

February 29, 2024

Manager of Licensing  
Nunavut Water Board  
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Resource Management Officer, CIRNAC  
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P.O. Box 100  
Iqaluit, NU X0A 0H0

**RE: Water Licence 2AM-MRY1325 Monthly Surveillance Network Program (SNP) Report  
January 2024**

The following is the monthly report for January 2024 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 conducted in January under the Licence at sites with discharge/flowing water conditions, and the details concerning the collected water quality samples including sample dates and laboratory identification numbers. Analytical water quality testing results are presented in Table 2. 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 January 2024.

**Monitoring Program Results**

*Water Sampling and Analysis Results*

Table 2 provides the analytical results related to the Sewage Treatment Plant (STP) facilities. There were no exceedances of applicable water quality criteria observed at STP monitoring stations in January 2024. Due to frozen winter conditions, no other samples were collected during the month of January.

*Flow and Volume Measurements*

Table 3.1 provides a breakdown of volume measurements for January 2024 as required by Part I, Item 9 of the Licence. There were no exceedances of the source specific daily volume withdrawal limits in January 2024.

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, Omer Pasalic, Sean Noble-Nowdluk (CIRNAC)  
Conor Goddard, Chris Spencer (QIA)  
Tim Sewell, Megan Lord-Hoyle, Lou Kamermans, Francois Gaudreau, Martin Beausejour, Connor Devereaux,  
Katie Babin, Allison Parker, Dale Kristoff, Elisabeth Luther (Baffinland)

**Attachments**

Attachments – Table 1.1, Table 2, Table 3.1

**Table 1.1: Monitoring Program  
Water Sampling Summary**

Location	Location Description	Sample Date	Sample Type	Lab Sample ID	Comment
MP-01	Sewage Treatment Facility	2024-01-02	P	WT2400074-001	Discharge volume recorded daily.
MP-01	Sewage Treatment Facility	2024-01-02	FD	WT2400074-004	Discharge volume recorded daily.
MP-01B	Sewage Treatment Facility	2024-01-02	P	WT2400072-001	Discharge volume recorded daily.
MP-01B	Sewage Treatment Facility	2024-01-02	FD	WT2400072-003	Discharge volume recorded daily.
MS-01B	Sewage Treatment Facility	2024-01-02	P	WT2400075-001	Discharge volume recorded daily.
MS-01B	Sewage Treatment Facility	2024-01-02	FD	WT2400075-003	Discharge volume recorded daily.

**Notes:**

Sample Types:

P - Permitted Sample

FB - Field Blank

FD - Field Duplicate

TB - Trip Blank

NST - No Sample Taken



Table 2 : Water Quality Results for Water Licence  
Monitoring Location - MP-01

Location Name Field Sample ID ALS Laboratory Work Order Sample Date Sample Type			MP-01	MP-01
			MP-01_2024-01-02	QV-CC2_2024-01-02
			WT2400074	WT2400074
			2024-01-02	2024-01-02
			P	FD
Analyte	Units	Table 5 Criteria		
pH, Lab	pH units	9.5	7.82	7.93
Total Suspended Solids	mg/L	120	1.5	2.8
Total Dissolved Solids	mg/L		986	984
Turbidity	NTU		0.68	0.80
Alkalinity, Total	mg/L		121	112
Ammonia, Total (as N)	mg/L		0.0385	0.0328
Total Kjeldahl Nitrogen	mg/L		< 0.050	1.38
Fecal Coliforms	CFU/100mL	10000	37	45
BOD	mg/L	100	< 2.0	2.5
Oil and Grease, Total	mg/L		< 5.0	< 5.0
Phosphorus, Nutrient	mg/L		8.63	8.57

Notes:  
Highlight indicate result exceeded applicable criteria.  
Half value used in monthly average when value is less than detection limit.  
pH criteria is a range;6.0-9.5.  
Sample Type:  
P-Permitted  
FD-Field Duplicate  
FB-Field Blank  
TB-Trip Blank



Table 2 : Water Quality Results for Water Licence  
Monitoring Location - MP-01B

Location Name Field Sample ID ALS Laboratory Work Order Sample Date Sample Type			MP-01B	MP-01B
			MP-01B_2024-01-02	QV-CC3_2024-01-02
			WT2400072	WT2400072
			2024-01-02	2024-01-02
			P	FD
Analyte	Units	Table 5 Criteria		
pH, Lab	pH units	9.5	7.39	7.24
Total Suspended Solids	mg/L	120	< 1.0	< 1.4
Total Dissolved Solids	mg/L		594	615
Turbidity	NTU		< 0.10	0.15
Alkalinity, Total	mg/L		56.8	41.1
Ammonia, Total (as N)	mg/L		0.0160	0.0215
Total Kjeldahl Nitrogen	mg/L		0.494	0.498
Fecal Coliforms	CFU/100mL	10000	< 1	< 1
BOD	mg/L	100	< 2.0	< 2.0
Oil and Grease, Total	mg/L		< 5.0	< 5.0
Phosphorus, Nutrient	mg/L		8.05	8.05

Notes:  
Highlight indicate result exceeded applicable criteria.  
Half value used in monthly average when value is less than detection limit.  
pH criteria is a range;6.0-9.5.  
Sample Type:  
P-Permitted  
FD-Field Duplicate  
FB-Field Blank  
TB-Trip Blank



Table 2 : Water Quality Results for Water Licence  
Monitoring Location - MS-01B

Location Name Field Sample ID ALS Laboratory Work Order Sample Date Sample Type			MS-01B	MS-01B
			MS-01B_2024-01-02	QW-CC1_2024-01-02
			WT2400075	WT2400075
			2024-01-02	2024-01-02
			P	FD
Analyte	Units	Table 4 Criteria		
pH, Lab	pH units	9.5	8.14	8.04
Total Suspended Solids	mg/L	35	1.7	1.7
Total Dissolved Solids	mg/L		561	570
Turbidity	NTU		0.27	0.28
Alkalinity, Total	mg/L		212	212
Ammonia, Total (as N)	mg/L	4.0	0.242	0.249
Total Kjeldahl Nitrogen	mg/L		1.30	1.18
Fecal Coliforms	CFU/100mL	1000	98	14
BOD	mg/L	30	< 2.0	< 2.0
Oil and Grease, Total	mg/L		< 5.0	< 5.0
Phosphorus, Nutrient	mg/L	4.0	0.867	0.894

Notes:  
Highlight indicate result exceeded applicable criteria.  
Half value used in monthly average when value is less than detection limit.  
pH criteria is a range;6.0-9.5.  
Sample Type:  
P-Permitted  
FD-Field Duplicate  
FB-Field Blank  
TB-Trip Blank

Table 3.1: Flow and Volume Measurements - Part I Item 11 - January 2024

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-Jan-24	109.9	22.3	0.0	129.1	1.0	0.0	0.0	44.8	0.0	24.0	25.5	0.3	0.0	0.0
2-Jan-24	154.8	0.5	0.0	132.3	1.1	0.0	0.0	43.4	0.0	20.0	20.6	0.3	0.0	0.0
3-Jan-24	118.9	21.0	0.0	108.0	0.9	8.0	0.0	48.0	0.0	17.0	21.2	0.6	0.0	0.0
4-Jan-24	171.4	0.0	0.0	130.2	0.9	0.0	0.0	41.9	0.0	15.0	21.9	0.3	0.0	0.0
5-Jan-24	126.3	54.1	0.0	137.0	0.4	0.0	0.0	70.4	0.0	18.0	18.9	0.6	0.0	0.0
6-Jan-24	162.4	59.5	0.0	119.0	0.6	0.0	0.0	60.1	2.0	21.0	20.4	0.6	0.0	0.0
7-Jan-24	160.0	132.3	0.0	125.2	1.0	0.0	0.0	56.4	0.0	24.0	18.7	0.6	0.0	0.0
8-Jan-24	128.2	89.9	0.0	124.7	0.9	0.0	0.0	46.0	0.0	24.0	25.0	0.3	0.0	0.0
9-Jan-24	103.6	151.0	0.0	111.1	0.6	0.0	0.0	26.9	0.0	24.0	22.4	0.3	0.0	0.0
10-Jan-24	167.8	62.9	0.0	122.7	1.3	0.0	0.0	33.2	0.0	19.0	22.3	0.3	0.0	0.0
11-Jan-24	122.3	26.3	0.0	138.3	0.9	0.0	0.0	68.8	0.0	23.0	27.6	0.3	0.0	0.0
12-Jan-24	126.8	22.1	0.0	127.0	0.9	0.0	0.0	55.9	0.0	24.0	21.8	0.6	0.0	0.0
13-Jan-24	110.6	23.9	0.0	120.3	1.3	0.0	0.0	44.5	0.0	17.0	27.0	0.3	0.0	0.0
14-Jan-24	112.0	25.6	0.0	128.5	1.3	0.0	0.0	56.8	0.0	21.0	24.3	0.6	0.0	0.0
15-Jan-24	116.4	26.6	0.0	117.5	1.3	0.0	0.0	56.8	0.0	24.0	25.8	0.3	5.7	0.0
16-Jan-24	109.3	33.3	0.0	110.8	1.7	0.0	0.0	48.1	0.0	22.0	20.6	0.5	0.0	0.0
17-Jan-24	117.7	40.7	0.0	122.3	1.3	0.0	0.0	62.0	0.0	20.0	34.2	0.0	0.0	0.0
18-Jan-24	110.1	47.0	0.0	122.0	1.3	0.0	0.0	40.3	0.0	19.0	25.9	0.8	0.0	0.0
19-Jan-24	114.2	59.5	0.0	123.7	1.3	0.0	0.0	60.9	0.0	19.0	22.5	0.2	0.0	0.0
20-Jan-24	91.9	59.2	0.0	104.0	0.0	10.0	0.0	60.8	0.0	19.0	28.9	0.7	0.0	0.0
21-Jan-24	112.0	74.8	0.0	93.7	0.4	0.0	0.0	37.6	0.0	20.0	27.7	0.3	0.0	0.0
22-Jan-24	110.0	68.5	0.0	95.8	1.1	35.0	0.0	45.2	0.0	17.0	31.7	0.8	0.0	0.0
23-Jan-24	105.0	67.7	0.0	95.0	0.6	10.0	0.0	70.8	0.0	15.0	13.0	0.3	0.0	0.0
24-Jan-24	115.4	58.4	0.0	112.2	0.5	0.0	0.0	47.6	2.0	24.0	38.9	1.0	0.0	0.0
25-Jan-24	115.1	79.6	0.0	103.7	0.9	0.0	0.0	44.4	0.0	16.0	19.8	0.3	0.0	0.0
26-Jan-24	111.5	46.5	0.0	59.2	1.0	0.0	0.0	54.6	0.0	19.0	25.6	0.8	0.0	0.0
27-Jan-24	104.4	72.1	0.0	95.7	0.0	0.0	0.0	35.2	0.0	9.0	23.0	0.8	0.0	0.0
28-Jan-24	74.1	60.1	0.0	106.2	0.0	0.0	0.0	67.5	0.0	7.0	36.2	0.0	0.0	0.0
29-Jan-24	133.7	49.4	0.0	102.7	0.9	0.0	0.0	53.5	0.0	7.0	25.5	0.5	0.0	0.0
30-Jan-24	125.2	20.4	0.0	119.1	0.4	0.0	0.0	47.7	0.0	9.0	21.5	0.0	0.0	0.0
31-Jan-24	106.0	55.2	0.0	136.8	0.4	0.0	0.0	64.1	0.0	24.0	33.4	0.8	0.0	0.0
Total	3,746.8	1,610.4	0.0	3,573.8	25.7	63.0	0.0	1,594.5	4.0	581.0	771.9	14.5	5.7	0.0

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