



181 University Ave  
Suite 300, P.O. Box 33  
Toronto, Ontario M5H 3M7  
416-628-0216

**Sent by Email**

**September 30, 2021**

Licensing  
Nunavut Water Board  
P.O. Box 119  
Gjoa Haven, NU  
X0B 1J0

**Re: August 2021 – Monthly Monitoring Report for Water Licence 2AM-DOH1335**

This report is comprised of the monitoring requirements set out in Part I and Schedule I of water licence 2AM-DOH1335 Amendment 2 (the licence), and additional requirements from CIRNAC.

On February 2, 2021 TMAC was purchased by Agnico Eagle Mines (Agnico Eagle) but TMAC continues to exist as a legal entity and is now a wholly owned subsidiary of Agnico Eagle. All rights, obligations, liabilities of TMAC continue to reside with TMAC until or if an amalgamation with Agnico Eagle occurs later in 2021.

During the subject period of this report, the focus of activities at Doris was underground mining, ore processing, water management and environmental compliance.

Dewatering of the Tailings Impoundment Area (TIA) and the Doris underground workings through the Robert's Bay Discharge System continued in August. Dewatering of the Doris underground workings through the mill tailings system to the TIA also continued this month.

In February, Agnico made the decision to pause mining activities at Madrid North to allow further evaluation of the mine plan for this area and focus on activities at Doris. Underground mining activities at the Madrid North Portal were suspended and remain inactive at this time.

Sampling locations monitored under this licence (seasonally or when facilities are operational) are provided in Figure 6 through Figure 8 at the end of this report.

**Site Wide Water Quality Monitoring Program (Part I Item 3 and Schedule I)**

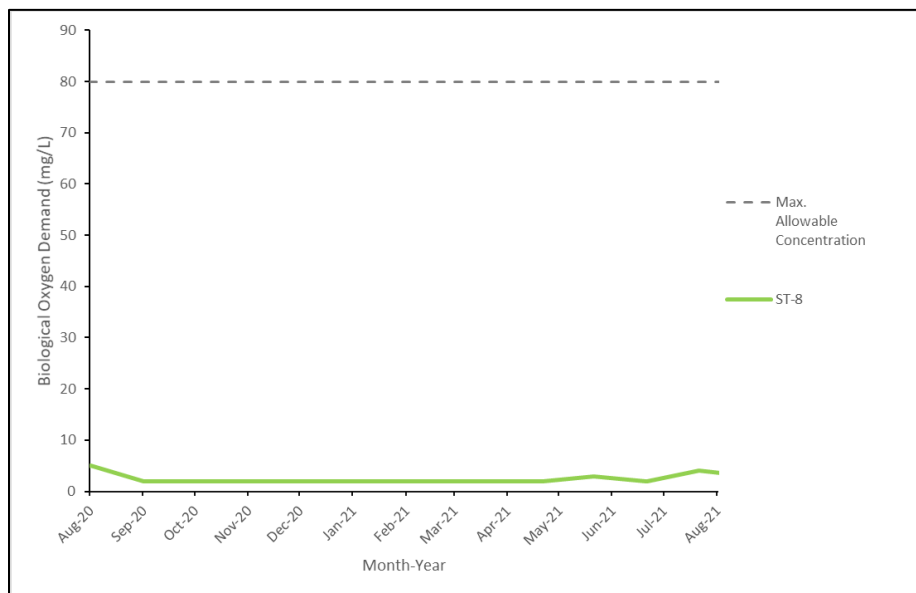
Water quality sampling was conducted in August at monitoring stations identified in Schedule I of the licence (ST-1 through ST-13, TL-1 through TL-12 and MMS-1 through MMS-10). Water quality samples were not collected for monitoring stations that were inactive during the month being reported (e.g., facilities that had not yet been constructed, were frozen during the month, or were not operationally active).

All parameters were compared to the applicable effluent quality limits outlined in Part D and Part F of the licence. No exceedances of effluent quality limits were observed in any samples collected this month. Results of all water quality monitoring are provided in Appendix A attached to this report. Due to a delay with the contract laboratory used to analyze the TL6 and TL7A samples, August results for these stations were not available at the time of submission of this

report. Results of these samples will be reported in the next monthly SNP report when they become available.

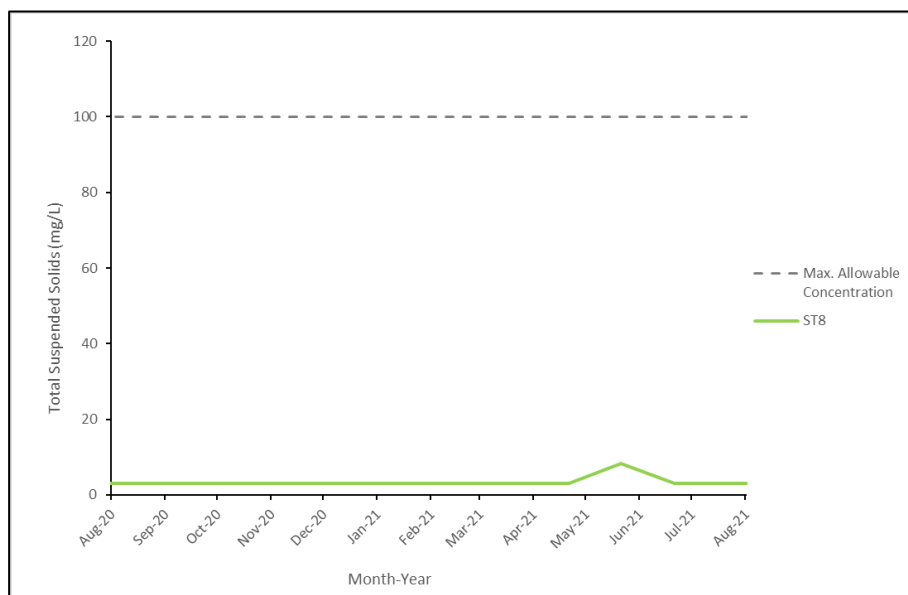
Figure 1 and 2 illustrates effluent quality characteristics for parameters of interest at select monitoring stations.

**Figure 1. Biological Oxygen Demand Results Consistently Below Discharge Criteria for Wastewater Treatment Plant (ST8)**



Note: Maximum Average Concentration as per Part F Item 4(b).

**Figure 2. Total Suspended Solids Results Consistently Below Discharge Criteria for Wastewater Treatment Plant (ST8)**



Note: Maximum Average Concentration as per Part F Item 4(b).

## Flow and Volume Measurements (Part F, Part I and Schedule I)

Table 1. Effluent discharge, August 2021

Facility	Station Code	Discharge Volume (m <sup>3</sup> )	Exceedances of Discharge Criteria	Discharge Location	Licence Reference
Doris Sedimentation Pond *	ST-1	2,188	N/A	Tailings Impoundment Area	Part F Item 17
Doris Contact Water Pond #1	ST-2	6	N/A	Tailings Impoundment Area	Part F Item 17, 18(a)
Non-Hazardous Landfill Sump	ST-3	0	0	Facility not constructed	Part F Item 18(a)
Landfarm Sump	ST-4	0	0	Tailings Impoundment Area	Part F Item 18(b)
Doris Plant Site Fuel Storage Area	ST-5	0	0	Tailings Impoundment Area	Part F Item 18(b)
Rob Bay Single 5ML Fuel Storage Area	ST-6a	0	0	Tundra Discharge 13W 432954 7563407	Part F Item 18(b)
Rob Bay Fuel Storage and Containment Berm	ST-6b	0	0	Tundra Discharge 13W 432878 7563130	Part F Item 18(b)
Doris Sewage Treatment Plant, Effluent	ST-8	1,128	0	Tundra Discharge 13W 432933 7559057	Part F Item 5(b-c)
Doris Sewage Treatment Plant, Sludge	N/A	24.8	N/A	Tailings Impoundment Area	Part I Item 5(f)
Doris Reagent and Cyanide Storage Facility Sump	ST-11	0	N/A	Tailings Impoundment Area	Part F Item 17
Doris Contact Water Pond #2	ST-13	0	N/A	Facility not constructed	Part F Item 17
Doris Mine Water Discharge	TL-12	34,295	N/A	Tailings Impoundment Area Roberts Bay	
Madrid North Contact Water Pond	MMS-1	31	0	Tailings Impoundment Area	Part F Item 17, 18(a)
Madrid South Primary Contact Water Pond	MMS-2	0	N/A	Facility not constructed	Part F Item 17, 18(a)
Madrid South Secondary Contact Water Pond	MMS-3	0	N/A	Facility not constructed	Part F Item 17, 18(a)
Madrid South Fuel Storage Facility	MMS-5	0	0	Facility not constructed	Part F Item 18(b)
Madrid North Connector	MMS-7	0	N/A	Facility not constructed	
Madrid North Fuel Storage Facility	MMS-8	0	0	Facility not constructed	Part F Item 18(b)
Madrid Mine Water Discharge	MMS-10	0	N/A	Tailings Impoundment Area	

Records of visual monitoring of discharge to tundra are maintained on file as per Part I Item 11.

\* Note: Volume reported includes effluent transferred from the Doris Contact Water Pond #1, Landfarm Sump, Doris Plant Site Fuel Storage Area and Madrid North Contact Water Pond.

**Table 2. Discharge from TIA to Roberts Bay, August 2021**

Month	Number of days of discharge	Discharge Volume (m <sup>3</sup> )	Exceedances of Discharge Criteria*
January	0	0	0
February	0	0	0
March	0	0	0
April	0	0	0
May	3	826	0
June	29	185,609	0
July	26	152,583	0
August	31	166,253	0
<b>Annual Cumulative</b>	89	505,271	0

\* Discharge criteria as outlined in *Metal and Diamond Mining Effluent Regulations*.

Acute Lethality testing conducted as outlined in Part F Item 22 and Part I Item 14

Note: A minor rounding error was identified for the Discharge Volume reported for July 2021. This error has been corrected in Table 2 above.

**Table 3. Water Usage, August 2021**

Month	Windy Lake (ST-7A)			Doris Lake (ST-7)					Total Usage
	Domestic Water*	Industrial**	Winter Track	Domestic Water*	Surface Exploration	Industrial Usage**	Dust Suppression	Winter Track	
January	964	224	14	0	0	0	0	1	1,416
February	878	236	142	0	0	0	0	15	1,271
March	1,100	135	28	0	0	73	0	1,738	3,074
April	1,099	156	0	0	0	80	0	345	1,680
May	1,069	42	0	0	0	127	109	96	1,443
June	1,084	50	0	0	0	44	328	0	1,506
July	1,058	84	0	0	0	111	402	0	1,655
August	1,298	224	0	0	0	28	322	0	1,872
<b>Annual Total</b>	8,550	1,151	184	0	0	463	1,161	2,195	13,704
<b>Annual Allowance</b>	<b>43,800</b>					<b>1,930,000</b>			<b>2,033,800</b>

\* As permitted by water licences 2BE-HOP1222 and 2AM-DOH1335 Part E Item 1 and Part I Item 5(a)(b)

\*\* Includes industrial uses such as underground drilling, core processing, milling, concrete batching, etc.

**Table 4. Volume of Reclaim Water from the TIA for Process Water, August 2021**

<b>Month</b>	<b>Reclaim Water (m<sup>3</sup>) *</b>
January	85,079
February	77,385
March	76,663
April	78,336
May	74,222
June	57,629
July	56,777
August	66,438
<b>Annual Cumulative</b>	<b>572,529</b>

\* As per Part E Item 5 and Part I Item 5(c)  
 Numbers rounded to the nearest cubic meter.

Table 5. Doris Waste Rock and Ore Volumes, August 2021

Month	Waste Rock Management					Underground Void Space			Ore Processing and Tailings Management		
	Produced from Mining Activity (tonnes)	Backfilled Directly to Mine (tonnes)	Returned Underground from Temporary Waste Rock Pile* (tonnes)	Moved to Temporary Waste Rock Pile (tonnes)*	Cumulative on Temporary Waste Rock Pile (tonnes)*	Volume Created from Mining Activities (tonnes)	Cumulative Volume Available for Backfill (tonnes)	Cumulative Volume Available for Backfill (m³)	Quantity of Ore Processed** (tonnes)	Total Dry Tailings Placed in TIA** (tonnes)	Total Dry Detoxified Tailings Placed Underground** (tonnes)
December Balance	-	-	-	-	647,948	-	1,487,357	700,312	-	-	-
January	11,573	13,297	3,000	-1,724	643,224	4,636	1,569,370	674,455	34,755	33,793	962
February	26,063	15,016	0	11,047	654,271	17,793	1,551,577	680,810	22,027	21,124	1,389
March	19,810	12,823	0	6,987	661,258	18,514	1,242,762	687,422	17,034	16,321	771
April	19,900	6,038	0	13,862	675,120	35,530	1,568,592	700,111	38,540	37,303	1,348
May	17,662	17,500	0	162	675,282	12,572	1,581,164	704,601	41,577	40,020	1,444
June	21,128	19,332	7,135	1,796	669,943	-4,752	1,576,412	705,452	15,058	14,514	554
July	18,845	14,864	1,725	3,981	672,199	19,785	1,596,196	713,134	24,368	23,439	905
August	25,007	8,116	1,060	16,891	688,030	33,037	1,629,233	725,312	33,215	31,853	1,473
Cumulative Total	159,988	106,986	12,920	53,002		137,115			226,574	218,367	8,846

\* As per Part I Item 5(d)(e)

\*\* As per Part I Item 6

Note: Void space created from mining activities is determined as the sum of the initial void space as calculated in March 2017 and void space created each month from mining activities. A negative volume of void space created in a month indicates that a higher volume of waste rock and detoxified tailings was returned underground compared to the volume of void space created from new mining activities.

Table 6. Madrid North Waste Rock and Ore Volumes, August 2021

Month	Waste Rock Management						Underground Void Space			Ore Produced
	Produced from Mining Activity (tonnes)	Backfilled Directly to Underground Mine (tonnes)	Returned Underground from Temporary Waste Rock Pile* (tonnes)	Moved to Temporary Waste Rock Pile (tonnes)*	Moved to Naartok East Crown Pillar Trench for Backfill (tonnes)*	Cumulative on Temporary Waste Rock Pile (tonnes)*	Volume Created from Mining Activities (tonnes)	Cumulative Volume Available for Backfill (tonnes)	Cumulative Volume Available for Backfill (m³)	Quantity of Ore Produced** (tonnes)
December Balance	-	-	-	-	-	350,426	-	-	-	-
January	2,369	0	0	0	2,369	348,057	-254	360,939	128,907	0
February	1,313	0	0	0	1,313	346,744	-141	360,545	128,766	0
March	0	0	0	0	0	0	0	0	0	0
April	0	0	0	0	0	0	0	0	0	0
May	0	0	0	0	0	0	0	0	0	0
June	0	0	0	0	0	0	0	0	0	0
July	0	0	0	0	0	0	0	0	0	0
August	0	0	0	0	0	0	0	0	0	0
Cumulative Total	3,682	0	0	0	3,682		-395			0

\* As per Part I Item 5(d)(e)

\*\* As per Part I Item 6

Waste rock produced in January and February 2021 was removed from the underground decline and placed for backfill into the Naartok East Crown Pillar Recovery Trench.

Note: Void space created from mining activities is determined as the sum of the initial void space as calculated in December 2020 and void space created each month from mining activities. A negative volume of void space created in a month indicates that a higher volume of waste rock was returned underground or backfilled in the Naartok East Crown Pillar trench compared to the volume of void space created from new mining activities.

**Table 7. Doris Lake Water Level (ST-12), August 2021**

Month	Minimum Water Level (masl)	Maximum Water Level (masl)	Mean Water Level (masl)	Monthly Water Level Variation (masl)*	Comparison of Mean Water Level from Month to Month (masl)^
January	21.785	21.810	21.798	-0.009	-0.004
February	21.785	21.807	21.795	0.022	-0.003
March	21.769	21.797	21.783	0.028	-0.012
April	21.767	21.788	21.775	0.021	-0.008
May	21.750	21.774	21.764	0.024	-0.011
June	21.766	22.356	22.082	0.590	0.318
July	21.761	22.275	21.962	0.514	-0.120
August	21.594	21.831	21.689	0.237	-0.273

\* Monthly Water Level Variation is calculated as the difference between the Maximum Water Level and the Minimum Water Level measured during the month.

^ Comparison of the change in water level from month to month. This value is calculated by subtracting the Mean Water Level of the current month from the Mean Water Level of the previous month (e.g. February Mean Water level - January Mean Water level). A positive value from this calculation indicates a rise in water level since the previous month; a negative value from this calculation indicates a drop in water level since the previous month.

### **Waste Management (Part F Item 10 and 11)**

In August, TMAC shipped hazardous waste offsite via empty cargo aircraft. Table 8 below summarizes the type and volume of waste shipped offsite during this month. All waste was received by KBL Environmental in Yellowknife for final remediation and/or disposal.

**Table 8. Waste Backhaul Summary, August 2021**

Waste Type Shipped	Volume Shipped* (m <sup>3</sup> )
Used Glycol	3

\* Numbers rounded to the nearest cubic meter.

### **Summary of Assessments of Water Balance and Water Quality Model (Part F Item 24 and Part I Item 12 c)**

Average monthly water quality, hydrologic, and climatic monitoring data were collected while in operations during August. Data will contribute to the assessment of the water and load balance model and will be compared to the predicted water quality and elevation within the TIA and will be reported in the annual report for 2021.

### **Thermal Monitoring (Part I Items 7, 8 and Schedule I)**

Thermal monitoring undertaken as per Part I Items 7, 8 and Schedule I is reported in the annual Geotechnical Report.

### **Site Freshet and Precipitation Conditions (Part I Item 12(d))**

Visual monitoring was conducted at the Diversion Berm this month. No issues were identified at the Diversion Berm and associated check dam in August. Photos of this infrastructure are provided in Figure 3 below.

Inspections were completed of site culverts throughout the month of August. No issues were identified with these water management structures. Figure 4 and 5 below shows the upstream and downstream conditions of culverts located at both extremities of the Madrid All-Weather Road.

**Figure 3. Diversion berm during August 2021**



**Figure 4. Culvert at km 2 on Madrid camp access road upstream (left) and downstream (right) August 2021**



**Figure 5. Culvert at Madrid All-Weather Road at Naartok intersection upstream (right) and downstream (left) August 2021**



## Incident Reporting

There were no reportable spills pertaining to this licence that occurred this month.

Should there be any questions regarding this monthly report, please contact me at [guillaume.dumont-vandewinkel@agnicoeagle.com](mailto:guillaume.dumont-vandewinkel@agnicoeagle.com).

Yours sincerely,



Guillaume Dumont-Vandewinkel  
Environmental Coordinator  
Hope Bay Project  
(867) 988-6882 ext. 101

Cc:

Omer Pasalic, Water Resources Officer, CIRNAC  
Eric Steinmetzer, General Manager – Hope Bay, Agnico Eagle  
Sarah Warnock, Environmental Superintendent – Hope Bay, Agnico Eagle  
Nancy Duquet-Harvey, Assistant Environmental Superintendent – Hope Bay, Agnico Eagle

Figure 6. 2AM-DOH1335 SNP Monitoring Locations



Figure 7. 2AM-DOH1335 SNP Monitoring Locations



Figure 8. 2AM-DOH1335 SNP Monitoring Locations

