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Technical Advisor – Mining  
Nunavut Water Board  
P.O. Box 119  
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**Re: June 2007–Monthly Monitoring Report for Water License 2BE-HOP0712**

Following is the monthly report for June 2007 as required under Water license 2BE-HOP0712.

**Monitoring Program**

During the month of June 2007, 121 water and effluent samples were collected, as part of the monitoring program. As MHLB uses an external certified laboratory for carryout all the analyses and the sample sizes are quite small, MHLB uses the QAQC data produced by the laboratory to determine the accuracy and precision of the issued results. A summary of the monthly sampling for water license is provided in Microbiological samples at most times were arriving late to the external laboratories because of the delays in shipment and logistical problems getting them to a laboratory within 24 hours period. Bacteriological samples for June were lost during transit between Cambridge Bay and Yellowknife.

Table 1: SNP Water sampling summary

Station Number	Sampling Date	Lab Reference #	Comment and UTM NAD83 coordinates
HOP-1	June 24 2007	L521873-15	Windy Lake water Intake (432472E 7550698N)
HOP-2	June 24 2007	L521873-16	RBC surge Tank (432577E 7550636N)
HOP-3	June 24 2007	L521873-17	RBC effluent meets Windy Lake (432450E 7551350N)
HOP-4	June 09 2007	L516797-8	10-LTA: Effluent prior to release (432590E 7550510N)
HOP-5	June 09 2007	L516797-9	11-Fuel Farm: Effluent prior to release (432640E 7550560N)
HOP-6	No discharge	-	Patch Lake Fuel Farm Effluent (433750E 7551910N)
HOP-4	June 27 2007	L527067-3	WCLTA-2-3 (3 <sup>rd</sup> sample after treatment)
HOP-4	June 28 2007	L527067-4	WCLTA-2-4 (4 <sup>th</sup> sample after treatment)
HOP-4	June 26 2007	L524586-1	WCLTA-1-2 (2 <sup>nd</sup> sample before treatment)
HOP-4	June 26 2007	L524586-2	WCLTA-2-2 (2 <sup>nd</sup> sample after treatment)
HOP-4	June 29 2007	L527067-5	WCLTA-2-5 (5 <sup>th</sup> sample after treatment)
HOP-4	June 25 2007	L524586-3	WCLTA-1 (sample before treatment)
HOP-4	June 25 2007	L524586-4	WCLTA-2 (sample after treatment)
HOP-4	June 25 2007	L524586-5	WCLTA-3 (sample after treatment)
WL-B	June 07 2007	L515576-1	Before drill sample @ Windy Lake (UTM:431950E 7550060N)
WL-C	June 07 2007	L515576-2	Before drill sample @ Windy Lake (UTM:431920E 7551000N)
WL-D	June 07 2007	L515576-3	Before drill sample @ Windy Lake (UTM:432290E 7550990N)

**Water usage**

During the month of June 2007, Windy camp was in operation for the whole month. Water abstraction pumps were located at Windy Lake Water pump (HOP-1 UTM 432472E 7550698N), northwest of Patch Lake (UTM 433750E 7550480N) for drills located at Madrid Project areas, Windy Lake drill rig (UTM 431960E 7550050N), and Glenn Lake (UTM 430590E 7559570N).

There were 4 drill rigs active at Hope Bay for 16 days, 3 drill rigs for 13 days, and 2 drill rigs for 1 day for the month of June. In total, there were 105 active drill days for June 2007. The water consumption for the drill rigs were calculated from water usage used to renew Boston Project Water License. A volume of

2.5 m<sup>3</sup> per drill per day was assumed using the total number of drill rigs active at any given day in a month.

Table 2 provides the water volume usage as required under Part J, Items 1 & 6 of the water license.

### **Results**

Water sampling and analysis results are provided in Tables 3, 4 & 5 for samples related to the SNP sampling requirements for the month of June 2007. The laboratory analytical results are available on requests.

Should there be any questions regarding the monthly report for June 2007, **please** contact Matthew Kawei, MHL Exploration Senior Environmental Coordinator.

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Table 2: Water usage in cubic meters (m<sup>3</sup>) for Windy Lake Camp and Drill rig sites

Details	HOP-1	Remarks	Drills <sup>1</sup>	Remarks	Total	Remarks
Water Source	Windy Lake	Part C: Item 1	Patch Lake/Windy/Glenn	Part C: Item 1	Windy Lake Camp & Drill Rigs	2BE-HOP0712: Compliance License
Monthly Cumulative	526	600	262.5	900	788.5	1500 m <sup>3</sup> monthly
Volume Average (Daily)	18	20	5	30	10	50 m <sup>3</sup> daily
Median	18	20	10	30	35	50 m <sup>3</sup> daily
Maximum	25	20	8.8	30	26.3	50 m <sup>3</sup> daily
Minimum	12	20	10	30	25.8	50 m <sup>3</sup> daily

Table 3: Effluent Discharge from the WWTF, from Monitoring Stations HOP-1, HOP-2 & HOP-3

Parameter	HOP-1	HOP-2	HOP-3	2BE-HOP0712
ALS Lab Reference #	L521873-15	L521873-16	L521873-17	Part D: Item 10
Field Sample Details	WCRBC SITE B	WCRBC SITE A	WCRBC SITE C	Part J: Item 2
Sample Date/Time	June 24 07 @ 08:35	June 24 07 @ 08:18	June 24 07	Compliance Values
Biochemical Oxygen Demand (BOD <sub>5</sub> )	<2	285	<2	80 mg/L
Total Suspended Solids (mg/L)	4	124	<3	100 mg/L
Fecal Coliforms	<1	2,800,000	<1	10 x 10 <sup>4</sup> CFU/100 mL
pH (pH unit)	7.4	7.8	6.6	Between 6 and 9
Oil & Grease (Visibility)	No visible sheen	No visible sheen	No visible sheen	No visible Sheen

<sup>1</sup> Calculated (estimate of water consumed by drilling per day based on Boston License application (~ 2.5 m<sup>3</sup>/day)

Table 4: Water quality analytical results at HOP-4 and HOP-5 for Hope Bay under License # 2BE-HOP0712. All units are reported in mg/L.

Parameters	HOP-4	HOP-5	HOP-4	HOP-4	HOP-4	Remarks
ALS Lab Reference #	L516797-8	L516797-9	L527067-3	L527067-4	L524586-1	License # 2BE-HOP0712
Field Sample Details	10-LTA	11-FUEL FARM	WCLTA-2-3	WCLTA-2-4	WCLTA-1-2	Part D: Item 17 &
Sample Date/Time	June 09 07	June 09 07	June 27 07 @ 13:22	June 28 07 @ 09:50	June 26 07 @ 13:22	Part J: Item 4
Oil & Grease (Visibility)	-	-	-	-	-	15,000 µg/Land with no visible sheen
Benzene	0.00630	0.0582	<0.00050	<0.00050	<0.00050	0.37 mg/L (370 µg/L)
Toluene	0.0330	0.0259	<0.00050	<0.00050	<0.00050	0.002 mg/L (2 µg/L)
Ethylbenzene	0.00675	0.0344	<0.00050	<0.00050	<0.00050	0.09 mg/L (90 µg/L)
Total Petroleum Hydrocarbons	-	-	-	-	-	Not done
Poly Aromatic Hydrocarbons	-	-	-	-	-	Not done
Total Phenols	-	-	-	-	-	Not done
Total Hardness (as CaCO <sub>3</sub> )	239	47	937	1030	950	No guidelines provided in permit
Nitrate-Nitrite	0.4	0.2	<0.1	<0.1	<0.1	No guidelines provided in permit
Calcium	75.1	11.4	166	180	176	No guidelines provided in permit
Potassium	6.5	2.6	25	26	24.2	No guidelines provided in permit
Magnesium	12.5	4.5	127	141	124	No guidelines provided in permit
Sodium	93	27	506	549	454	No guidelines provided in permit
Sulphate	33.9	25.8	290	324	305	No guidelines provided in permit
Total Alkalinity (as CaCO <sub>3</sub> )	38	17	175	184	168	No guidelines provided in permit
Total Arsenic	0.0113	0.0016	-	-	-	No guidelines provided in permit
Total Cadmium	<0.0002	<0.0002	-	-	-	No guidelines provided in permit
Total Chromium	0.0226	0.0084	-	-	-	No guidelines provided in permit
Total Copper	0.040	0.006	-	-	-	No guidelines provided in permit
Total Nickel	0.0209	0.0049	-	-	-	No guidelines provided in permit
Total Lead	0.0019	0.0023	-	-	-	0.001 mg/L (1 µg/L)
Total Iron	5.34	3.10	-	-	-	No guidelines provided in permit
Total Mercury	-	-	-	-	-	Not done

Table 4: continue. All units are reported in mg/L.

Parameters	HOP-4	HOP-4	HOP-4	HOP-4	HOP-4	Remarks
ALS Lab Reference #	L524586-2	L524586-3	L524586-4	L524586-5	L527067-5	License # 2BE-HOP0712
Field Sample Details	WCLTA-2-2	WCLTA-1	WCLTA-2	WCLTA-3	WCLTA-2-5	Part D: Item 17 &
Sample Date/Time	June 26 07 @ 13:22	June 25 07 @ 09:22	June 25 07 @ 09:45	June 25 07 @ 09:48	June 29 07 @ 09:40	Part J: Item 4
Oil & Grease (Visibility)	-	-	-	-	-	15,000 µg/Land with no visible sheen
Benzene	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.37 mg/L (370 µg/L)
Toluene	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.002 mg/L (2 µg/L)
Ethylbenzene	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.09 mg/L (90 µg/L)
Total Petroleum Hydrocarbons	-	-	-	-	-	Not done
Poly Aromatic Hydrocarbons	-	-	-	-	-	Not done
Total Phenols	-	-	-	-	-	Not done
Total Hardness (as CaCO <sub>3</sub> )	4080	881	465	8	1140	No guidelines provided in permit
Nitrate-Nitrite	<0.1	<0.1	0.1	<0.1	<0.1	No guidelines provided in permit
Calcium	159	163	14.6	1.8	188	No guidelines provided in permit
Potassium	24.1	23.1	20.5	0.6	29.9	No guidelines provided in permit
Magnesium	122	115	104	0.8	163	No guidelines provided in permit
Sodium	472	433	2660	4	642	No guidelines provided in permit
Sulphate	301	288	1680	1.2	380	No guidelines provided in permit
Total Alkalinity (as CaCO <sub>3</sub> )	159	159	2330	9	196	No guidelines provided in permit
Total Arsenic	-	0.0155	3.09	0.0007	-	No guidelines provided in permit
Total Cadmium	-	<0.0002	0.0003	<0.0002	-	No guidelines provided in permit
Total Chromium	-	<0.005	<0.005	0.0013	-	No guidelines provided in permit
Total Copper	-	0.082	0.004	0.006	-	No guidelines provided in permit
Total Nickel	-	0.0395	0.0258	0.0019	-	No guidelines provided in permit
Total Lead	-	0.0017	0.0006	0.0012	-	0.001 mg/L (1 µg/L)
Total Iron	-	2.77	0.969	1.32	-	No guidelines provided in permit
Total Mercury	-	-	-	-	-	Not done

Table 5: Water quality data for before drilling at Windy Lake as required under Part F: Item 7. All units in mg/L

Parameters	Windy Lake	Windy Lake	Windy Lake	Remarks
ALS Lab Ref #	L515576-1	L515576-2	L515576-3	License # 2BE-HOP0712
Field Sample Details	WL-B	WL-C	WL-D	Part J: Item 5
Sample Date/Time	June 07 07@ 14:00	June 07 07@ 14:15	June 07 07@ 14:35	Effluent Quality Standards
Total Suspended Solids	<3	<3	<3	mg/L
pH	7.7	7.6	7.7	pH unit
Electrical Conductivity	508	509	511	µS/cm
Iron	0.354	0.064	0.136	No guidelines provided in permit
Manganese	0.004	0.002	<0.001	No guidelines provided in permit
Silver	<0.0004	<0.0004	<0.0004	No guidelines provided in permit
Aluminium	0.08	0.04	<0.02	No guidelines provided in permit
Trace Arsenic	0.0006	0.0007	0.0005	No guidelines provided in permit
Boron	0.05	0.06	0.05	No guidelines provided in permit
Barium	0.0036	0.0051	0.0024	No guidelines provided in permit
Beryllium	<0.001	<0.001	<0.001	No guidelines provided in permit
Bismuth	<0.0001	<0.0001	<0.0001	No guidelines provided in permit
Cadmium	<0.0002	<0.0002	<0.0002	No guidelines provided in permit
Cobalt	<0.0002	<0.0002	<0.0002	No guidelines provided in permit
Chromium	0.0016	0.0020	0.0018	No guidelines provided in permit
Copper	0.001	0.002	<0.001	No guidelines provided in permit
Molybdenum	0.0008	0.0008	0.0008	No guidelines provided in permit
Nickel	0.0007	0.0007	0.0005	No guidelines provided in permit
Lead	0.0011	0.0009	<0.0001	No guidelines provided in permit
Antimony	<0.0004	<0.0004	<0.0004	No guidelines provided in permit
Selenium	0.0017	0.0020	0.0009	No guidelines provided in permit
Tin	<0.0004	<0.0004	<0.0004	No guidelines provided in permit
Strontium	0.0690	0.0669	0.0654	No guidelines provided in permit
Titanium	<0.005	<0.005	<0.005	No guidelines provided in permit
Thallium	<0.0001	<0.0001	<0.0001	No guidelines provided in permit
Uranium	0.0002	0.0002	0.0002	No guidelines provided in permit
Vanadium	0.0005	0.0005	0.0004	No guidelines provided in permit
Zinc	0.033	0.041	0.009	No guidelines provided in permit
Mercury	-	-	-	Not done