked up and disposed of appropriately
July 24, 2019	Engine Oil	16	L	Pad H	Equipment failure	Spill was contained and contaminated soil picked up and disposed of appropriately
July 27, 2019	Hydraulic Oil	30	L	Quarry 2	O-ring failure	Stop equipment and call mechanic for repair. Pick up spill and brought to yellow bin behind maintenance shop
July 27, 2019	Hydraulic Oil	15	L	Quarry 2	Hydraulic hose attached to the traction motor broke off.	Machine was turned off to stop leaking, mechanic was called to fix the hose and contaminants were cleaned with absorbent pad and they were picked up and brought to the proper container.
July 29, 2019	Diesel	50	L	Whale Tail Haul Road KM 126	Wiggins on fuel tank stayed stuck. Missing Wiggins fuel cap.	Contaminated soil picked up and sent to contaminated pad

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July 30, 2019	Diesel	50	L	Main road beside transit	Zoom boom was transporting a tote of fuel and the cap popped off and some fuel fell on the ground	Spill was contained and contaminated soil picked up and disposed of appropriately
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