

March 30, 2023

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

Senior Resources Management Officer, CIRNAC  
Nunavut District, Nunavut Region  
P.O. Box 100  
Iqaluit, NU X0A 0H0

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

The following is the monthly report for February 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 February 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 February 2023.

*Flow and Volume Measurements*

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

Prepared by:

A handwritten signature in black ink that reads "Allison Parker".

Allison Parker

Environmental Specialist

Reviewed by:

A handwritten signature in black ink that reads "Todd Swenson".

Todd Swenson

Environmental Superintendent

cc:     Jeremy Fraser(CIRNAC)  
          Tim Soucie (QIA)  
          Tim Sewell, Megan Lord-Hoyle, Lou Kamermans, Francois Gaudreau, Martin Beausejour, Connor  
          Devereaux, Katie Babin (Baffinland)

#### **Attachments**

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

## **Attachments**

### **Monthly Water Sampling Results**

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

Monitoring Program Station	Sampling Date	Lab ID Number	Comment
<b>Milne Port</b>			
MP-01 (Sewage Treatment Facility)	2023-02-14	WT2303767-001	Discharge volume recorded daily.
MP-01-01 (Field Duplicate of MP-01)	2023-02-14	WT2303767-003	
MP-01A (Polishing Waste Stabilization Pond)	NA	NA	No discharge.
MP-01B (Sewage Treatment Facility)	2023-02-14	WT2303771-001	Discharge volume recorded daily.
MP-01B-01 (Field Duplicate of MP-01B)	2023-02-14	WT2303771-003	
MP-MRY-2 (Freshwater Intake at Phillips Creek)	NA	NA	No water withdrawal.
MP-MRY-3 (Freshwater Intake from Km 32 Lake)	NA	NA	Withdrawal volume recorded daily.
MP-02 (Milne Port Maintenance Shop)	NA	NA	No discharge.
MP-03 (Bulk Fuel Storage Facility Stormwater)	NA	NA	No discharge.
MP-04 (Treated Oily Water from Milne Port Landfarm Facility to Tundra)	NA	NA	No discharge.
MP-04A (Treated Oily Water from Milne Port Snow dump Facility to Tundra)	NA	NA	No discharge.
MP-05 Ore Stockpile Sedimentation Pond (East)	NA	NA	No discharge.
MP-06 Ore Stockpile Sedimentation Pond (West)	NA	NA	No discharge.
MP-C-A (Downstream of Construction Area)	NA	NA	No flow.
MP-C-B (Downstream of Construction Area)	NA	NA	No flow.
MP-C-D (Downstream of Construction Area)	NA	NA	No flow.

Monitoring Program Station	Sampling Date	Lab ID Number	Comment
MP-C-E (Downstream of Construction Area)	NA	NA	No flow.
MP-C-F (Downstream of Construction Area)	NA	NA	No flow.
MP-C-H (Downstream of Construction Area)	NA	NA	No flow.
MP-C-J (Downstream of Construction Area)	NA	NA	No flow.
MP-C-K (Downstream of Construction Area)	NA	NA	No flow.
MP-Q1-01 (Downstream of Q1 Quarry)	NA	NA	No flow.
MP-Q1-02 (Downstream of Q1 Quarry)	NA	NA	No flow.
<b>Mary River Mine Site</b>			
MS-01 (Sewage Treatment Facility)	N/A	N/A	No discharge.
MS-01A (Mine Site Polishing Waste Stabilization Pond)	N/A	N/A	Facility not constructed.
MS-01B (Sewage Treatment Facility)	2023-02-14	WT2303760-001	Discharge volume recorded daily.
MS-01B (Field Duplicate of MS-01B)	2023-02-14	WT2303760-003	
MS-02 (Mine Site Maintenance Shop)	N/A	N/A	Facility not constructed.
MS-MRY-1 (Freshwater Intake Camp Lake)	N/A	N/A	Withdrawal volume recorded daily.
MS-MRY-04A (Polishing Waste Stabilization Pond)	N/A	N/A	No discharge.
MS-MRY-04B (Polishing Waste Stabilization Pond)	N/A	N/A	No discharge.
MS-MRY-04C (Polishing Waste Stabilization Pond)	N/A	N/A	No discharge.
MS-03 (Mine Site Bulk Fuel Storage Facility Stormwater)	N/A	N/A	No discharge.
MS-03B (Mine Site Bulk Fuel Storage Facility Stormwater)	N/A	N/A	No discharge.

Monitoring Program Station	Sampling Date	Lab ID Number	Comment
MS-04 (Mine Site Fuel Unloading Station Stormwater)	N/A	N/A	No discharge.
MS-05 (Mine Site Landfarm Facility)	N/A	N/A	No discharge.
MS-06 (Ore Stockpile Pond Stormwater)	N/A	N/A	No discharge.
MS-07 (Run of Mine Ore Stockpile Pond Stormwater)	NA	NA	No discharge.
MS-08 (Mine Waste Rock Stockpile Pond)	NA	NA	No discharge
MS-09 (Waste Rock Stockpile East Pond)	N/A	N/A	Facility not constructed.
MS-10 (SDLT-1 Pond Ore Stockpile Stormwater)	N/A	N/A	Facility not constructed.
MS-11 (KM105 Pond Stormwater)	N/A	N/A	No discharge.
MS-12 (Weatherhaven Camp Stormwater)	N/A	N/A	Facility not constructed.
MS-13 (Explosives Magazine Pond)	N/A	N/A	Facility not constructed.
MS-14 (Quarry QMR2 Pond/Sump)	N/A	N/A	Facility not constructed.
MS-MRY-6 (Exploration Camp Bulk Fuel Storage Facility Stormwater)	N/A	N/A	No discharge.
MS-MRY-09 (Deposit 1 Surface Water Drainage)	N/A	N/A	No flow.
MS-MRY-13A (Downstream Non-Hazardous Landfill)	N/A	N/A	No flow.
MS-MRY-13B (Downstream Non-Hazardous Landfill)	N/A	N/A	No flow.
MS-C-A (Downstream of Construction and Borrow Areas)	N/A	N/A	No flow.

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

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

Analyte	Sample ID			MP-01	MP-0101
	ALS Laboratory Sample ID			WT2303767-001	WT2303767-003
	Sample Date & Time			2023-02-14 14:45	2023-02-14 14:45
	QA/QC Sample Type			N/A	Field Duplicate
	Units	LOR	Criteria <sup>1</sup>		
pH	pH units	0.10	6.0 - 9.5	7.67	7.86
Total Suspended Solids	mg/L	1.0/1.4	120	5.2	3.1
Ammonia, Total (as N)	mg/L	0.0050	-	0.0419	0.0478
Total Kjeldahl Nitrogen	mg/L	0.050	-	1.58	1.58
Phosphorus, Total	mg/L	0.0200	-	9.28	9.28
Fecal Coliforms	CFU/100 mL	1	10,000	<1	<1
BOD	mg/L	2.0	100	2.9	2.6
Oil and Grease, Total	mg/L	5.0	-	<5.0	<5.0
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen
Toxicity	-	-	Not Acutely Toxic	-	-

**Notes:**

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

<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	Sample ID			MP-01B	MP-01B01
	ALS Laboratory Sample ID			WT2303771-001	WT2303771-003
	Sample Date & Time			2023-02-14 14:45	2023-02-14 14:45
	QA/QC Sample Type			N/A	Field Duplicate
	Units	LOR	Criteria <sup>1</sup>		
pH	pH units	0.10	6.0 - 9.5	7.61	7.64
Total Suspended Solids	mg/L	1.0	120	<1.0	<1.0
Ammonia, Total (as N)	mg/L	0.0050	-	0.0313	0.0261
Total Kjeldahl Nitrogen	mg/L	0.050	-	1.43	1.28
Phosphorus, Total	mg/L	0.0200	-	8.45	8.43
Fecal Coliforms	CFU/100 mL	1	10,000	<1	<1
BOD	mg/L	2.0	100	<2.0	<2.0
Oil and Grease, Total	mg/L	5.0	-	<5.0	<5.0
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen
Toxicity	-	-	Not Acutely Toxic	-	-

**Notes:**

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

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

Analyte	Sample ID			MS-01B_2023-02-14	MS-01B01_2023-02-14
	ALS Laboratory Sample ID			WT2303760-001	WT2303760-003
	Sample Date & Time			2023-02-14 15:00	2023-02-14 15:00
	QA/QC Sample Type			N/A	Field Duplicate
	Units	LOR	Criteria <sup>1</sup>		
pH	pH units	0.10	6.0 - 9.5	8.28	7.99
Total Suspended Solids	mg/L	1.0	35	4.7	3.0
Ammonia, Total (as N)	mg/L	0.0050	4.0	0.0287	0.0257
Total Kjeldahl Nitrogen	mg/L	0.050	-	1.42	1.34
Phosphorus, Total	mg/L	0.0020	4.0	0.728	0.733
Fecal Coliforms	CFU/100 mL	1	1,000	2	2
BOD	mg/L	2.0	30	2.3	2.3
Oil and Grease, Total	mg/L	5.0	-	<5.0	<5.0
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen
Toxicity	-	-	Not Acutely Toxic	-	-

**Notes:**

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

<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 -February 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)	Treated Sewage Effluent from MS- 01 to Discharge Location #1 (m³)	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- 01 to Milne Inlet (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 (m³)
1-Feb-23	108.7	1.7	0.0	91.3	1.1	0.0	0.0	33.7	0.0	20.0	19.9	1.3	0.0	0.0
2-Feb-23	97.5	2.6	0.0	92.6	1.1	0.0	0.0	59.5	0.0	26.0	24.3	1.0	0.0	0.0
3-Feb-23	94.7	8.6	0.0	92.5	1.1	0.0	0.0	44.6	0.0	23.0	23.9	0.0	0.0	0.0
4-Feb-23	104.4	12.9	0.0	95.1	1.1	0.0	0.0	45.4	0.0	20.0	18.7	1.4	0.0	0.0
5-Feb-23	115.5	6.0	0.0	67.5	1.1	0.0	0.0	33.2	3.0	22.0	18.3	1.0	0.0	0.0
6-Feb-23	102.5	4.7	0.0	95.6	1.2	0.0	0.0	52.7	0.0	26.0	21.8	1.4	0.0	0.0
7-Feb-23	115.1	0.0	0.0	56.7	1.2	0.0	0.0	44.3	0.0	26.0	24.7	0.0	0.0	1.0
8-Feb-23	105.6	17.0	0.0	90.3	1.2	0.0	0.0	53.7	0.0	26.0	30.9	0.0	0.0	0.0
9-Feb-23	110.6	1.3	0.0	108.8	1.2	0.0	0.0	50.8	0.0	26.0	9.1	0.4	0.0	0.0
10-Feb-23	119.1	6.7	0.0	109.0	1.2	0.0	0.0	29.6	0.0	25.0	18.7	1.0	0.0	0.0
11-Feb-23	100.0	2.5	0.0	94.5	1.2	0.0	0.0	73.3	0.0	26.0	21.7	1.4	0.0	0.0
12-Feb-23	133.2	6.1	0.0	102.4	1.2	0.0	0.0	41.8	0.0	25.0	22.2	1.0	0.0	0.0
13-Feb-23	98.8	8.1	0.0	90.3	1.2	0.0	0.0	42.6	0.0	23.0	17.6	0.4	0.0	0.0
14-Feb-23	120.4	14.0	0.0	117.6	1.2	0.0	0.0	47.3	0.0	9.0	21.2	1.0	0.0	0.0
15-Feb-23	111.0	13.8	0.0	106.5	1.2	0.0	0.0	42.5	0.0	24.0	23.3	0.4	0.0	0.0
16-Feb-23	102.6	8.6	0.0	90.4	1.3	0.0	0.0	43.7	0.0	25.0	17.3	1.3	0.0	0.0
17-Feb-23	120.6	6.0	0.0	93.1	1.2	0.0	0.0	48.5	0.0	19.0	24.1	0.3	0.0	0.0
18-Feb-23	110.3	6.0	0.0	102.0	1.2	0.0	0.0	40.8	0.0	17.0	20.4	1.2	0.0	0.0
19-Feb-23	68.0	6.0	0.0	98.7	1.2	0.0	0.0	33.2	0.0	14.0	20.7	1.0	0.0	0.0
20-Feb-23	143.4	26.9	0.0	100.5	1.7	6.0	3.0	36.6	0.0	18.0	22.4	0.0	0.0	0.0
21-Feb-23	129.9	19.3	0.0	77.6	1.2	0.0	0.0	38.0	0.0	15.0	20.4	1.3	0.0	0.0
22-Feb-23	114.5	0.0	0.0	89.7	1.2	0.0	0.0	47.8	0.0	18.0	19.4	1.3	0.0	0.0
23-Feb-23	107.5	9.5	0.0	87.0	1.2	0.0	0.0	53.6	0.0	20.0	23.6	0.7	0.0	0.0
24-Feb-23	73.4	16.3	0.0	90.5	1.2	0.0	0.0	33.5	0.0	18.0	23.5	0.7	0.0	0.0
25-Feb-23	97.5	21.8	0.0	98.6	1.2	0.0	0.0	38.4	0.0	12.0	15.3	0.5	0.0	0.0
26-Feb-23	128.0	3.1	0.0	93.4	1.2	0.0	0.0	39.7	0.0	16.0	18.6	0.4	0.0	0.0
27-Feb-23	123.0	13.7	0.0	102.7	1.2	0.0	0.0	39.2	0.0	21.0	20.9	0.7	0.0	0.0
28-Feb-23	140.7	19.8	0.0	116.6	1.2	0.0	0.0	42.6	0.0	24.0	16.7	0.3	0.0	0.0
Total	3,096.8	262.9	0.0	2,651.5	33.7	6.0	3.0	1,230.5	3.0	584.0	579.5	21.4	0.0	1.0

**Notes:**  
WWTP - Waste Water Treatment Plant  
PWSP - Polishing Waste Stabilization Pond