95 Wellington Street W
Suite 1010
P.O. Box 44
Toronto, Ontario
M5J 2N7
416-628-0216

Sent by Email

August 31, 2017

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

Re: July 2017 – Monthly Monitoring Report for Water Licence 2BB-BOS1727

This report is comprised of monitoring requirements as set out in Part J of water licence 2BB-BOS1727. Boston Camp was reopened on June 15, 2017 to support a seasonal surface exploration program. During the subject period of this report, the focus of activities at Boston Camp was surface exploration drilling, seasonal water management and licence compliance.

Part J Item 2: Water Use Volumes

In July, water was extracted from Aimaokatalok Lake for domestic use at Boston Camp and to support the surface exploration drilling program. All usage from water sources during the month were metered at the source or measured by Bambi bucket haul load. Daily water usage for the month is presented in Table 1.

Table 1: Daily water usage in cubic meters, July 2017.

Date	Domestic Water Consumption (m^3)	Drill Water Usage Total (m^3)	Total Daily Usage (m^3)
Jul-01	9	25	35
Jul-02	8	25	33
Jul-03	10	38	48
Jul-04	8	49	57
Jul-05	10	13	23
Jul-06	9	14	24
Jul-07	10	33	42
Jul-08	10	24	34
Jul-09	10	25	35
Jul-10	0	23	23
Jul-11	0	10	10
Jul-12	0	11	11
Jul-13	11	12	23
Jul-14	0	16	16
Jul-15	0	52	52
Jul-16	11	23	34
Jul-17	9	6	15
Jul-18	0	32	32
Jul-19	10	51	61
Jul-20	10	13	23
Jul-21	7	6	13
Jul-22	0	9	9
Jul-23	8	9	17

Jul-24	0	33	33
Jul-25	10	10	20
Jul-26	0	6	6
Jul-27	8	13	21
Jul-28	0	3	3
Jul-29	10	7	17
Jul-30	0	36	36
Jul-31	9	13	22
Monthly Total	188	640	828
Annual Total	299	784	1083

Part J Item 3: Minewater Discharge Volumes

Minewater was not pumped from underground during this period.

Part J Items 4 and 5: Sewage Disposal Facility Daily Effluent Discharge and Sewage Sludge

Effluent discharge from the sewage disposal facility (BOS-3) began on July 30 upon receiving compliant effluent quality results. Prior to receiving compliant results, effluent from the sewage disposal facility was stored in a temporary holding pond. Once effluent quality in the treatment plant was confirmed, effluent stored in the holding pond was slowly introduced into the treatment unit. This will continue until the holding pond has been completely dewatered. A total of 6.78 m^3 of complaint effluent was discharged from the STP to the tundra in July.

No sewage sludge was removed from the sewage disposal facility in July.

Part J Items 5: Daily Quantities of Effluent Discharged – Containment Pond, Bulk Fuel Storage and Landfarm

No water was discharged from the Containment Pond (BOS-2C), the Bulk Fuel Storage Facility (BOS-5) or the Landfarm (BOS-6) this month. A total of 48m^3 of compliant water was discharged from the Portal (BOS-9) to an approved location on the tundra.

Part J Items 6 and 7: Water Source and Waste Disposal Coordinates

GPS coordinates of locations of water sources and waste associated with camp and drilling activities are kept on file. Water was sourced from Aimaokatalok Lake (BOS1) for domestic use at Boston Camp and to support the surface exploration program.

Non-saline drill cuttings generated as part of the drilling program were deposited in historic drill cuttings sumps located on the west side of the airstrip (67º 39' 10.8", 106º 22' 53.6"). Saline drill cuttings were deposited into a temporary lined sump constructed on the camp pad. As the cutting materials settles, saline waters will be decanted and pumped into the underground mine workings.

All waste generated from activities at the Boston Camp will be stored on site and transported to Doris Camp for disposal on the winter track in 2018.

Part J Items 8 and 11 (also Part D Items 6, 17 and 19): Sampling at Containment Pond, Minewater, Bulk Fuel Storage, and Landfarm

No samples were taken from the Containment Pond (BOS-2), the Bulk Fuel Storage facility (BOS-5) or the Landfarm facility (BOS-6) during the month of July.

Part J Item 9: Sewage Disposal Facility Effluent

Pre-discharge samples were taken at monitoring station BOS-3 during the commissioning of the Sewage Treatment Plant. Upon receipt of compliant results, effluent was discharged to the tundra on July 30. Results of samples collected in July under monitoring station BOS-3 are provided in Appendix A.

No samples were taken at monitoring station BOS-4 as there was no observable flow into Aimaokatalok Lake at this station.

Part J Item 11: Seepage Monitoring

Seepage at Boston (BOS-8) is monitored seasonally when water is available to sample. Results of samples collected in July under monitoring station BOS-8 are provided in Appendix A.

Part J Item 14 (also Part F Item 7): Under-Ice Water Quality Sampling

Not applicable as on-ice drilling did not occur pertaining to licence 2BB-BOS1727.

Incident Reporting

Spill #17-250 - On July 5, 2017, an operator discharged water of unknown water quality to the tundra from a containment pond facility at Boston Camp (67° 39' 29.3", 106° 22' 58.2").

The water, which was originally contained in the Boston tank farm berm, was sampled on June 4, 2017. Lead results were 0.0218 mg/L, while the maximum allowable concentration for discharge is 0.01 mg/L. All other parameters were below the maximum allowable concentrations for discharge. The results were forwarded to the camp manager and the individual was advised that the water could not be discharged until it was treated through the oil-water separator and then resampled to confirm compliance with the effluent quality standards for BOS5.

The non-complaint water was treated through an oil-water separator, which is common practice for treating water with elevated levels of metals or hydrocarbons. This particular unit has been used to successfully treat non-complaint water at Boston in previous years. The water was then discharged directly to the tundra after being treated through the oil-water separator, without post-treatment samples being collected to confirm water quality.

Spill #17-252 - On July 11, 2017, a worker observed a small leak from an elbow joint on a sewage distribution line between the main camp and a lift station (67° 39' 32.4", 106° 23' 18.2") which allowed untreated sewage to be released to the tundra. The leak was immediately reported to the sewage treatment plant operator for response and repair.

Upon investigation, the clamps on the line coupler were found to be loose and were immediately tightened to prevent further spillage. The area was found to be lightly saturated, but no pooling water was observed, and therefore the spilled material could not be recovered.

The leak is believed to have been caused by the line expanding and contracting due to sun exposure and warmer temperatures. This allowed for the clamps securing the rubber coupler to become loose. This coupler, along with all rubber style couplers, have been replaced with victaulic style clamps to limit the potential of another spill occurrence.

Should there be any questions regarding this monthly report, please contact John Roberts at John.Roberts@tmacresources.com.

Yours sincerely,

M. John Roberts
Vice President, Environmental Affairs
Hope Bay Project
(416) 628-0216
cc. Eva Paul, Water Resources Officer, INAC

Figure 1. 2BB-BOS1217 SNP Monitoring Locations