



March 2023

April 30, 2023

Manager of Licensing Nunavut Water Board P.O. Box 119 Gjoa Haven, Nunavut XOB 1JO Resource Management Officer, CIRNAC Nunavut District, Nunavut Region P.O. Box 100 Igaluit, NU XOA 0H0

# RE: Water Licence 2AM-MRY1325 Monthly Surveillance Network Program (SNP) Report March 2023

The following is the monthly report for March 2023 as required under Part I, Item 21 of the Type 'A' Water Licence 2AM-MRY1325 (the Licence) which states:

"The Licensee shall submit to the Board, within thirty (30) days following the month being reported, a Monthly Monitoring Report. The Report shall include:

- a) All data and information required by this Part and generated by the Monitoring Program in the tables of Schedule I
- b) An assessment of data to identify areas of non-compliance with regulated discharge parameters referred to in Part F"

## **Monitoring Program**

Table 1.1 presents a list of samples/monitoring required under the Licence and the details concerning which water quality samples were collected along with sample dates and laboratory identification numbers, as appropriate. Analytical water quality testing results are presented in Tables 2.1 through 2.3. Table 3.1 presents water volumes consumed for domestic and industrial water purposes as well as select volumes of effluent and waste discharged and/or disposed at the Mary River Mine Site and Milne Port during March 2023.

## **Monitoring Program Results**

Water Sampling and Analysis Results

Tables 2.1 through 2.3 provide the analytical results related to the Sewage Treatment Facilities. There were no exceedances of applicable water quality criteria observed at monitoring stations in March 2023.

Flow and Volume Measurements

Table 3.1 provides a breakdown of volume measurements for March 2023 as required by Part I, Item 9 of the Licence. There were no exceedances of the source-specifically volume withdrawal limits in March 2023.

We trust that the information provided in this monthly report is acceptable and should you have any questions regarding this report please contact the undersigned.





allison Parker

## Water Licence 2AM-MRY1325 Monthly Report

March 2023

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Reviewed by:

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**Environmental Superintendent** 

cc: Jeremy Fraser, Omer Pasalic (CIRNAC)

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## **Attachments**

Attachments – Monthly Water Sampling Results: Table 1.1, Tables 2.1 – 2.3, Table 3.1



March 2023



Baffinland





**Table 1.1: Monitoring Program Water Sampling Summary for March 2023** 

Monitoring Program Station	Sampling Date	Lab ID Number	Comment		
	Milne Po	ort			
MP-01	2023-03-08	WT2305625-001	Discharge volume recorded		
(Sewage Treatment Facility)	2023-03-08	W12303023-001	daily.		
MP-01A	NA	NA	No discharge.		
(Polishing Waste Stabilization Pond)	IVA	NA	No discharge.		
MP-01B	2023-03-07	WT2305812-001	Discharge volume recorded		
(Sewage Treatment Facility)	2023-03-21	WT2306931-001	daily.		
MP-MRY-2	NA	NA	No water withdrawal.		
(Freshwater Intake at Phillips Creek)	INA	IVA	No water withdrawar.		
MP-MRY-3	NA	NA	Withdrawal volume		
(Freshwater Intake from Km 32 Lake)	INA	IVA	recorded daily.		
MP-02	NIA	NA	Facility was as assumed a		
(Milne Port Maintenance Shop)	NA	NA	Facility not constructed.		
MP-03					
(Bulk Fuel Storage Facility	NA	NA	No discharge.		
Stormwater)					
MP-04					
(Treated Oily Water from Milne Port	NA	NA	No discharge.		
Landfarm Facility to Tundra)					
MP-04A					
(Treated Oily Water from Milne Port	NA	NA	No discharge.		
Snow dump Facility to Tundra)					
MP-05					
Ore Stockpile Sedimentation Pond	NA	NA	No discharge.		
(East)					
MP-06					
Ore Stockpile Sedimentation Pond	NA	NA	No discharge.		
(West)					
MP-C-A			N. G		
(Downstream of Construction Area)	NA	NA	No flow.		
MP-C-B	N/ 0	A. A	N = fl=		
(Downstream of Construction Area)	NA	NA	No flow.		
MP-C-D	A/ -		AL CI		
(Downstream of Construction Area)	NA	NA	No flow.		
MP-C-E	A/ -		AL CI		
(Downstream of Construction Area)	NA	NA	No flow.		
MP-C-F			AL CI		
(Downstream of Construction Area)	NA	NA	No flow.		







Monitoring Program Station	Sampling Date	Lab ID Number	Comment		
MP-C-H	N/A	NI A	No flore		
(Downstream of Construction Area)	NA	NA	No flow.		
MP-C-J	NIA	NIA	No flow.		
(Downstream of Construction Area)	NA	NA	NO HOW.		
MP-C-K	NIA.	NI A	N = fl =		
(Downstream of Construction Area)	NA	NA	No flow.		
MP-Q1-01	NIA	NA	No flow.		
(Downstream of Q1 Quarry)	NA	INA	NO HOW.		
MP-Q1-02	NIA	NIA	No flow		
(Downstream of Q1 Quarry)	NA	NA	No flow.		
	Mary River M	ine Site			
MS-01	N/A	N/A	No discharge.		
(Sewage Treatment Facility)	14/4	14/7	discharge.		
MS-01A					
(Mine Site Polishing Waste	N/A	N/A	Facility not constructed.		
Stabilization Pond)					
MS-01B	2023-03-08	WT2305682-001	Discharge volume recorded		
(Sewage Treatment Facility)	2023-03-08	W12303082-001	daily.		
MS-02	N/A	N/A	Facility not constructed.		
(Mine Site Maintenance Shop)	IV/A	IN/A			
MS-MRY-1	N/A	N/A	Withdrawal volume		
(Freshwater Intake Camp Lake)	IV/A	IN/A	recorded daily.		
MS-MRY-04A	N/A	N/A	No discharge.		
(Polishing Waste Stabilization Pond)	IN/A	IN/A	No discharge.		
MS-MRY-04B	N/A	N/A	No discharge.		
(Polishing Waste Stabilization Pond)	IN/A	IN/A	No discharge.		
MS-MRY-04C	N/A	N/A	No discharge.		
(Polishing Waste Stabilization Pond)	IN/A	IN/A	No discharge.		
MS-03					
(Mine Site Bulk Fuel Storage Facility	N/A	N/A	No discharge.		
Stormwater)					
MS-03B					
(Mine Site Bulk Fuel Storage Facility	N/A	N/A	No discharge.		
Stormwater)					
MS-04					
(Mine Site Fuel Unloading Station	N/A	N/A	Facility not constructed.		
Stormwater)					
MS-05	N1 / A	N1/A	No disabayas		
(Mine Site Landfarm Facility)	N/A	N/A	No discharge.		
MS-06	N1 / A	N1/A	No disabayas		
(Ore Stockpile Pond Stormwater)	N/A	N/A	No discharge.		



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Monitoring Program Station	Sampling Date	Lab ID Number	Comment
MS-07			
(Run of Mine Ore Stockpile Pond	NA	NA	No discharge.
Stormwater)			
MS-08	NI A	NI A	No disalesses
(Mine Waste Rock Stockpile Pond)	NA	NA	No discharge
MS-09	N1/A	NI/A	Facility not constructed
(Waste Rock Stockpile East Pond)	N/A	N/A	Facility not constructed.
MS-10			
(SDLT-1 Pond Ore Stockpile	N/A	N/A	Facility not constructed.
Stormwater)			
MS-11	N/A	N/A	No discharge.
(KM105 Pond Stormwater)	N/A	IN/A	No discharge.
MS-12	N/A	N/A	Facility not constructed.
(Weatherhaven Camp Stormwater)	N/A	N/A	racility not constructed.
MS-13	N/A	N/A	Facility not constructed.
(Explosives Magazine Pond)	N/A	14/74	racinty not constructed.
MS-14	N/A	N/A	Facility not constructed.
(Quarry QMR2 Pond/Sump)	N/A	NA	racinty not constructed.
MS-MRY-6			
(Exploration Camp Bulk Fuel Storage	N/A	N/A	No discharge.
Facility Stormwater)			
MS-MRY-09	N/A	N/A	No flow.
(Deposit 1 Surface Water Drainage)	14/74	14//1	TVO HOW.
MS-MRY-13A			
(Downstream Non-Hazardous	N/A	N/A	No flow.
Landfill)			
MS-MRY-13B			
(Downstream Non-Hazardous	N/A	N/A	No flow.
Landfill)			
MS-C-A			
(Downstream of Construction and	N/A	N/A	No flow.
Borrow Areas)			
MS-C-B			
(Downstream of Construction and	N/A	N/A	No flow.
Borrow Areas)			
MS-C-C	_	_	
(Downstream of Construction and	N/A	N/A	No flow.
Borrow Areas)			



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Monitoring Program Station	Sampling Date	Lab ID Number	Comment		
MS-C-D					
(Downstream of Construction and	N/A	N/A	No flow.		
Borrow Areas)					
MS-C-E					
(Downstream of Construction and	N/A	N/A	No flow.		
Borrow Areas)					
MS-C-F					
(Downstream of Construction and	N/A	N/A	No flow.		
Borrow Areas)					
MS-C-G					
(Downstream of Construction and	N/A	N/A	No flow.		
Borrow Areas)					
MS-C-H					
(Downstream of Construction and	N/A	N/A	No flow.		
Borrow Areas)					
MQ-C-A	N/A	N/A	No flow.		
(Downstream of QMR2 Quarry)	IN/A	IN/A	NO HOW.		
MQ-C-B	N/A	N/A	No flow.		
(Downstream of QMR2 Quarry)	IN/A	IN/A	NO HOW.		
MQ-C-D	N/A	N/A	No flow.		
(Downstream of QMR2 Quarry)	IV/A	IN/A	INO HOW.		
	Steensby F	Port			
Steensby Exploration Camp is		21/2			
presently inactive.	N/A	N/A	N/A		



Table 2.1: Water Quality Results for Water Licence Monitoring Location - MP-01

Analyte	F	MP-01 WT2305625-001 2023-03-08 13:10 N/A			
	Units	LOR	Criteria <sup>1</sup>		
рН	pH units	0.10	6.0 - 9.5	7.94	
Total Suspended Solids	mg/L	1.5	120	<1.5	
Ammonia, Total (as N)	mg/L	0.0050	-	0.0854	
Total Kjeldahl Nitrogen	mg/L	0.500	-	5.65	
Phosphorus, Total	mg/L	0.100	-	10.3	
Fecal Coliforms	CFU/100 mL	1	10,000	<1	
BOD	mg/L	2.0	100	2.2	
Oil and Grease, Total	mg/L	5.0	-	<5.0	
On and Grease, Total	_	-	No Visible Sheen	No Visible Sheen	
Toxicity	_	-	Not Acutely Toxic	Not Acutely Toxic	

Bold highlight indicates result that exceeded the applicable water quality criteria.

<sup>&</sup>lt;sup>1</sup>Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 5: Effluent Quality Discharge Limits for Sewage Treatment Facilities to the Ocean



Table 2.2: Water Quality Results for Water Licence Monitoring Location - MP-01B

Analyte	A	Sample IE LS Laboratory Sa Sample Date & QA/QC Sample	ample ID Time	MP-01B WT2305812-001 2023-03-07 14:00 N/A	MP-01B <sup>2</sup> WT2306931-001 2023-03-21 14:00 N/A	
	Units LOR Criteria <sup>1</sup>					
рН	pH units	0.10	6.0 - 9.5	7.32	7.77	
Total Suspended Solids	mg/L	1.0/1.4	120	<1.0	<1.4	
Ammonia, Total (as N)	mg/L 0.0050		-	0.0231	0.0136	
Total Kjeldahl Nitrogen	mg/L	0.050	-	0.922	<0.050	
Phosphorus, Total	mg/L	0.0200	-	9.44	7.19	
Fecal Coliforms	iforms CFU/100 mL		1 10,000		<1	
BOD	mg/L	2.0	100	<2.0	<2.0	
Oil and Croase Total	mg/L	5.0	-	<5.0	<5.0	
Oil and Grease, Total	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen	
Toxicity	-	-	Not Acutely Toxic	Not Acutely Toxic	Not Acutely Toxic	

Bold highlight indicates result that exceeded the applicable water quality criteria.

<sup>&</sup>lt;sup>1</sup> Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 5: Effluent Quality Discharge Limits for Sewage Treatment Facilities to the Ocean

<sup>&</sup>lt;sup>2</sup> Resampled due to potential insufficient sample quantity during March 7th sample for annual toxicity analysis.



Table 2.3: Water Quality Results for Water Licence Monitoring Location - MS-01B

Analyte	AL	Sample I S Laboratory S Sample Date 8 QA/QC Sampl	MS-01B_2023-03-08 WT2305682-001 2023-03-08 15:40 N/A		
	Units	LOR	Criteria <sup>1</sup>		
рН	pH units	0.10	6.0 - 9.5	8.34	
Total Suspended Solids	mg/L	1.4	35	<1.4	
Ammonia, Total (as N)	mg/L	0.0050		0.0211	
Total Kjeldahl Nitrogen	mg/L	0.050		0.966	
Phosphorus, Total	mg/L	0.0040	4.0	1.23	
Fecal Coliforms	CFU/100 mL	1	1,000	<1	
BOD	mg/L	2.0	30	<2.0	
Oil and Crossa Tatal	mg/L	5.0	-	<5.0	
Oil and Grease, Total	-	-	No Visible Sheen	No Visible Sheen	
Toxicity	-	-	Not Acutely Toxic	Not Acutely Toxic	

Bold highlight indicates result that exceeded the applicable water quality criteria.

<sup>&</sup>lt;sup>1</sup>Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 4: Effluent Quality Discharge Limits for Sewage Treatment Facilities to Freshwater Receiving Environment



Table 3.1: Flow and Volume Measurements - Part I Item 11 - March 2023

DATE	Camp Lake Freshwater for Domestic Use - Daily Water MS-MRY-1 (m³)	Camp Lake Freshwater for Industrial Use - Daily Water MS-MRY-1 (m³)	01 to Discharge	Treated Sewage Effluent from MS- 01B to Discharge Location #1 (m³)	Sewage Sludge Removed from Mine Site WWTPs to Incinerator or Disposal Offsite by Backhaul (m³)	Sewage Sludge/Off-Spec Effluent Removed from Mine Site WWTPs to PWSP at Mine Site (m³)	Sewage Sludge Removed from Lift Stations to PWSP at Mine Site (m³)	Km 32 Lake Milne Port Camp Daily Water Use for Domestic Purposes MP- MRY-3 (m³)	Km 32 Lake Milne Port Camp Daily Water Use for Industrial Purposes MP- MRY-3 (m³)	_	Treated Sewage Effluent from MP- 01B to Milne Inlet (m³)	Sewage Sludge Removed from Milne Port WWTPs to Incinerator or Disposal Offsite by Backhaul (m³)	Sewage Sludge Removed from Lift Stations to PWSP at Milne Port (m³)	Sludge Removed from Milne Port WWTPs/WTPs to PWSP at Milne Port (m <sup>3</sup> )
1-Mar-23	127.8	18.4	0.0	117.1	2.4	0.0	0.0	43.3	0.0	18.0	20.0	0.3	2.8	0.0
2-Mar-23	191.5	11.4	0.0	100.3	0.4	0.0	0.0	50.2	0.0	17.0	19.9	0.7	0.0	0.0
3-Mar-23	120.7	20.3	0.0	124.3	0.6	0.0	0.0	53.1	1.0	26.0	24.6	0.3	0.0	0.0
4-Mar-23	77.6	16.5	0.0	112.9	0.6	0.0	0.0	39.2	1.0	21.0	19.8	0.2	0.0	0.0
5-Mar-23	137.4	19.0	0.0	125.1	0.6	0.0	0.0	45.9	0.0	20.0	20.2	1.0	0.0	0.0
6-Mar-23	104.3	27.0	0.0	127.8	0.6	0.0	0.0	40.0	0.0	17.0	23.0	0.3	0.0	0.0
7-Mar-23	117.0	29.4	0.0	115.5	0.6	0.0	0.0	43.6	0.0	19.0	16.9	1.3	0.0	0.0
8-Mar-23	74.1	31.1	0.0	100.7	0.6	0.0	0.0	41.4	0.0	25.0	22.0	0.0	0.0	0.0
9-Mar-23	113.1	26.9	0.0	94.0	0.6	0.0	0.0	30.3	0.0	24.0	21.4	1.0	0.0	0.0
10-Mar-23	100.3	22.5	0.0	96.0	0.6	0.0	0.0	58.0	0.0	18.0	16.4	0.0	0.0	0.0
11-Mar-23	129.7	19.0	0.0	101.2	0.6	0.0	0.0	40.2	1.0	16.0	20.5	1.4	0.0	0.0
12-Mar-23	96.0	15.9	0.0	106.7	0.7	0.0	0.0	39.1	0.0	18.0	21.5	0.0	0.0	0.0
13-Mar-23	91.8	11.7	0.0	114.8	0.7	0.0	0.0	45.2	0.0	17.0	22.6	1.0	0.0	9.0
14-Mar-23	109.6	3.1	0.0	110.2	0.4	0.0	0.0	46.8	0.0	18.0	31.0	0.4	0.0	0.0
15-Mar-23	113.4	0.0	0.0	105.0	0.5	0.0	0.0	48.3	0.0	13.0	18.2	1.0	0.0	0.0
16-Mar-23	93.4	0.0	0.0	88.5	0.8	0.0	0.0	45.1	0.0	30.0	20.7	0.4	0.0	0.0
17-Mar-23	108.8	12.9	0.0	98.1	1.1	0.0	0.0	48.5	0.0	22.0	21.2	1.0	0.0	0.0
18-Mar-23	123.7	3.9	0.0	92.1	0.9	0.0	0.0	45.0	0.0	17.0	22.8	0.0	0.0	0.0
19-Mar-23	91.9	10.2	0.0	94.8	1.1	0.0	0.0	45.3	1.0	21.0	21.4	0.4	0.0	0.0
20-Mar-23	105.9	0.0	0.0	101.4	2.2	0.0	0.0	46.0	1.0	23.0	27.9	0.0	0.0	0.0
21-Mar-23	121.3	14.8	0.0	103.7	2.1	0.0	0.0	45.1	1.0	22.0	25.3	0.4	0.0	0.0
22-Mar-23	116.0	11.4	0.0	108.4	1.8	0.0	0.0	47.4	0.0	21.0	25.8	1.0	0.0	0.0
23-Mar-23	75.1	0.0	0.0	97.2	2.5	0.0	0.0	55.2	0.0	22.0	27.2	0.4	0.0	0.0
24-Mar-23	120.5	0.0	0.0	92.4	1.8	0.0	0.0	43.3	0.0	24.0	19.4	0.0	0.0	0.0
25-Mar-23	99.0	19.5	0.0	99.8	1.8	6.0	0.0	50.5	0.0	20.0	28.8	0.0	0.0	0.0
26-Mar-23	105.7	16.2	0.0	100.1	2.6	0.0	0.0	36.8	0.0	18.0	30.9	0.9	0.0	0.0
27-Mar-23	117.6	4.9	0.0	102.3	2.0	0.0	0.0	35.0	0.0	19.0	23.7	0.0	0.0	0.0
28-Mar-23	121.1	4.8	0.0	0.0	1.8	95.9	0.0	52.2	0.0	14.0	29.0	0.0	0.0	0.0
29-Mar-23	102.9	8.6	0.0	0.0	1.7	109.9	0.0	49.2	0.0	24.0	25.8	0.8	0.0	0.0
30-Mar-23	125.9	7.4	0.0	0.0	1.7	100.0	0.0	41.0	0.0	23.0	23.7	0.3	0.0	0.0
31-Mar-23	99.4	15.7	0.0	0.0	1.7	101.5	0.0	47.4	0.0	16.0	18.9	0.7	0.0	0.0
Total	3,432.4	402.3	0.0	2,830.4	37.5	413.3	0.0	1,397.4	6.0	623.0	710.1	15.1	2.8	9.0

WWTP - Waste Water Treatment Plant

PWSP - Polishing Waste Stabilization Pond