General Water Licence Application
(Application for a new Water Licence)

April 2010

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NUNAVUT IMALIRIYIN KATIMAYINGI
NUNAVUT WATER BOARD
OFFICE DES EAUX DU NUNAVUT

DOCUMENT MANAGEMENT

Original Document Date: April 2010

DOCUMENT AMENDMENTS

	Description	Date
(1)		
(2)		
(3)		
(4)		
(5)		
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NUNAVUT WATER BOARD
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GENERAL WATER LICENCE APPLICATION
(APPLICATION FOR NEW WATER LICENCE)

The applicant is referred to the NWB's Guide 4: *Guide to Completing and Submitting a Water Licence Application for a New Licence* for more information about this application form.

LICENCE NO:
(for NWB use only)

1. APPLICANT (PROPOSED LICENSEE) CONTACT INFORMATION (name, address)

Corinne Miller
Transport Canada
Programs – Contaminated Sites
1100 – 9700 Jasper Avenue
Edmonton, AB
T5J 4E6

Phone: 780-495-3980
Fax: 780-495-4748
e-mail: corinne.miller@tc.gc.ca

2. APPLICANT REPRESENTATIVE CONTACT INFORMATION if different from Block 1 (name, address)

Phone: _____
Fax: _____
e-mail: _____
(Attach authorization letter.)

3. NAME OF PROJECT (including the name of the project location)

Cambridge Bay Airport, NU – Firefighter Training Area Remediation
Cambridge Bay Airport, NU – Apron Remediation

4. LOCATION OF UNDERTAKING

Project Extents

NW: Latitude: (69 °06' 40" N) Longitude: (105°09' 40" W)
NE: Latitude: (° ' " N) Longitude: (° ' " W)
SE: Latitude: (° ' " N) Longitude: (° ' " W)
SW: Latitude: (° ' " N) Longitude: (° ' " W)

The Cambridge Bay Airport is not on federally owned land and is not listed in the Federal Real Property Directory. The Cambridge Bay Airport is on untitled land owned by the Government of Nunavut with a legal description of Quad 77/2, Lot 1004, Plan #2958

Camp Location(s) N/A

Latitude: (° ' " N) N Longitude: (° ' " W)

5. **MAP** - Attach a topographical map, indicating the main components of the undertaking.

NTS Map Sheet No.: 077D02E_____ Map Name: _____ Map Scale: __1:50,000____

6. **NATURE OF INTEREST IN THE LAND** - Check any of the following that are applicable to the proposed undertaking (at least one box under the 'Surface' header must be checked).

Sub-surface

☐ Mineral Lease from Nunavut Tunngavik Incorporated (NTI)
Date (expected date) of issuance: _____ Date of expiry: _____

☐ Mineral Lease from Indian and Northern Affairs Canada (INAC)
Date (expected date) of issuance: _____ Date of expiry: _____

Surface

☐ Crown Land Use Authorization from Indian and Northern Affairs Canada (INAC)
Date (expected date) of issuance: _____ Date of expiry: _____

☐ Inuit Owned Land (IOL) Authorization from Kitikmeot Inuit Association (KIA)
Date (expected date) of issuance: _____ Date of expiry: _____

☐ IOL Authorization from Kivalliq Inuit Association (KivIA)
Date (expected date) of issuance: _____ Date of expiry: _____

☐ IOL Authorization from Qikiqtani Inuit Association (QIA)
Date (expected date) of issuance: _____ Date of expiry: _____

☐ Commissioner's Land Use Authorization
Date (expected date) of issuance: _____ Date of expiry: _____

X Other: **Cambridge Bay Airport Firefighting Training Area and Apron Area Remediation**
_____
Date (expected date) of issuance: _____ Date of expiry: _____

Name of entity(s) holding authorizations:

The Cambridge Bay Airport is on untitled land owned by the Government of Nunavut with a legal description of Quad 77/2, Lot 1004, Plan #2958

7. NUNAVUT PLANNING COMMISSION (NPC) DETERMINATION

Indicate the land use planning area in which the project is located.

☐ North Baffin
☐ South Baffin
☐ Akunniq
☐ Keewatin
☐ Sanikiluaq
X West Kitikmeot

Is a land use plan conformity determination required?

☐ Yes **? TBD** ☐ No

If Yes, indicate date issued and attach copy _____to be determined by NPC

If No, provide written confirmation from NPC confirming that a land use plan conformity review is not required.

8. NUNAVUT IMPACT REVIEW BOARD (NIRB) DETERMINATION

Is an Article 12 Part 4 screening determination required?

☐ Yes **? TBD** ☐ No

If Yes, indicate date issued and attach copy _____
If No, provide written confirmation from NIRB confirming that a screening determination is not required.

9. DESCRIPTION OF UNDERTAKING – List and attach plans and drawings or project proposal.

Cambridge Bay Airport –Firefighter Training Area Remediation and Apron Remediation

The Cambridge Bay airport covers an area of approximately 140 ha and has been used as an airport since the 1950s. Operations conducted on this site included the following: airline offices, airport manager office, petroleum/fuel storage and distribution, aircraft and vehicle maintenance. Administration and control of the airport was transferred from Transport Canada to the Government of the Northwest Territories in 1995. Since 1999, the airport has been owned by the Government of Nunavut (GN). As part of the Arctic A Transfer Agreement between Transport Canada and the Government of Northwest Territories in 1995, Transport Canada agreed to address certain environmental issues that were identified in environmental baseline studies. The Firefighter Training Area (FFTA) and the Apron Area Remediation (Apron) were identified as Areas of Environmental Concern (AEC) in 1994.

Cambridge Bay Airport –Firefighter Training Area Remediation

The Firefighter Training Area is located southwest of the northwest end of the runway. This training area was bermed, unlined and measured approximately 4.5 m x 3 m. Fuel storage was provided by an above ground storage tank (AST) farm and pipe system formerly located west of the bermed area. The FFTA was in use for a brief period after the transfer of the Cambridge Bay Airport from Transport Canada to the Government of Northwest Territories. The FFTA site consists of an aircraft mock-up area where fuel and potentially other combustible/flammable waste liquids were periodically burned as part of firefighting training exercises. A containment berm, constructed of local till material, surrounds the aircraft mock-up area. Fuel storage was provided by an aboveground storage tank farm and pipe system formerly located to the west of the mock-up area. The FFTA had above ground storage tanks (ASTs). Transport Canada returned to the site and removed the AST and associated piping and tilled the area to aerate soils. Soil tilling was reported to have been completed on two or three occasions over a 2 year period, with the last tilling completed in 1996.

The FFTA was identified as a target for hydrogeological investigation due to long-term fuel usage at the site. Franz Environmental (Franz) was retained by Public Works and Government Services Canada (PWGSC) and Transport Canada to complete a Phase II/III Environmental Site Assessment (ESA) at the Cambridge Bay Airport. The work was completed to identify environmental liabilities and assess remediation/risk management options at areas of potential environmental concern (APECs). For AEC3 – the Firefighting Training Area (FFTA), Franz recommended the following for the FFTA:

- Petroleum hydrocarbon (PHC) contaminated soils and groundwater (including metals) in AEC 3 (FFTA) and 4 to be excavated and treated in an onsite land treatment facility (LTF).

The approximate surface area of contaminated soil is 3312 m2 and an estimated volume of 6624 m3. FRANZ recommended PHC contaminated soils and groundwater (including metals) at AECs 3 be excavated and treated in an onsite land treatment facility (LTF), assuming a 7,000m3 capacity LTF could be constructed at the Airport. Considering prevailing climatic conditions at Cambridge Bay (relatively cold temperatures, short summer), Franz estimates that up to 3,500m3 of PHC contaminated soil can be cycled through the LTF annually.

Cambridge Bay Airport – Apron Area Remediation

The former F.H. Ross Tank Site (Apron) is located approximately 60 m south of the Air Terminal Building and Canadian North/First Air storage depots. The area is rectangular in shape and approximately 50 X 100 m in area. The apron is used as parking and refuelling station for airplanes that land at the Airport. Site features include: a fuel transfer station, airport lighting and over ground fuel fee lines that transfer fuel from nearby ASTs to the fuel transfer building.

F.H. Ross and Associates Ltd were responsible for airport maintenance and aircraft fuelling during 1999, and at the time, they maintained three 100,000 litre AST, east of the runway. In 1992, they were refurbished and relocated to the current location, located 30 m to the southeast of the apron. However, no formal decommissioning procedures were followed.

A Phase III Environmental Site Assessment and Remedial Action Plan were conducted at the Cambridge Bay Airport by EBA Engineering (EBA) in 2011. The work was completed to identify environmental liabilities and assess remediation/risk management options at areas of potential environmental concern (APECs). For the Apron Area, EBA recommended the following:

- Petroleum hydrocarbon (PHC) contaminated soils in the Apron Area to be excavated and treated in an onsite land treatment facility (LTF).

The approximate estimated volume of contaminated soil in the Apron area is 3300 m3.

Based on Transport Canada's experience with previous remedial projects in similar environments, and the requirement for a land treatment facility in Cambridge Bay for future projects, it was decided that the ex-situ Land Farming option be used. One on-site LTF will be constructed to hold both the hydrocarbon contaminated soil from the Apron Area and the FFTA. It would have a capacity of 11,700 m3 (7700 m3 from the FFTA and 3300 m3 from the Apron). The impacted soil will be treated in an on-site LTF, therefore a substantial cost savings will be realized by not having to transport to a landfill and it will be re-used as fill at the airport. This option supports Transport Canada's Environmental Management System, Contaminated Sites Management Plan and its commitment towards the protection of the environment.

10. **OPTIONS** – Provide a brief explanation of the alternative methods or locations that were considered to carry out the project.

N/A

11. CLASSIFICATION OF PRIMARY UNDERTAKING - Indicate the primary classification of undertaking by checking one of the following boxes.

☐ Industrial
☐ Agricultural
☐ Mining and Milling (includes exploration/drilling/exploration camps)
☐ Conservation
☐ Municipal (includes camps/lodges)
☐ Recreational
☐ Power
X Miscellaneous (describe below):
Airport Site Remediation

See Schedule II of *Northwest Territories Waters Regulations* for Description of Undertakings.

Information in accordance with applicable Supplemental Information Guidelines (SIG) must be submitted with a New Water Licence Application. Indicate which SIG(s) are applicable to your application.

☐ Hydrostatic Testing
☐ Tannery
☐ Tourist / Remote Camp
X Landfarm & On-Site Storage of Hydrocarbon Contaminated Soil
☐ Onshore Oil and Gas Exploration Drilling
☐ Mineral Exploration / Remote Camp
☐ Advanced Exploration
☐ Mine Development
☐ Municipal
☐ General Water Works
☐ Power

12. WATER USE - Check the appropriate box(s) to indicate the type(s) of water use(s) being applied for.

☐ To obtain water for camp/ municipal purposes
☐ To obtain water for industrial purposes
☐ To divert a watercourse
☐ To cross a watercourse
☐ To modify the bed or bank of a watercourse
☐ To alter the flow of, or store water
☐ Flood control
X Other: No Water Use

13. **QUANTITY AND QUALITY OF WATER INVOLVED -** For each type of water use indicated in Block 12, provide the source of water, the quality of the water source and available capacity, the estimated quantity to be used in cubic meters per day, method of extraction, as well as the quantities and qualities of water to be returned to source.

Name of water source(s) (show location(s) on map):
N/A _____

Describe the quality of the water source(s) and the available capacity: _____
_____
_____

Provide the overall estimated quantity of water to be used: **None** _____ m^3/day

Provide the estimated quantity(s) of water to be used from each source:
None _____

Indicate the estimated quantities to be used for each purpose (camp, drilling, etc.)
None _____

Describe the method of extraction(s): **N/A** _____

Estimated quantity(s) of water returned to source(s) **None** _____ m^3/day

Describe the quality of water(s) returned to source(s): **N/A** _____
_____
_____

14. **WASTE** – Check the appropriate box(s) to indicate the types of waste(s) generated and deposited.

☐ Sewage
☐ Solid Waste
☐ Hazardous
☐ Bulky Items/Scrap Metal
☐ Animal Waste
☐ Waste oil
☐ Greywater
☐ Sludges
☐ Contaminated soil and/or water
X Other (describe): **None** _____

15. **QUANTITY AND QUALITY OF WASTE INVOLVED** – For each type of waste indicated in Block 14, describe its composition, quantity in cubic meters/day, method of treatment and method of disposal.

Type of Waste	Composition	Quantity Generated	Treatment Method	Disposal Method
None				

16. OTHER AUTHORIZATIONS – In addition to the sub-surface and surface land use authorizations provided in Block 6, indicate any other authorizations required in relation to the proposed undertaking. For each provide the following:

Authorization: **N/A** _____

Administering Agency: _____

Project Activity: _____

Date (expected date) of issuance: _____ Date of expiry: _____

17. PREDICTED ENVIRONMENTAL IMPACTS OF UNDERTAKING AND PROPOSED MITIGATION MEASURES - Describe direct, indirect, and cumulative impacts related to water and waste.

None

18. WATER RIGHTS OF EXISTING AND OTHER USERS OF WATER

Provide the names, addresses and nature of use for any known persons or properties that may be adversely affected by the proposed undertaking, including those that hold licences for water use in precedent to the application, domestic users, in-stream users, authorized waste depositors, owners of property, occupiers of property, and/or holders of outfitting concessions, registered trapline holders, and holders of other rights of a similar nature.

Advise the Board if compensation has been paid and/or agreement(s) for compensation have been reached with any existing or other users.

19. INUIT WATER RIGHTS

Advise the Board of any substantial affect of the quality, quantity or flow of waters flowing through Inuit Owned Land (IOL), and advise the Board if negotiations have commenced or an agreement to pay compensation for any loss or damage has been reached with one or more Designated Inuit Organization (DIO).

20. CONSULTATION – Provide a summary of any consultation meetings including when the meetings were held, where and with whom. Include a list of concerns expressed and measures to address concerns.

Public Involvement/ Traditional Knowledge

Community	Name	Organization	Date Contacted
Government of Nunavut			email – January 18
Nunavut airport			email – January 31
Nunavut Airport			email – February 3

21. SECURITY INFORMATION

Provide an estimate of the total financial security for final reclamation equal to the total outstanding reclamation liability for land and water combined sufficient to cover the highest liability over the life of the undertaking. Estimates of reclamation costs must be based on the cost of having the necessary reclamation work done by a third party contractor if the operator defaults. The estimate must also include contingency factors appropriate to the particular work to be undertaken.

The final cost to conduct remediation of AEC 3 is estimated to $6.5 million for the period of 2010/2015, as reported in the *Franz Environmental Inc. – Cambridge Bay Airport, Nunavut: Phase II/III Environmental Site Assessment (ESA) Report, March 2010, Project #: 1748-0901*.

22. FINANCIAL INFORMATION

The Government of Canada is committed to taking action on federal contaminated sites to protect human health and the environment and reduce their associated liabilities that are reported through the Public Accounts of Canada. The Federal Contaminated Sites Action Plan (FCSAP) is a cost-shared program that helps federal custodians to address contaminated sites for which they are responsible. The primary objective of this program is to address the risks that these sites pose to human health and the environment and to reduce the associated financial liability. Federal departments are required to cost share 15% of the total project cost and 85% of the cost share is provided through FCSAP.

Prior to divesting a property, federal departments must ascertain the environmental condition of the property in compliance with Treasury Board Secretariat's Policy on Management of Real Property. To determine the environmental condition, a phased site assessment approach is conducted in accordance with industry standards (i.e. Canadian Standards Association). Transport Canada has established priorities and targets concerning contaminated sites through its Environmental Management System (EMS). The EMS target is to remediate and/or risks manage TC's contaminated sites by 2010/2011. Thus, Transport Canada is obligated under the land transfer agreement with the Government of Nunavut to address the contaminated site issues at sites, including Cambridge Bay Firefighter Training Area, where the contamination originated prior to the transfer date.

Assessment work is an important part of the FCSAP program. Assessment projects involve detailed scientific and/or engineering analysis to identify the nature and extent of the contamination. A full-scale assessment of the severity of contamination for a specific site is a lengthy and complex process. By assessing contaminated sites, the federal government is able to determine whether the site requires further action in terms of remediation or risk management to reduce the associated human health or ecological risk

If further action is required as a result of the assessment, a remediation or risk management plan is developed. The plan represents the selected/preferred option from various alternatives that are evaluated to most effectively and efficiently reduce the risk to human health and the environment. The selected option addresses the unique conditions at the site. The responsible government department or agency oversees the development of the remediation plan and works closely with the consultants, contractors, and trades people hired to design and implement it.

Transport Canada has a national Contaminated Sites Program and a Contaminated Sites Management Plan (CSMP). The CSMP outlines the department's strategy in addressing its contaminated sites. A key component of the CSMP is to address higher risk sites first. According to the National Classification System for Contaminated Sites (NCSCS), the Cambridge Bay Firefighter Training Area project site score for AEC 3 is 71.7 and the Cambridge Bay Apron Area project site score is 780.0, which classifies both the FTA and the Apron as a Class 1 site (High Priority for Action). The factors that make this a Class 1 site are the high potential for adverse impacts, to human health and the environment.
The

Completion of these projects will address the environmental liabilities associated with the site and allow Transport Canada to meet the transfer commitments and to report costs and liabilities for their contaminated sites to the Treasury Board Secretariat annually.

23. STUDIES UNDERTAKEN TO DATE - List and attach copies of studies, reports, research, etc.

Cambridge Bay FTA Project

Franz Environmental Inc. – Cambridge Bay Airport, Nunavut: Phase II/III Environmental Site Assessment (ESA) Report, March 2010, Project #: 1748-0901

AECOM – Phase II/III Environmental Site Investigation, Firefighter Training Area, Cambridge Bay Airport, Cambridge Bay, NU, November 2010, Project # 60164535

Human Health Risk Assessment of the contaminants at the site:
Franz Environmental Inc. – Human Health and Ecological Risk Assessment, Cambridge Bay Airport, Nunavut: Final Report, March 2010, Project #: 1748-0902

Cambridge Bay Apron Project

EBA - Phase III Environmental Site Assessment and Remedial Action Plan at Cambridge Bay Airport, Cambridge Bay, Nunavut. 2011.

Franz Environmental Inc. - Phase II/III Environmental Site Assessment, Cambridge Bay Airport, Cambridge Bay Nunavut. Franz Environmental, 2009.

24. PROPOSED TIME SCHEDULE – Indicate the proposed start and completion dates for each applicable phase of development (construction, operation, closure, and post closure).

Construction
Proposed Start Date: **July 2012** _____ Proposed Completion Date**: October 2017** ____
(month/year) (month/year)

Operation
Proposed Start Date: _____ Proposed Completion Date: _____
(month/year) (month/year)

Closure
Proposed Start Date: _____ Proposed Completion Date: _____
(month/year) (month/year)

Post - Closure
Proposed Start Date: _____ Proposed Completion Date: September 2014 ____
(month/year) (month/year)

For each applicable phase of development indicate which season(s) activities occur.

Construction
☐ Winter ☐ Spring **X** Summer ☐ Fall ☐ All season

Operation
☐ Winter ☐ Spring ☐ Summer ☐ Fall ☐ All season

Closure
☐ Winter ☐ Spring ☐ Summer ☐ Fall ☐ All season

Post - Closure
☐ Winter ☐ Spring ☐ Summer **X** Fall ☐ All season

25. PROPOSED TERM OF LICENCE

Number of years (maximum of 25 years): Four _____ years

Requested Date of Issuance: April 2012 _____ Requested Expiry Date: July 2017
(month/year) (month/year)

(The requested date of issuance must be at least three (3) months from the date of application for a type B water licence and at least one (1) year from the date of application for a type A water licence, to allow for processing of the water licence application. These timeframes are approximate and do not account for the time to complete any pre-licensing land use planning or development impact requirements, time for the applicant to prepare and submit a water licence application in accordance with any project specific guidelines issued by the NWB, or the time for the applicant to respond to requests for additional information. See the NWB's *Guide 5: Processing Water Licence Applications* for more information)

26. ANNUAL REPORTING – If not using the NWB's *Standardized Form for Annual Reporting*, provide details regarding the content of annual reports and a proposed outline or template of the annual report.

The consultant awarded the contract is required to compile an annual report, which details the project activities. This report can be made available to the NWB.

27. CHECKLIST – The following must be included with the application for the water licensing process to begin.

Written confirmation from the NPC confirming that NPC's requirements regarding land use plan conformity have been addressed.

☐ Yes ■ No If no, date expected ____ to be determined (TBD)

Written confirmation from the NIRB confirming that NIRB's requirements regarding development impact assessment have been addressed.

☐ Yes ■ No If no, date expected _____ to be determined (TBD)

Completed General Water Licence Application form.

■ Yes ☐ No If no, date expected _____

Information addressing Supplemental Information Guideline (SIG) , where applicable (see Block 11)

☐ Yes ■ No If no, date expected __NONE _____

English Summary of Application.

■ Yes ☐ No If no, date expected _____

Inuktitut and/or Inuinnaqtun Summary of Application.

■ Yes ☐ No If no, date expected _____

Application Fee of $30.00 CDN (Payee Receiver General for Canada).

☐ Yes ■ No If no, date expected **Government of Canada is exempt**

Water Use Fee Deposit of $30.00 CDN (Payee Receiver General for Canada). The actual water use fee will be calculated by the NWB based upon the amount of water authorized for use in accordance with the Regulations at the time of issuance of the licence.

☐ Yes ■ No If no, date expected _____

28. SIGNATURE

Name (Print)	**Title (Print)**	**Signature**	**Date**