



WHALE TAIL PROJECT

## **Monitoring Program Summary Report**

**April 2020**

Type A Water License 2AM-WTP1826

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## **SECTION 1 • BACKGROUND**

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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, Whale Tail North Basin dewatering, Quarry 1 discharge and Whale Tail South Basin water transfer.

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

## SECTION 2 • WATER MANAGEMENT

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### 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 m<sup>3</sup>/year. A total volume of 2,364 m<sup>3</sup> was withdrawn from Nemo Lake in April. Details are provided in Table 2.1.1 below.

**Table 2.1.1: April 2020 – Freshwater Consumption**

Water Location	Source Lake	Jan	Feb	March	April	Total
Camp	Nemo	2 062	2 184	2 317	1 485	8 048
Construction/Operation	Nemo	1 518	1 840	1 284	879	5 521
Dust Suppression	Nemo / WTHR Pond	0	0	0	0	0
<b>Total Freshwater Usage (m<sup>3</sup>)</b>		<b>3 579</b>	<b>4 024</b>	<b>3 601</b>	<b>2 364</b>	<b>13 569</b>

### 2.2 LAKE WATER MONITORING

Lake around the Whale Tail Project were monitored on a monthly basis during the open water season. In April, no 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) due to freezing conditions.

### 2.3 WHALE TAIL DIKE SEEPAGE MONITORING

In April, the Whale Tail North dewatering continued and seepage water was still observed at the toe of the structure. Seepage was estimated in average at 170 m<sup>3</sup>/h based on pumping rate. This inferred seepage is a decrease from last month.

Agnico continue to manage water from WTD seepage as part of the dewatering of the Whale Tail North Basin and is be monitored for Water License 2AM-WTP1826 Part D Item 7. Refer to Section 2.5 below for the water quality monitoring results.

Seepage water quality is also monitored as per the requirement of the Water License. The 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 sewage treatment plan is discharged 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 minimally on a monthly basis and thus sample was taken in April. A total of 1,436 m<sup>3</sup> was discharged during the month.

## 2.5 WHALE TAIL NORTH BASIN DEWATERING

As describe in Section 2.3 above, Agnico has discharged the Whale Tail Dike (WTD) seepage as part of the Whale Tail North Dewatering to Whale Tail South Basin (ST-DD-7). Water discharge was from April 1 to 3, April 15 to 20 and April 25 to 30. A total volume of 138,987 m<sup>3</sup> was discharged in April.

No dewatering of the Whale Tail North Basin to Mammoth Lake (ST-DD-9), via the temporary diffuser, in April.

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: 6.49 / 7.58 (Limit is 6-9 units)
- pH 30 days minimum/maximum: 7.06 / 7.16 (Limit is 6-9 units)
- Al 24 hour maximum concentration: 0.019 mg/L (Limit is 3.0 mg/L)
- Al 30 days maximum concentration: 0.012 mg/L (Limit is 1.5 mg/L)

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

- NTU 24 hour maximum concentration: 1.97 NTU (Maximum Limit is 30 NTU)
- NTU 30 days mean maximum concentration: 1.64 NTU (Maximum Limit is 15 NTU).
- TSS 24 hour maximum concentration: 19 mg/L (Maximum Limit is 22.5 mg/L)
- TSS 30 days mean maximum concentration: 5.64 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 April.

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

Date	ST-DD-7				License Requirement			
	Turbidity <sup>1</sup>	TSS <sup>2</sup>	pH <sup>1</sup>	Total Al <sup>2</sup>	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
01-04-2020	1.97	19	7.58		1.64	5.00	7.07	
02-04-2020	0.91	9	7.41	<0.006	1.58	5.38	7.06	0.007
03-04-2020	1.09	1	7.13		1.50	5.25	7.08	
04-04-2020	No discharge				1.21	5.40	7.11	
05-04-2020	No discharge				1.22	5.64	7.13	

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06-04-2020	No discharge				1.18	5.46	7.13	
07-04-2020	No discharge				1.22	5.42	7.16	
08-04-2020	No discharge				1.22	5.42	7.16	
09-04-2020	No discharge				1.22	5.42	7.16	
10-04-2020	No discharge				1.22	5.42	7.16	
11-04-2020	No discharge				1.22	5.42	7.16	
12-04-2020	No discharge				1.22	5.42	7.16	
13-04-2020	No discharge				1.22	5.42	7.16	
14-04-2020	No discharge				1.22	5.42	7.16	
15-04-2020	0.9	3	6.94		1.21	5.25	7.15	
16-04-2020	1.04	<1	6.49	0.014	1.21	4.88	7.11	0.006
17-04-2020	1.34	2	7.00		1.23	4.13	7.12	
18-04-2020	1.7	1	7.07		1.29	3.79	7.14	
19-04-2020	0.95	2	6.98		1.30	3.92	7.14	
20-04-2020	0.78	<1	6.69		1.30	3.88	7.12	
21-04-2020	No discharge				1.36	4.18	7.13	
22-04-2020	No discharge				1.36	4.18	7.13	
23-04-2020	No discharge				1.36	4.18	7.13	
24-04-2020	No discharge				1.36	4.18	7.13	
25-04-2020	0.86	4	7.08		1.32	4.17	7.12	
26-04-2020	1.58	5	6.91		1.34	4.23	7.11	
27-04-2020	1.57	4	7.09		1.35	4.21	7.11	
28-04-2020	0.88	4	7.18		1.32	4.20	7.11	
29-04-2020	0.86	1	7.19		1.24	3.93	7.09	
30-04-2020	1.35	2	7.15	0.019	1.19	3.87	7.06	0.012
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 discharge from Quarry 1 restarted in April. Discharge was from April 13 to 15 and from April 25 to 29. A total volume of 74,812m<sup>3</sup> 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 2.6.1 below. No non-compliance observed during the month of April related to this discharge to the receiving environment.

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

Parameter	Maximum Authorized Concentration Grab Sample	Maximum Authorized Monthly Mean Concentration	Unit	Sample Date			Monthly Average
				2020-04-13	2020-04-25	2020-04-27	
Field Measured							
pH	6.0 - 9.5	6.0 - 9.5	pH units	7.78	7.24	6.95	7.32
Conventional Parameters							
Total dissolved solids	1400	1400	mg/L	625	664	692	660
Total suspended solids	30	15	mg/L	8	2	4	4.67
Nutrients							
Total phosphorus	0.6	0.3	mg/L	<0.01	-	<0.01	0.005
Total ammonia as NH4	32	16	mg/L	3.53	-	1.67	2.60
General Organics							
Total oil and grease	6	3	mg/L	<1	NA	<1	0.5
Total Metals							
Aluminum	1	0.5	mg/L	0.162	-	0.215	0.189
Arsenic	0.2	0.1	mg/L	0.0457	0.0144	0.0164	0.0255
Cadmium	0.004	0.002	mg/L	<0.00002	-	<0.00002	0.00001
Chromium	0.04	0.02	mg/L	0.0046	-	0.0019	0.0033
Copper	0.2	0.1	mg/L	0.0082	0.0039	0.0042	0.0054
Iron	2	1	mg/L	0.29	-	0.15	0.22
Lead	0.1	0.05	mg/L	<0.0003	<0.0003	<0.0003	0.00015
Mercury	0.008	0.004	mg/L	<0.00001	-	<0.00001	0.000005
Nickel	0.5	0.25	mg/L	0.0151	0.0153	0.018	0.02
Zinc	0.2	0.1	mg/L	<0.001	0.004	0.004	0.003

\*Sampling error for original sample so the duplicate value was reported

## 2.7 WHALE TAIL SOUTH WATER TRANSFER

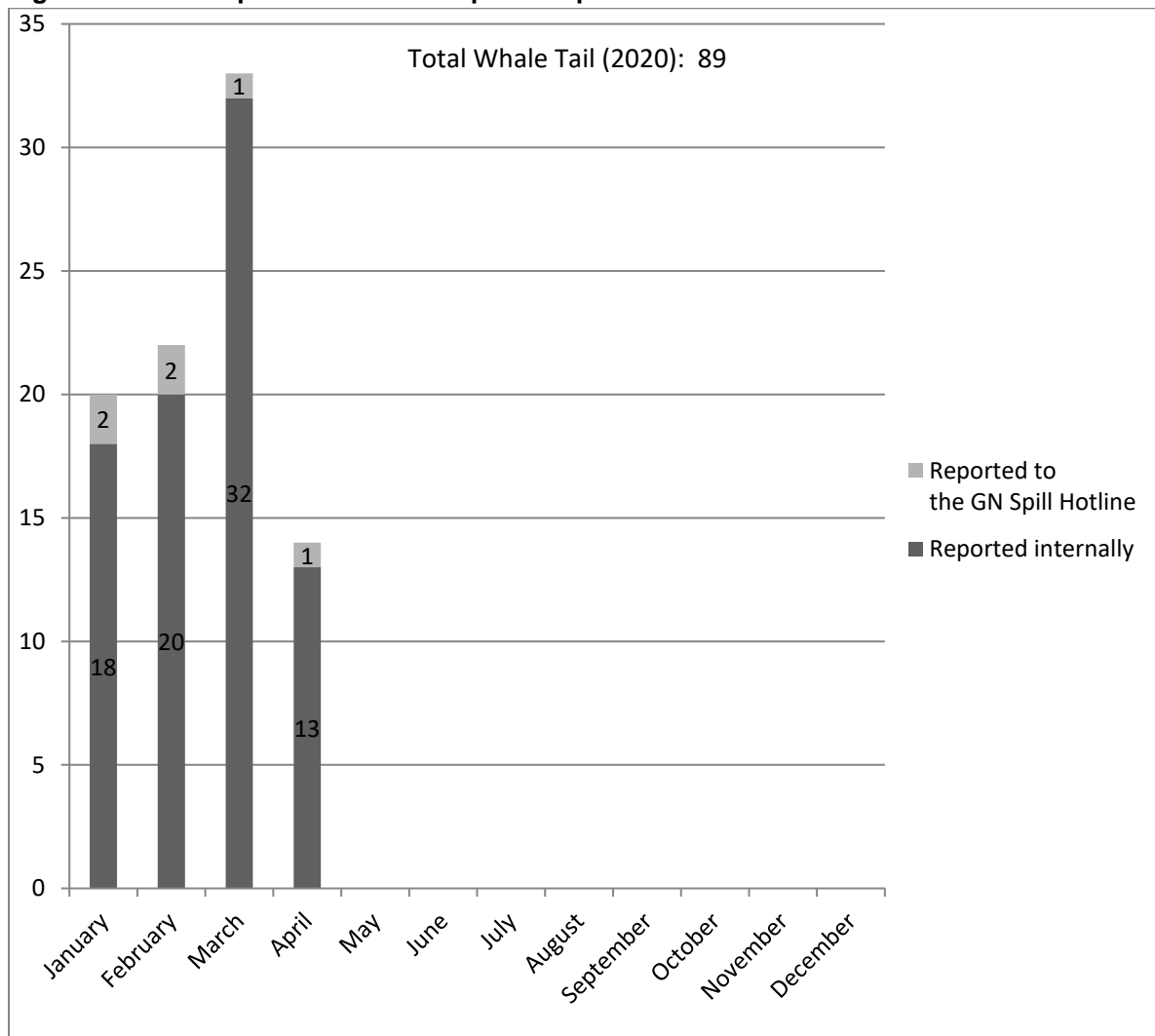
No water transfer between Whale Tail South to Mammoth Lake in April.

### SECTION 3 • SPILL MANAGEMENT

Figure 3.1 shows reported and non-reported spills for 2020 broken down per month and Table 3.1 summarizes Agnico Eagle spill reports for April.

All spills reported internally (13) were managed appropriately on site according to Agnico's spill contingency plan. One (1) spill was reported to regulators in April. 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 2020 Reported and Non-Reported Spills**





**Table 3.1: Summary of Agnico Eagle Internal and Reported Spill Reports, April 2020**

Date of Spill	Hazardous Material	Qty	Units (L / Kg)	Location	Cause of spill	Clean-up action taken
April 4, 2020	Diesel	100	L	Whale Tail Pit Phase 3	Damaged Fuel Cap - When the fuel truck finished refueling HTR22, the operator noticed that the wiggins would not fully close and fuel was spilling on the ground.	An empty 45 gallon drum was placed under the fuel cap to collect fuel from the leaking part. All of the contaminated material will be collected and brought to the Meadowbank land farm once the Haul Truck is repaired and moved out of the way.
April 6, 2020	Hydraulic Oil	20	L	New maintenance shop	The hose from the hydraulic valve to steering came apart	Put absorbent pads on spill and replace faulty hose. Spill was contained, and contaminated soil picked up and disposed of appropriately in the petroleum waste bin.
April 6, 2020	Hydraulic Oil	25	L	Maintenance parking	A hydraulic hose was removed and not capped	Spill was contained, and contaminated soil picked up and disposed of appropriately in the petroleum waste bin. Hydraulic hose was replaced/re-installed
April 7, 2020	Diesel	10	L	Sana rip-rap pad	Breather malfunction on equipment and overflow	Spill was contained, and contaminated soil picked up and disposed of appropriately in the yellow bin. Equipment was repaired.
April 10, 2020	Hydraulic Oil	40	L	WRSF	Hydraulic oil leaking from O'ring seal	Spill was contained and contaminated soil pick up and disposed of appropriately in the petroleum bin
April 13, 2020	Hydraulic Oil	85	L	New sana pad	Hydraulic hose failure	Stop engine, change defective hose and inspection of other hoses. Spill was contained, and contaminated soil picked up and disposed of appropriately in the petroleum bin.
April 13, 2020	Hydraulic Oil	48	L	Channel Road	Equipment failure	Contaminated soil and snow picked up and disposed of appropriately in the petroleum bin. Stop engine, clean up of the wheel and clean up of the snow
April 13, 2020	Contaminated Water	55	L	Camp Housekeeping Lift Station	The Sewage Truck Operator went to unload some sewage into the NewTerra Sewage Treatment plant when the	STP Operator reported the issue to his supervisor and the Supervisor sent the sewage Truck immediately to the lift station and had his

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					Sewage plant operator noticed that there was no more water coming out in his system. Some Rocks coming from the Sewage truck clogged into the piping system. A few moments later someone reported that the housekeeping Grey water Lift Station was overflowing	STP Operator with the assistance of the camp plumber fix the issue
April 13, 2020	Transmission fluid	20	L	Super Highway	Transmission line failure	Contaminated soil picked up and disposed of appropriately in the petroleum bin
April 14, 2020	Hydraulic Oil	25	L	5123MSW73	O'ring failure in the pump drive	Contaminated soil picked up and disposed of appropriately in the petroleum bin
April 14, 2020	Hydraulic Oil	5	L	Whale Tail Pit Hole # 2223	Equipment failure	Spill was contained and contaminated soil picked up and disposed of appropriately in a petroleum contaminated soil quadrex
April 20, 2020	Hydraulic Oil	75	L	SANA Seacan Laydown	Equipment failure	Engine was stopped and mechanic was called for repair. Contaminated snow picked up and disposed of appropriately.
April 25, 2020	Hydraulic Oil	5	L	IVR Hole # 2242	AMQ_5L_HYDRAULIC OIL_DRILL #5_IVR	Spill was contained and contaminated soil picked up and disposed of appropriately in a petroleum contaminated soil quadrex
April 25, 2020	Grease	NA	L	Kitchen	Supervisor reported a bad odor coming from the Floor near the kitchen office to the E&I Maintenance Supervisor.	The Maintenance Crew (Plumber & Carpenter) opened up the side box on the side of the kitchen module and that is when they observed the presence of grease on the ground under the Floor. They then cut a hole in the floor inside the kitchen office and found 1/2 inch of grease under the flooring and insulation.