AGNICO EAGLE
MELIADINE

Follow Up Report: #18-455
November 17, 2018 Retention Tank Overflow

Description of Incident:

Due to freezing of an outlet hose and valve at the Exploration Camp Sewage Treatment Plant retention tank, the retention tank could not be emptied. The tank overflowed treated sewage effluent within the Sea-can housing and made contact with the ground via a hole in the door. The flow extended less than 5m from the spill source and the nearest water body, Meliadine Lake is approximately 78m from the source.

Spill Response & Cleanup:

Following the overflow, water to the Exploration Camp was temporarily shut down, the hose and valve was thawed and the retention tank was emptied. Treated effluent was frozen in place beneath the Mel-7 pipeline. The material was removed with ice picks and transported to CP1.

Spill Cause and Corrective Measures

The Sea-Can containing the retention tank had shifted in such a way that the door was not able to be closed completely, and had been left slightly ajar. Although a heater runs inside the Sea-Can, the outside temperature was less than -30°C, which led to the freezing of the hose and valve. As a preventative measure, an insulated plywood door was installed on the Sea-Can so that it can be closed completely and prevent freezing in the future.

Treated water at this location is sampled and tested weekly (MEL-7 sampling location). At the time of the spill, the most recent results were that of the November 5th sample, which indicated a fecal coliform level of <2 CFU/100ml reported in the original spill report. Following the spill, two further sets of results showed all parameters were well below the former Type B (1424) water license discharge limits (Table 1).

Table 1: Results of lab analysis from MEL-7 treated effluent and corresponding license discharge limits.

Parameter	Type B 1424 License Limits	2018-11-05 Results	2018-11-12 Results	2018-11-19 Results
pH	**6.0 to 9.5**	6.91	7.08	7.61
TSS	**100 mg/L**	2	1	4
Oil & Grease	**5 mg/L**	<0.50	0.90	1.6
Fecal Coliforms	**1000 CFU/100mL**	<2	<2	10
BOD5	**80 mg/L**	<2	3	7

Figure 1: 2018-11-17 – The day of spill, before clean up.

Figure 2: 2018-11-30 – After clean up with new door installed.