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December 10, 2013

Phyllis Beaulieu,
Manager of Licensing
Nunavut Water Board
P.O. Box 119
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Re: October 2013 – Monthly Monitoring Report for Water Licence 2BE-HOP1222

Part I Conditions Applying to Abandonment and Restoration

No reclamation work was completed at Windy Camp this month.

Part J Items 2, 3, 4, 5, 6, 10: Sewage Treatment Effluent, Bulk Fuel Containments, and Quarries

Windy Camp has been closed for operations since October 23, 2008; therefore the licence requirements relating to the WWTF (HOP-2 and HOP-3) are not applicable. HOP-5 (Bulk Fuel Storage – Windy Camp) and HOP-6 (Bulk Fuel Storage Facility – Patch Lake) were dismantled in 2012. HOP-8 has not been constructed. Water quality sampling and management was not required at HOP-7A, B or D (quarries A, B and D) as no water was observed at these sites.

Part J Item 7: Under-Ice Drilling Samples

Not applicable at this time of year.

Part J Item 8: Water Use Volumes

In October, water was extracted from Windy Lake for use at Doris Camp and dust suppression (Table 1). Water from various lakes, as permitted by the licence, was used for drilling (Table 2). The volume of water used is presented in the column “volume (m³) consumed” of Table 2. At the AANDC Inspector’s request, we have also recorded the amount of water that is recirculated by the drill (water not used in the drilling process). This volume is presented in the column “volume (m³) consumed recirculated + consumed” of Table 2 and is a total of the consumed and recirculated water. The volume regulated by the licence is interpreted as being the volume of water consumed. Drilling for 2013 ended on October 24.

The water quality results from HOP-1 are presented in Table 3.

Table 1: Daily water usage from Windy Lake, in cubic meters, October 2013

Date	Volume (m ³)
1-Oct-13	35.5
2-Oct-13	0.0
3-Oct-13	0.0
4-Oct-13	0.0
5-Oct-13	42.0
6-Oct-13	0.0
7-Oct-13	0.0
8-Oct-13	28.0
9-Oct-13	0.0
10-Oct-13	0.0
11-Oct-13	53.0
12-Oct-13	0.0

13-Oct-13	0.0
14-Oct-13	0.0
15-Oct-13	42.0
16-Oct-13	0.0
17-Oct-13	0.0
18-Oct-13	28
19-Oct-13	0.0
20-Oct-13	28.0
21-Oct-13	0.0
22-Oct-13	0.0
23-Oct-13	32
24-Oct-13	14
25-Oct-13	0.0
26-Oct-13	1.0
27-Oct-13	28.0
28-Oct-13	0.0
29-Oct-13	0.0
30-Oct-13	0.0
31-Oct-13	24.0

Table 2: Daily drill water usage, in cubic meters, October 2013

Date	Volume (m³) consumed	Volume (m³) recirculated + consumed
1-Oct-13	12.8	156.8
2-Oct-13	19.7	192.8
3-Oct-13	12.4	120.9
4-Oct-13	7.2	152.5
5-Oct-13	7.3	113.9
6-Oct-13	10.4	132.9
7-Oct-13	7.1	131.0
8-Oct-13	3.9	60.8
9-Oct-13	15.4	98.3
10-Oct-13	13.9	160.6
11-Oct-13	11.9	178.4
12-Oct-13	9.3	178.8
13-Oct-13	11.6	166.8
14-Oct-13	7.4	184.9
15-Oct-13	10.7	208.0
16-Oct-13	12.5	182.0
17-Oct-13	8.6	161.4
18-Oct-13	20.3	163.0
19-Oct-13	39.9	212.3
20-Oct-13	27.7	205.7
21-Oct-13	14.8	222.0
22-Oct-13	22.5	200.5
23-Oct-13	31.2	200.5
24-Oct-13	18.3	232.8
25-Oct-13	22.6	232.4
26-Oct-13	29.1	223.2
27-Oct-13	44.8	209.3
28-Oct-13	45.1	194.1
29-Oct-13	19.7	116.6
30-Oct-13	15	52.0
31-Oct-13	3	11.2

Table 3: HOP-1 Water Quality Sample Results, October 2013

Sample ID		HOP1-01OCT13
ALS ID		L1371632-4
Date Sampled		10/1/2013 08:30
Parameters	Units	Results
Conductivity (EC)	uS/cm	437
Hardness (as CaCO3)	mg/L	75.8

Sample ID		HOP1-01OCT13
ALS ID		L1371632-4
Date Sampled		10/1/2013 08:30
Parameters	Units	Results
pH	pH	7.77
Total Suspended Solids	mg/L	<3.0
Ammonia, Total (as N)	mg/L	<0.050
Nitrate (as N)	mg/L	<0.050
Nitrite (as N)	mg/L	<0.050
Orthophosphate-Dissolved (as P)	mg/L	<0.0010
Phosphorus (P)-Total	mg/L	<0.020
Cyanide, Total	mg/L	<0.0050
Cyanide, Free	mg/L	<0.0050
Fecal Coliforms	CFU/100mL	<1
Aluminum (Al)-Total	mg/L	0.0247
Antimony (Sb)-Total	mg/L	<0.00040
Arsenic (As)-Total	mg/L	<0.00040
Barium (Ba)-Total	mg/L	<0.0030
Beryllium (Be)-Total	mg/L	<0.0010
Boron (B)-Total	mg/L	<0.050
Cadmium (Cd)-Total	mg/L	<0.000010
Calcium (Ca)-Total	mg/L	12.9
Chromium (Cr)-Total	mg/L	<0.0010
Cobalt (Co)-Total	mg/L	<0.0020
Copper (Cu)-Total	mg/L	0.0011
Iron (Fe)-Total	mg/L	0.027
Lead (Pb)-Total	mg/L	<0.00010
Lithium (Li)-Total	mg/L	<0.010
Magnesium (Mg)-Total	mg/L	9.72
Manganese (Mn)-Total	mg/L	0.0026
Mercury (Hg)-Total	mg/L	<0.000020
Molybdenum (Mo)-Total	mg/L	<0.0050
Nickel (Ni)-Total	mg/L	<0.0020
Potassium (K)-Total	mg/L	4.03
Selenium (Se)-Total	mg/L	<0.00040
Silver (Ag)-Total	mg/L	<0.000020
Sodium (Na)-Total	mg/L	57.2
Thallium (Tl)-Total	mg/L	<0.00010
Tin (Sn)-Total	mg/L	<0.050
Titanium (Ti)-Total	mg/L	0.0016
Uranium (U)-Total	mg/L	0.00016
Vanadium (V)-Total	mg/L	<0.0010
Zinc (Zn)-Total	mg/L	<0.0040
Calcium (Ca)-Dissolved	mg/L	13.1
Magnesium (Mg)-Dissolved	mg/L	10.4
Oil and Grease	mg/L	<1.0
Oil And Grease (Visible Sheen)		NO VISIBLE SHEEN

Incident Reporting

A notification was made to the NT-NU Spill Report hotline on October 24 (Report Number 13-357) regarding the Patch Drill Cuttings Consolidation Sump. Sampling undertaken in 2013 showed that elevated concentrations of brine related compounds extend down gradient from the sump to the shoreline of the Imniagut Lake. The seep is currently frozen, and TMAC is investigating potential future actions.

Should there be any questions regarding this monthly report, please contact Katsky Venter or Lea-Marie Bowes-Lyon, ESR Site Managers for TMAC Resources Inc. at (867) 988-0569 or Katsky.Venter@tmacresources.com or Lea-Marie.Bowes-Lyon@tmacresources.com.

Yours sincerely,

Léa-Marie Bowes-Lyon
Tenure and Permitting Manager
Hope Bay Project