



WHALE TAIL PROJECT

Monitoring Program Summary Report

September 2020

Type A Water License 2AM-WTP1830

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SECTION 1 • BACKGROUND

On May 13, 2020, Agnico received the minister approval for the Water License 2AM-WTP1830 Amendment No.1. This amendment was required to authorize changes to the previously-approved uses of water and deposit of wastes needed to reflect the expansion of the Whale Tail Pit Project.

As required under Part I, Item 22 of Type A Water License 2AM-WTP1830, 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 Attenuation Pond discharge and dewatering discharges.

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

SECTION 2 • WATER MANAGEMENT

2.1 WATER USAGE

Fresh water usage for September is summarized in Table 2.1 below

Table 2.1: September 2020 – Freshwater Usage (m³)

Water Location	Source Lake	Jan	Feb	March	April	May	June
Camp	Nemo	2,062	2,184	2,317	1,485	1,845	2,013
Construction/Operation	Nemo	1,518	1,840	1,284	879	1,967	1,039
Dust Suppression	Nemo / WTHR Pond	0	0	0	0	0	0
Explosive	Mammoth Lake	0	0	0	0	0	0
Drilling	Proximal Sources	0	0	0	0	0	0
Total Freshwater Usage (m³)		3,579	4,024	3,601	2,364	3,812	3,052

Water Location	Source Lake	July	Aug	Sept	Total
Camp	Nemo	2,187	2,424	2,620	19,136
Construction/Operation	Nemo	498	1,533	1,935	12,493
Dust Suppression	Nemo / WTHR Pond	1,500	0	0	1,500
Explosive	Mammoth Lake	0	0	0	
Drilling	Proximal Sources	0	0	0	
Total Freshwater Usage (m³)		4,184	3,958	4,555	33,129

2.2 LAKE WATER MONITORING

Lakes 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 A16 (ST-WT-14) and Lake A15 (ST-WT-15).

2.3 WHALE TAIL SOUTH CHANNEL

The Whale Tail South Channel was operational in September and a monthly sample was collected (ST-WT-13). No issues to report.

2.4 WHALE TAIL DIKE SEEPAGE MONITORING

In September, seepage at the toe of Whale Tail dike was still observed. Agnico continues to manage water from WTD seepage as part of the Whale Tail Attenuation Pond.

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

2.5 SEWAGE TREATMENT PLANT

Effluent from the sewage treatment plan is discharged to the Whale Tail Attenuation Pond. As per Water License Schedule I Sampling Station ST-WT-11, effluent is to be sampled four times per calendar year. Agnico is currently sampling the STP on a monthly basis and thus a sample was taken in September. A total of 2 524 m³ was discharged during the month.

2.6 WHALE TAIL ATTENUATION POND

Water from the Whale Tail Attenuation Pond was discharged to Mammoth Lake everyday during the month of September. Discharge from the Mammoth Lake West Diffuser occurred from September 1 to 20, and discharge from the Mammoth Lake East diffuser occurred everyday during the month except for September 14.

Water was treated by the Water Treatment Plan before discharge. A total of 505,058 m³ was discharged to Mammoth Lake.

As per Water License Part F Item 5, the effluent from this discharge shall not exceed the limits detailed in Table 2.6.1 and 2.6.2 below. No non-compliance was observed during the month of September.

Table 2.6.1: Whale Tail Attenuation Pond Discharge to Mammoth Lake West Diffuser (ST-WT-2)

Parameter	Maximum Authorized Concentration Grab Sample	Maximum Authorized Monthly Mean Concentration	Unit	Sample Date				Monthly Average
				9/1/2020	9/7/2020	9/14/2020	9/20/2020	
Field Measured								
pH	6.0 - 9.5	6.0 - 9.5	pH units	6.94	7.11	7.03	6.96	7.01
Conventional Parameters								
Total suspended solids	30	15	mg/L	4	10	4	<1	4.51
Nutrients								
Total phosphorus	0.6	0.3	mg/L	<0.01	<0.01	<0.01	<0.01	0.005
Total ammonia (NH3-N)	32	16	mg/L	1.03	0.71	1.74	1.83	1.33
General Organics								
Total Petroleum hydrocarbons (TPH)	6	3	mg/L	0.1	<0.1	<0.1	<0.1	0.06
Total Metals								
Aluminum	1	0.5	mg/L	0.074	0.033	0.03	<0.006	0.035
Arsenic	0.2	0.1	mg/L	0.0039	0.0039	0.0048	0.0055	0.0045
Cadmium	0.004	0.002	mg/L	<0.00002	< 0.00002	< 0.00002	< 0.00002	0.00001
Chromium	0.04	0.02	mg/L	0.0014	0.0007	<0.0006	<0.0006	0.00068
Copper	0.2	0.1	mg/L	0.0045	0.0011	0.0025	0.0006	0.0022
Iron	2	1	mg/L	0.5	0.65	0.69	0.66	0.625
Lead	0.1	0.05	mg/L	<0.00017	< 0.00017	<0.00017	<0.00017	0.000085
Mercury	0.008	0.004	mg/L	<0.00001	< 0.00001	< 0.00001	< 0.00001	0.000005
Nickel	0.5	0.25	mg/L	0.0264	0.0257	0.0253	0.0259	0.0258
Zinc	0.2	0.1	mg/L	0.02	0.009	0.018	0.008	0.014

Table 2.6.2: Whale Tail Attenuation Pond Discharge to Mammoth Lake East Diffuser (ST-WT-2a)

Parameter	Maximum Authorized Concentration Grab Sample	Maximum Authorized Monthly Mean Concentration	Unit	Sample Date					Monthly Average
				9/1/2020	9/7/2020	9/16/2020	9/21/2020	9/28/2020	
Field Measured									
pH	6.0 - 9.5	6.0 - 9.5	pH units	6.14	7.04	7.02	6.87	7.02	6.82
Conventional Parameters									
Total suspended solids	30	15	mg/L	4	6	6	18	4	8
Nutrients									
Total phosphorus	0.6	0.3	mg/L	0.02	<0.01	<0.01	<0.1	<0.01	0.009
Total ammonia (NH3-N)	32	16	mg/L	1.04	0.7	3.17	1.55	0.62	1.42
General Organics									
Total Petroleum hydrocarbons (TPH)	6	3	mg/L	<0.1	<0.1	<0.1	<0.1	0.1	0.05
Total Metals									
Aluminum	1	0.5	mg/L	0.049	0.016	<0.006	<0.006	0.008	0.0158
Arsenic	0.2	0.1	mg/L	0.0041	0.0034	0.0026	0.0023	0.0016	0.0028
Cadmium	0.004	0.002	mg/L	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	0.00001
Chromium	0.04	0.02	mg/L	0.0013	<0.0006	<0.0006	<0.0006	<0.0006	0.0005
Copper	0.2	0.1	mg/L	0.0013	0.0005	0.0025	0.001	<0.0005	0.0011
Iron	2	1	mg/L	0.46	0.56	0.59	0.68	0.56	0.57
Lead	0.1	0.05	mg/L	<0.00017	<0.00017	<0.00017	<0.00017	<0.00017	0.000085
Mercury	0.008	0.004	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000005
Nickel	0.5	0.25	mg/L	0.03	0.0232	0.0342	0.0196	0.0086	0.023
Zinc	0.2	0.1	mg/L	0.01	0.006	0.014	0.013	0.008	0.010

2.7 WHALE TAIL IVR PIT AREA DEWATERING

The dewatering of lakes in the footprint of the IVR Pit started in August and was completed in September. All fishout activities were completed in September with the approval of DFO. Water was pumped to the Whale Tail Attenuation Pond as per the approved Dewatering Phase Pumping System Design Report and thus no water quality limits were applicable as per the Water License.

2.8 WHALE TAIL IVR WRSF/ATTENUATION POND AREAS DEWATERING

All fishout activities of lakes A50, A51, A52, A53 were completed in September with the approval of DFO.

As per the approved Dewatering Phase Pumping System Design Report, dewatering water was sent to Lake A53 and then discharge to Whale Tail South, if it met the discharge criteria, or the Whale Tail Attenuation, if water quality was not sustainable for a direct discharge to the environment.

Discharge to Whale Tail South, without treatment, occurred from September 1 to September 14. A total volume of 212,788 m³ water discharge during this period of time. From September 15 to September 27, water from A53 was sent the Whale Tail Attenuation Pond and managed as part of this facility.

Daily monitoring for TSS, Turbidity and pH were conducted as per the Water License 2AM-WTP1830 Part D Item 8 and the Water Quality Monitoring and Management Plan for Dike Construction and Dewatering for the dewatering of Lake A53 to Whale Tail South. The effluent (ST-DD-15) did not exceed the water quality limits as detailed in Table 4.3.

Table 4.3 Dewatering Effluent Water Quality Limit

Parameter	Maximum Monthly Mean	Short Term Maximum
Total Suspended Solids	15.0 mg/L	30 mg/L

No non-compliance related to Water License or MDMER regulatory limits were observed during the month.

Table 4.4 Whale Tail Dewatering Monitoring (ST-DD-15)

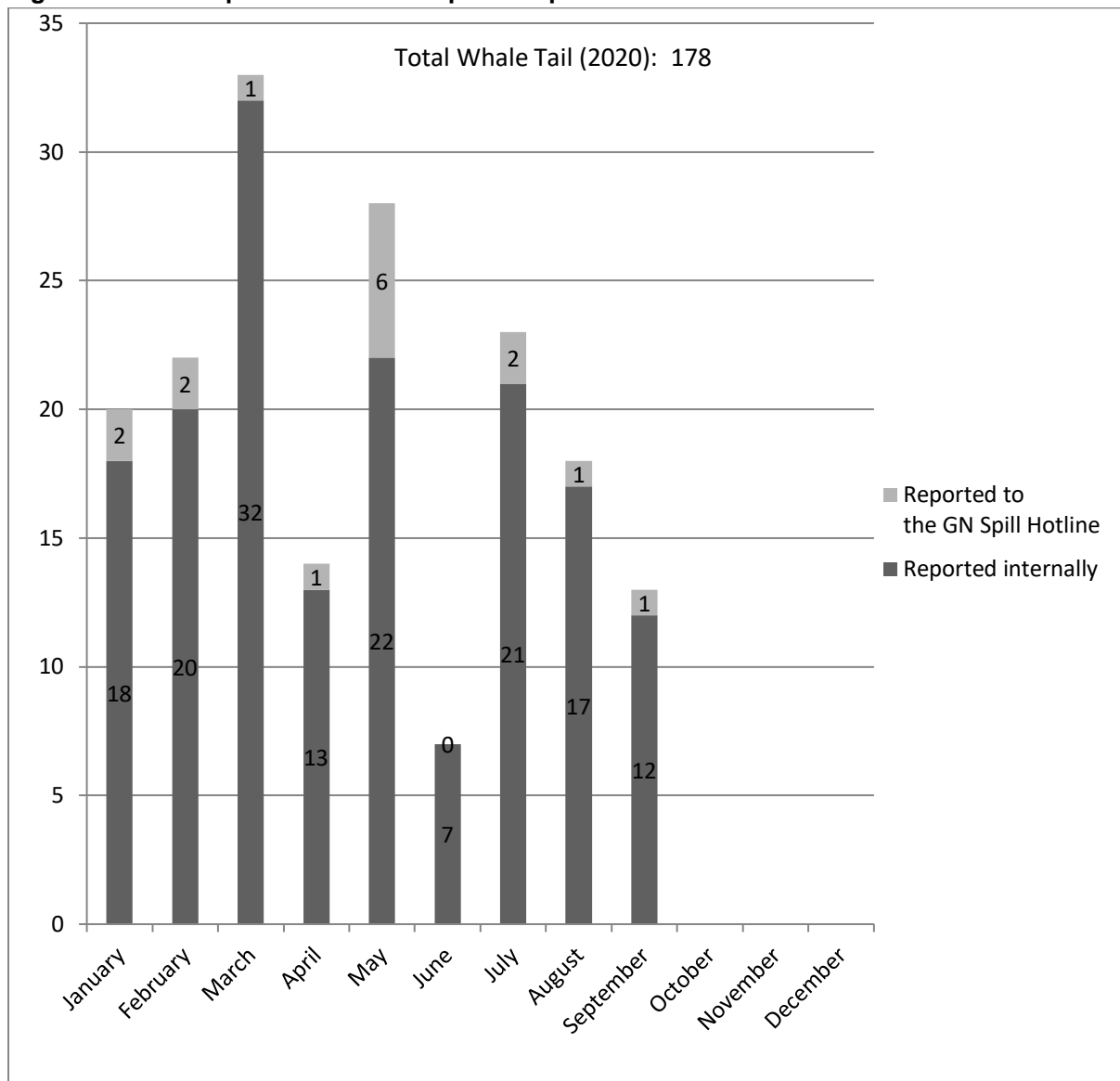
Date	ST-DD-15			License Requirement
	Turbidity ¹	TSS ²	pH ¹	TSS 30-day Mean
	NTU	mg/L		15
9/1/2020	1.62	3	7.11	3.00
9/2/2020	2.01	1	7.03	2.00
9/3/2020	1.83	1	7.41	1.67
9/4/2020	2.15	1	7.56	1.50
9/5/2020	2.64	1	7.11	1.40
9/6/2020	2.59	1	7.21	1.33
9/7/2020	2.24	1	7.16	1.29
9/8/2020	2.15	1	7.12	1.25
9/9/2020	2.46	2	7.52	1.33
9/10/2020	2.49	2	7.38	1.40
9/11/2020	2.3	2	7.41	1.45
9/12/2020	2.37	3	7.38	1.58
9/13/2020	3.16	3	7.44	1.69
9/14/2020	5.3	11	7.6	2.36
9/15/2020	No discharge to WTS			
9/16/2020	No discharge to WTS			
9/17/2020	No discharge to WTS			
9/18/2020	No discharge to WTS			
9/19/2020	No discharge to WTS			
9/20/2020	No discharge to WTS			
9/21/2020	No discharge to WTS			
9/22/2020	No discharge to WTS			
9/23/2020	No discharge to WTS			
9/24/2020	No discharge to WTS			
9/25/2020	No discharge to WTS			
9/26/2020	No discharge to WTS			
9/27/2020	No discharge to WTS			
9/28/2020	No discharge			
9/29/2020	No discharge			
9/30/2020	No discharge			

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 September.

All spills reported internally (12) were managed appropriately on site according to Agnico's spill contingency plan. One (1) spill was 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 2020 Reported and Non-Reported Spills



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

Date of Spill	Hazardous Material	Qty	Units (L / Kg)	Location	Cause of spill	Clean-up action taken
September 1, 2020	Hydraulic Oil	40	L	Road 7	Hydraulic hose failure	The equipment was stopped, and mechanic called. Contaminated material was disposed of adequately in the yellow bin.
September 1, 2020	Hydraulic Oil	8	L	PAD 5B	Hydraulic oil tote was punctured by equipment	The tote was turned over to prevent more oil from leaking out, spill pads were used to clean up the oil and the contaminated material was removed and adequately disposed of in the petroleum bin.
September 2, 2020	Hydraulic Oil	15	L	Pattern:5109msw67	Hydraulic hose failure	Engine was stopped, absorbent pads were used to clean spill and contaminated material was adequately disposed of in the yellow bin by the mechanic shop.
September 8, 2020	Hydraulic Oil	5	L	Whale Tail Dumb Ramp	Hydraulic hose failure on grader	Operator stopped equipment, spill was cleaned up and contaminated material was adequately disposed of.
September 8, 2020	Coolant	15	L	Whale Tail (Phase 1)	Coolant leak at the back of the machine	Operator stopped equipment, spill was cleaned up and contaminated material was adequately disposed of.
September 8, 2020	Hydraulic Oil	70	L	IVR	Equipment failure	Operator stopped equipment, spill was cleaned up and contaminated material was adequately disposed of.
September 9, 2020	Hydraulic Oil	650	L	WTHR road KM 172	Truck went off the WTHR	Contaminated material was adequately disposed of.
September 10, 2020	Coolant	20	L	Whale Tail Pit Phase 2 Ramp	Equipment failure	Loader was moved out of the way and shut off. Leak was repaired, and the contaminated material was picked up and adequately disposed of.
September 17, 2020	Hydraulic Oil	1	L	RP320 face	Hydraulic hose failure	Hydraulic hose was repaired, the spill was contained, and contaminated material was properly disposed of in a quatrex bag at the underground service dome.
September 24, 2020	Hydraulic Oil	15	L	Phase 1 pattern (5102MSW24)	Hydraulic hose failure	Operator stopped equipment, spill was cleaned up and contaminated material was adequately disposed of in the yellow bin.
September 28, 2020	Coolant	40	L	Waste dump 5190 elevation	Coolant hose failure	Operator stopped equipment, spill was cleaned up and contaminated material was adequately disposed of in the yellow bin.
September 28, 2020	Coolant	45	L	Phase 3	Coolant hose failure	Material was adequately disposed of in the yellow bin.
September 30, 2020	Diesel	30	L	Whale Tail Pit Phase 2	While refueling a drill, the fuel hose broke at a splice and caused fuel to spill onto ground	The operator hit the emergency shutoff, the proper clamps were installed on the hose to prevent another spill from occurring. Contaminated material was disposed of in the yellow bin behind the underground shop.