



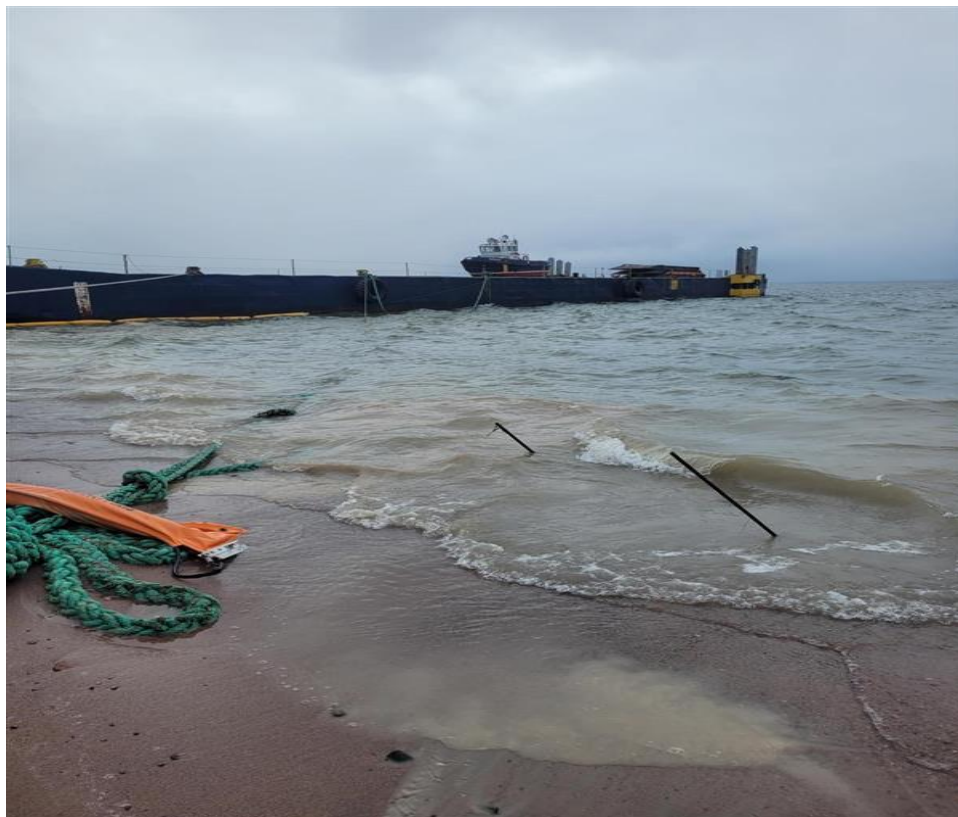
## 2024-09-08 MBK Baker Lake TSS

GN reference #: 2024-340

Please find the following information as a follow up to the spill report, #2024-340, submitted September 9, 2024 by Agnico Eagle Meadowbank division. This detailed report is submitted to the Inspector in compliance with the conditions under the Nunavut Water Board License 2AM-MEA1530, Part H, Item 8c and subsection 38(7) of the fisheries act.

### Description

During an inspection of the Baker Lake Marshalling Facilities by Environment, a turbid flow of water from heavy rains was observed heading to the shore of Baker Lake, creating apparent plumes of TSS along the shore adjacent to the barge dock. The visible plumes in Baker Lake were mostly contained within a few feet from the shoreline, and water appeared clear a few meters into the lake. The plume is hereafter referred to as “BL-BARGE-Out” for the flow of water that entered on the West side of the dock (64°18'17.68" N, 95°57'11.11" W), See figure 1 below for general site layout information and flow path estimate.



*Figure 1. Baker Lake Dock Facilities – September 11*

Water samples in the lake on the west side of the dock were taken for analysis for TSS, as well as for acute lethality to *Daphnia Magna* and *Rainbow Trout*. The lethality samples were collected on September 9<sup>th</sup>. The results for samples taken in the lake are presented in Table 1 below.

Table 1. TSS Results of Baker Lake Samples

Date	BL Barge Out TSS
2024-09-08	149
2024-09-09	2
2024-09-11	17
2024-09-12	18
2024-09-18	6

*\*TSS result from September 8<sup>th</sup> is from internal lab. All other results are from an accredited lab\**

Location: 64° 18'20" 95° 57'23". The impacted waterbody is Baker Lake.

Cause

The identified cause for the turbid runoff is the heavy rains received during the week of September 1<sup>st</sup> where above average volumes of water reported through the Marshalling Facilities without sufficient control measures in place. The volume of water flows through exposed till material, from which sediments are transported towards the lake.

Remediation Actions

Upon observation of the runoff into the lake, the environmental personnel deployed, woodchip-log or straw-log booms and rock fill berm in the flow path of the runoff, to control the transportation of sediments. Over the next week, inspections and monitoring of the area was performed by environmental staff. During the monitoring, the TSS control measures were monitored, repaired and added, if needed. Samples of the water quality (total suspended solids) of the lake adjacent to the dock facilities were taken, as described in Table 1. Acute Lethality sample results are attached.



*Figure2. Mitigation Measures at BL-LAKE (2024/09/11)*



*Figure 3. Dock facilities (2024/09/18)*



*Figure 2. Mitigation Measures at BL-BARGE (2024/09/22)*

## Corrective Measures

Monitoring of the area continued and was followed closely after each rain event to ensure the mitigation measures in place were effective.

From September 21<sup>st</sup> to 29<sup>th</sup> general earthwork improvements and water management maintenance occurred at the Baker Lake Marshalling facilities occurred. Some of the remediation work included ditch extensions, addition of diversion culverts, and pad resurfacing.



