



December 30, 2013

Manager of Licensing  
Nunavut Water Board  
P.O. Box 119  
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Water Resources Officer, AANDC  
Nunavut District, Nunavut Region  
P.O. Box 100  
Iqaluit, NU X0A 0H0

**RE: Water Licence 2AM-MRY1325 Monthly SNP Report – November 2013**

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The following is the monthly report for November 2013 as required under Part I, Items 21 Water License 2AM-MRY1325. Part I, Item 21 of the above referenced Water Licence state:

*"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 identified area of non-compliance with regulated discharge parameters referred to in Part F"*

**Monitoring Program**

During the month of November 2013, samples were collected at MS-MRY-04, MP-01, and MS-01 as part of the Water Licence Monitoring Program.

Table 1 presents a list of samples/monitoring required under the Water Licenses and the details concerning which water quality samples have been collected along with sample date/lab identification number as appropriate. Analytical water quality testing results received are presented in Table 2. Volumes consumed for domestic water purposes and the volumes of treated sewage effluent and sewage sludge discharged at Mary River Mine Site and Milne Port Camp are presented in 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 November 2013.

**B) Flow and Volume Measurements**

Table 3 provides a breakdown of volume measurements as requested in Part I, Item 9 of the water license for November 2013.



We hope that the information provided in this monthly report is acceptable and should you have any questions regarding this report please contact Jim Millard at 902-403-1337(cell) / 647-693-9447(site) or by e-mail at jim.millard@baffinland.com.

Regards,

A handwritten signature in black ink, appearing to read "J. Millard", written in a cursive style.

James Millard, M.Sc., P.Geo.  
Senior Environmental Superintendent

Attach: Tables 1, 2 and 3

Cc: Justin Hack, Erik Allain (AANDC), Stephen Bathory QIA

**Table 1: Monitoring Program Water Sampling Summary for November 2013**

Monitoring Program Station	Sampling Date	Lab ID#	Comment
<b>Milne Port</b>			
MP-01 (Sewage Treatment Facility)	November 5, 2013 November 12, 2013 November 19, 2013 November 26, 2013	1070666, 1070683 1072304, 1072307 1073897, 1073900 1075773, 1075776	Discharge volume reported daily
MP-0101 (Duplicate for MP-01)	November 26, 2013	1075775, 1075778	QA/QC sample
MP-MRY-3 (Freshwater Intake from Km 32 Lake - Winter)	N/A	N/A	Withdrawal volume Reported Daily
MP-MRY-04 (RBC at Exploration Camp)	N/A	N/A	RBC shut down for season
MP-MRY-07 (Oily Water Treatment for Bladder Farm)	N/A	N/A	Bladder Fuel Storage Facility is the process of being decommissioned
MP-MRY-12 (MRY-12)	N/A	N/A	No flow, frozen conditions
MP-C-A (Downstream of Construction Area)	N/A	N/A	No flow, frozen conditions
MP-C-B (Downstream of Quarry Area)	N/A	N/A	No flow, frozen conditions
MP-C-F (Downstream of Construction Area)	N/A	N/A	No flow, frozen conditions
MP-Q1-01 (Downstream of Q1 Quarry)	N/A	N/A	No flow, frozen conditions
MP-Q1-02 (Downstream of Q1 Quarry)	N/A	N/A	No flow, frozen conditions
<b>Mary River Mine Site</b>			
MS-01 (Sewage Treatment Facility)	November 26, 2013	1075787, 1075789	Discharge volume reported daily
MS-MRY-1 (Freshwater Intake from Camp Lake)	N/A	N/A	Withdrawal volume reported daily
MS-MRY-04 (Exploration Camp RBC)	November 5, 2013 November 12, 2013	1070689, 1070692 1072299, 1072303	Discharge volume reported daily
MS-MRY-04A (Exploration Camp PWSP)	N/A	N/A	No effluent discharge from this facility
MS-MRY-09 (Bulk Sample Pit)	N/A	N/A	No flow, frozen conditions
MS-MRY-10 (Weathered Ore Bulk Sample Stockpile)	N/A	N/A	No flow, frozen conditions
MS-MRY-11 (Bulk Sample Crusher Stockpile)	N/A	N/A	No flow, frozen conditions
MS-MRY-13A (Downstream Non-Hazardous)	N/A	N/A	No flow, frozen conditions

Monitoring Program Station	Sampling Date	Lab ID#	Comment
Landfill)			
MS-MRY-13B (Downstream Non-Hazardous Landfill)	N/A	N/A	No flow, frozen conditions
MS-C-A (Downstream of Construction and Borrow Areas)	N/A	N/A	No flow, frozen conditions
MS-C-B (Downstream of Construction and Borrow Areas)	N/A	N/A	No flow, frozen conditions
MS-C-C (Downstream of Construction and Borrow Areas)	N/A	N/A	No flow, frozen conditions
MS-C-D (Downstream of Construction and Borrow Areas)	N/A	N/A	No flow, frozen conditions
MS-C-E (Downstream of Construction and Borrow Areas)	N/A	N/A	No flow, frozen conditions
MS-C-F (Downstream of Construction and Borrow Areas)	N/A	N/A	No flow, frozen conditions
MQ-C-B (Downstream of QMR2 Quarry)	N/A	N/A	No flow, frozen conditions
MQ-C-D (Downstream of QMR2 Quarry)	N/A	N/A	No flow, frozen conditions
<b>Steensby Port</b>			
Steensby Exploration Camp closed for the season			

**Notes:** During the month of November, the new waste water treatment facility (MS-01) at Mary River Mine Site was operated in a start-up mode and was in the process of being commissioned. During start-up of MS-01, the facility is receiving sewage feed from the existing RBC and construction wash car facilities. MS-01 treated effluent from this location is discharged to the exploration camp PWSPs (MS-MRY-04a) during the start-up phase.

Table 2. Water Chemistry Results - November 2013

Sample Number	Sample ID	Date Sampled	Parameter Name	Result	Units	Lab
<b>Milne Port</b>						
1070666	MP-01	5-Nov-13	Biochemical Oxygen Demand	1	mg/L	Exova
1070683	MP-01	5-Nov-13	Faecal Coliforms	5	CFU/100mL	Exova
1070666	MP-01	5-Nov-13	Total Kjeldahl Nitrogen	1.4	mg/L	Exova
1070666	MP-01	5-Nov-13	N-NH3 (Ammonia)	0.18	mg/L	Exova
1070666	MP-01	5-Nov-13	Oil & Grease - Total	<1	mg/L	Exova
1070666	MP-01	5-Nov-13	Total Suspended Solids	<2	mg/L	Exova
1070666	MP-01	5-Nov-13	pH	8.65	pH units	Exova
1072304	MP-01	12-Nov-13	Biochemical Oxygen Demand	9	mg/L	Exova
1072307	MP-01	12-Nov-13	Faecal Coliforms	300	CFU/100mL	Exova
1072304	MP-01	12-Nov-13	Total Kjeldahl Nitrogen	2.01	mg/L	Exova
1072304	MP-01	12-Nov-13	N-NH3 (Ammonia)	1.88	mg/L	Exova
1072304	MP-01	12-Nov-13	Oil & Grease - Total	5	mg/L	Exova
1072304	MP-01	12-Nov-13	Total Suspended Solids	<2	mg/L	Exova
1072304	MP-01	12-Nov-13	pH	7.84	pH units	Exova
1073897	MP-01	19-Nov-13	Biochemical Oxygen Demand	10	mg/L	Exova
1073900	MP-01	19-Nov-13	Faecal Coliforms	6	CFU/100mL	Exova
1073897	MP-01	19-Nov-13	Total Kjeldahl Nitrogen	6.94	mg/L	Exova
1073897	MP-01	19-Nov-13	N-NH3 (Ammonia)	5.69	mg/L	Exova
1073897	MP-01	19-Nov-13	Oil & Grease - Total	<1	mg/L	Exova
1073897	MP-01	19-Nov-13	Total Suspended Solids	<2	mg/L	Exova
1073897	MP-01	19-Nov-13	pH	8.03	pH units	Exova
1075773	MP-01	26-Nov-13	Biochemical Oxygen Demand	<1	mg/L	Exova
1075776	MP-01	26-Nov-13	Faecal Coliforms	0	CFU/100mL	Exova
1075773	MP-01	26-Nov-13	Total Kjeldahl Nitrogen	1.15	mg/L	Exova
1075773	MP-01	26-Nov-13	N-NH3 (Ammonia)	0.24	mg/L	Exova
1075773	MP-01	26-Nov-13	Oil & Grease - Total	<1	mg/L	Exova
1075773	MP-01	26-Nov-13	Total Suspended Solids	3	mg/L	Exova
1075773	MP-01	26-Nov-13	pH	7.79	pH units	Exova
1075775	MP-0101	26-Nov-13	Biochemical Oxygen Demand	2	mg/L	Exova
1075778	MP-0101	26-Nov-13	Faecal Coliforms	0	CFU/100mL	Exova
1075775	MP-0101	26-Nov-13	Total Kjeldahl Nitrogen	2.26	mg/L	Exova
1075775	MP-0101	26-Nov-13	N-NH3 (Ammonia)	1.89	mg/L	Exova
1075775	MP-0101	26-Nov-13	Oil & Grease - Total	<1	mg/L	Exova
1075775	MP-0101	26-Nov-13	Total Suspended Solids	2	mg/L	Exova
1075775	MP-0101	26-Nov-13	pH	7.8	pH units	Exova
<b>MARY RIVER MINE SITE</b>						
1070689	MS-MRY-04	5-Nov-13	Biochemical Oxygen Demand	6	mg/L	Exova
1070692	MS-MRY-04	5-Nov-13	Faecal Coliforms	0	CFU/100mL	Exova
1070689	MS-MRY-04	5-Nov-13	Total Kjeldahl Nitrogen	2.73	mg/L	Exova
1070689	MS-MRY-04	5-Nov-13	N-NH3 (Ammonia)	0.31	mg/L	Exova
1070689	MS-MRY-04	5-Nov-13	Oil & Grease - Total	<1	mg/L	Exova
1070689	MS-MRY-04	5-Nov-13	Total Phosphorus	1.25	mg/L	Exova
1070689	MS-MRY-04	5-Nov-13	Total Suspended Solids	11	mg/L	Exova
1070689	MS-MRY-04	5-Nov-13	pH	7.81	pH units	Exova
1072299	MS-MRY-04	12-Nov-13	Biochemical Oxygen Demand	29	mg/L	Exova
1072303	MS-MRY-04	12-Nov-13	Faecal Coliforms	0	CFU/100mL	Exova
1072299	MS-MRY-04	12-Nov-13	Total Kjeldahl Nitrogen	11.2	mg/L	Exova
1072299	MS-MRY-04	12-Nov-13	N-NH3 (Ammonia)	4.61	mg/L	Exova
1072299	MS-MRY-04	12-Nov-13	Oil & Grease - Total	<1	mg/L	Exova
1072299	MS-MRY-04	12-Nov-13	Total Phosphorus	3.63	mg/L	Exova
1072299	MS-MRY-04	12-Nov-13	Total Suspended Solids	38	mg/L	Exova
1072299	MS-MRY-04	12-Nov-13	pH	8	pH units	Exova
1075787	MS-01	26-Nov-13	Biochemical Oxygen Demand	<1	mg/L	Exova
1075789	MS-01	26-Nov-13	Faecal Coliforms	1	CFU/100mL	Exova
1075787	MS-01	26-Nov-13	Total Kjeldahl Nitrogen	0.82	mg/L	Exova
1075787	MS-01	26-Nov-13	N-NH3 (Ammonia)	0.43	mg/L	Exova
1075787	MS-01	26-Nov-13	Oil & Grease - Total	<1	mg/L	Exova
1075787	MS-01	26-Nov-13	Total Phosphorus	19	mg/L	Exova
1075787	MS-01	26-Nov-13	Total Suspended Solids	3	mg/L	Exova
1075787	MS-01	26-Nov-13	pH	7.81	pH units	Exova

Exceedances to Water Licence effluent discharge quality limits are indicated by yellow shading. Sample Stations MS-MRY-04 (Mine Site RBC) and MS-01 (Mine Site MBR) showed exceedance for several parameters during November. The discharge from the WWTPs was not to the receiving environment, but was to the PW/SP, a lined and engineered containment pond.

In the spring, after melt, the effluent will be resampled and re-treated if necessary prior to discharge to the receiving environment.

The RBC was in an upset condition due in part to the fluctuating loadings received during the commissioning of the new sewage treatment plant (MS-01).

The RBC is currently being phased out and is soon to be replaced shortly with the above referenced plant.

Note: MP-0101 is a field duplicate of MP-01.

Table 3: Flow and Volume Measurements-Part I Item 11 - November 2013

DATE	Camp Lake Freshwater Use (Mary River Camp) - Daily Potable Water (m <sup>3</sup> ) - MRY-1	Camp Lake Daily Freshwater Use for Other Purposes - (m <sup>3</sup> ) - MRY-1	Camp Lake Daily Freshwater to Milne Inlet Camp - (m <sup>3</sup> ) - MRY-1	Km 32 Lake Milne Inlet Camp Daily Potable Water (m <sup>3</sup> ) MRY-3	Km 32 Lake Milne Inlet Camp Fresh Water Use for Other Purposes (m <sup>3</sup> ) MRY-3	Treated Sewage Effluent (m <sup>3</sup> ) from WWTF to PWSP at Mary River Camp - MRY-4	Sewage Sludge Removed (m <sup>3</sup> ) from Mary River WWTP	Treated Sewage Effluent (m <sup>3</sup> ) from MP-01 to PWSP at Milne Inlet (MP-01a)	Sewage Sludge Removed (m <sup>3</sup> ) from Milne Inlet WWTP
1-Nov	26.1	0.0	15.1	30.3	0.0	26.1	10.0	30.3	0.0
2-Nov	25.7	0.0	15.1	30.3	0.0	25.7	0.0	30.3	0.0
3-Nov	18.9	0.0	15.1	30.3	0.0	18.9	0.0	30.3	2.3
4-Nov	26.5	0.0	15.1	45.4	0.0	26.5	0.0	45.4	0.0
5-Nov	21.6	0.0	15.1	45.4	0.0	21.6	0.0	45.4	0.0
6-Nov	25.4	0.0	0.0	30.3	0.0	25.4	0.0	30.3	0.0
7-Nov	22.7	0.0	0.0	45.4	0.0	22.7	0.0	45.4	0.0
8-Nov	22.7	0.0	0.0	45.4	0.0	22.7	0.0	45.4	2.0
9-Nov	37.5	0.0	0.0	30.3	0.0	37.5	0.0	30.3	0.0
10-Nov	20.1	0.0	0.0	30.3	0.0	20.1	0.0	30.3	0.0
11-Nov	22.7	0.0	0.0	30.3	0.0	22.7	0.0	30.3	0.0
12-Nov	22.3	0.0	0.0	30.3	0.0	22.3	0.0	30.3	0.0
13-Nov	24.2	0.0	0.0	45.4	0.0	24.2	0.0	45.4	0.0
14-Nov	28.4	0.0	0.0	30.3	0.0	28.4	0.0	30.3	0.0
15-Nov	27.6	0.0	0.0	30.3	0.0	27.6	0.0	30.3	0.0
16-Nov	23.5	0.0	0.0	45.4	0.0	23.5	0.0	45.4	2.1
17-Nov	25.7	0.0	0.0	30.3	0.0	25.7	0.0	30.3	0.0
18-Nov	23.5	0.0	0.0	30.3	0.0	23.5	0.0	30.3	0.0
19-Nov	3.8	0.0	0.0	30.3	0.0	3.8	0.0	30.3	0.0
20-Nov	37.9	0.0	0.0	15.1	0.0	37.9	8.0	15.1	0.0
21-Nov	21.6	0.0	0.0	15.1	0.0	21.6	0.0	15.1	0.0
22-Nov	31.4	0.0	0.0	45.4	0.0	31.4	0.0	45.4	0.0
23-Nov	33.7	0.0	0.0	45.4	0.0	33.7	0.0	45.4	0.0
24-Nov	56.0	0.0	0.0	45.4	0.0	56.0	0.0	45.4	0.0
25-Nov	26.5	0.0	0.0	45.4	0.0	26.5	0.0	45.4	0.0
26-Nov	32.2	0.0	0.0	15.1	0.0	32.2	0.0	15.1	2.1
27-Nov	30.3	0.0	0.0	45.4	0.0	30.3	0.0	45.4	0.0
28-Nov	45.8	0.0	0.0	30.3	0.0	45.8	0.0	30.3	0.0
29-Nov	26.5	0.0	0.0	45.4	0.0	26.5	0.0	45.4	0.0
30-Nov	20.4	0.0	0.0	30.3	0.0	20.4	0.0	30.3	0.0
<b>Total</b>	<b>811.2</b>	<b>0.0</b>	<b>75.7</b>	<b>1044.8</b>	<b>0.0</b>	<b>811.2</b>	<b>18.0</b>	<b>1044.8</b>	<b>8.5</b>

Notes:

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