



May 30, 2019

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

Water Resources Officer
CIRNAC
P.O. Box 100
Iqaluit, NU X0A 0H0

RE: Water Licence 2AM-MRY1325 Monthly SNP Report – April 2019

The following is the monthly report for April 2019 as required under Part I, Item 21 of the Type 'A' Water Licence 2AM-MRY1325 (the Licence). Part I, Item 21 of the above referenced Water Licence 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 April 2019, water samples were collected as part of the Water Licence Monitoring Program.

Table 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 Table 2. 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 the attached Table 3.

Monitoring Program Results

A) Water Sampling and Analysis Results

Table 2 provides the analytical results related to the Monitoring Program sampling requirements for April 2019. There were no exceedences of the applicable criteria during the sampling period.

B) Flow and Volume Measurements

Table 3 provides a breakdown of volume measurements as required by Part I, Item 9 of the Licence for April 2019. There were no exceedences of the source specific daily volume withdrawal limits, with the exception of four (4) exceedences (214.6 m³, 3 April 2019; 211.9 m³, 4 April 2019; 204.9 m³, 5 April 2019; and 257.3 m³, 13 April 2019) of the daily domestic use for Camp Lake water source at the Mine Site (203.8 m³). Water withdrawal volumes returned to within limits following the last event.

We trust that the information provided in this monthly report is acceptable and should you have any questions regarding this report please contact myself, William Bowden (ext. 6016), or Timothy Ray Sewell at 416.364.8820 ext. 6054.

Regards,

Connor Devereaux
Environmental Superintendent

Reviewed by:

Christopher Murray
Environmental & Regulatory Compliance Manager

Attach: Tables 1, 2, and 3

Cc: Jeremy Fraser, Justin Hack (CIRNAC); Grant Goddard, Megan Lord-Hoyle, Timothy Ray Sewell, Sylvain Proulx, Gerald Rogers, Francois Gaudrau, William Bowden (Baffinland); Jared Ottenhof (QIA)

Table 1: Monitoring Program Water Sampling Summary for March 2019

Monitoring Program Station	Sampling Date	Lab ID#	Comment
Milne Port			
MP-01 (Sewage Treatment Facility)	4/3/2019	L2254045-1	Volume reported daily during discharge
MP-01a (Polishing Waste Stabilization Pond)	N/A	N/A	No flow.
MP-MRY-3 (Freshwater Intake from Km 32 Lake - Winter)	N/A	N/A	No flow.
MP-MRY-04 (RBC at Exploration Camp)	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-MRY-12 (Bulk Sample Stockpile Area Seepage)	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-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-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			

Monitoring Program Station	Sampling Date	Lab ID#	Comment
MS-01 (Sewage Treatment Facility)	4/3/2019	L2254030-1	Discharge volume reported daily
MS-01b (Sewage Treatment Facility)	4/3/2019	L2254037-1	Discharge volume reported daily
MS-MRY-1 (Freshwater Intake Camp Lake)	N/A	N/A	No flow.
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-06 (Ore Stockpile Pond Stormwater)	N/A	N/A	No flow.
MS-08 (Mine Waste Rock Stockpile pond)	N/A	N/A	No flow.
MS-MRY-6 (Exploration Camp Bladder Farm Stormwater)	N/A	N/A	No flow.
MS-MRY-09 (Bulk Sample Pit)	N/A	N/A	No flow.
MS-MRY-10 (Weathered Ore Bulk Sample Stockpile)	N/A	N/A	No flow.
MS-MRY-11 (Processing Bulk Sample Stockpile)	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.

Monitoring Program Station	Sampling Date	Lab ID#	Comment
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.
Steensby Port			
Steensby Exploration Camp is presently not active.	N/A	N/A	

TABLE 2.1 - WATER QUALITY RESULTS FOR WATER LICENCE MONITORING LOCATION - MP-01

Analyte	Sample ID			MP-01
	ALS Laboratory Sample ID			L2254045-1
	Sample Date & Time			4/3/2019 2:45:00 PM
	QA/QC Sample Type			N/A
	Units	LOR	Water Licence Criteria ¹	
pH	pH units	0.1	6.0 - 9.5	7.6
Total Suspended Solids	mg/L	2	<120	11.6
Alkalinity, Total (as CaCO ₃)	mg/L	10	-	208
Ammonia, Total (as N)	mg/L	0.02	-	0.248
Total Kjeldahl Nitrogen	mg/L	0.15	-	2.82
Phosphorus, Total	mg/L	0.003	-	8.41
Fecal Coliforms	CFU/100mL	0	10,000	10
BOD	mg/L	2	100	3.4
COD	mg/L	10	-	43
Oil and Grease, Total	mg/L	2	No Visible Sheen	<2.0

Notes:

Grey and bold highlight indicate results that exceeded the applicable water quality criteria.

¹Type 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 - MS-01

Analyte	Sample ID			MS-01
	ALS Laboratory Sample ID			L2254030-1
	Sample Date & Time			4/3/2019 3:00:00 PM
	QA/QC Sample Type			N/A
	Units	LOR	Water Licence Criteria ¹	
pH	pH units	0.1	6.0 - 9.5	7.32
Total Suspended Solids	mg/L	2	35	8.7
Alkalinity, Total (as CaCO3)	mg/L	10	-	110
Ammonia, Total (as N)	mg/L	0.02	4	0.120
Total Kjeldahl Nitrogen	mg/L	0.15	-	1.93
Phosphorus, Total	mg/L	0.003	4	1.050
Fecal Coliforms	CFU/100mL	0	1,000	26
BOD	mg/L	2	30	3.5
COD	mg/L	10	-	35
Oil and Grease, Total	mg/L	2	No Visible Sheen	<2.0

Notes:

Grey and bold highlight indicate results that exceeded the applicable water quality criteria.

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

TABLE 2.3 - WATER QUALITY RESULTS FOR WATER LICENCE MONITORING LOCATION - MS-01B

Analyte	Sample ID			MS-01B
	ALS Laboratory Sample ID			L2254037-1
	Sample Date & Time			4/3/2019 2:45:00 PM
	QA/QC Sample Type			N/A
	Units	LOR	Water Licence Criteria ¹	
pH	pH units	0.1	6.0 - 9.5	7.65
Total Suspended Solids	mg/L	2	35	3.3
Alkalinity, Total (as CaCO ₃)	mg/L	10	-	107
Ammonia, Total (as N)	mg/L	0.02	4	0.060
Total Kjeldahl Nitrogen	mg/L	0.15	-	1.10
Phosphorus, Total	mg/L	0.003	4	1.230
Fecal Coliforms	CFU/100mL	0	1,000	3
BOD	mg/L	2	30	<2.0
COD	mg/L	10	-	19
Oil and Grease, Total	mg/L	2	No Visible Sheen	<2.0

Notes:

Grey and bold highlight indicate results that exceeded the applicable water quality criteria.

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

Table 3: Flow and Volume Measurements-Part I Item 11 - April 2019

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	Km 32 Lake Milne Port Camp Daily Water (m ³) MP-MRY-3	Treated Sewage Effluent (m ³) from MP-01 to Milne Port	Sewage Sludge Removed (m ³) from Milne Port WWTP to Incinerator	Sewage Sludge Removed (m ³) from Milne Port WWTP to PWSP at Milne Port - MP-01a
1-Apr-19	163.3	30.3	63.0	96.0	0.8	45.0	25.0	0.3	0.0
2-Apr-19	98.7	75.7	58.0	108.7	0.9	69.7	53.0	0.3	0.0
3-Apr-19	241.6	60.6	59.0	110.1	0.9	46.0	57.0	0.3	0.0
4-Apr-19	211.9	103.1	63.0	105.5	1.1	70.0	53.0	0.7	0.0
5-Apr-19	204.9	87.7	68.0	110.4	1.3	45.9	50.0	0.7	0.0
6-Apr-19	171.1	15.1	61.0	108.5	1.3	73.7	58.0	0.7	0.0
7-Apr-19	189.2	19.5	64.0	101.8	1.3	58.0	54.0	0.3	0.0
8-Apr-19	132.3	15.1	64.0	92.2	1.2	70.9	52.0	0.3	0.0
9-Apr-19	170.8	12.0	63.0	82.8	1.2	62.2	55.0	0.2	2.8
10-Apr-19	179.9	0.0	60.0	107.2	1.2	68.8	54.0	0.3	0.0
11-Apr-19	168.3	0.0	59.0	127.0	1.2	52.8	54.0	0.4	0.0
12-Apr-19	74.5	26.5	50.0	111.1	1.1	104.4	54.0	0.8	0.0
13-Apr-19	257.3	18.9	56.0	101.6	1.1	76.6	59.0	0.8	0.0
14-Apr-19	193.5	42.2	56.0	113.2	1.2	62.0	52.0	0.8	0.0
15-Apr-19	96.8	75.7	56.0	108.5	1.2	67.6	53.0	0.7	0.0
16-Apr-19	193.6	0.0	52.0	115.8	1.2	73.2	54.0	0.7	0.0
17-Apr-19	167.6	10.3	53.0	93.8	1.2	64.6	55.0	0.6	0.0
18-Apr-19	103.8	13.8	45.0	89.5	0.5	81.4	55.0	0.0	0.0
19-Apr-19	182.0	0.0	48.0	82.9	0.4	72.1	62.0	0.0	10.0
20-Apr-19	137.2	13.3	56.0	71.7	1.1	53.2	54.0	0.4	0.0
21-Apr-19	141.0	2.7	58.0	94.2	1.2	55.8	63.0	0.7	0.0
22-Apr-19	141.1	1.3	45.0	76.1	1.7	58.9	58.0	0.7	0.0
23-Apr-19	137.4	0.0	53.0	74.2	1.7	59.2	61.0	0.7	0.0
24-Apr-19	151.0	19.7	63.0	67.0	0.8	47.0	63.0	0.6	0.0
25-Apr-19	139.3	0.0	50.0	66.1	1.2	64.5	65.0	0.0	0.0
26-Apr-19	128.3	3.4	58.0	68.1	0.9	51.2	63.0	0.3	0.0
27-Apr-19	129.3	3.4	56.0	64.5	1.1	59.1	59.0	0.3	0.0
28-Apr-19	162.9	6.2	56.0	67.9	0.6	50.4	49.0	0.3	5.0
29-Apr-19	145.2	0.0	62.0	77.2	1.0	53.2	58.0	0.3	0.0
30-Apr-19	185.0	6.9	54.0	71.9	1.0	56.7	62.0	0.3	6.0
Total	4798.8	663.5	1709.0	2765.5	32.7	1874.0	1664.0	14.0	23.8

Notes:

WWTP - Waste Water Treatment Plant

PWSP - Polishing Waste Stabilization Pond