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NUNAVUT IMALIRIYIN KATIMAYINGI  
NUNAVUT WATER BOARD  
OFFICE DES EAUX DU NUNAVUT



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

April 2010

## ***DOCUMENT MANAGEMENT***

Original Document Date: April 2010

### **DOCUMENT AMENDMENTS**

	<b>Description</b>	<b>Date</b>
(1)		
(2)		
(3)		
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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.

<b>LICENCE NO:</b> (for NWB use only)	
<b>1. APPLICANT (PROPOSED LICENSEE) CONTACT INFORMATION</b> (name, address) Transport Canada Environmental Affairs - Programs 3 <sup>rd</sup> Floor – 344 Edmonton Street Winnipeg, Manitoba R3C 0P6  Attention: Michael Molinski  Phone: 204-984-0440 Fax: 204-983-5048 e-mail: michael.molinski@tc.gc.ca	<b>2. APPLICANT REPRESENTATIVE CONTACT INFORMATION</b> if different from Block 1 (name, address)   Phone: _____ Fax: _____ e-mail: _____ (Attach authorization letter.)
<b>3. NAME OF PROJECT</b> (including the name of the project location)  Resolute Bay Landfill Remediation – Resolute Bay Airport, Nunavut	
<b>4. LOCATION OF UNDERTAKING</b>  <b>Project Extents</b>  NW: Latitude: (74 °44' 44.77" N) Longitude: (94°01'55.13" W) NE: Latitude: (74°44'52.46" N) Longitude: ( 95°01'20.17" W) SE: Latitude: ( 74°42'48.04" N) Longitude: ( 94°58'40.22" W) SW: Latitude: ( 74°42'45.01" N) Longitude: ( 95°00'09.30" W)  <b>Camp Location(s) NO CAMP LOCATIONS</b>  Latitude: ( ° ' " N) Longitude: ( ° ' " W)	
<b>5. MAP</b> - Attach a topographical map, indicating the main components of the undertaking.  NTS Map Sheet No.: 58F11/12 Map Name: Resolute 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: Resolute Bay Airport Land Remediation**

Transport Canada property parcel: Lot # 1001, 58 F/11

Date (expected date) of issuance: 2012 Date of expiry: 2015

Name of entity(s) holding authorizations:

**7. NUNAVUT PLANNING COMMISSION (NPC) DETERMINATION**

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

**X** North Baffin

☐ Keewatin

☐ South Baffin

☐ Sanikiluaq

☐ Akunnig

☐ West Kitikmeot

Is a land use plan conformity determination required?

**●** Yes

No

If Yes, indicate date issued and attach copy May 10, 2011

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 by NIRB**

☐ 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.**

The Resolute Bay airport was originally constructed in 1949 by the Royal Canadian Air Force. From 1964 to July 1, 1995, Resolute Bay Airport was owned by the Government of Canada and operated by Transport Canada. In July 1995, ownership was transferred to the Government of Northwest Territories. From July 1, 1995 to April 1, 1999, this airport was operated by the Arctic Airport Division of the Department of Transportation. Since April 1, 1999, the airport has been owned by the Government of Nunavut (GN) and operated by the Nunavut Airports Division of the Nunavut Department of Community Government, Housing and Transportation.

Past activities for transportation, communications and administration in the Arctic have resulted in the generation of solid waste. Solid waste disposal from military activities and the community itself have resulted in the creation of several landfill sites. Two landfills, the solid waste landfill and the historic landfill, are present near the airport. The third site, known as the vehicle storage area is north of the solid waste landfill.

Waste material was dumped in the solid waste landfill during the 1960s and 1970s. The landfill has not been officially used since 1995, when a new landfill was constructed southeast of the hamlet. However, as recent as 2005, there was evidence of recent dumping of waste in the landfill.

The historic landfill was used from 1947 to 1995. The Canadian and American military forces used this landfill between 1947 and 1964. Transport Canada and various airport tenants used the landfill between 1964 and 1995.

The vehicle storage area is located near the solid waste landfill and used to store metal debris such as old vehicles and unused airport equipment.

Previous investigations of the landfill sites indicate that there has been an impact to groundwater and a potential risk to aquatic life in areas where buried refuse has been previously identified.

The project details will consist of off-site recycling of selected metal debris that can be accessed at the metal storage area and the 2 main landfills. Surface waste material would be consolidated and placed on the main slope, extending down the toe of the slope. Waste material would be placed on the main slope as per specifications by a qualified professional to ensure a stable slope with an acceptable factor for safety. Exposed waste would be covered with a geotextile and available fill material. The Solid Waste Landfill and Historic Landfill should be shaped so that overland drainage is properly managed and surface water is directed away from the landfill. Long term monitoring will also be required to ensure the remediation targets are working to the designed specifications. The maximum amount of material will be removed and recycled while any additional material will be managed to eliminate exposure to the environment. Construction will require 2 years. Monitoring of the site will consist of inspections and sampling ground water monitoring well for 2 years after the construction phase to ensure the site is operating as designed.

Franz Environmental – Resolute Bay Airport Landfill Sites, Resolute Bay, Nunavut: Phase II/III  
Environmental Site Assessment (ESA) Final Report, March 2010

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

**No alternate locations or methods apply.**

<b>11.</b>	<p><b>CLASSIFICATION OF PRIMARY UNDERTAKING</b> - Indicate the primary classification of undertaking by checking one of the following boxes.</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Industrial  <input type="checkbox"/> Mining and Milling (includes exploration/drilling/exploration camps)  <input type="checkbox"/> Conservation  <input type="checkbox"/> Municipal (includes camps/lodges)  <input type="checkbox"/> Power </td> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Agricultural    <input type="checkbox"/> Recreational  <input checked="" type="checkbox"/> Miscellaneous (describe below):  <b>- Airport Landfill Sites Remediation, see description in Section 9 above.</b> </td> </tr> </table> <p>See Schedule II of <i>Northwest Territories Waters Regulations</i> for Description of Undertakings.</p> <p>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. <b>None Apply.</b></p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <input type="checkbox"/> Hydrostatic Testing  <input type="checkbox"/> Tannery  <input type="checkbox"/> Tourist / Remote Camp  <input type="checkbox"/> Landfarm &amp; On-Site Storage of Hydrocarbon Contaminated Soil  <input type="checkbox"/> Onshore Oil and Gas Exploration Drilling  <input type="checkbox"/> Mineral Exploration / Remote Camp  <input type="checkbox"/> Advanced Exploration  <input type="checkbox"/> Mine Development  <input type="checkbox"/> Municipal  <input type="checkbox"/> General Water Works  <input type="checkbox"/> Power </div>	<input type="checkbox"/> Industrial <input type="checkbox"/> Mining and Milling (includes exploration/drilling/exploration camps) <input type="checkbox"/> Conservation <input type="checkbox"/> Municipal (includes camps/lodges) <input type="checkbox"/> Power	<input type="checkbox"/> Agricultural  <input type="checkbox"/> Recreational <input checked="" type="checkbox"/> Miscellaneous (describe below): <b>- Airport Landfill Sites Remediation, see description in Section 9 above.</b>
<input type="checkbox"/> Industrial <input type="checkbox"/> Mining and Milling (includes exploration/drilling/exploration camps) <input type="checkbox"/> Conservation <input type="checkbox"/> Municipal (includes camps/lodges) <input type="checkbox"/> Power	<input type="checkbox"/> Agricultural  <input type="checkbox"/> Recreational <input checked="" type="checkbox"/> Miscellaneous (describe below): <b>- Airport Landfill Sites Remediation, see description in Section 9 above.</b>		
<b>12.</b>	<p><b>WATER USE</b> - Check the appropriate box(s) to indicate the type(s) of water use(s) being applied for.</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> To obtain water for camp/ municipal purposes  <input type="checkbox"/> To obtain water for industrial purposes  <input type="checkbox"/> To cross a watercourse  <input type="checkbox"/> To alter the flow of, or store water </td> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> To divert a watercourse  <input type="checkbox"/> To modify the bed or bank of a watercourse  <input type="checkbox"/> Flood control </td> </tr> </table> <p><b>X Other: No Water Use, No modification of watercourse, No distribution of water</b></p>	<input type="checkbox"/> To obtain water for camp/ municipal purposes <input type="checkbox"/> To obtain water for industrial purposes <input type="checkbox"/> To cross a watercourse <input type="checkbox"/> To alter the flow of, or store water	<input type="checkbox"/> To divert a watercourse <input type="checkbox"/> To modify the bed or bank of a watercourse <input type="checkbox"/> Flood control
<input type="checkbox"/> To obtain water for camp/ municipal purposes <input type="checkbox"/> To obtain water for industrial purposes <input type="checkbox"/> To cross a watercourse <input type="checkbox"/> To alter the flow of, or store water	<input type="checkbox"/> To divert a watercourse <input type="checkbox"/> To modify the bed or bank of a watercourse <input type="checkbox"/> Flood control		

- 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):

**No Water Sources Used** \_\_\_\_\_

Describe the quality of the water source(s) and the available capacity: **No Water Sources Used**

\_\_\_\_\_

Provide the overall estimated quantity of water to be used: **No Water Sources Used** m<sup>3</sup>/day

Provide the estimated quantity(s) of water to be used from each source:

**No Water Sources Used** \_\_\_\_\_

Indicate the estimated quantities to be used for each purpose (camp, drilling, etc.)

**No Water Sources Used** \_\_\_\_\_

Describe the method of extraction(s): **No Water Sources Used** \_\_\_\_\_

Estimated quantity(s) of water returned to source(s) **No Water Sources Used** \_\_\_\_\_ m<sup>3</sup>/day

Describe the quality of water(s) returned to source(s): **No Water Sources Used** \_\_\_\_\_

\_\_\_\_\_

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

☐ Sewage

☐ Waste oil

☐ Solid Waste

☐ Greywater

☐ Hazardous

☐ Sludges

☐ Bulky Items/Scrap Metal

☐ Contaminated soil and/or water

☐ Animal Waste

**X Other (describe): No Waste is generated for this project.** \_\_\_\_\_

- 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
<b>None</b>				



- 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: **No Authorization Required** \_\_\_\_\_

Administering Agency: **No Authorization Required** \_\_\_\_\_

Project Activity\_ **No Authorization Required** \_\_\_\_\_

Date (expected date) of issuance: **NONE** Date of expiry: \_\_\_\_\_

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

Surface waste material would be consolidated and placed on the main slope, extending down the toe of the slope. Waste material would be placed on the main slope as per specifications by a qualified professional to ensure a stable slope with an acceptable factor for safety. Exposed waste would be covered with a geotextile and available fill material. Long term monitoring will also be required to ensure the remediation targets are working to the designed specifications. The maximum amount of material will be removed and recycled while any additional material will be managed to eliminate exposure to the environment. Construction will require 2 years. Monitoring of the site will consist of inspections and sampling ground water monitoring well for 2 years after the construction phase to ensure the site is operating as designed.

- 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. There are no dwellings/persons adjacent to the property that may be adversely affected. Thus, an overall positive impact for the environment and health and safety.

Advise the Board if compensation has been paid and/or agreement(s) for compensation have been reached with any existing or other users. **NONE**

- 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). **NONE**

- 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
Resolute Bay	Thomas Livingston	Government of Nunavut	June 21, 2010
Resolute Bay	Jason, Brown	Government of Nunavut	June 21, 2010
Resolute Bay	Brian Duguay	Government of Nunavut	June 21, 2010

**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 cost for final reclamation, as referenced from the Franz Environmental Inc. report is estimated to be around \$4.6 million.**

## **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 Resolute Bay, 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. The Resolute Bay Landfills Remediation/Risk Management project is a NCS Class 1 site with a score of 81.8 for the solid waste landfill, 75.9 for the historic landfill and 59.0 for the metal/waste storage area indicating that action is likely required. The factors that make this a Class 1 site are the high potential for adverse impacts, to human health and the environment.

Completion of this project 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.

Franz Environmental – Resolute Bay Airport Landfill Sites, Resolute Bay, Nunavut: Phase II/III Environmental Site Assessment (ESA) Final Report, March 2010

Franz Environmental – Human Health and Ecological Risk Assessment: Resolute Bay Airport Landfill Sites and Vehicle Storage Area, Final Report, March 2010  
Section 6.0: pages 16 - 21

**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 2013** \_\_\_\_\_  
(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 2015** \_\_\_\_\_  
(month/year) (month/year)

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

Construction

☐ Winter ☐ Spring ☒ Summer ☐ Fall ☐ All season

Operation

☐ Winter ☐ Spring ☐ Summer ☐ Fall ☐ All season

Closure

☐ Winter ☐ Spring ☐ Summer ☐ Fall ☐ All season

Post - Closure

☐ Winter ☐ Spring ☐ Summer ☒ Fall ☐ All season

**25. PROPOSED TERM OF LICENCE**

Number of years (maximum of 25 years): Four (4) years

Requested Date of Issuance: July 2012 \_\_\_\_\_ Requested Expiry Date: September 2015 \_\_\_\_\_  
(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)

<b>26.</b>	<p><b>ANNUAL REPORTING</b> – If not using the NWB’s <i>Standardized Form for Annual Reporting</i>, provide details regarding the content of annual reports and a proposed outline or template of the annual report.</p> <p>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.</p>		
<b>27.</b>	<p><b>CHECKLIST</b> – The following must be included with the application for the water licensing process to begin.</p> <p>Written confirmation from the NPC confirming that NPC’s requirements regarding land use plan conformity have been addressed.</p> <p> <input checked="" type="radio"/> Yes         <input type="radio"/> No         If no, date expected ____       </p> <p>Written confirmation from the NIRB confirming that NIRB’s requirements regarding development impact assessment have been addressed.</p> <p> <input type="radio"/> Yes         <input checked="" type="radio"/> No         If no, date expected <u>to be determined by NIRB</u> </p> <p>Completed General Water Licence Application form.</p> <p> <input checked="" type="radio"/> Yes         <input type="radio"/> No         If no, date expected ____       </p> <p>Information addressing Supplemental Information Guideline (SIG) , where applicable (see Block 11)</p> <p> <input type="radio"/> Yes         <input checked="" type="radio"/> No         If no, date expected <u>NONE</u> </p> <p>English Summary of Application.</p> <p> <input checked="" type="radio"/> Yes         <input type="radio"/> No         If no, date expected ____       </p> <p>Inuktitut and/or Inuinnaqtun Summary of Application.</p> <p> <input checked="" type="radio"/> Yes         <input type="radio"/> No         If no, date expected ____       </p> <p>Application Fee of \$30.00 CDN (Payee Receiver General for Canada).</p> <p> <input type="radio"/> Yes         <input checked="" type="radio"/> No         If no, date expected <b>Government of Canada Exempt</b> </p> <p>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.</p> <p> <input type="radio"/> Yes         <input checked="" type="radio"/> No         If no, date expected ____       </p>		
<b>28.</b>	<p><b>SIGNATURE</b></p>		
<b>Name (Print)</b>	<b>Title (Print)</b>	<b>Signature</b>	<b>Date</b>