



March 2, 2014

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

Water Resources Officer, AANDC
Nunavut District, Nunavut Region
P.O. Box 100
Iqaluit, NU X0A 0H0

RE: Water License 2AM-MRY1325 Monthly SNP Report – January 2014

The following is the monthly report for January 2014 as required under Part I, Item 21 of Type 'A' Water License 2AM-MRY1325. 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 identified area of non-compliance with regulated discharge parameters referred to in Part F"*

Monitoring Program

During the month of January 2014, 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 January 2014.

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 January 2014.



We trust 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) / 647-364-8820 Ext.6010(site) or by e-mail at jim.millard@baffinland.com.

Regards,

A handwritten signature in black ink, appearing to read "J. Millard", written over a horizontal line.

James Millard, M.Sc., P.Geo.
Environmental Manager

Attach: Tables 1, 2 and 3

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

Table 1: Monitoring Program Water Sampling Summary for January 2014

Monitoring Program Station	Sampling Date	Lab ID#	Comment
Milne Port			
MP-01 (Sewage Treatment Facility)	2 JAN 14 7 JAN 14 14 JAN 14 21 JAN 14 28 JAN 14	1080947, 1080951 1080948, 1080952 1081261, 1081264 1082633, 1082635 1083721, 1083723 1084752, 1084754	Discharge volume reported daily
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
Mary River Mine Site			
MS-01 (Sewage Treatment Facility)	2 JAN 14 7 JAN 14 23 JAN 14 28 JAN 14 30 JAN 14	1080954, 1080958 1081252, 1081254 1084223, 1084224 1084737, 1084751 1085204, 1085205	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)	2 JAN 14 7 JAN 14 23 JAN 14 28 JAN 14	1080941, 1080943 1081258, 1081260 1084226, 1084227 1084720, 1084722	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)	N/A	N/A	No flow, frozen conditions

Monitoring Program Station	Sampling Date	Lab ID#	Comment
Stockpile)			
MS-MRY-11 (Bulk Sample Crusher Stockpile)	N/A	N/A	No flow, frozen conditions
MS-MRY-13A (Downstream Non-Hazardous Landfill)	N/A	N/A	No flow, frozen conditions
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
Steensby Port			
Steensby Exploration Camp closed for the season			

Notes: During the month of January, 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 - January 2014

Sample Number	Sample ID	Date Sampled	Parameter Name	Result	Units	Lab
MILNE PORT						
1080947	MP-01	2-Jan-14	Biochemical Oxygen Demand	2	mg/L	Exova
1080951	MP-01	2-Jan-14	Faecal Coliforms	0	ct/100mL	Exova
1080947	MP-01	2-Jan-14	Total Kjeldahl Nitrogen	0.32	mg/L	Exova
1080947	MP-01	2-Jan-14	N-NH3 (Ammonia)	0.19	mg/L	Exova
1080947	MP-01	2-Jan-14	Oil & Grease - Total	<1	mg/L	Exova
1080947	MP-01	2-Jan-14	Total Suspended Solids	<2	mg/L	Exova
1080947	MP-01	2-Jan-14	pH	7.82	pH units	Exova
1080948	**MP-0101	2-Jan-14	Biochemical Oxygen Demand	2	mg/L	Exova
1080952	**MP-0101	2-Jan-14	Faecal Coliforms	0	ct/100mL	Exova
1080948	**MP-0101	2-Jan-14	Total Kjeldahl Nitrogen	0.26	mg/L	Exova
1080948	**MP-0101	2-Jan-14	N-NH3 (Ammonia)	0.11	mg/L	Exova
1080948	**MP-0101	2-Jan-14	Oil & Grease - Total	<1	mg/L	Exova
1080948	**MP-0101	2-Jan-14	Total Suspended Solids	<2	mg/L	Exova
1080948	**MP-0101	2-Jan-14	pH	7.84	pH units	Exova
1081261	MP-01	7-Jan-14	Biochemical Oxygen Demand	<1	mg/L	Exova
1081264	MP-01	7-Jan-14	Faecal Coliforms	0	ct/100mL	Exova
1081261	MP-01	7-Jan-14	Total Kjeldahl Nitrogen	1.2	mg/L	Exova
1081261	MP-01	7-Jan-14	N-NH3 (Ammonia)	0.11	mg/L	Exova
1081261	MP-01	7-Jan-14	Oil & Grease - Total	3	mg/L	Exova
1081261	MP-01	7-Jan-14	Total Suspended Solids	<2	mg/L	Exova
1081261	MP-01	7-Jan-14	pH	7.91	pH units	Exova
1082633	MP-01	14-Jan-14	Biochemical Oxygen Demand	1	mg/L	Exova
1082635	MP-01	14-Jan-14	Faecal Coliforms	0	ct/100mL	Exova
1082633	MP-01	14-Jan-14	Total Kjeldahl Nitrogen	1.98	mg/L	Exova
1082633	MP-01	14-Jan-14	N-NH3 (Ammonia)	0.09	mg/L	Exova
1082633	MP-01	14-Jan-14	Oil & Grease - Total	<1	mg/L	Exova
1082633	MP-01	14-Jan-14	Total Suspended Solids	<2	mg/L	Exova
1082633	MP-01	14-Jan-14	pH	7.85	pH units	Exova
1083721	MP-01	21-Jan-14	Biochemical Oxygen Demand	2	mg/L	Exova
1083723	MP-01	21-Jan-14	Faecal Coliforms	0	ct/100mL	Exova
1083721	MP-01	21-Jan-14	Total Kjeldahl Nitrogen	1.39	mg/L	Exova
1083721	MP-01	21-Jan-14	N-NH3 (Ammonia)	0.13	mg/L	Exova
1083721	MP-01	21-Jan-14	Oil & Grease - Total	<1	mg/L	Exova
1083721	MP-01	21-Jan-14	Total Suspended Solids	<2	mg/L	Exova
1083721	MP-01	21-Jan-14	pH	7.92	pH units	Exova
1084752	MP-01	28-Jan-14	Biochemical Oxygen Demand	5	mg/L	Exova
1084754	MP-01	28-Jan-14	Faecal Coliforms	0	ct/100mL	Exova
1084752	MP-01	28-Jan-14	Total Kjeldahl Nitrogen	0.63	mg/L	Exova
1084752	MP-01	28-Jan-14	N-NH3 (Ammonia)	0.13	mg/L	Exova
1084752	MP-01	28-Jan-14	Oil & Grease - Total	<1	mg/L	Exova
1084752	MP-01	28-Jan-14	Total Suspended Solids	3.4	mg/L	Exova
1084752	MP-01	28-Jan-14	pH	7.92	pH units	Exova
1084752	MP-01	28-Jan-14	*Toxicity	Non-lethal		Exova
MARY RIVER MINE SITE						
1080941	MS-MRY-04	2-Jan-14	Biochemical Oxygen Demand	12	mg/L	Exova
1080943	MS-MRY-04	2-Jan-14	Faecal Coliforms	5	ct/100mL	Exova
1080941	MS-MRY-04	2-Jan-14	Total Kjeldahl Nitrogen	4.12	mg/L	Exova
1080941	MS-MRY-04	2-Jan-14	N-NH3 (Ammonia)	0.66	mg/L	Exova
1080941	MS-MRY-04	2-Jan-14	Oil & Grease - Total	5	mg/L	Exova
1080941	MS-MRY-04	2-Jan-14	Total Phosphorus	2.49	mg/L	Exova
1080941	MS-MRY-04	2-Jan-14	Total Suspended Solids	21	mg/L	Exova
1080941	MS-MRY-04	2-Jan-14	pH	7.59	pH units	Exova
1081258	MS-MRY-04	7-Jan-14	Biochemical Oxygen Demand	21	mg/L	Exova
1081260	MS-MRY-04	7-Jan-14	Faecal Coliforms	1260	ct/100mL	Exova
1081258	MS-MRY-04	7-Jan-14	Total Kjeldahl Nitrogen	8.71	mg/L	Exova
1081258	MS-MRY-04	7-Jan-14	N-NH3 (Ammonia)	5.19	mg/L	Exova
1081258	MS-MRY-04	7-Jan-14	Oil & Grease - Total	<1	mg/L	Exova
1081258	MS-MRY-04	7-Jan-14	Total Phosphorus	4.16	mg/L	Exova
1081258	MS-MRY-04	7-Jan-14	Total Suspended Solids	26	mg/L	Exova
1081258	MS-MRY-04	7-Jan-14	pH	7.75	pH units	Exova
1084226	MS-MRY-04	23-Jan-14	Biochemical Oxygen Demand	12	mg/L	Exova
1084227	MS-MRY-04	23-Jan-14	Faecal Coliforms	190	ct/100mL	Exova
1084226	MS-MRY-04	23-Jan-14	Total Kjeldahl Nitrogen	18.5	mg/L	Exova
1084226	MS-MRY-04	23-Jan-14	N-NH3 (Ammonia)	17.2	mg/L	Exova
1084226	MS-MRY-04	23-Jan-14	Oil & Grease - Total	3	mg/L	Exova
1084226	MS-MRY-04	23-Jan-14	Total Phosphorus	3.47	mg/L	Exova
1084226	MS-MRY-04	23-Jan-14	Total Suspended Solids	9	mg/L	Exova
1084226	MS-MRY-04	23-Jan-14	pH	7.66	pH units	Exova
1084720	MS-MRY-04	28-Jan-14	Biochemical Oxygen Demand	19	mg/L	Exova
1084722	MS-MRY-04	28-Jan-14	Faecal Coliforms	160	ct/100mL	Exova
1084720	MS-MRY-04	28-Jan-14	Total Kjeldahl Nitrogen	10.7	mg/L	Exova
1084720	MS-MRY-04	28-Jan-14	N-NH3 (Ammonia)	7.53	mg/L	Exova
1084720	MS-MRY-04	28-Jan-14	Oil & Grease - Total	2	mg/L	Exova
1084720	MS-MRY-04	28-Jan-14	Total Phosphorus	4.11	mg/L	Exova
1084720	MS-MRY-04	28-Jan-14	Total Suspended Solids	19	mg/L	Exova
1084720	MS-MRY-04	28-Jan-14	pH	7.51	pH units	Exova
1080954	MS-01	2-Jan-14	Biochemical Oxygen Demand	22	mg/L	Exova
1080958	MS-01	2-Jan-14	Faecal Coliforms	400	ct/100mL	Exova
1080954	MS-01	2-Jan-14	Total Kjeldahl Nitrogen	18.5	mg/L	Exova
1080954	MS-01	2-Jan-14	N-NH3 (Ammonia)	8.52	mg/L	Exova
1080954	MS-01	2-Jan-14	Oil & Grease - Total	<1	mg/L	Exova
1080954	MS-01	2-Jan-14	Total Phosphorus	29.7	mg/L	Exova
1080954	MS-01	2-Jan-14	Total Suspended Solids	28	mg/L	Exova
1080954	MS-01	2-Jan-14	pH	7.5	pH units	Exova
1081252	MS-01	7-Jan-14	Biochemical Oxygen Demand	53	mg/L	Exova
1081254	MS-01	7-Jan-14	Faecal Coliforms	140	ct/100mL	Exova
1081252	MS-01	7-Jan-14	Total Kjeldahl Nitrogen	18.9	mg/L	Exova
1081252	MS-01	7-Jan-14	N-NH3 (Ammonia)	16.7	mg/L	Exova
1081252	MS-01	7-Jan-14	Oil & Grease - Total	<1	mg/L	Exova
1081252	MS-01	7-Jan-14	Total Phosphorus	21.9	mg/L	Exova

1081252	MS-01	7-Jan-14	Total Suspended Solids	10	mg/L	Exova
1081252	MS-01	7-Jan-14	pH	7.34	pH units	Exova
1084223	MS-01	23-Jan-14	Biochemical Oxygen Demand	2	mg/L	Exova
1084224	MS-01	23-Jan-14	Faecal Coliforms	17	ct/100mL	Exova
1084223	MS-01	23-Jan-14	Total Kjeldahl Nitrogen	1.19	mg/L	Exova
1084223	MS-01	23-Jan-14	N-NH3 (Ammonia)	0.09	mg/L	Exova
1084223	MS-01	23-Jan-14	Oil & Grease - Total	<1	mg/L	Exova
1084223	MS-01	23-Jan-14	Total Phosphorus	12.7	mg/L	Exova
1084223	MS-01	23-Jan-14	Total Suspended Solids	<2	mg/L	Exova
1084223	MS-01	23-Jan-14	pH	7.98	pH units	Exova
1084737	MS-01	28-Jan-14	Biochemical Oxygen Demand	4	mg/L	Exova
1084751	MS-01	28-Jan-14	Faecal Coliforms	140	ct/100mL	Exova
1084737	MS-01	28-Jan-14	Total Kjeldahl Nitrogen	0.76	mg/L	Exova
1084737	MS-01	28-Jan-14	N-NH3 (Ammonia)	0.6	mg/L	Exova
1084737	MS-01	28-Jan-14	Oil & Grease - Total	<1	mg/L	Exova
1084737	MS-01	28-Jan-14	Total Phosphorus	0.17	mg/L	Exova
1084737	MS-01	28-Jan-14	Total Suspended Solids	4	mg/L	Exova
1084737	MS-01	28-Jan-14	pH	7.84	pH units	Exova
1084737	MS-01	28-Jan-14	*Toxicity	Non-lethal		Exova
1085204	MS-01	30-Jan-14	Biochemical Oxygen Demand	6	mg/L	Exova
1085205	MS-01	30-Jan-14	Faecal Coliforms	130	ct/100mL	Exova
1085204	MS-01	30-Jan-14	Total Kjeldahl Nitrogen	1.01	mg/L	Exova
1085204	MS-01	30-Jan-14	N-NH3 (Ammonia)	0.32	mg/L	Exova
1085204	MS-01	30-Jan-14	Oil & Grease - Total	<1	mg/L	Exova
1085204	MS-01	30-Jan-14	Total Phosphorus	0.26	mg/L	Exova
1085204	MS-01	30-Jan-14	Total Suspended Solids	16	mg/L	Exova
1085204	MS-01	30-Jan-14	pH	7.79	pH units	Exova

Non-compliances to the Water Licence are indicated by yellow shading. Sample Stations MS -MRY-04 (Mine Site RBC) and MS-01 (Mine Site MBR) showed non-compliance for several parameters during January. The discharge from the WWTPs was not to the receiving environment, but was to the PWSP, 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 non-compliances for MS-MRY-04 and MS-1 were due to the decommissioning and commissioning process (for the exploration camp RBC and the new MBR, respectively) which caused upset conditions in the plants. The RBC (MS-MRY-04) is currently being phased out and is soon to be replaced shortly with the new MBR plant.

*Note: Acute lethality to Rainbow trout, *Oncorhynchus mykiss* (as per Environment Canada's Environmental Protection Series Method EPS/1/RM/13)
Acute lethality to *Daphnia magna* (as per Environment Canada's Environmental Protection Series Biological Test Method EPS/1/RM/14).

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

Table 3: Flow and Volume Measurements-Part I Item 11 - January 2014

DATE	Camp Lake Freshwater Use (Mary River Camp) - Daily Potable Water (m³) - MRY-1	Camp Lake Daily Freshwater Use for Other Purposes - (m³) - MRY-1	Camp Lake Daily Freshwater to Milne Inlet Camp - (m³) - MRY-1	Km 32 Lake Milne Inlet Camp Daily Potable Water (m³) MRY-3	Km 32 Lake Milne Inlet Camp Fresh Water Use for Other Purposes (m³) MRY-3	Treated Sewage Effluent (m³) from WWTF to PWSP at Mary River Camp - MRY-4	Sewage Sludge Removed (m³) from Mary River WWTP	Treated Sewage Effluent (m³) from MP-01 to Milne Inlet	Sewage Sludge Removed (m³) from Milne Inlet WWTP
1-Jan	20.1	0.0	0.0	0.0	0.0	20.1	0.0	0.0	0.0
2-Jan	25.0	0.0	0.0	7.6	0.0	25.0	0.0	7.6	0.0
3-Jan	14.8	0.0	0.0	30.3	0.0	14.8	0.0	30.3	0.0
4-Jan	18.2	0.0	0.0	30.3	0.0	18.2	0.0	30.3	0.0
5-Jan	21.6	0.0	0.0	15.1	0.0	21.6	0.0	15.1	0.0
6-Jan	23.1	0.0	0.0	26.5	0.0	23.1	0.0	26.5	0.0
7-Jan	31.8	30.3	0.0	15.1	0.0	31.8	0.0	15.1	0.0
8-Jan	18.9	0.0	0.0	15.1	0.0	18.9	0.0	15.1	0.0
9-Jan	18.9	0.0	0.0	30.3	0.0	18.9	0.0	30.3	0.0
10-Jan	45.0	0.0	0.0	30.3	0.0	45.0	0.0	30.3	0.0
11-Jan	33.3	0.0	0.0	30.3	0.0	33.3	0.0	30.3	0.0
12-Jan	37.9	0.0	0.0	15.1	0.0	37.9	0.0	15.1	0.0
13-Jan	27.6	0.0	0.0	45.4	0.0	27.6	0.0	45.4	0.0
14-Jan	28.8	0.0	0.0	15.1	0.0	28.8	0.0	15.1	0.0
15-Jan	25.0	0.0	0.0	45.4	0.0	25.0	0.0	45.4	0.0
16-Jan	24.2	0.0	0.0	15.1	0.0	24.2	0.0	15.1	0.0
17-Jan	46.2	0.0	0.0	15.1	0.0	46.2	0.0	15.1	0.0
18-Jan	40.1	0.0	0.0	30.3	0.0	40.1	0.0	30.3	0.0
19-Jan	44.7	0.0	0.0	30.3	0.0	44.7	0.0	30.3	0.0
20-Jan	45.4	0.0	0.0	30.3	0.0	45.4	0.0	30.3	0.0
21-Jan	23.8	0.0	0.0	30.3	0.0	23.8	0.0	30.3	0.0
22-Jan	45.4	0.0	0.0	15.1	0.0	45.4	0.0	15.1	0.0
23-Jan	42.4	0.0	0.0	15.1	0.0	42.4	0.0	15.1	0.0
24-Jan	36.7	0.0	0.0	22.7	0.0	36.7	0.0	22.7	0.0
25-Jan	26.5	0.0	0.0	45.4	0.0	26.5	0.0	45.4	0.0
26-Jan	17.8	0.0	0.0	30.3	0.0	17.8	0.0	30.3	0.0
27-Jan	39.0	0.0	0.0	15.1	0.0	39.0	0.0	15.1	0.0
28-Jan	38.2	0.0	0.0	15.1	0.0	38.2	0.0	15.1	0.0
29-Jan	39.0	0.0	0.0	30.3	0.0	39.0	0.0	30.3	0.0
30-Jan	21.6	0.0	0.0	15.1	0.0	21.6	0.0	15.1	0.0
31-Jan	18.2	0.0	0.0	15.1	0.0	18.2	0.0	15.1	0.0
Total	939.2	30.3	0.0	723.0	0.0	939.2	0.0	723.0	0.0

Notes:

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