145 King Street East, Suite 400
Toronto, Ontario M5C 2Y7
416-947-1212

Sent by Email

April 28, 2023

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

Re: March 2023 – Monthly Monitoring Report for Water License 2BE-HOP2232

This report is comprised of monitoring requirements as set out in Part J, Items 2 through 8, and 10 of water license 2BE-HOP2232. Some monitoring requirements stipulated in this Part refer to facilities that have not been constructed, facilities that no longer exist, or facilities where activity is seasonal. Water levels in Windy Lake will be monitored in accordance with Part J, Item 9 during open water season. Sampling locations monitored under this license (seasonally or when facilities are operational) are provided in Figure 1 at the end of this report.

During the period of this report, the focus of activities under the Windy Regional Exploration license was on-land surface exploration drilling, on-ice exploration drilling, water management and environmental compliance.

Part I Conditions Applying to Abandonment and Restoration

No abandonment or restoration work was conducted during the 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 and New Windy Camp has not been constructed. Therefore, the license requirements relating to the Wastewater Treatment Facility (HOP-2 and HOP-3) are not applicable at this time. HOP-5 (Bulk Fuel Storage – Windy Camp) and HOP-6 (Bulk Fuel Storage Facility – Patch Lake) were dismantled in 2012. HOP-8 (Bulk Fuel Storage Facility at New Windy Camp) 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 discharge of water occurred from these areas this month.

Part J Item 7: Under-Ice Drilling Samples

Under-ice water quality sampling was conducted this month as on-ice surface exploration drilling was continued in the license area. Results of water quality monitoring are provided in Appendix B attached to this report.

Part J Item 8: Water Use Volumes

Geographical locations for all water sources and usage are maintained on file. All usage from water sources during the month were metered at the source. Daily water usage for the month is presented in Table 1.

Table 1: Daily water usage in cubic meters, March 2023.

Date	Regional Drill Water Usage (m3)
1-Mar	8.36
2-Mar	10.01
3-Mar	10.82
4-Mar	11.44
5-Mar	13.59
6-Mar	37.54
7-Mar	21.37
8-Mar	13.57
9-Mar	25.39
10-Mar	23.45
11-Mar	18.43
12-Mar	24.67
13-Mar	22.98
14-Mar	15.01
15-Mar	13.39
16-Mar	17.43
17-Mar	14.44
18-Mar	16.86
19-Mar	10.16
20-Mar	17.77
21-Mar	24.08
22-Mar	18.71
23-Mar	17.73
24-Mar	19.23
25-Mar	14.60
26-Mar	10.11
27-Mar	9.83
28-Mar	14.58
29-Mar	16.77
30-Mar	14.60
31-Mar	15.60
Monthly Total	522.52
Annual Total	1532.68

Water quality monitoring results and volumes extracted from the Windy Lake freshwater intake (HOP-1) for domestic, industrial, dust suppression and winter tracks are presented in the monthly monitoring report for license 2AM-DOH1335, Schedule I for Station ST-7A.

Incident Reporting

Four incidents pertaining to this licence occurred this month.

NU Spill #2023-078 - On March 3, 2023, at 3:30 pm, a spill of approximately 3L of drill cuttings was noticed during a routine inspection at an exploration drill rig on Patch Lake. (Coordinates: 68o3’40”N, 106o34’10”W).

During a routine inspection of the exploration drill, a dark patch of snow was noted by personnel. Upon further inspection it was concluded that the stain came from drill cuttings that had frozen on the snow build up around and under the rig.

Following an investigation, it was concluded that the spill was either due to the cuttings hose falling from the cuttings bin or a hole in the secondary containment for said cuttings bin.

Mitigation measures

Once drilling was completed, the area surrounding the spill was secured and the affected area surrounding the spill was then cleaned up and the contaminated material was appropriately disposed of by the waste management department. As per company policy, the area surrounding the drill was scraped after the pad was cleared, reducing the risk of any trace contaminants entering the water body.

In order to reduce the risk of reoccurrence, the blow-off hose was secured inside the secondary containment and the funnel hose was changed to a rubber hose to reduce the risk of tearing the secondary containment. Furthermore, the importance of checking the cuttings containment regularly was reviewed with the drilling crew.

NU Spill #2023-092 - On March 13, 2023, at 8:00 am, a spill of less than 0.25L of hydraulic fluid was noticed during a routine inspection at an exploration drill rig on Patch Lake. (Coordinates: 68o2’18”N, 106o33’10”W).

During a routine inspection of the exploration drill, a small hydraulic fluid leak was noticed by site personnel. The fluid pooled on the ice and did not enter the water body. Following an investigation, it was concluded that the spill was due to improper storage of equipment on the ice as the quick connects were not placed in secondary containment as required.

Mitigation measures

The area surrounding the spill was secured and the affected area surrounding the spill was then cleaned up and the contaminated material was appropriately disposed of by the waste management department. As per company policy, the area will be scraped once drilling is complete in order to eliminate any potential of residual material entering the waterbody once the ice melts.

In order to reduce the risk of reoccurrence, a spill tray was installed below the quick connects and the importance of the secondary containment was reviewed with the operator.

NU Spill #2023-093 - On March 13, 2023, at 8:30 am, a spill of 4L of urine was noticed during a routine inspection at an exploration drill rig on Patch Lake. (Coordinates: 68o2’33”N, 106o32’41”W).

During a routine inspection of the exploration drill, patches of urine were noticed by site personnel on the padded snow surrounding the drill. The fluid did not enter the water body. Following an investigation, it was concluded that the spill was due to lack of knowledge of the appropriate environmental requirements and procedures on the part of the operators and a lack of equipment to allow them to follow said requirements.

Mitigation measures

The area surrounding the spill was secured and the affected area surrounding the spill was then cleaned up and the contaminated material was appropriately disposed of by the waste management department. As per company policy, the area will be scraped once drilling is complete in order to eliminate any potential of residual material entering the waterbody once the ice melts.

In order to reduce the risk of reoccurrence, lined pails were immediately provided to the operators and the environmental requirements reviewed with the teams. The working on-ice SOPs for both

contracting companies were modified to explicitly outline how bodily waste is to be dealt with. Lastly a new procedure was created using bags with a check valve to effectively deal with urine over the long term.

NU Spill #2023-106 - On March 19, 2023, at 0:30 am, a spill of approximately 1000L of drill cuttings and recirculation water was noticed during a routine inspection at an exploration drill rig on Patch Lake. (Coordinates: 68o3'17"N, 106o34'15"W).

The incident involves drill cuttings and recirculation water. The recirculation water keeps the drill bit cool while the drill is in operation. When exiting the hole, the water carries the cuttings out of the drill hole which are then settled out in a sedimentation tank. As per company policy, no salt brine is used for on-ice drilling. This tank must be periodically emptied of cuttings in order to be disposed of. During a routine transfer of drill cuttings to the Marooka, the workers noticed a fluid spill to the ice occurring. Following an investigation, it was concluded that the root cause of the spill was a defective equipment and a faulty design. The weld around the burner in the tank broke and allowed the cuttings to escape the tank. Additionally, the original welds for the Marooka were found to be spot-welds which allowed the cuttings to escape.

Mitigation measures

Once the spill was noticed by the operators, the pumping was immediately stopped and the area secured. No fluid entered the water body as it was contained on the surface of the ice. The surface was cleared and scraped and the mixture of drill cuttings and ice was placed in lined megabags. These were disposed of appropriately by the waste management department.
In order to reduce the risk of reoccurrence, secondary containment is now supplied with the Marooka and a two-person crew will be used to monitor the cuttings transfer to the Marooka in order to intervein sooner if a spill starts to occur. Furthermore, the spot welds around the burner tube inside the box will be rewelded around the full circumference in order to prevent any future leakage.

Should there be any questions regarding this monthly report, please contact me at guillaume.dumont@agnicoeagle.com.
Yours sincerely,

Guillaume Dumont-Vandewinkel
Environmental Coordinator
Hope Bay Project
(819) 759-3555 ext. 4600101

Cc:
Jonathan Mesher, Water Resources Officer, CIRNAC
Eric Steinmetzer, General Manager – Hope Bay, Agnico Eagle
Nancy Duquet-Harvey, Environmental Superintendent – Hope Bay, Agnico Eagle

Figure 1. 2BE-HOP2232 SNP Monitoring Locations