

2017 Annual Report for TC Licence No. 1BR-RLF1520 Resolute Bay Land Treatment Unit

Executive Summary

In 2002, Transport Canada (TC) constructed two Land Treatment Units (LTUs) at the Resolute Bay Airport for the treatment of soils excavated from the Former Firefighter Training Area (FTA) and Above Ground Storage Tank (AST) area at the airport (see Figure 1). LTU 1 was divided into 3 zones separated by berms. Zone 1 and 2 contained heavier hydrocarbons while Zone 3 contained lighter hydrocarbons. LTU 2 is a single cell and contains lighter hydrocarbons. The LTUs received approximately 5,800 m³ of soil from the FTA and the AST area in 2002.

TC applied treatment to the LTUs, based on available funding from year-to-year.

Two smaller LTUs (3&4) are present in the area; however, TC is not the custodian.

In 2015, TC received a Licence from the Nunavut Water Board (NWB) for maintenance and decommissioning activities for the LTUs. TC retained a qualified engineering consultant to complete soil and groundwater monitoring. Analytical results from an accredited laboratory for nine test pits across the two LTUs indicate that one of more the following parameters exceeded the CCME guidelines: BTEX, PHC F1 and/or PHC F2. All soil samples complied with all other parameters, including metals. The six groundwater monitoring wells could not be sampled as the water was frozen.

In 2016, TC retained a qualified engineering consultant to inspect the LTUs and sample the six groundwater wells. The monitoring wells did not produce enough water to collect a sample. The consultant also posted trilingual signage on each well, as required by the NWB licence.

In 2017, TC retained a qualified engineering consultant to inspect the LTUs and sample the six groundwater wells. Only one well produced enough groundwater to be collected and analyzed. The analytical results for MW-1 exceeded guidelines for toluene and several metals. The consultant observed that ponded water located outside the south end of LTU 2 was surrounded by green vegetation (e.g. moss, small grass tufts), which was not observed in any other areas around the LTUs at the time of the 2017 site visit. No nutrients had been applied to the LTUs since 2002/2003. The consultant expressed concern with the integrity of the liner. TC is evaluating its options and will keep the NWB apprised of its future plans for ongoing operation and maintenance of the LTUs.



Figure 1. Location of TC-owned LTU 1 and LTU 2 at the Resolute Bay Airport.