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Licensing
Nunavut Water Board
P.O. Box 119
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Re: December 2023 – Monthly Monitoring Report for Water License 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 license), and additional requirements from CIRNAC.

In March 2022, Agnico Eagle made the decision to maintain the suspension of production activities at the Doris Mine site and Madrid North Portal to dedicate the infrastructure of the Hope Bay site to exploration activities. As such, the mill operation will remain suspended and underground activities will focus on exploration development. As the mill will not be operational for the foreseeable future, Table 4: Volume of Reclaim Water from the TIA for Process Water has been removed.

In February 2023, Agnico Eagle made the decision to temporarily cease underground development of the Doris mine. The final blast occurred on April 19, 2023 and all waste rock haulage was completed on April 24, 2023. Until development is restarted, the main focus underground will be on care and maintenance.

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

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.

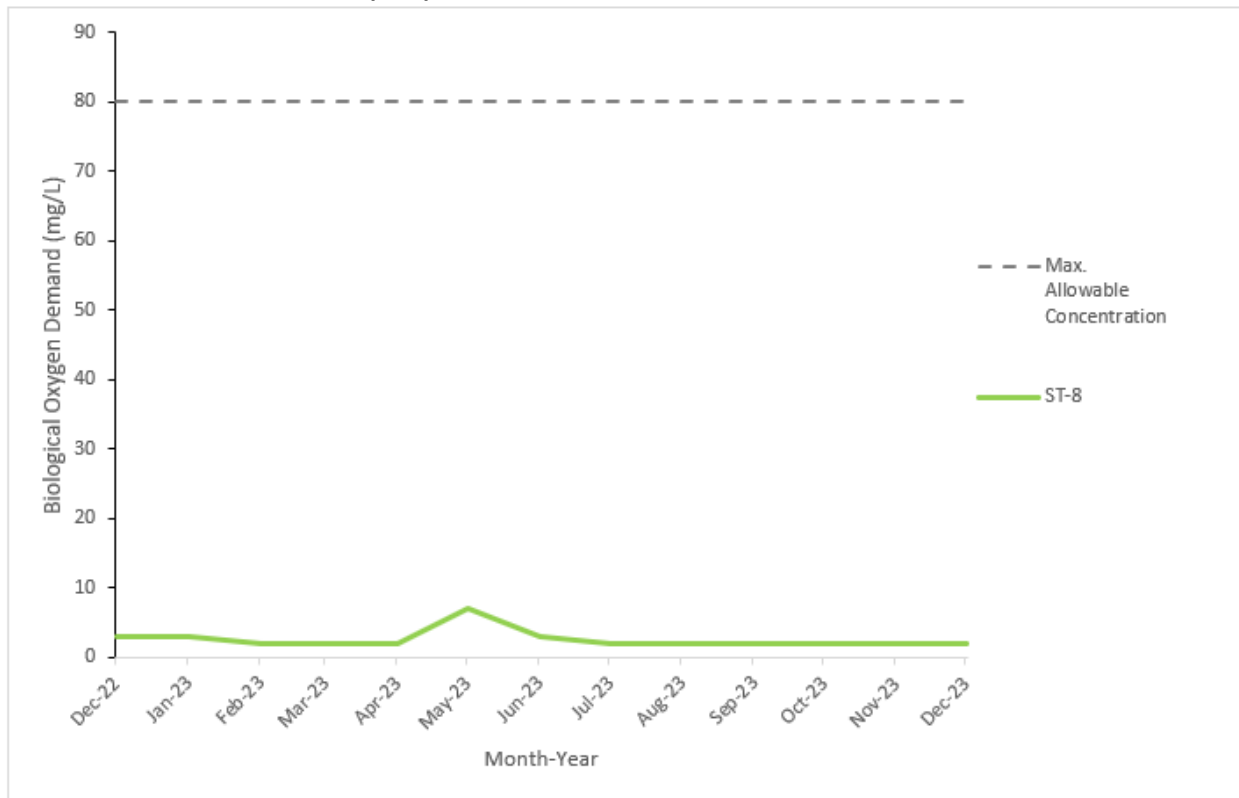
Site Wide Water Quality Monitoring Program (Part I Item 3 and Schedule I)

Water quality sampling was conducted throughout the month 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.

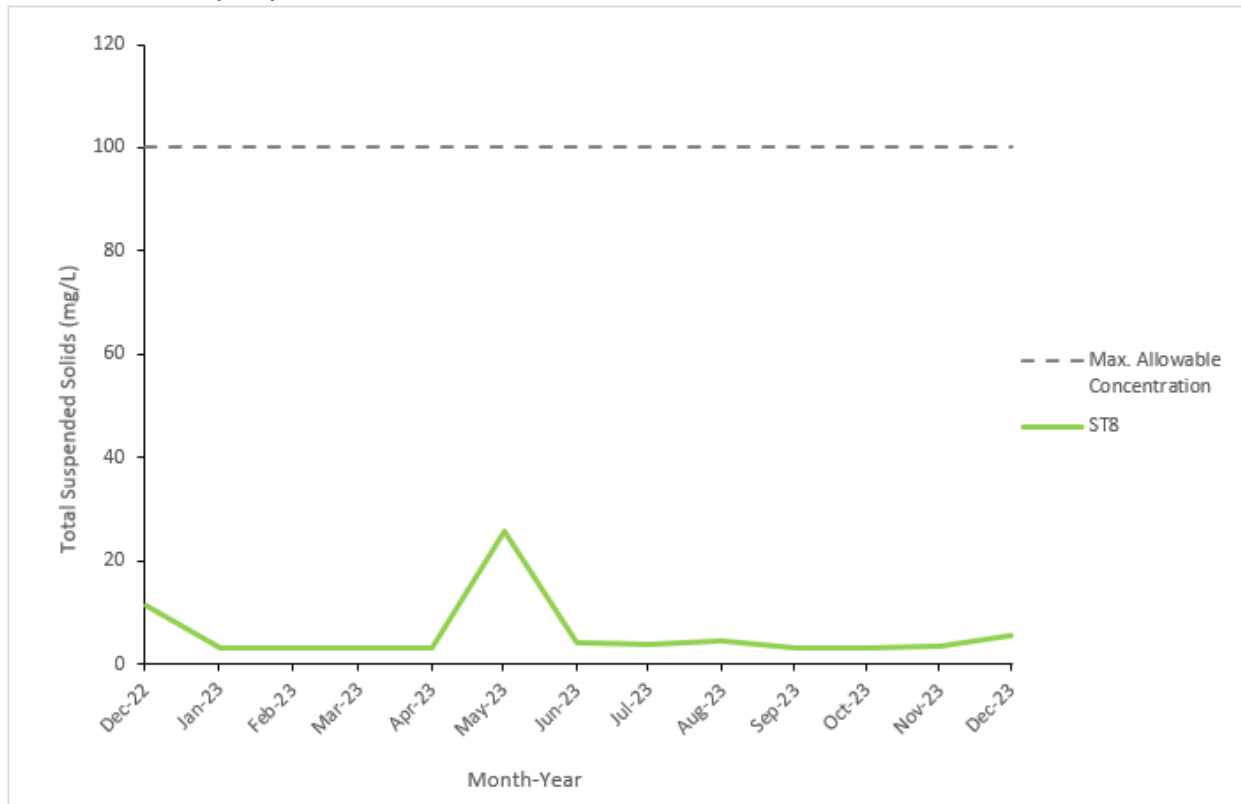
Figure 1 and 2 illustrates effluent quality characteristics for parameters of interest at select monitoring stations.

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, December 2023

Facility	Station Code	Discharge Volume (m ³)	Exceedances of Discharge Criteria	Discharge Location	Licence Reference
Doris Sedimentation Pond *	ST-1	0	N/A	Tailings Impoundment Area	Part F Item 17
Doris Contact Water Pond #1	ST-2	0	N/A	Doris sedimentation pond	Part F Item 17, 18(a)
Non-Hazardous Landfill Sump	ST-3	0	0	Facility not constructed	Part F Item 18(a)
Land farm 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	Doris sedimentation pond	Part F Item 18(b)
Doris Sewage Treatment Plant, Effluent	ST-8	326	0	Tundra Discharge 13W 432933 7559057	Part F Item 5(b-c)
Doris Sewage Treatment Plant, Sludge	N/A	5.0	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	51,422	N/A	Tailings Impoundment Area Roberts Bay	
Madrid North Contact Water Pond	MMS-1	0	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, December 2023

Month	Number of days of discharge	Discharge Volume (m³)	Exceedances of Discharge Criteria*
January	0	0	0
February	0	0	0
March	0	0	0
April	0	0	0
May	23	49,991	0
June	1	809	0
July	1	8	0
August	7	47,654	0
September	30	254,927	0
October	31	257,833	0
November	30	285,069	0
December	31	271,280	0
Annual Cumulative	154	1,167,571	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

Table 3. Water Usage, December 2023

Month	Windy Lake (ST-7A)				Doris Lake (ST-7)				Patch Lake	Total Usage
	Domestic Water*	Industrial**	Winter Track	Dust Suppression	Domestic Water*	Industrial Usage**	Dust Suppression	Winter Track	Winter Track	
January	973	0	1,604	0	0	0	0	690	1,560	4,827
February	1,147	22	532	0	0	29	0	662	480	2,872
March	1,020	8	511	0	0	0	0	1,498	0	3,037
April	933	31	363	0	0	8	0	158	0	1,493
May	930	26	0	0	0	144	180	0	0	1,280
June	826	82	0	0	0	0	126	0	0	1,034
July	1,014	4	0	0	0	146	280	0	0	1,444
August	853	2	0	0	0	30	196	0	0	1,081
September	787	0.0	0.0	0.0	0	0	60	0	0	847
October	665	1	0	0	0	0	0	48	0	714
November	475	1	0	0	0	0	0	48	0	524
December	411	0	32	0	0	0	0	0	3,780	4,223
Annual Total	10,034	176	3,042	0	0	357	842	3,104	5,820	23,375
Annual Allowance	43,800					1,930,000				2,033,800

* 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. Doris Waste Rock and Ore Volumes, December 2023

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)	Waste Hauled for Surface Construction from Surface Stockpile (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	-	-	-	-	-	741,861	-	1,727,676	848,809	-	-	-
January	10,557	0	0	0	10,557	752,418	10,557	1,738,233	852,580	0	0	0
February	9,523	0	0	2,401	9,523	759,540	9,523	1,747,756	855,981	0	0	0
March	11,977	0	0	4,369	11,977	767,148	11,977	1,759,733	860,258	0	0	0
April	6,500	0	0	610	6,500	773,038	6,500	1,766,233	862,580	0	0	0
May	80	0	0	7,314	80	765,804	80	1,766,313	862,608	0	0	0
June	0	0	0	695	0	765,109	0	1,766,313	862,608	0	0	0
July	0	0	0	0	0	765,109	0	1,776,313	862,608	0	0	0
August	0	0	0	0	0	765,109	0	1,766,313	862,608	0	0	0
September	0	0	0	95	0	765,109	0	1,766,313	862,608	0	0	0
October	0	0	0	1,058	0	765,109	0	1,766,313	862,608	0	0	0
November	0	0	0	1,058	0	765,109	0	1,766,313	862,608	0	0	0
December	0	0	0	0	0	765,109	0	1,766,313	862,608	0	0	0
Cumulative Total	38,637	0	0	17,600	38,637		38,637			0	0	0

* 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 5. Madrid North Waste Rock and Ore Volumes, December 2023

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	-	-	-	-	-	0	-	-	-	-
January	0	0	0	0	0	0	0	0	0	0
February	0	0	0	0	0	0	0	0	0	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
September	0	0	0	0	0	0	0	0	0	0
October	0	0	0	0	0	0	0	0	0	0
November	0	0	0	0	0	0	0	0	0	0
December	0	0	0	0	0	0	0	0	0	0
Cumulative Total	0	0	0	0	0	0	0	0	0	0

* 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 December 2021 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 6. Doris Lake Water Level (ST-12), December 2023

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	21.979	22.043	22.013	0.000	0.000
February	21.985	22.042	22.013	0.056	-0.030
March	21.971	22.016	21.992	0.045	-0.021
April	21.954	22.005	21.979	0.051	-0.013
May	21.922	22.317	22.098	0.395	0.119
June	22.038	22.196	22.141	0.158	0.043
July	21.746	22.027	21.870	0.281	-0.271
August	21.691	21.757	21.728	0.066	-0.142
September	21.724	21.847	21.799	0.123	0.071
October	21.812	21.875	21.840	0.063	0.041
November	21.655	21.847	21.783	0.192	-0.057
December	21.637	21.949	21.765	0.312	-0.018

* 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 December, Agnico Eagle shipped no hazardous waste offsite. As a result, Table 7 has been removed from this month's report. Waste shipments are expected to proceed in January.

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 December. 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 2023.

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 not conducted at the Diversion Berm this month. Inspection of the Diversion Berm and associated check dam will proceed on a bi-monthly basis and is expected to be completed in January.

Inspections were suspended of site culverts throughout the month of December due to snow build up. Inspections are due to be resumed in freshet of 2023.

Incident Reporting

One incident pertaining to the license this month:

Spill 2023-529 On December 24, 2023, at 10:00 am, a spill of approximately 1000 L of treated effluent was noted by operators, coming from a leak in the discharge line going towards the final discharge point. The initial report mistakenly reported a spill of 1000 m³. This volume was reported using the incorrect units and should have read 1000 L. The coordinates and impacted area remain the same as the initial report.

On December 25, 2023, at approximately 10:00 am the Nunavut Spill Line was notified via email (spills@gov.nt.ca) of a spill of approximately 1000 m³ of treated effluent (as noted above, this should have read 1000 L). This follow-up report provides supplemental information based on the results of the incident investigation.

During regular operations, the discharge pipe carries treated effluent from the Tailings Impoundment Area (TIA) to the final discharge point (FDP) in Robert's Bay. During routine operations, an operator noticed a patch of ice surrounding a breather valve connection, indicating a leak in the line. Following an investigation, it was concluded that the root cause of the spill was related to a broken PVC valve connecting the steel breather valve to the main HDPE pipe. After review, it was determined that stainless steel fittings are better suited for this application.

Once the spill was noticed by the operators, the discharge to Robert's Bay was immediately halted to avoid further spillage and the line was repaired. The affected area was cleared of all the treated effluent that was frozen on the surface and the material was disposed of in the TIA. The line was re-inspected after discharge was resumed to ensure no further leaks were occurring. Prior to the incident, the line was inspected daily by the treatment plant operator and this inspection will continue to occur to ensure any further leaks are detected.

In order to reduce the risk of reoccurrence, all valves connecting breather valves on the line will be changed to stainless steel valves. This work is expected to be completed in May to coincide with a plant shutdown, avoiding any material damage to the line related to thermal constraints and alleviating safety concerns related to carrying out these replacements in winter conditions.

Should there be any questions regarding this monthly report, please contact me at guillaume.dumont@agnicoeagle.com.

Yours sincerely,



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Cc:

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Figure 6. 2AM-DOH1335 SNP Monitoring Locations



Figure 7. 2AM-DOH1335 SNP Monitoring Locations



Figure 8. 2AM-DOH1335 SNP Monitoring Locations

