



Presented to

Public Services and Procurement Canada

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1.1 INTRODUCTION

The purpose of this document is to present the Tier II Landfill Operations and Maintenance Plan elaborated for the environmental remediation of the CAM-E former DEW Line site located approximately 75 km east of Kugaaruk, part of the Keith Bay area in Nunavut.

The remediation project was awarded to Kudlik Construction Ltd. in May 2016. In September 2016, heavy equipment, camp facilities, materials and all consumables were delivered by sealift to Kugaaruk. All equipment, materials and consumables required to achieve the remediation project were transported by CAT train during the winter 2017, from Kugaaruk to CAM-E.

This document is covering the procedures for the operations and the maintenance of the Tier II facility until the final site closure. The plan will be effective from June 2018 and may be updated according to the site conditions.

Figure 1: Site location



1.2 SOIL PLACEMENT INTO THE FACILITY

Once the facility construction have been completed, a ramp made of gravel will be built to allow the trucks to go over the berm and dump the Tier II soil into the the facility. The soil will be placed as follow:

- Backup with the dump truck on the ramp over the berm until getting into the facility. The truck shall stay on the ramp and dump the Tier II soil beside it.
- Once enough Tier II soil have been stockpiled inside the facility, use the dozer and spread the Tier II soil in lifts not exceeding 300 mm in thickness. Compact with the random action of the dozer tracks.
- Place Type 3 granular fill as intermediate fill to a typical thickness of 150 mm over each layer of highly organic or wet Tier II contaminated soil, if required.
- Compact Type 3 granular with the random action of the dozer tracks.

1.3 WATER MANAGEMENT

At the beginning of the season, make sure there is no stranding water before starting placing the soil inside the facility. Standing water must be tested, discharged or treated, according if the results meet or not the contact water discharge criteria specified within the water licence.

1.4 LANDFILL CLOSING

Before placing the final cover on the landfill, make sure all type II contaminated soil have been placed in the facility and that the final elevation of the contaminated soil in the facility has been surveyed. The final cover on this section shall be completed while outside temperature is still above zero and the last Tier II soil shall be placed no later than August 12. Any Tier II soil found or generated after the closing of the facility will be containerized and transported out of site for disposal into a licenced facility. Complete the cover as follow:

- When the last load of contaminated soil will have been placed, if required, confirm with the DR which type of material shall be used to fill the facility up to the elevation of 450 mm below the top of the berm.
- Decommission the drainage pipe.
- Place and compact 300 mm of type 1 granular material on the entire surface.

- Place and compact 150 mm of sand on the entire surface and have the surface approved by the HDPE liner installer supervisor.
- Install the geotextile and the HDPE liner as per specification.
- Place a layer of 300 mm of sand over the liner/geotextile assembly.
- Complete the cover as per drawings.
- Complete as-built survey to document cover layer thicknesses and final elevation.
- Install the thermistors as per drawings and specifications.