Transport Canada
LTU Annual Report 2007
Iqaluit Airport, Nunavut
Water License No. 1BR-LTU0608

To:

Nunavut Water Board
P.O. Box 119
Gjoa Haven, Nunavut
X0B 1J0

March 2009

Introduction

Transport Canada (TC) received a water license from the Nunavut Water Board to operate a landfarm in order to treat petroleum hydrocarbon (PHC) contaminated soil at the Iqaluit airport. The water license No. 1BR-LTU0608 was issued on August 21, 2007 which outlines the terms and conditions for the operations and maintenance of the facility. TC anticipated constructing one large LTU cell on site, however the topographic conditions and airport operations made this difficult due to restriction related to the runway, adjacent taxiway and apron. Therefore, TC constructed two smaller LTU cells (C & D) adjacent to the previously constructed LTU cells (A & B) which will be decommissioned in the near future (see site plan drawing). The following report will outline the activities for the LTU as described in Part B Item 2 in the water license.

History

Prior to July 1, 1995 Iqaluit 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 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 GNWT and Transport Canada, the environmental issues, which existed prior to the airport transfer, are to be remediated as well as any items identified by the GN within six years of the transfer date. Works identified under this document address some of the issues identified in the transfer agreement as well as post transfer issues. Types of PHC contaminated soils encountered for disposal in the LTU are gasoline, diesel, and jet fuel (A,B) which are the main sources of fuel spills and leaks over the past 60 years at this location. The depth of contaminated soil in the LTU will not be greater then 1m and will be constructed based on the parameters outlined in the water licence application (also see attached engineered drawing).

Transport Canada is obligated to remediate all hazardous substances that are the department's responsibility that do not comply with the applicable environmental laws.

Part B Item 2

i. TC completed the remediation of Apron I during the summer of 2007. The Apron was configured to refuel B-52 bombers when the USAF owned and operated this airport between 1955 through the 1970's. As such, the Apron has an underground refueling piped system with 10 fuel hydrant boxes. TC conducted an environmental phase I & II investigation which indicated several areas of contamination at or near the fuel hydrant boxes. The contaminated soil consisted of jet fuel that was likely due to refueling spills and possibly leaking underground pipes. The underground hydrant boxes were removed and all associated contaminated soil was removed and placed in the LTU cell D. Approximately 150 –200 m3 of contaminated soil was placed in the LTU. Additional test pits were conducted in order to determine the site was clear of any additional contamination.

TC also completed the remediation of an abandoned sea can with associated 205L – used oil storage drums. The site is located adjacent to LTU cell B on the northeast corner. There were approximately 100 drums that were stored on site with several that appeared to be leaking. TC removed all drums and the sea can and proceeded to remediate the contaminated soil. TC removed approximately 270 m3 of contaminated soil and placed it in the LTU cell D.

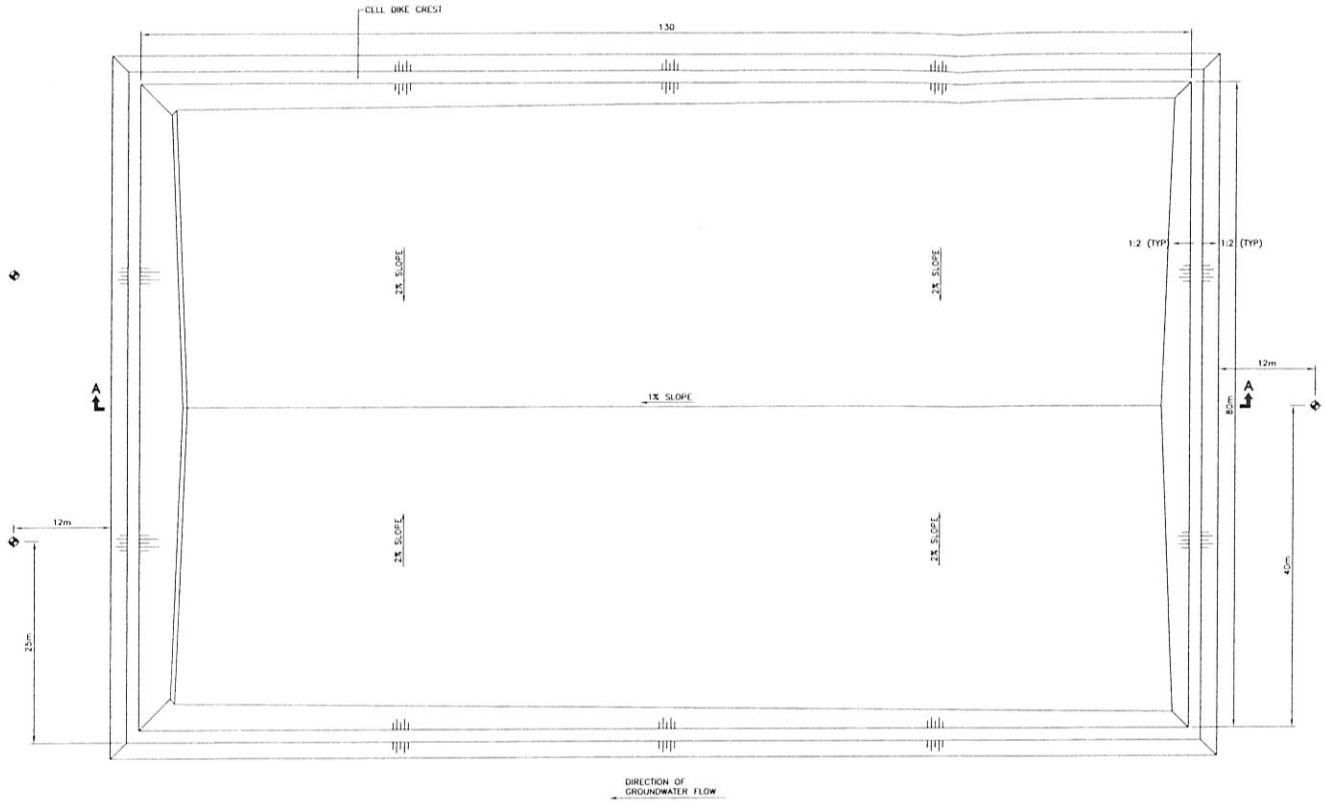
ii. No discharges to report;

iii. There is no storage of any petroleum hydrocarbons at this site. The only concern for the Spill Contingency Plan is for heavy equipment working at the site for delivering contaminated soil to the facility or equipment used during tilling/fertilizing and maintaining the site. Heavy equipment operators are required to have their equipment properly maintained without any leaks. Operators are required to have a small spill kit with them at all times while on site. Operators are also required to have a spill plan containing contacts and procedures for emergencies such as hospitals, fire department, police and territorial governmental department environmental spills;

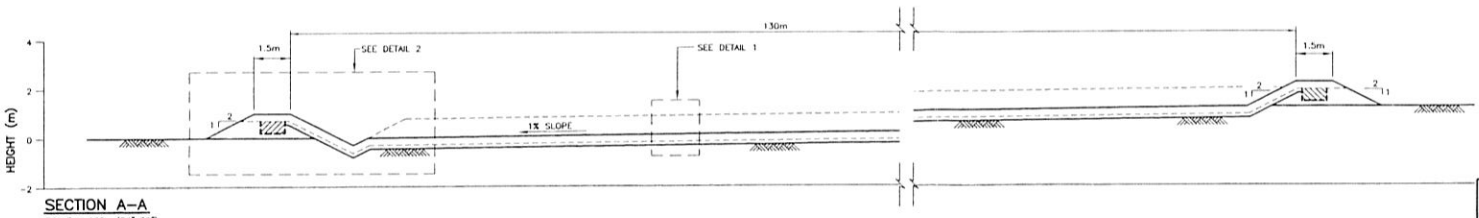
iv. No additional works completed. See attachments for photos, site plan, engineered drawing;

v. No monitoring/sampling required. The contaminated soil was placed in the LTU cell D during the summer and late fall.

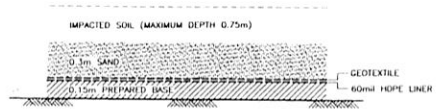
vi. No additional details, no water use at this site



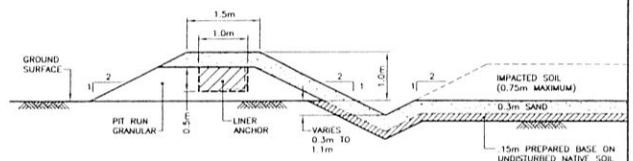
PLAN



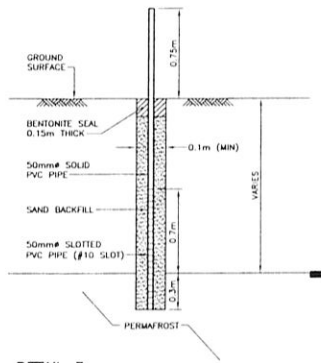
SECTION A–A
SCALE: 1:100 (24"x36")
1:200 (11"x17")



DETAIL 1 (FLOOR LINER)
SCALE: 1:20 (24"x36")
1:40 (11"x17")



DETAIL 2
SCALE: 1:50 (24"x36")
1:100 (11"x17")



DETAIL 3
SCALE: 1:20 (24"x36")
1:40 (11"x17")

LEGEND

MONITORING WELL (SEE DETAIL 3)

NOTES

1. EXACT LOCATION OF FACILITY TO BE DETERMINED ON SITE.
2. IF SUITABLE SOIL CONDITIONS EXIST, BASE TO BE PREPARED BY SCARIFYING EXISTING GROUND TO A MINIMUM DEPTH OF 0.15m, REMOVING STONES LARGER THAN 50mm AND COMPACTING TO 95% DENSITY. IF SOIL CONDITIONS ARE NOT SUITABLE, BASE TO BE PREPARED BY PLACING SAND TO A MINIMUM DEPTH OF 0.15m AND COMPACTING TO 95% DENSITY.

0 6 12 18 24 30m

SCALE: 1:300 METRIC 24"x36"
(PLAN) 1:600 METRIC 11"x17"

NO.	DATE	DESCRIPTION	BY
A	26/04/06	PRELIMINARY DESIGN NOT FOR CONSTRUCTION	EC

REVISIONS / ISSUE

A. SECTION LETTER OR DETAIL NUMBER
B. DRAWING WHERE SECTION OR DETAIL IS DRAWN
OR
DRAWING WHERE SECTION OR DETAIL WAS INDICATED
— SECTION OR DETAIL SHOWN ON SAME DRAWING

KGS GROUP CONSULTING ENGINEERS & PROJECT MANAGERS
WINNIPEG (204) 896-1209
THUNDER BAY (807) 345-2233

CLIENT
WINNIPEG ENVIRONMENTAL REMEDIATION INCORPORATED

PROJECT
LAND TREATMENT UNIT
IQALUIT AIRPORT
NUNAVUT

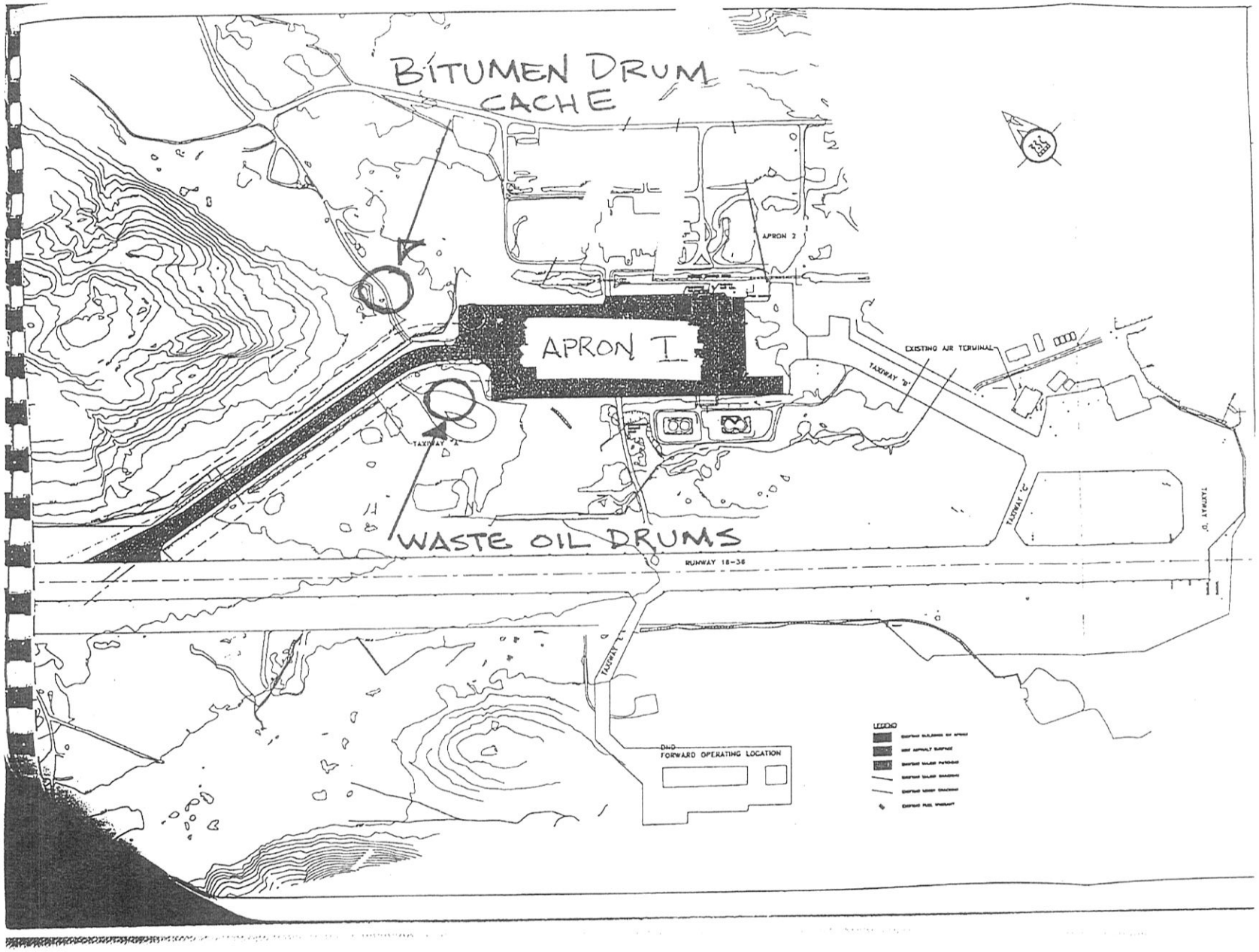
DWG. DESCRIPTION
SOIL TREATMENT CELL
PLAN, SECTIONS AND DETAILS

PERMIT TO PRACTICE
KGS GROUP
Signature
Date Apr 26/06
PERMIT NUMBER: P419
The Association of Professional Engineers, Geologists and Geophysicists of the NWT/NU

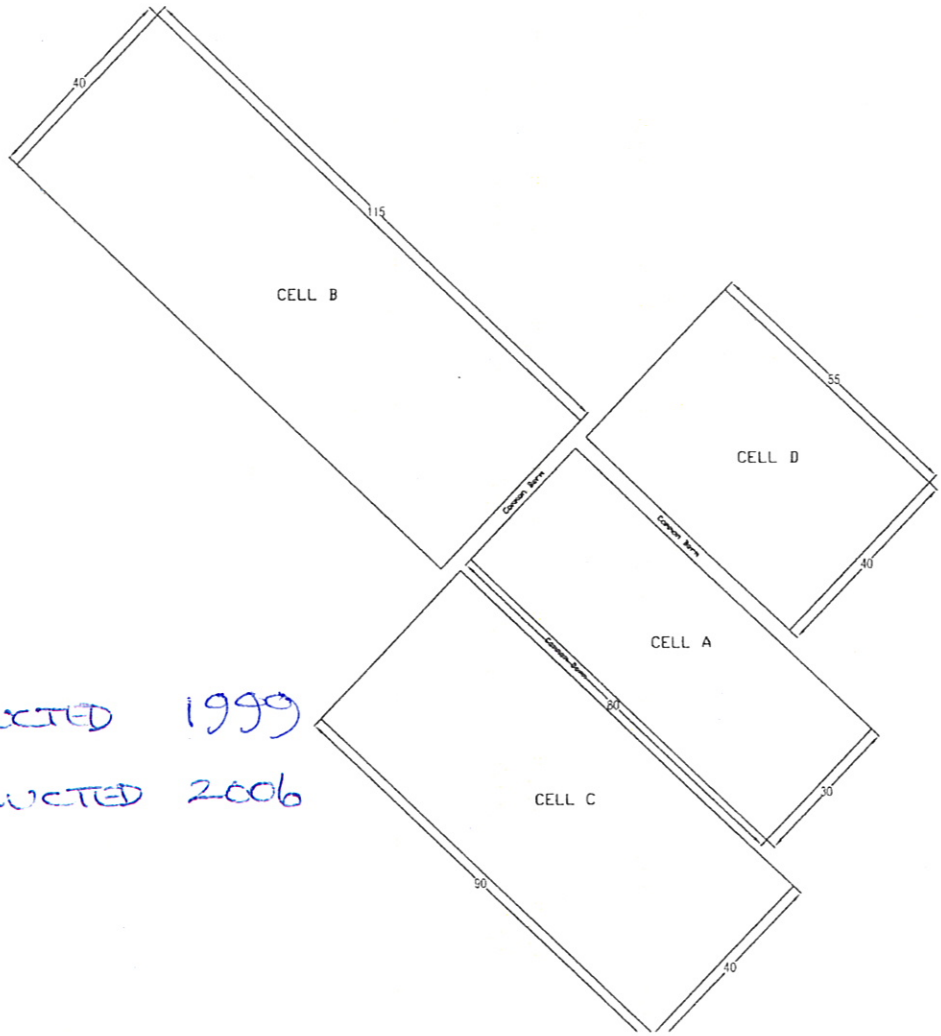
ENG. STAMP
PROFESSIONAL ENGINEER EDWARD J. COLLINS
NWT

DESIGNED BY	EC	DRAWN BY	EC
CHECKED	RS	CHECKED	
APPROVED	EC		
SCALE	AS NOTED	DATE	APRIL 2006
KGS DWG. NO.	06-1344-01		01
CLIENT DWG. NO.		REV.	A

FIGURE 1


BITUMEN DRUM CACHE
APRON 2
APRON I
EXISTING AIR TERMINAL
TAXIWAY 'B'
TAXIWAY 'A'
TAXIWAY 'C'
WASTE OIL DRUMS
RUNWAY 18-36
TAXIWAY 'C'
DND
FORWARD OPERATING LOCATION

IQALUIT AIRPORT LTU



CELL A & B CONSTRUCTED 1999

CELL C & D CONSTRUCTED 2006


Google Earth
File Edit View Tools Add Help
Search
Fly To
Find Businesses
Directions
Fly to e.g., Reservoir Rd. Clayville, NY
Places
Add Content
My Places
Sightseeing
Select this folder and click on the 'Play' button below, to start the tour.
Temporary Places
Layers
Primary Database
Geographic Web
Roads
3D Buildings
Street View
Borders and Labels
Traffic
Weather
Gallery
Ocean
Global Awareness
Places of Interest
More
Terrain
TAXIWAY "C"
B
D
A
C
APRON I
RUNWAY 17-35
Image © 2009 DigitalGlobe
© 2009 Tele Atlas
Imagery Date: Jul 26, 2006
63°45'27.70" N 68°32'53.81" W elev 125 ft
start
Google Earth


HITACHI
EX300LC


CASE
9060