Q. **Reference: Application, Install Oil Spill Containment Transformer T1S (2023–2024) – Cat Arm)**

**a)** Please provide a description of the primary containment system.

**b)** Why is a secondary containment system required for a transformer that is not in use? Is there a legislative requirement that there be a secondary containment system for a spare transformer?

**c)** Should a third containment system be installed? How does Hydro determine when the number of containment systems is adequate?

A. **a)** The primary containment system for Transformer T1S is the transformer tank in which the oil is stored.

**b)** To mitigate the risk of environmental spill and to align with industry standards, Newfoundland and Labrador Hydro's ("Hydro") asset management standards for power transformers include the requirement for secondary containment. Hydro established a design protocol that required secondary containment for new transformer installations or relocated transformers where the installation of secondary containment is not impeded by existing constraints. This applies to both in service and spare power transformers, as the risk of a transformer oil leak is largely independent of the operating status of the transformer.

Spare Transformer T1S will be retained as a dedicated spare for the Cat Arm Hydroelectric Generating Station until the transformer is retired, which is estimated to be in 2039. To ensure that the integrity of the spare transformer is maintained, it must remain oil filled while not in service.

In addition to meeting the requirements for secondary containment laid out in Hydro's asset management standards, the transformer is also located adjacent to the Atlantic Ocean which poses an increased environmental risk. If a leak were to occur, the transformer oil could migrate to the ocean, harming the sensitive marine ecosystem. While there is no legislative requirement to install a secondary containment system, the installation of

secondary containment for spare Transformer T1S in in line with Hydro and industry standards.

**c)** There is no requirement for a third containment system. Secondary containment systems provide an adequate layer of protection and ensure that any accidental release of oil is properly contained. Secondary containment systems are in line with industry standards for hydrocarbon containment.