

Follow Up Report: #2022076

March 10th, 2022 – Thickener Process Water Spill

The following information relates to spill 2022076 reported by Agnico Eagle Mines Limited on March 11^h, 2022, and is being provided in accordance with:

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

Description of Incident

On March 10th, 2022, there was an overflow of approximately 10 m³ of thickener process water on the industrial pad, outside the process plant.

The coordinates of this spill are 63 2'11.5"N, 92 13'35.3"W. No water bodies were impacted by this spill; the closest water body (G2) is approximately 600 m northwest.



Figure 1: Location of the March 10th, 2022, thickener process water spill.



Figure 2: Thickener process water spill clean up

Spill Response & Cleanup

To immediately stop the spill; the thickener process water was directed to the carbon in leach (CIL) tanks. The filter presses were then stopped to reduce any additional water going to the feed wheel of the grinding thickener, ending the overflow.

The topography of the area and the freezing conditions caused the thickener process water to pool and freeze on the west side of process road. A loader and haul truck were used to clean up the material. All material collected was placed in the process plants sump where it will be returned to the process plant system.

Cause of Incident and Corrective Measures

The investigation into the cause of the release identified a high-water level occurrence in the thickener tank which entrained ice down the thickener tank. Additionally, it is suspected there was vacuum effect on the suction of the pipe from the thickener launder to the process water tank due to the failing ice.

This led to a back flow build-up in the pipes, as the upstream clarifier feed box and slurry flow from thickener recirculation were still active. As the thickener process water filled the tank, an overflow of approximately 10m³ occurred.

As there were two other thickener process water spills in March 2022 the corrective measures discussed in this section will be similar to those included in the March 6th (#2022067) and March 11th (#2022075) 2022 thickener process water spill follow-up reports.

The following corrective measures are being implemented:

- Visually inspecting the top of the grinding thickener/clarifier feedbox every 2 hours and clearing snow if safe (ongoing).
- Ensuring there is adequate water flow from the clarifier feedbox to the grinding thickener by removing some baffle on the clarifier feedbox (completed).
- Preventatively cleaning the grinding thickener overflow launder to regain a full capacity.
- Installing an air vent system on the grinding thickener overflow pipe to the process water tank.
- Pouring a concrete secondary containment.
- Installing an additional thickener tank which will split the flow going into the grinding thickener.



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