Follow Up Report: #20-121
May 4th 2020, Emulsion Spill

The following information refers to spill 20-121 reported by Agnico Eagle Mines Ltd. May 4th 2020, and is being provided in accordance with:

- the Nunavut Water Board License 2AM-MEL1631 Water License, part H, item 8c
- the Government of Nunavut's, Environmental Protection Act subsection 5.1(a)

Description of Incident:

On May 4th at approximately 3:30 am, an estimated 800 L of emulsion was spilled on the gravel transfer pad just outside of Portal 1 (Figure 1). While attempting to remove the emulsion bin from the flat rack, the operator was not aware that one of their forks had been improperly placed below the bin, as opposed to being properly inserted through the fork slot. When they backed up with the full bin, it tipped off of the forks and fell onto its side, popping off the lid, and spilling the contents on the ground. The emulsion poured out over an area of about 10 m^2.

No water bodies were impacted by this spill. The closest natural water body (Lake B7) is over 1000 m from the spill location. The coordinates of the spill are 63° 1'16"N, 92°12'34"W (Figure 1).

Figure 1: Location of 800 L emulsion spill.

Spill Response & Cleanup:

After the spill occurred, the mine workers taped off the area with caution tape and covered the spilled product with gravel. At 6 a.m. the Environment Department was notified of the spill. Emulsion plant personnel determined that there was no risk of ignition prior to responding to the spill. The product spilled was Titan 7000 RU (UN0332), which has a division 1.5 blast sensitivity rating (very insensitive). This product requires high pressure and a heat source for detonation. No pressure or heat source was present at the time of the spill.

Upon arrival that morning at the site, the DYNO Nobel team had begun scooping the contaminated gravel and emulsion into quatrex bags. Normally, as much of the raw product as possible that can be recovered will be used again. Since this material was mixed with gravel, everything that was removed is now slowly being destroyed by packing the gravel-emulsion mix into blast holes where it is then detonated. It will take several weeks to properly destroy the remaining material.

Figure 2: Initial spill scene just after 3:30 a.m.

Figure 3: Photos taken at 7:22 a.m. Spill recovery was underway and material was being moved into quatrex bags to be stored at the DYNO Nobel emulsion plant.

Corrective Measures

The Environment Department held additional toolbox meetings with the underground mine department, to further discuss methods for spill prevention, the importance of using a spotter, and ensuring that loads are secure before moving them. Since this specific incident had the potential to cause injury if there had been a worker next to the bin, this incident was also reported to the Health and Safety Department. Supervisor job task observations are being completed in order to improve the training for this task. In addition, a long-term solution for an improved emulsion handling and distribution system is currently being investigated.

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