

January 30, 2025

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

Resource 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
December 2024**

The following is the monthly report for December 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 December 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 December 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 December 2024. The sample taken at MS-01 failed to produce a result for fecal coliforms due to bacteria overgrowth on the plate preventing the lab from being able to make a discrete colony count. The laboratory results for the December MS-01 sample were received from the external laboratory on December 19, at which time preparations were in progress to shut-down the MS-01 STP due to low population numbers. Due to logistical constraints, including flight schedules and required holding times for these samples, no follow-up sample could be collected prior to the shut-down, which was completed on December 24.

Due to frozen winter conditions, no other water samples were collected during the month of December.

Flow and Volume Measurements

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

We trust that the information provided in this monthly report is acceptable. If 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, Amoudla Kootoo (QIA)
Tim Sewell, Megan Lord-Hoyle, Lou Kamermans, Elisabeth Luther, Francois Gaudreau, Martin Beausejour,
William Bowden, Shannon Mulhall, Irniq Lecompte (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
MP-01	Sewage Treatment Facility	2024-12-10	P	WT2436671-002
MP-01B	Sewage Treatment Facility	2024-12-10	P	WT2436671-001
MS-01	Sewage Treatment Facility	2024-12-10	P	WT2436802-002
MS-01B	Sewage Treatment Facility	2024-12-10	P	WT2436802-004

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	MP-01
		Field Sample ID	MP-01_2024-12-10
		ALS Laboratory Work Order	WT2436671
		Sample Date	2024-12-10
		Sample Type	P
Analyte	Units	Table Criteria	
pH, Lab	pH units	6.0-9.5	7.74
Total Suspended Solids	mg/L	120	1.9
Total Dissolved Solids	mg/L	-	877
Turbidity	NTU	-	0.83
Alkalinity, Total	mg/L	-	72.9
Ammonia, Total (as N)	mg/L	-	0.0659
Total Kjeldahl Nitrogen	mg/L	-	0.147
Fecal Coliforms	CFU/100mL	10000	8
BOD	mg/L	100	< 2.0
Oil and Grease, Total	mg/L	-	< 5.0
Visible Sheen	-	No Visible Sheen	No Visible Sheen
Phosphorus, Nutrient	mg/L	-	5.26

Notes:
Highlight indicate result exceeded applicable criteria.
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	MP-01B
		Field Sample ID	MP-01B_2024-12-10
		ALS Laboratory Work Order	WT2436671
		Sample Date	2024-12-10
		Sample Type	P
Analyte	Units	Table Criteria	
pH, Lab	pH units	6.0-9.5	7.56
Total Suspended Solids	mg/L	120	< 1.0
Total Dissolved Solids	mg/L	-	505
Turbidity	NTU	-	0.11
Alkalinity, Total	mg/L	-	73.8
Ammonia, Total (as N)	mg/L	-	0.0354
Total Kjeldahl Nitrogen	mg/L	-	0.906
Fecal Coliforms	CFU/100mL	10000	3
BOD	mg/L	100	< 2.0
Oil and Grease, Total	mg/L	-	< 5.0
Visible Sheen	-	No Visible Sheen	No Visible Sheen
Phosphorus, Nutrient	mg/L	-	8.03

Notes:
Highlight indicate result exceeded applicable criteria.
Sample Type:
P-Permitted
FD-Field Duplicate
FB-Field Blank
TB-Trip Blank



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

		Location Name	MS-01
		Field Sample ID	MS-01_2024-12-10
		ALS Laboratory Work Order	WT2436802
		Sample Date	2024-12-10
		Sample Type	P
Analyte	Units	Table Criteria	
pH, Lab	pH units	6.0-9.5	8.00
Total Suspended Solids	mg/L	35	9.9
Total Dissolved Solids	mg/L	-	3070
Turbidity	NTU	-	3.49
Alkalinity, Total	mg/L	-	145
Ammonia, Total (as N)	mg/L	4.0	0.121
Total Kjeldahl Nitrogen	mg/L	-	4.06
Fecal Coliforms	CFU/100mL	1000	NR ¹
BOD	mg/L	30	< 2.0
Oil and Grease, Total	mg/L	-	< 5.0
Visible Sheen	-	No Visible Sheen	No Visible Sheen
Phosphorus, Nutrient	mg/L	4.0	0.479

Notes:
Highlight indicate result exceeded applicable criteria.
¹NR - No Result: No Data - Fecal coliform overgrowth on the plate.
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			MS-01B
Field Sample ID			MS-01B_2024-12-10
ALS Laboratory Work Order			WT2436802
Sample Date			2024-12-10
Sample Type			P
Analyte	Units	Table Criteria	
pH, Lab	pH units	6.0-9.5	7.96
Total Suspended Solids	mg/L	35	2.8
Total Dissolved Solids	mg/L	-	682
Turbidity	NTU	-	0.19
Alkalinity, Total	mg/L	-	126
Ammonia, Total (as N)	mg/L	4.0	0.0218
Total Kjeldahl Nitrogen	mg/L	-	2.88
Fecal Coliforms	CFU/100mL	1000	< 1
BOD	mg/L	30	< 2.0
Oil and Grease, Total	mg/L	-	< 5.0
Visible Sheen	-	No Visible Sheen	No Visible Sheen
Phosphorus, Nutrient	mg/L	4.0	0.0868

Notes:
Highlight indicate result exceeded applicable criteria.
Sample Type:
P-Permitted
FD-Field Duplicate
FB-Field Blank
TB-Trip Blank

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

DATE	Camp Lake Freshwater for Domestic Use - Daily Water MS-MRY-1 (m ³) ¹	Camp Lake Freshwater for Industrial Use - Daily Water MS-MRY-1 (m ³) ¹	Treated Sewage Effluent from MS-01 to Discharge Location #1 (m ³)	Treated Sewage Effluent from MS-01B to Discharge Location #1 (m ³)	Sewage Sludge Removed from Mine Site WWTPs to Incinerator or Disposal Offsite by Backhaul (m ³)	Sewage Sludge/Off- Spec Effluent Removed from Mine Site WWTPs to PWSP at Mine Site (m ³)	Sewage Sludge Removed from Lift Stations to PWSP at Mine Site (m ³)	Km 32 Lake Milne Port Camp Daily Water Use for Domestic Purposes MP- MRY-3 (m ³)	Km 32 Lake Milne Port Camp Daily Water Use for Industrial Purposes MP- MRY-3 (m ³)	Treated Sewage Effluent from MP-01 to Milne Inlet (m ³)	Treated Sewage Effluent from MP-01B to Milne Inlet (m ³)	Sewage Sludge Removed from Milne Port WWTPs to Incinerator or Disposal Offsite by Backhaul (m ³)	Sewage Sludge Removed from Lift Stations to PWSP at Milne Port (m ³)	Sludge Removed from Milne Port WWTPs/WTPs to PWSP at Milne Port (m ³)
1-Dec-24	114.5	6.8	11.0	91.9	0.4	6.0	0.0	52.1	0.0	15.0	19.3	0.1	0.0	0.0
2-Dec-24	130.4	5.6	11.0	108.9	0.9	0.0	0.0	42.3	0.0	22.0	21.5	0.0	0.0	0.0
3-Dec-24	132.9	0.0	17.0	115.8	1.1	0.0	0.0	61.6	0.0	14.0	17.8	0.1	0.0	0.0
4-Dec-24	138.2	4.5	16.0	121.9	1.2	0.0	0.0	39.7	0.0	19.0	29.6	0.0	0.0	0.0
5-Dec-24	137.1	4.5	16.0	126.9	0.9	0.0	0.0	60.7	0.0	24.0	23.9	0.0	0.0	0.0
6-Dec-24	128.6	4.5	17.0	119.3	0.9	0.0	0.0	45.2	0.0	17.0	23.7	0.1	0.0	0.0
7-Dec-24	132.0	21.3	18.0	116.9	0.6	3.0	0.0	43.0	0.0	18.0	20.5	0.0	0.0	0.0
8-Dec-24	118.5	14.5	17.0	128.8	0.9	6.0	0.0	44.4	0.0	17.0	21.6	0.1	0.0	0.0
9-Dec-24	109.1	2.3	10.0	115.3	0.9	0.0	0.0	56.7	0.0	18.0	28.9	0.0	0.0	0.0
10-Dec-24	125.0	7.6	18.0	73.9	1.4	0.0	0.0	47.1	0.0	17.0	21.1	0.0	0.0	0.0
11-Dec-24	115.3	16.0	18.0	109.4	1.3	0.0	0.0	55.9	0.0	20.0	29.4	0.0	0.0	0.0
12-Dec-24	114.2	15.2	17.0	125.6	1.5	0.0	0.0	43.5	0.0	17.0	25.0	0.1	0.0	2.0
13-Dec-24	90.4	14.6	18.0	108.0	1.1	0.0	0.0	57.4	2.0	15.0	25.9	0.0	0.0	0.0
14-Dec-24	128.1	7.2	16.0	94.3	1.4	0.0	0.0	43.0	0.0	17.0	19.0	0.1	0.0	0.0
15-Dec-24	115.5	2.3	17.0	107.5	1.3	0.0	0.0	54.9	0.0	20.0	28.4	0.0	0.0	0.0
16-Dec-24	106.9	0.0	17.0	109.2	0.9	0.0	0.0	45.9	0.0	17.0	25.2	0.0	5.7	0.0
17-Dec-24	120.1	17.0	7.0	84.0	0.9	0.0	0.0	43.3	0.0	20.0	16.3	0.1	0.0	0.0
18-Dec-24	130.9	2.3	13.0	106.7	0.0	0.0	0.0	36.4	0.0	26.0	0.0	0.0	0.0	0.0
19-Dec-24	119.2	12.8	12.0	111.6	0.4	0.0	8.0	73.4	0.0	42.0	0.0	0.0	0.0	0.0
20-Dec-24	135.9	1.1	12.0	112.3	1.2	0.0	0.0	39.3	0.0	34.0	24.0	0.1	0.0	9.0
21-Dec-24	132.6	3.4	13.0	106.6	0.9	0.0	0.0	53.7	0.0	22.0	20.1	0.1	0.0	0.0
22-Dec-24	120.6	1.1	12.0	126.3	0.7	16.0	0.0	50.3	0.0	18.0	24.7	0.1	0.0	0.0
23-Dec-24	128.1	2.3	11.0	115.5	0.7	16.0	0.0	47.6	0.0	16.0	23.8	0.1	0.0	0.0
24-Dec-24	188.9	1.1	0.0	106.4	0.5	0.0	0.0	42.9	0.0	18.0	27.7	0.1	0.0	0.0
25-Dec-24	118.2	16.6	0.0	125.3	0.9	0.0	0.0	43.9	0.0	17.0	22.1	0.1	0.0	0.0
26-Dec-24	114.5	1.1	0.0	116.2	0.9	0.0	0.0	45.9	0.0	15.0	21.3	0.1	0.0	9.0
27-Dec-24	95.1	6.8	0.0	109.2	0.9	0.0	0.0	45.8	0.0	16.0	9.3	0.1	0.0	0.0
28-Dec-24	93.7	6.8	0.0	89.1	0.4	0.0	0.0	34.9	0.0	11.0	20.2	0.0	0.0	0.0
29-Dec-24	98.1	0.0	0.0	75.9	0.9	0.0	0.0	41.1	0.0	16.0	24.1	0.0	0.0	0.0
30-Dec-24	136.1	1.1	0.0	94.6	0.9	0.0	0.0	44.8	2.0	14.0	18.0	0.0	0.0	0.0
31-Dec-24	130.6	3.4	0.0	104.3	0.4	0.0	0.0	60.8	0.0	15.0	29.7	0.0	0.0	0.0
Total	3,798.9	203.5	334.0	3,357.6	26.6	47.0	8.0	1,497.6	4.0	587.0	662.0	1.3	5.7	20.0

Notes:

WWTP - Waste Water Treatment Plant

PWSP - Polishing Waste Stabilization Pond

¹Tracking may be influenced by reported data to the Pi data system; variances between reported domestic and industrial values have potential to occur.

However, total daily withdrawal is not influenced by the tracking methodology.