

October 2, 2009

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

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

#### RE: Water License 2BB-MRY0710 Monthly SNP Report - August 2009

Following is the monthly report for August 2009 as required under Part I, Item 19 of Water License 2BB-MRY0710.

#### **SNP Sampling**

During the month of August 2009, samples were collected at MRY-4, MRY-4b, MRY-4c (corresponding to treated discharge from PWSP No. 2, and PWSP No. 3, respectively), MRY-7 and MRY-10 as part of the SNP sampling program. Surveys were completed at MRY-8/9, MRY-11, and MRY-12 during August with no observable discharge/run off from these areas. Table 1 presents a list of samples/monitoring required under the Water License and the details concerning which water quality samples have been collected along with sample date/lab identification number as appropriate. Analytical water quality and acute toxicity testing results received as part of the SNP program are presented in Table 2. Volumes consumed for domestic water and exploration drilling purposes at Mary River have been collected and are attached in Table 3.

# **SNP Results**

#### A) Water Sampling and Analysis Results

Table 2 provides the results related to SNP sampling requirements for August 2009.

# B) Flow and Volume Measurements

Table 3 provides a breakdown of volume measurements as requested in Part I, Item 7 of the water license for August 2009.

We hope that the information provided in this monthly report is acceptable and should you have any questions regarding this report please contact the undersigned at 403-450-8843 or by e-mail at jim.millard@baffinland.com.

Regards,

Jim Millard Senior Environmental Superintendent

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Attach: Tables 1, 2 and 3 (three pages)

Cc: Andrew Keim, INAC, Stephen Bathory QIA



**Table 1: SNP Water Sampling Summary** 

SNP Station	Sampling Date	Lab ID#	Comment			
MRY-1			Volume reported daily			
MRY-2			N/A for August			
MRY-3			N/A for August			
MRY-4	10-Aug-09 31-Aug-09	735606, 735509 741119, 740983	Volume reported daily			
MRY-4b	23-Aug-09	739153, 739183	Pre-discharge sample.			
MRY-4b01	23-Aug-09	739154, 739184	MRY4b01 is a field duplicate of above.			
MRY-4b	27-Aug-09	740376, 740389, 740382	Volume reported daily			
	29-Aug-09	740885, 740889				
	31-Aug-09	740932, 740982				
		740931				
MRY-4c	18-Aug-09	738260, 738269	Pre-discharge sample			
MRY-4c	23-Aug-09	739152	Volume reported daily			
	24-Aug-09	739408, 739456, 739409				
MRY-5			N/A for August			
MRY-6			N/A for August			
MRY-7 Batch 3b	4-Aug-09	734502				
MRY-8 / 9			Run off was not observed during the			
			August surveys.			
MRY-10	18-Aug-09	738367				
MRY-11			Run off was not observed during the			
			August surveys.			
MRY-12			Run off was not observed during the			
			August surveys.			

nple Number	Chemistry Result Sample ID	Date Sampled	Parameter Name	Result	Unit	Lab
735606	MRY-4	10-Aug-09	Faecal Coliforms	<10	ct/100 ml	Exova Accur
735509	MRY-4	10-Aug-09	Acute Toxicity	not lethal	00 100 1111	Exova
741119	MRY-4	31-Aug-09	Biological Oxygen Demand	20	ma/l	Exova Accur
		•			mg/L	
741119	MRY-4	31-Aug-09	pH	7.83	pH units	Exova Accur
741119	MRY-4	31-Aug-09	Total Suspended Soilds	23	mg/L	Exova Accur
741119	MRY-4	31-Aug-09	Oil and Grease	1	mg/L	Exova Accur
740983	MRY-4	31-Aug-09	Faecal Coliforms	0	ct/100 ml	Exova Accur
739153	MRY-4b	23-Aug-09	Biological Oxygen Demand	6	mg/L	Exova Accur
739153	MRY-4b	23-Aug-09	pH	7.44	pH units	Exova Accur
		·	Total Suspended Soilds		,	
739153	MRY-4b	23-Aug-09	<u> </u>	13	mg/L	Exova Accur
739153	MRY-4b	23-Aug-09	Oil and Grease	<1	mg/L	Exova Accur
739183	MRY-4b	23-Aug-09	Faecal Coliforms	<10	ct/100 ml	Exova Accur
739154	MRY-4b01	23-Aug-09	Biological Oxygen Demand	5	mg/L	Exova Accut
739154	MRY-4b01	23-Aug-09	рН	7.47	pH units	Exova Accut
739154	MRY-4b01	23-Aug-09	Total Suspended Soilds	9	mg/L	Exova Accut
739154	MRY-4b01	23-Aug-09	Oil and Grease	<1	mg/L	Exova Accur
739184	MRY-4b01	23-Aug-09	Faecal Coliforms	<10	ct/100 ml	Exova Accur
740376	MRY-4b			8		Exova Accut
		27-Aug-09	Biological Oxygen Demand		mg/L	
740376	MRY-4b	27-Aug-09	pH	7.58	pH units	Exova Accur
740376	MRY-4b	27-Aug-09	Total Suspended Soilds	10	mg/L	Exova Accur
740376	MRY-4b	27-Aug-09	Oil and Grease	<1	mg/L	Exova Accur
740380	MRY-4b	27-Aug-09	Faecal Coliforms	<10	ct/100 ml	Exova Accut
740382	MRY-4b	27-Aug-09	Acute Toxicity	not lethal		Exova
740885	MRY-4b	29-Aug-09	Biological Oxygen Demand	8	mg/L	Exova Accut
740885	MRY-4b	29-Aug-09	pH	7.45	pH units	Exova Accur
740885	MRY-4b	·	Total Suspended Soilds	11	,	Exova Accur
		29-Aug-09	· · · · · · · · · · · · · · · · · · ·		mg/L	
740885	MRY-4b	29-Aug-09	Oil and Grease	2	mg/L	Exova Accut
740889	MRY-4b	29-Aug-09	Faecal Coliforms	<10	ct/100 ml	Exova Accut
740932	MRY-4b	31-Aug-09	Biological Oxygen Demand	8	mg/L	Exova Accur
740932	MRY-4b	31-Aug-09	рН	7.56	pH units	Exova Accut
740932	MRY-4b	31-Aug-09	Total Suspended Soilds	16	mg/L	Exova Accur
740932	MRY-4b	31-Aug-09	Oil and Grease	<1	mg/L	Exova Accur
740982	MRY-4b	31-Aug-09	Faecal Coliforms	0	ct/100 ml	Exova Accur
740931	MRY-4b	31-Aug-09	Acute Toxicity	not lethal	00 100 1111	Exova
740331	IVII I I -4D	31-Aug-03	Acute Toxicity			LXUVA
738260	MRY-4c	18-Aug-09	Biological Oxygen Demand	5	mg/L	Exova Accut
738260	MRY-4c	18-Aug-09	pН	7.57	pH units	Exova Accut
738260	MRY-4c	18-Aug-09	Total Suspended Soilds	13	mg/L	Exova Accut
738260	MRY-4c	18-Aug-09	Oil and Grease	<1	mg/L	Exova Accut
738269	MRY-4c	18-Aug-09	Faecal Coliforms	0	ct/100 ml	Exova Accur
739152	MRY-4c	23-Aug-09	Biological Oxygen Demand	4	mg/L	Exova Accur
						Exova Accur
739152	MRY-4c	23-Aug-09	pH	7.54	pH units	
739152	MRY-4c	23-Aug-09	Total Suspended Soilds	10	mg/L	Exova Accur
739152	MRY-4c	23-Aug-09	Oil and Grease	<1	mg/L	Exova Accut
739408	MRY-4c	24-Aug-09	Biological Oxygen Demand	6	mg/L	Exova Accut
739408	MRY-4c	24-Aug-09	рН	7.87	pH units	Exova Accur
739408	MRY-4c	24-Aug-09	Total Suspended Soilds	7	mg/L	Exova Accut
739408	MRY-4c	24-Aug-09	Oil and Grease	<1	mg/L	Exova Accur
	MRY-4c	24-Aug-09	Faecal Coliforms	<10	ct/100 ml	Exova Accur
739456		/ lug 00	Acute Toxicity	not lethal	55, 100 1111	Exova
739456 739409		24-Aug-09		nociciidi	1	LAUVA
739409	MRY-4c	24-Aug-09				
		24-Aug-09 4-Aug-09	Ethylbenzene	<0.5	ug/L	
739409	MRY-4c			<0.5 <0.5	ug/L ug/L	
739409 734502	MRY-4c MRY-7 Batch 3b	4-Aug-09	Ethylbenzene		_	Exova Accur
739409 734502 734502 734502	MRY-4c MRY-7 Batch 3b MRY-7 Batch 3b MRY-7 Batch 3b	4-Aug-09 4-Aug-09 4-Aug-09	Ethylbenzene Toluene Benzene	<0.5 <0.5	ug/L ug/L	Exova Accur Exova Accur
739409 734502 734502 734502 734502	MRY-4c MRY-7 Batch 3b	4-Aug-09 4-Aug-09 4-Aug-09 4-Aug-09	Ethylbenzene Toluene Benzene Oil &Grease	<0.5 <0.5 8.0000	ug/L ug/L mg/L	Exova Accur Exova Accur Exova Accur
739409 734502 734502 734502 734502 734500	MRY-4c MRY-7 Batch 3b	4-Aug-09 4-Aug-09 4-Aug-09 4-Aug-09 4-Aug-09	Ethylbenzene Toluene Benzene Oil &Grease Lead	<0.5 <0.5 8.0000 <0.001	ug/L ug/L mg/L mg/L	Exova Accur Exova Accur Exova Accur Exova Accur
739409 734502 734502 734502 734502	MRY-4c MRY-7 Batch 3b	4-Aug-09 4-Aug-09 4-Aug-09 4-Aug-09	Ethylbenzene Toluene Benzene Oil &Grease	<0.5 <0.5 8.0000	ug/L ug/L mg/L	Exova Accur Exova Accur Exova Accur Exova Accur
739409 734502 734502 734502 734502 734500	MRY-4c MRY-7 Batch 3b	4-Aug-09 4-Aug-09 4-Aug-09 4-Aug-09 4-Aug-09	Ethylbenzene Toluene Benzene Oil &Grease Lead	<0.5 <0.5 8.0000 <0.001	ug/L ug/L mg/L mg/L	Exova Accun Exova Accun Exova Accun Exova Accun
734502 734502 734502 734502 734502 734500 738367 738367	MRY-4c  MRY-7 Batch 3b  MRY-10  MRY-10	4-Aug-09 4-Aug-09 4-Aug-09 4-Aug-09 4-Aug-09 18-Aug-09	Ethylbenzene Toluene Benzene Oil &Grease Lead Total Arsenic Total Copper	<0.5 <0.5 8.0000 <0.001 <0.10 1.37	ug/L ug/L mg/L mg/L ug/L ug/L	Exova Accur Exova Accur Exova Accur Exova Accur Exova Accur Exova Accur
739409 734502 734502 734502 734502 734500 738367 738367 738367	MRY-4c  MRY-7 Batch 3b  MRY-10  MRY-10  MRY-10	4-Aug-09 4-Aug-09 4-Aug-09 4-Aug-09 4-Aug-09 18-Aug-09 18-Aug-09	Ethylbenzene Toluene Benzene Oil &Grease Lead Total Arsenic Total Copper Total Lead	<0.5 <0.5 8.0000 <0.001 <0.10 1.37 0.27	ug/L ug/L mg/L mg/L ug/L ug/L ug/L	Exova Accui Exova Accui Exova Accui Exova Accui Exova Accui Exova Accui Exova Accui
739409 734502 734502 734502 734502 734500 738367 738367 738367 738367	MRY-4c  MRY-7 Batch 3b  MRY-10  MRY-10  MRY-10  MRY-10  MRY-10	4-Aug-09 4-Aug-09 4-Aug-09 4-Aug-09 4-Aug-09 18-Aug-09 18-Aug-09 18-Aug-09	Ethylbenzene Toluene Benzene Oil &Grease Lead Total Arsenic Total Copper Total Lead Total Nickel	<0.5 <0.5 8.0000 <0.001 <0.10 1.37 0.27 1.53	ug/L ug/L mg/L mg/L ug/L ug/L ug/L ug/L ug/L	Exova Accui Exova Accui Exova Accui Exova Accui Exova Accui Exova Accui Exova Accui Exova Accui
739409  734502 734502 734502 734502 734500  738367 738367 738367 738367 738367	MRY-4c  MRY-7 Batch 3b  MRY-7 Batch 3b  MRY-7 Batch 3b  MRY-7 Batch 3b  MRY-1 Batch 3b  MRY-10  MRY-10  MRY-10  MRY-10  MRY-10  MRY-10  MRY-10  MRY-10	4-Aug-09 4-Aug-09 4-Aug-09 4-Aug-09 4-Aug-09 18-Aug-09 18-Aug-09 18-Aug-09 18-Aug-09	Ethylbenzene Toluene Benzene Oil &Grease Lead Total Arsenic Total Copper Total Lead Total Nickel Total Zinc	<0.5 <0.5 8.0000 <0.001 <0.10 1.37 0.27 1.53 1.6	ug/L ug/L mg/L mg/L ug/L ug/L ug/L ug/L ug/L	Exova Accun Exova Accun Exova Accun Exova Accun Exova Accun Exova Accun Exova Accun Exova Accun Exova Accun
739409 734502 734502 734502 734502 734500 738367 738367 738367 738367	MRY-4c  MRY-7 Batch 3b  MRY-10  MRY-10  MRY-10  MRY-10  MRY-10	4-Aug-09 4-Aug-09 4-Aug-09 4-Aug-09 4-Aug-09 18-Aug-09 18-Aug-09 18-Aug-09	Ethylbenzene Toluene Benzene Oil &Grease Lead Total Arsenic Total Copper Total Lead Total Nickel	<0.5 <0.5 8.0000 <0.001 <0.10 1.37 0.27 1.53	ug/L ug/L mg/L mg/L ug/L ug/L ug/L ug/L ug/L	Exova Accuu Fxova Accuu Fxova Accuu Field

Notes: Samples MRY-4b and MRY-4c correspond to Mary River Camp PWSP No. 2, and PWSP No. 3, respectively.

Table 3: Fl	ow and Volume Me	easurements-Part I	Item 7 - August 20	09	Т	T =	Т
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	Treated Sewage Effluent (m <sup>3</sup> ) from WWTF to PWSP at Mary River Camp - MRY-4	Sewage Sludge Removed (m³) from Mary River WWTP	Daily Drill Water Use (m³) - Exploration	Treated Sewage Effluent (m³) from PWSP to Sheardown Lake (MRY-4a,b,c)	Treated Sewage Effluent (m <sup>3</sup> ) from PWSP to Milne Inlet (MRY-5a)
1-Aug	29.4	0.0	29.4	0	44.3	0.0	0.0
2-Aug	0.0	0.0	0.0	0	31.6	0.0	0.0
3-Aug	0.0	0.0	0.0	0	71.3	0.0	0.0
4-Aug	0.0	0.0	0.0	0	76.8	0.0	0.0
5-Aug	28.4	0.0	28.4	0	66.9	0.0	0.0
6-Aug	0.0	0.0	0.0	0	55.5	0.0	0.0
7-Aug	0.0	0.0	0.0	0	60.6	0.0	0.0
8-Aug	0.0	0.0	0.0	0	70.1	0.0	0.0
9-Aug	25.1	0.0	25.1	0	65.6	0.0	0.0
10-Aug	0.0	0.0	0.0	0	75.1	0.0	0.0
11-Aug	0.0	0.0	0.0	0	33.0	0.0	0.0
12-Aug	0.0	0.0	0.0	0	20.1	0.0	0.0
13-Aug	13.7	0.0	13.7	0	61.7	0.0	0.0
14-Aug	0.0	0.0	0.0	0	59.9	0.0	0.0
15-Aug	31.0	0.0	31.0	0	60.1	0.0	0.0
16-Aug	0.0	0.0	0.0	0	57.3	0.0	0.0
17-Aug	16.6	0.0	16.6	0	38.2	0.0	0.0
18-Aug	0.0	0.0	0.0	0	22.7	0.0	0.0
19-Aug	16.1	0.0	16.1	0	0.0	0.0	0.0
20-Aug	0.0	0.0	0.0	0	26.3	0.0	0.0
21-Aug	0.0	0.0	0.0	0	73.0	0.0	0.0
22-Aug	23.0	0.0	23.0	0	80.5	470.1	0.0
23-Aug	0.0	0.0	0.0	0	87.4	392.9	0.0
24-Aug	0.0	0.0	0.0	0	79.2	545.1	0.0
25-Aug	25.5	0.0	25.5	0	79.7	56.8	0.0
26-Aug	0.0	0.0	0.0	0	10.6	0.0	0.0
27-Aug	25.3	0.0	25.3	0	36.6	397.5	0.0
28-Aug	0.0	0.0	0.0	0	76.4	340.7	0.0
29-Aug	0.0	0.0	0.0	0	71.2	262.3	0.0
30-Aug	0.0	0.0	0.0	0	72.7	155.0	0.0
31-Aug	31.3	0.0	31.3	0	0.0	237.3	0.0
Total	234.0	0.0	234.0	0	1664.4	2857.7	0.0

### Notes:

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