UPDATED ABANDONMENT AND RESTORATION PLAN

Cambridge Bay Airport Land Treatment Units (LTU), Nunavut

NWB Licence #1BR-FTA1828 (Original #1BR-FTA1721)

Prepared by:
Transport Canada

August 2018

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1.0 INTRODUCTION

The purpose of this updated Abandonment and Restoration Plan is to provide information regarding the current status of the project and proposed decommissioning of the Land Treatment Units at Cambridge Bay Airport, Nunavut.

1.1 Site Description and Project Status

Prior to July 1, 1995 Cambridge Bay Airport was owned by the Government of Canada and operated by the Quebec Region of the Department of Transport. From July 1, 1995 until April 1, 1999 the airport was owned by the Government of Northwest Territories (GNWT) and operated by the Arctic Airports Division of the Department of Transportation. Since April 1, 1999 the airport has been owned by the Government of Nunavut and operated by the Nunavut Airports Division of the Nunavut Department of Community Government, Housing and Transportation. As a condition of the Arctic A Airport transfer agreement (July 1995) between Transport Canada and GNWT (and subsequent transfer to the Government of Nunavut), Transport Canada must remediate the environmental issues identified prior to the airport transfer.

In 2013, hydrocarbon impacted soil was excavated from the Apron area at the Cambridge Bay Airport and placed in an engineered Land Treatment Unit (LTU) on-site. In 2014, hydrocarbon impacted soil was excavated from the former Fire Training Area (FTA) at the Cambridge Bay Airport and placed in an additional engineered Land Treatment Unit (LTU) on-site. Additionally in 2014, during construction of the FTA LTU, a buried drum cache near the former FTA area was discovered. Soils from this drum cache were excavated and placed into the Apron LTU. The Apron LTU contains approximately 4,000 m^3 of soil and the FTA LTU contains approximately 4,500 m^3 of soil.

The LTUs are located at the Cambridge Bay Airport, southwest of the northwest end of the runway. The LTUs are located in a developed area at the Cambridge Bay Airport. Therefore, they do not impact communities, traditional use areas (hunting and trapping camps), sensitive areas, parks, game preserves, and resource harvesting areas, fish spawning areas, waterfowl habitat, animal migration routes, beaches, archaeological and historic sites, public or private water supplies. The area surrounding the airport is flat lying close to the roadside, with topography then beginning to drop off quite steeply (+/-10 m drop) towards the shoreline and West Arm of Cambridge Bay. Please see Annex I for site drawings.

Since there is potential for PFAS contamination to be present at Firefighter Training Areas, such as at Cambridge Bay Airport, where aqueous film forming foams (AFFF) for firefighting training were used, Transport Canada sampled the

soils and sump water of each LTU for the presence PFAS substances. The analytical results confirmed the presence of PFAS in both LTUs. Currently, there are no viable remediation technologies to treat PFAS impacted soils. Therefore, Transport Canada will maintain and manage the LTUs until a suitable treatment technology is available to remediate the impacted soils. Active treatment of hydrocarbons has been suspended. On-going water management is required to ensure that surface water continues to be contained within the LTUs, the integrity of the berms are maintained, and conditions of the NWB license are met. Water management will include yearly tilling of soils in the LTUs to increase water capacity and pumping of water from sumps over tilled soil (as needed). Transport Canada is currently forecasting to maintain and manage the LTUs until 2028 or until a suitable PFAS remediation technology can be implemented.

2.0 SCHEDULE

The original temporal scope of the project was 5 years, commencing in April 2012 and concluding in July 2017. However, due to the uncertainty of PFAS treatment technologies, TC requested and was granted a renewed NWB licence term of 10 years. The expiry date of that licence is May 16, 2028. The decommissioning of the LTUs will be completed once a suitable on-site PFAS remediation technology is implemented or when all contaminated material has been removed from the site and taken to a suitable facility for treatment and/or disposal. All work will be completed prior to the date of expiry of the water licence unless a renewal licence is applied for and granted.

3.0 DECOMMISSIONING

Transport Canada plans to decommission the LTUs once a suitable treatment method for PFAS can be implemented. At this time, it is not known whether that treatment method will occur on-site or whether contaminated materials will be taken off-site for treatment and/or disposal. Transport Canada will provide an update to the Nunavut Water Board once a final decommissioning plan has been determined.

Regardless of the treatment method, after soils and sump water have been removed from the LTUs, the following tasks will be undertaken as part of the decommissioning:

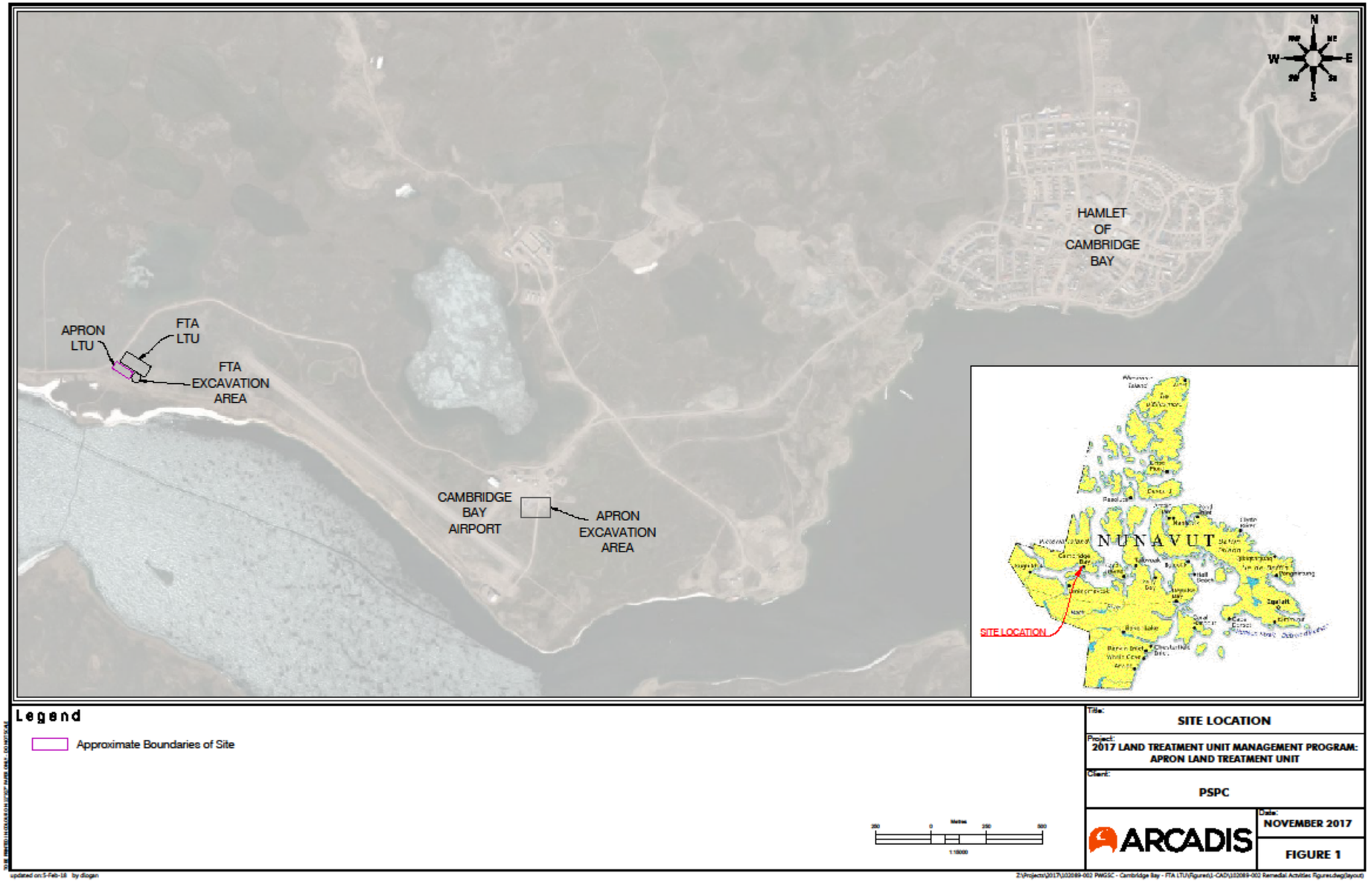
- liners from both LTUS will be taken to an approved landfill site for proper disposal,
- soil samples will be taken under the liner areas to ascertain whether contamination has leached beneath the liner,
- once both LTU sites have been confirmed to be compliant to the quality limits set out in the NWB licence, all monitoring wells will be

decommissioned in accordance with the applicable regulations in force at the time of the decommissioning (currently *Yukon Groundwater Environment Act – Contaminated Sites Regulations – Protocol No. 7 – Groundwater Monitoring Well Installation, Sampling and Decommissioning*), and

- LTU berms will be leveled and the site will be contoured to match the surrounding conditions, unless the property owner, (Government of Nunavut) expresses an interest for a different land use for the area. In that case, Transport Canada and Government of Nunavut will finalize those details in advance of the decommissioning.

ANNEX I

Site Drawings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CAMBRIDGE
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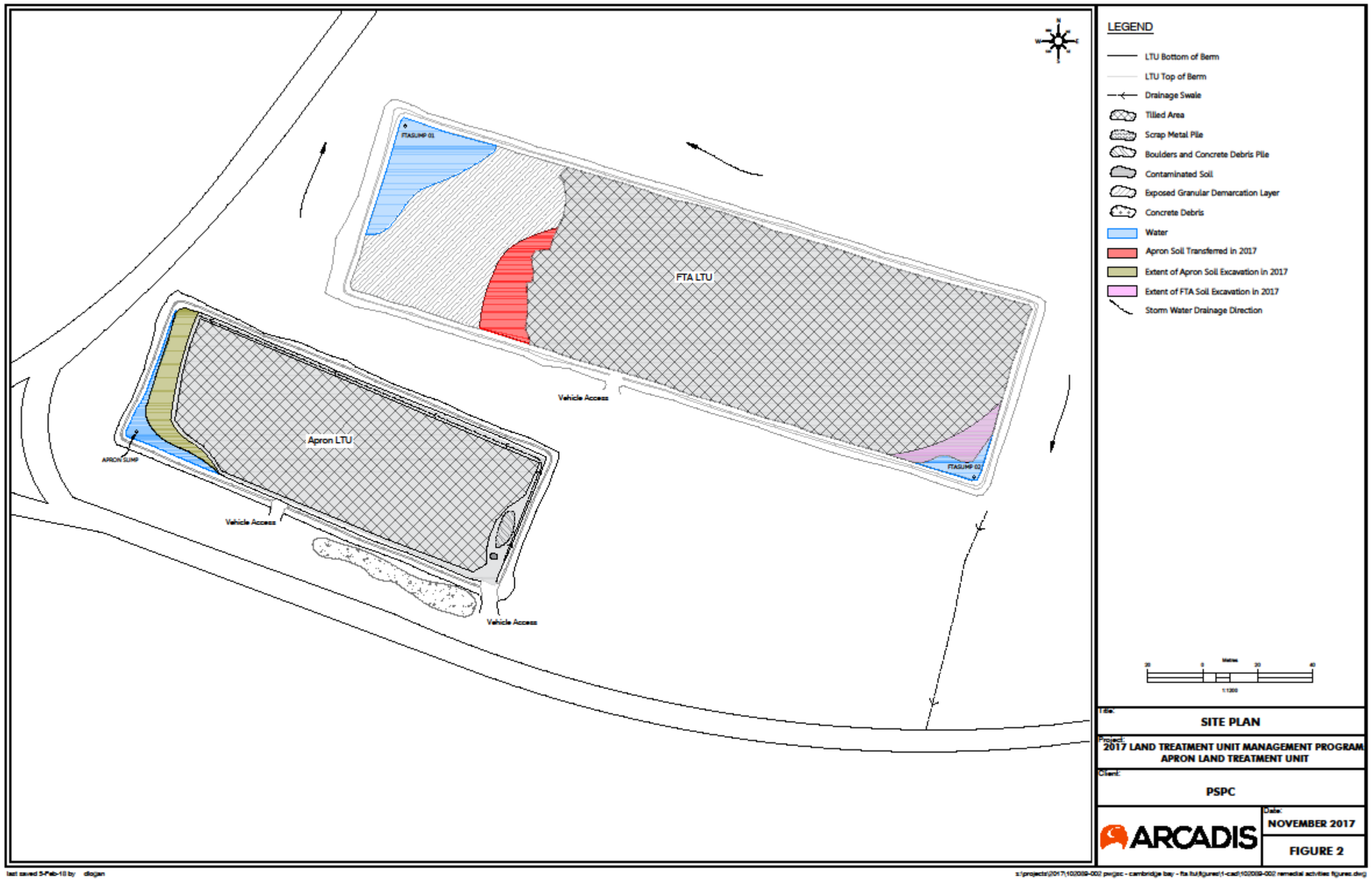
AIRPORT
APRON
EXCAVATION
AREA
NUNAVUT
SITE LOCATION
Legend
Approximate Boundaries of Site
Metres
1:15000
Title:
SITE LOCATION
Project:
2017 LAND TREATMENT UNIT MANAGEMENT PROGRAM:
APRON LAND TREATMENT UNIT
Client:
PSPC
ARCADIS
Date:
NOVEMBER 2017
FIGURE 1



LEGEND

- LTU Bottom of Berm
- LTU Top of Berm
- Drainage Swale
- Tilled Area
- Scrap Metal Pile
- Boulders and Concrete Debris Pile
- Contaminated Soil
- Exposed Granular Demarcation Layer
- Concrete Debris
- Water
- Apron Soil Transferred in 2017
- Extent of Apron Soil Excavation in 2017
- Extent of FTA Soil Excavation in 2017
- Storm Water Drainage Direction

Metres
20 0 20 40
1:1200

Title: SITE PLAN

Project: 2017 LAND TREATMENT UNIT MANAGEMENT PROGRAM
APRON LAND TREATMENT UNIT

Client: PSPC

ARCADIS

Date: NOVEMBER 2017

FIGURE 2

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