March 30, 2020

Manager of Licensing
Nunavut Water Board
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Gjoa Haven, Nunavut X0B 1J0

Water Resources 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 2020

The following is the monthly report for February 2020 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

During the month of February 2020, water samples were collected as part of the Water Licence SNP.

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 date/laboratory identification number as appropriate. Analytical water quality testing results received are presented in Tables 2.1 – 2.3. Water volumes consumed for domestic and industrial water purposes and the volumes of effluent discharged at the Mary River Mine Site and Milne Port are presented in Table 3.1.

Monitoring Program Results

Water Sampling and Analysis Results

Tables 2.1 – 2.3 provide the analytical results related to the SNP sampling requirements for February 2020. There were no exceedances of the site specific daily grab or monthly average samples.

Flow and Volume Measurements

Table 3.1 provides a breakdown of volume measurements as required by Part I, Item 9 of the Licence for February 2020. There were no exceedances of the source specific daily volume withdrawal limits in February.

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.

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Attachments

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

Attachments

Monthly Water Sampling Results

Baffinland

Table 1.1: Monitoring Program Water Sampling Summary for February 2020

Monitoring Program Station	Sampling Date	Lab ID Number	Comment
Milne Port			
MP-01 (Sewage Treatment Facility)	2020-02-11	L2416532-1	Volume reported daily during discharge
MP-01A (Polishing Waste Stabilization Pond)	N/A	N/A	No flow
MP-01B (Sewage Treatment Facility)	N/A	N/A	No flow
MP-MRY-2 (Freshwater Intake at Phillips Creek)	N/A	N/A	No water withdrawal
MP-MRY-3 (Freshwater Intake from Km 32 Lake)	N/A	N/A	Withdrawal volume recorded daily
MP-02 (Milne Port Maintenance Shop)	N/A	N/A	No flow
MP-03 (Bulk Fuel Storage Facility Stormwater)	N/A	N/A	No flow
MP-04 (Landfarm Facility & Snow Containment Facility)	N/A	N/A	No flow
MP-05 Ore Stockpile Sedimentation Pond (East)	N/A	N/A	No flow
MP-06 Ore Stockpile Sedimentation Pond (West)	N/A	N/A	No flow
MP-C-A (Downstream of Construction Area)	N/A	N/A	No flow
MP-C-B (Downstream of Construction Area)	N/A	N/A	No flow
MP-C-B01 (Downstream of Construction Area)	N/A	N/A	No flow
MP-C-C (Downstream of Construction Area)	N/A	N/A	No flow
MP-C-D (Downstream of Construction Area)	N/A	N/A	No flow
MP-C-E (Downstream of Construction Area)	N/A	N/A	No flow
MP-C-F (Downstream of Construction Area)	N/A	N/A	No flow
MP-C-G (Downstream of Construction Area)	N/A	N/A	No flow

Monitoring Program Station	Sampling Date	Lab ID Number	Comment
MP-C-H (Downstream of Construction Area)	N/A	N/A	No flow
MP-Q1-01 (Downstream of Q1 Quarry)	N/A	N/A	No flow
MP-Q1-02 (Downstream of Q1 Quarry)	N/A	N/A	No flow
Mary River Mine Site			
MS-01 (Sewage Treatment Facility)	2020-02-04	L2414018-1	Discharge volume reported daily
MS-01A (Mine Site Polishing Waste Stabilization Pond)	N/A	N/A	No flow
MS-01B (Sewage Treatment Facility)	2020-02-04	L2414001-1	Discharge volume reported daily
MS-01B01 (Field Duplicate of MS-01B)	2020-02-04	L2414001-3	Field Duplicate
MS-02 (Mine Site Maintenance Shop)	N/A	N/A	No flow
MS-MRY-1 (Freshwater Intake Camp Lake)	N/A	N/A	Withdrawal volume recorded daily
MS-MRY-04A	N/A	N/A	No flow
MS-MRY-04B	N/A	N/A	No flow
MS-MRY-04C	N/A	N/A	No flow
MS-03 (Milne Site Bulk Fuel Storage Facility Stormwater)	N/A	N/A	No flow
MS-04 (Mine Site Fuel Unloading Station Stormwater)	N/A	N/A	No flow
MS-05 (Mine Site Landfarm Facility)	N/A	N/A	Not constructed
MS-06 (Ore Stockpile Pond Stormwater)	N/A	N/A	No flow
MS-07 (Run of Mine Ore Stockpile Pond Stormwater)	N/A	N/A	Not constructed
MS-08 (Mine Waste Rock Stockpile Pond)	N/A	N/A	No flow
MS-09 (Waste Rock Stockpile East Pond)	N/A	N/A	No flow

Monitoring Program Station	Sampling Date	Lab ID Number	Comment
MS-MRY-6 (Exploration Camp Bladder Farm Stormwater)	N/A	N/A	No flow
MS-MRY-9 (Deposit 1 Surface Water Drainage)	N/A	N/A	No flow
MS-MRY-10 (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
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

Monitoring Program Station	Sampling Date	Lab ID Number	Comment
Steensby Port			
Steensby Exploration Camp is presently inactive.	N/A	N/A	N/A

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

Analyte	Sample ID			MP-01
	ALS Laboratory Sample ID			L2416532-1
	Sample Date & Time			11/02/2020 13:45
	QA/QC Sample Type			N/A
	Units	LOR	Criteria[1]	
pH	pH units	0.10	6.0 - 9.5	7.93
Total Suspended Solids	mg/L	2.0	120	5.4
Ammonia, Total (as N)	mg/L	0.010	-	0.064
Total Kjeldahl Nitrogen	mg/L	0.15	-	1.42
Phosphorus, Total	mg/L	0.030	-	8.16
Fecal Coliforms	CFU/100 mL	0	10,000	0
BOD	mg/L	2.0	100	<2.0
Oil and Grease, Total	mg/L	2.0	-	<2.0
	-	-	No Visible Sheen	No Visible Sheen

Notes:

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

[1] Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 5: Effluent Quality Discharge Limits for Sewage Treatment Facilities to the Ocean.

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

Analyte	Sample ID			MS-01
	ALS Laboratory Sample ID			L2414018-1
	Sample Date & Time			04/02/2020 15:00
	QA/QC Sample Type			N/A
	Units	LOR	Criteria[1]	
pH	pH units	0.10	6.0 - 9.5	7.78
Total Suspended Solids	mg/L	2.0	35	4.5
Ammonia, Total (as N)	mg/L	0.020	4.0	0.386
Total Kjeldahl Nitrogen	mg/L	0.15	-	0.36
Phosphorus, Total	mg/L	0.0030	4.0	0.991
Fecal Coliforms	CFU/100 mL	0	1000	41
BOD	mg/L	2.0	30	<2.0
Oil and Grease, Total	mg/L	2.0	-	<2.0
	-	-	No Visible Sheen	No Visible Sheen

Notes:

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

[1] Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 4: Effluent Quality Discharge Limits for Sewage Treatment Facilities to Freshwater Receiving Environment.

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

Analyte	Sample ID			MS-01B	MS-01B01
	ALS Laboratory Sample ID			L2414001-1	L2414001-3
	Sample Date & Time			04/02/2020 15:00	04/02/2020 15:00
	QA/QC Sample Type			N/A	Field Duplicate
	Units	LOR	Criteria[1]		
pH	pH units	0.10	6.0 - 9.5	7.29	7.36
Total Suspended Solids	mg/L	2.0	35	<2.0	<2.0
Ammonia, Total (as N)	mg/L	0.010	4.0	0.132	0.710
Total Kjeldahl Nitrogen	mg/L	0.15	-	0.45	0.98
Phosphorus, Total	mg/L	0.0030	4.0	0.0216	0.0195
Fecal Coliforms	CFU/100 mL	0	1000	0	0
BOD	mg/L	2.0	30	<2.0	<2.0
Oil and Grease, Total	mg/L	2.0	-	<2.0	<2.0
	-	-	No Visible Sheen	No Visible Sheen	No Visible Sheen

Notes:

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

[1] Type A Water Licence (2AM-MRY1325 - Amend. 1) - Table 4: Effluent Quality Discharge Limits for Sewage Treatment Facilities to Freshwater Receiving Environment.

Baffinland

Table 3.1: Flow and Volume Measurements-Part I Item 11 - February 2020

DATE	Camp Lake Freshwater for Domestic Use - Daily Water (m^3) MS-MRY-1	Camp Lake Freshwater for Industrial Use - Daily Water (m^3) MS-MRY-1	Treated Sewage Effluent (m^3) from MS-01 to Discharge Location #1	Treated Sewage Effluent (m^3) from MS-01B to Discharge Location #1	Sewage Sludge Removed (m^3) from Mine Site WWTPs to Incinerator for Disposal Offsite (Backhaul)	Sewage Sludge Removed (m^3) from Mine Site WWTP to PWSP at Mine Site	Sewage Sludge Removed (m^3) from Lift Stations to PWSP at Mine Site	Km 32 Lake Milne Port Camp Daily Water (m^3) MP-MRY-3	Km 32 Lake Milne Port Camp Fresh Water Use for Industrial Purposes (m^3) MP-MRY-3	Treated Sewage Effluent (m^3) from MP-01 to Milne Port	Treated Sewage Effluent (m^3) from MP-01B to Milne Port	Sewage Sludge Removed (m^3) from Milne Port WWTP to Mine Site WWTP	Sewage Sludge Removed (m^3) from Milne Port WWTP to PWSP at Mine Site	Sewage Sludge Removed (m^3) from Milne Port WWTP to Incinerator for Disposal Offiste (Backhaul)	Sewage Sludge Removed (m^3) from Lift Stations to PWSP at Milne Port	Sewage Sludge Removed (m^3) from Milne Port WWTP to PWSP at Milne Port
1-Feb-20	132.7	23.2	37.0	116.5	1.4	0.0	0.0	30.7	0.0	53.0	0.0	0.0	0.0	0.3	0.0	0.0
2-Feb-20	146.3	4.0	38.0	109.5	1.4	0.0	0.0	53.5	0.0	51.0	0.0	0.0	0.0	0.0	0.0	0.0
3-Feb-20	157.2	3.6	37.0	98.5	1.3	0.0	0.0	38.4	0.0	53.0	0.0	0.0	0.0	0.3	0.0	0.0
4-Feb-20	141.6	13.5	39.0	110.5	1.4	0.0	0.0	38.5	0.0	52.0	0.0	0.0	0.0	0.0	0.0	0.0
5-Feb-20	149.7	0.0	41.0	101.4	1.3	0.0	0.0	38.5	0.0	52.0	0.0	0.0	0.0	0.0	0.0	6.0
6-Feb-20	156.9	32.4	44.0	113.0	1.4	0.0	0.0	43.4	0.0	51.0	0.0	0.0	0.0	0.3	0.0	0.0
7-Feb-20	142.1	9.5	42.0	119.5	1.7	0.0	0.0	47.9	0.0	49.0	0.0	0.0	0.0	0.3	0.0	0.0
8-Feb-20	144.8	8.4	41.0	99.6	1.5	0.0	0.0	29.5	0.0	50.0	0.0	0.0	0.0	0.0	0.0	2.0
9-Feb-20	102.1	20.3	39.0	93.7	1.5	0.0	0.0	43.1	0.0	48.0	0.0	0.0	0.0	0.3	0.0	0.0
10-Feb-20	145.3	0.0	39.0	85.3	1.3	0.0	0.0	43.0	0.0	51.0	0.0	0.0	0.0	0.3	0.0	0.0
11-Feb-20	156.3	13.8	39.0	73.4	1.5	0.0	0.0	42.0	0.0	48.0	0.0	0.0	0.0	0.3	0.0	0.5
12-Feb-20	158.3	12.2	39.0	87.7	1.6	0.0	0.0	32.3	0.0	51.0	0.0	0.0	0.0	0.3	0.0	0.0
13-Feb-20	154.3	4.3	38.0	96.5	1.6	0.0	0.0	43.3	0.0	49.0	0.0	0.0	0.0	0.0	0.0	0.0
14-Feb-20	140.4	18.1	31.0	82.6	1.7	0.0	0.0	43.6	0.0	39.0	0.0	0.0	0.0	0.5	0.0	0.0
15-Feb-20	144.9	10.0	39.0	99.8	1.5	0.0	0.0	42.2	0.0	50.0	0.0	0.0	0.0	0.5	0.0	0.0
16-Feb-20	164.3	47.4	39.0	115.6	2.0	0.0	0.0	34.6	61.3	49.0	0.0	0.0	0.0	0.5	0.0	0.0
17-Feb-20	137.4	49.8	39.0	120.9	2.1	0.0	0.0	35.6	0.0	49.0	0.0	0.0	0.0	0.5	0.0	0.0
18-Feb-20	149.8	49.4	37.0	119.7	1.5	0.0	0.0	50.9	2.0	52.0	0.0	0.0	0.0	0.5	0.0	1.0
19-Feb-20	180.5	37.4	35.0	126.9	1.5	0.0	0.0	52.1	0.0	53.0	0.0	0.0	0.0	0.7	0.0	0.0
20-Feb-20	145.2	8.6	39.0	126.7	1.5	0.0	0.0	36.6	0.0	54.0	0.0	0.0	0.0	0.5	0.0	0.0
21-Feb-20	152.0	0.0	39.0	104.9	1.5	0.0	0.0	40.6	0.0	49.0	0.0	0.0	0.0	0.5	0.0	0.0
22-Feb-20	148.8	13.8	39.0	118.2	0.6	0.0	0.0	38.4	0.0	49.0	0.0	0.0	0.0	0.5	0.0	0.0
23-Feb-20	150.0	4.3	39.0	106.2	0.9	0.0	0.0	36.4	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0
24-Feb-20	143.8	6.9	31.0	101.0	1.2	0.0	0.0	46.8	0.0	47.0	0.0	0.0	0.0	0.5	0.0	0.0
25-Feb-20	156.7	0.0	28.0	112.7	1.5	0.0	0.0	37.4	0.0	51.0	0.0	0.0	0.0	0.5	0.0	0.0
26-Feb-20	155.3	0.0	39.0	124.0	1.2	0.0	0.0	43.4	0.0	50.0	0.0	0.0	0.0	0.3	0.0	0.0
27-Feb-20	124.6	12.0	30.0	127.6	1.2	0.0	0.0	31.0	0.0	49.0	0.0	0.0	0.0	0.5	0.0	0.0
28-Feb-20	155.3	13.9	34.0	128.3	1.2	0.0	0.0	38.0	0.0	48.0	0.0	0.0	0.0	0.5	0.0	0.0
29-Feb-20	143.8	13.8	39.0	68.7	1.2	0.0	0.0	44.1	0.0	47.0	0.0	0.0	0.0	0.5	0.0	1.0
Total	**4,280.4**	**430.5**	**1,090.0**	**3,088.9**	**41.0**	**0.0**	**0.0**	**1,176.0**	**63.3**	**1,444.0**	**0.0**	**0.0**	**0.0**	**10.3**	**0.0**	**10.5**

Notes:

WWTP - Waste Water Treatment Plant

PWSP - Polishing Waste Stabilization Pond