



March 9th, 2023

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Re: Follow-up Report Spill #2023-047 – Release of 450 L of Sodium hydroxide at the Meliadine Gold Project

On February 11th, 2023, the Nunavut Spill Line was notified by Agnico Eagle personnel via email (spills@gov.nt.ca) of a spill of approximately 450 L of sewage at the Meliadine Gold Project site (spill location coordinates: 63° 2' 22.79" N, 92° 13' 33.91" W). This follow-up report provides supplemental information based on the results of the incident assessment and is being provided in accordance with:

- Nunavut Water Board License 2AM-MEL1631 Water License, part H, item 8c.

Description of Incident

On February 11th, 2023, at approximately 3:30 am, an estimated 450 L of sodium hydroxide was spilled on the industrial pad beneath the sewage treatment plant (STP) due to a cracked PVC fitting. A 6 cm hole inside the STP floor allowed for the free liquid to drain to the ground below. The spilled sodium hydroxide collected directly underneath the STP, which was contained to the local area. No water bodies were impacted by this spill. The closest water body (G2) is approximately 370 meters north, as seen in Figure 1.



Figure 1: Location of the sodium hydroxide spill and proximity to water bodies.

Spill Response and Remediation

Upon observing the spill, the operator shut off the manual valve on the reservoir to stop the spill and deployed chemical spill pads to absorb the spilled material. The operator then reported the spill to their supervisor. The spill was contained underneath the STP as heat from building created a layer of ice under and around the infrastructure containing the spill to that area.



As per the spill contingency plan, a neutralizer was used on the sodium hydroxide to adjust the pH of the free liquid to a neutral pH. An industrial vacuum was later used to collect the remaining free liquid which was then transferred into a plastic tote. All contaminated spill rags, free liquid and contaminated ice/snow were brought to the Mill's reagent storage area where it's stored as hazardous waste and will be shipped offsite for disposal.

During freshet, this area will be monitored frequently for run-off. Any pooling water from this location will be pumped into a tote for disposal.

Root Causes and Corrective Measures

An assessment was conducted soon after the incident occurred to determine the root cause and contributing factors. The assessment concluded with the following:






- PVC fitting potentially contracted with freezing temperatures (caustic distribution tank is by entrance of building).
- No preventive maintenance (PM) schedule is currently in place for this piece of equipment.

The following corrective and preventative actions have been implemented to address the root causes and to reduce the likelihood of reoccurrence:

- A PM schedule to be created for monthly inspection of the chemical distribution lines within the STP.
- Plug to be installed in the STP floor where a hole was present.
- A centralized caustic distribution system with a single tank to feed the STP will replace the existing three tanks.
- Valves will be locked out at the bottom of the tank and feed from 20 L pails or top feed from the tank when needed. This is a temporary measure until the central feed tank is installed.

Should you have any questions or require further information, please do not hesitate to contact the undersigned.



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Appendix – Photos



AGNICO EAGLE

MELIADINE



Photo 1: Contaminated ice and snow.



Photo 2: Spill remediation efforts.



Photo 3: Spill remediation area.



Photo 4: Spill remediation area.