



January 30, 2018

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 – December 2018**

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The following is the monthly report for December 2018 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 December 2018, 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 December 2018. 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 December 2018.

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); Fai Ndofor, Sean Joseph (QIA)

**Table 1: Monitoring Program Water Sampling Summary for December 2018**

<b>Monitoring Program Station</b>	<b>Sampling Date</b>	<b>Lab ID#</b>	<b>Comment</b>
<b>Milne Port</b>			
MP-01 (Sewage Treatment Facility)	12/12/2018	L2210761-1	Volume reported daily during discharge
MP-0101 (Field Duplicate of Sewage Treatment Facility)	12/12/2018	L2210761-3	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, location is being retired due to lack of flow.
MP-C-E (Downstream of Construction Area)	N/A	N/A	No flow, location is being retired due to lack of 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.

<b>Monitoring Program Station</b>	<b>Sampling Date</b>	<b>Lab ID#</b>	<b>Comment</b>
MP-Q1-02 (Downstream of Q1 Quarry)	N/A	N/A	No flow.
<b>Mary River Mine Site</b>			
MS-01 (Sewage Treatment Facility)	12/12/2018	L2210728-1	Discharge volume reported daily
MS-0101 (Field Duplicate of Sewage Treatment Facility)	12/12/2018	L2210728-3	Discharge volume reported daily
MS-01b (Sewage Treatment Facility)	12/12/2018	L2210721-1	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	Area is being retired due to lack of flows
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.

<b>Monitoring Program Station</b>	<b>Sampling Date</b>	<b>Lab ID#</b>	<b>Comment</b>
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 not active.	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			L2210761-1	L2210761-3
	Sample Date & Time			12/12/2018 12:30:00 PM	12/12/2018 12:30:00 PM
	QA/QC Sample Type			N/A	Field Duplicate
	Units	LOR	Water Licence Criteria <sup>1</sup>		
pH	pH units	0.1	6.0 - 9.5	7.48	7.43
Total Suspended Solids	mg/L	2	<120	4.8	2.7
Alkalinity, Total (as CaCO <sub>3</sub> )	mg/L	10	-	102	101
Ammonia, Total (as N)	mg/L	0.02	-	1.32	1.19
Total Kjeldahl Nitrogen	mg/L	0.15	-	4.3	4.6
Phosphorus, Total	mg/L	0.003	-	9.97	9.87
Fecal Coliforms	CFU/100mL	0	10,000	0	0
BOD	mg/L	2	100	3	2
COD	mg/L	10	-	33	36
Oil and Grease, Total	mg/L	2	No Visible Sheen	<2.0	<2.0

**Notes:**

Grey and bold highlight indicate results 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 - MS-01**

Analyte	Sample ID			MS-01	MS-0101
	ALS Laboratory Sample ID			L2210728-1	L2210728-3
	Sample Date & Time			12/12/2018 3:00:00 PM	12/12/2018 3:00:00 PM
	QA/QC Sample Type			N/A	Field Duplicate
	Units	LOR	Water Licence Criteria <sup>1</sup>		
pH	pH units	0.1	6.0 - 9.5	7.42	7.45
Total Suspended Solids	mg/L	2	35	14.3	13.1
Alkalinity, Total (as CaCO3)	mg/L	10	-	78	79
Ammonia, Total (as N)	mg/L	0.02	4	0.113	0.086
Total Kjeldahl Nitrogen	mg/L	0.15	-	3.7	4.6
Phosphorus, Total	mg/L	0.003	4	1.2	1.19
Fecal Coliforms	CFU/100mL	0	1,000	670	630
BOD	mg/L	2	30	3.2	2.7
COD	mg/L	10	-	41	40
Oil and Grease, Total	mg/L	2	No Visible Sheen	<2.0	<2.0

**Notes:**

Grey and bold highlight indicate results 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 2.3 - WATER QUALITY RESULTS FOR WATER LICENCE MONITORING LOCATION - MS-01B**

Analyte	Sample ID			MS-01B
	ALS Laboratory Sample ID			L2210721-1
	Sample Date & Time			12/12/2018 2:45:00 PM
	QA/QC Sample Type			N/A
	Units	LOR	Water Licence Criteria <sup>1</sup>	
pH	pH units	0.1	6.0 - 9.5	7.21
Total Suspended Solids	mg/L	2	35	<2.0
Alkalinity, Total (as CaCO <sub>3</sub> )	mg/L	10	-	62
Ammonia, Total (as N)	mg/L	0.02	4	0.479
Total Kjeldahl Nitrogen	mg/L	0.15	-	2.04
Phosphorus, Total	mg/L	0.003	4	1.41
Fecal Coliforms	CFU/100mL	0	1,000	0
BOD	mg/L	2	30	<2.0
COD	mg/L	10	-	21
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.

<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: Flow and Volume Measurements-Part I Item 11 - December 2018

DATE	Camp Lake Freshwater Use (Mine Site Camp) - Daily Water (m³) MS-MRY-1	Treated Sewage Effluent (m³) from MS-01 to Discharge Location #1	Treated Sewage Effluent (m³) from MS-01b to Discharge Location #1	Sewage Sludge Removed (m³) from Mine Site WWTPs to Incinerator	Sewage Sludge Removed (m³) from Mine Site WWTP to PWSP at Mine Site - MS-MRY-4b	Km 32 Lake Milne Port Camp Daily Water (m³) MP-MRY-3	Treated Sewage Effluent (m³) from MP-01 to Milne Port	Sewage Sludge Removed (m³) from Milne Port WWTP to Incinerator	Sewage Sludge Removed (m³) from Milne Port WWTP to PWSP at Milne Port - MP-01a
1-Dec-18	146.1	94.7	51.4	0.7	0.0	60.7	46.0	0.7	0.0
2-Dec-18	167.3	105.3	62.0	0.9	0.0	48.3	58.0	0.3	0.0
3-Dec-18	208.0	152.0	56.0	0.9	0.0	48.1	56.0	0.7	1.0
4-Dec-18	218.1	164.8	53.3	0.7	0.0	52.6	53.0	0.3	0.0
5-Dec-18	192.7	112.9	79.8	1.0	0.0	41.0	53.0	0.0	0.0
6-Dec-18	197.0	136.1	60.9	1.0	0.0	46.0	52.0	0.7	0.0
7-Dec-18	269.1	225.2	43.9	1.0	0.0	43.5	47.0	0.7	0.0
8-Dec-18	146.3	99.9	46.4	1.0	0.0	49.6	53.0	0.7	0.0
9-Dec-18	175.7	122.0	53.7	1.0	0.0	45.9	50.0	0.3	0.0
10-Dec-18	104.4	53.2	51.2	0.9	0.0	56.7	52.0	0.7	0.0
11-Dec-18	144.7	81.8	62.9	0.9	0.0	36.2	52.0	0.0	0.0
12-Dec-18	172.2	102.4	69.8	1.0	0.0	47.3	42.0	0.3	0.0
13-Dec-18	109.2	57.6	51.6	1.0	0.0	45.2	49.0	0.7	0.0
14-Dec-18	126.2	64.4	61.8	0.9	0.0	33.3	47.0	0.7	0.0
15-Dec-18	110.5	65.3	45.2	0.9	0.0	47.9	56.0	0.3	0.0
16-Dec-18	71.4	22.2	49.2	0.7	0.0	22.9	41.0	0.0	0.0
17-Dec-18	99.5	42.1	57.4	1.1	0.0	33.5	47.0	0.0	4.5
18-Dec-18	117.0	58.5	58.5	0.6	0.0	47.4	57.0	0.0	1.6
19-Dec-18	112.6	63.7	48.9	0.9	0.0	47.2	50.0	0.0	1.6
20-Dec-18	136.0	83.9	52.1	0.9	2.8	47.2	50.0	0.0	1.6
21-Dec-18	127.6	82.3	45.3	0.6	2.6	46.7	50.0	0.0	1.6
22-Dec-18	100.6	52.2	48.4	0.6	2.4	40.3	50.0	0.0	1.6
23-Dec-18	105.5	60.3	45.2	0.3	2.8	43.2	50.0	0.0	1.6
24-Dec-18	67.8	15.5	52.3	0.4	2.4	37.1	46.0	0.0	1.6
25-Dec-18	98.1	30.2	67.9	0.6	2.4	42.1	50.0	0.0	1.6
26-Dec-18	126.6	48.6	78.0	0.4	2.4	42.1	47.0	0.0	1.6
27-Dec-18	226.0	158.8	67.2	0.4	0.0	39.0	49.0	0.7	0.0
28-Dec-18	171.4	104.9	66.5	0.9	0.0	40.2	44.0	0.7	0.0
29-Dec-18	114.7	70.1	44.6	0.9	0.0	39.1	50.0	0.7	0.0
30-Dec-18	105.9	63.8	42.1	0.9	0.0	36.1	48.0	0.7	0.0
31-Dec-18	96.5	49.8	46.7	0.7	0.0	36.7	50.0	0.7	0.0
<b>Total</b>	<b>4268.3</b>	<b>2594.8</b>	<b>1673.5</b>	<b>24.6</b>	<b>17.8</b>	<b>1306.7</b>	<b>1495.0</b>	<b>9.9</b>	<b>19.9</b>

Notes:

WWTP - Waste Water Treatment Plant

PWSP - Polishing Waste Stabilization Pond