

If the Licensee contemplates or requires an amendment to this licence, the NWB may decide, in the public interest, to hold a public hearing. The Licensee should submit applications for amendment as soon as possible to give the NWB sufficient time to go through the amendment process. The process and timing may vary depending on the scope of the amendment, however a

minimum of 30 days is required from time of acceptance by the NWB. It is the responsibility of the Licensee to ensure that all application materials have been received and acknowledged by the Manager of Licensing.

Sincerely,

A handwritten signature in black ink, appearing to read 'T. Kabloona', with a long horizontal stroke extending to the right.

Thomas Kabloona  
A/Chief Executive Officer

TK/ajw/pb

Enclosure: License No. **1BR-QIK0712**

Cc: Jim Rogers, INAC  
Peter Kusugak, INAC  
Andrew Keim, INAC  
Colette Spagnuolo, INAC  
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NUNAVUT WATER BOARD  
NUNAVUT IMALIRIYIN KATIMAYINGI  
OFFICE DES EAUX DU NUNAVUT

## DECISION

### LICENCE NUMBER: 1BR-QIK0712

This is the decision of the Nunavut Water Board (NWB) with respect to an application for the renewal a Licence dated May 23, 2007 made by:

#### DEFENCE CONSTRUCTION CANADA

to allow for the implementation of landfill monitoring operations at the FOX-5 (Broughton Island) DEW Line site (located approximately 26 km from the community of Qikiqtarjuaq, within the Qikiqtani Region, Nunavut (located at the general latitude of 67°33'N and general longitude 63°49' W).


### DECISION

After having been satisfied that the application was exempt from the requirement for screening by the Nunavut Impact Review Board in accordance with Schedule 12.1, Paragraph 5 of the *Nunavut Land Claim Agreement* (NLCA), the NWB decided that the application could proceed through the regulatory process. In accordance with S.55.1 of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (NWNSRTA) and Article 13 of the *NLCA*, public notice of the application was given and interested persons were invited to make representations to the NWB.

After reviewing the submission of the Applicant and representations made by interested persons, the NWB, having given due regard to the facts and circumstances, the merits of the submissions made to it and to the purpose, scope and intent of the *NLCA* and of the *NWNSRTA*, decided to waive the requirement to hold a public hearing and determined that:

**Licence Number 1BR-QIK0712 be issued subject to the terms and conditions contained therein. (Motion #: 2007-08-10)**

SIGNED this 12th day of August 2007 at Gjoa Haven, NU.

  
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Thomas Kabloona  
A/Chief Executive Officer

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## **I. INTRODUCTION**

The FOX-5 (Broughton Island) DEW Line site is located approximately 26 km from the community of Qikiqtarjuaq, within the Qikiqtani Region, Nunavut (located at the general latitude of 67°33'N and general longitude 63°49' W).

The FOX-5 site was determined to be surplus by the Department of National Defence (DND), and, accordingly, site remediation activities occurred between 2002 and 2007, which included the following activities:

- Demolition and removal of existing facilities that are not required for the operation of the North Warning System;
- Management of contaminated soils in accordance with Federal regulations and the *“Agreement Between Nunavut Tunngavik Incorporated and Her Majesty the Queen in Right of Canada, as Represented by the Minister of National Defense for the Clean-up and Restoration of Distant Early Warning Sites within the Nunavut Settlement Area-Environmental Provisions”* including its preamble and schedules, and any amendments to that agreement made pursuant to it;
- Remediation of existing site landfills, and construction of engineered landfill facilities for the containment of non-hazardous waste and contaminated soils;
- Collection and disposal of scattered surface debris on the FOX-5 site; and
- Restoration of disturbed areas to a stable condition shaped to match existing terrain.

The Applicant has stated their intention that long term monitoring of site landfills will be undertaken, and will continue for 25 years, after which these monitoring requirements will be re-evaluated.

## **II. PROCEDURAL HISTORY**

On May 23, 2007, an application for a renewal water licence was filed with the Nunavut Water Board by Defense Construction Canada, for site monitoring activities at the FOX-5 (Broughton Island) DEW Line site (located approximately 26 km from the community of Qikiqtarjuaq, within the Qikiqtani Region, Nunavut, at the general latitude of 67°33'N and general longitude 63°49' W).

## **III. GENERAL CONSIDERATIONS**

### **A. Term of the Licence**

In accordance with the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* S. 45, the NWB may issue a licence for a term not exceeding twenty-five years. The NWB believes that a term of approximately five (5) years is appropriate. The licence term will allow the Licensee to properly carry out the terms and conditions of the licence, to the satisfaction of the NWB.

**B. Water Use**

The Licensee has stated that water use will not be required during the term of this License, as potable water will be obtained from the Hamlet of Qikiqtarjuaq, and will be brought in by personnel who will undertake monitoring activities when they mobilize from the Hamlet.

**C. Deposit of Waste**

**Sewage**

The Licensee has stated that sewage disposal will not be required during the term of this Licence, as sewage generated during monitoring activities will be backhauled to the Hamlet of Qikiqtarjuaq.

**Solid Waste**

The Licensee has stated that solid waste disposal will not be required during the term of this Licence, as solid waste generated during monitoring activities will be backhauled to the Hamlet of Qikiqtarjuaq.

**D. Annual Report**

The requirements imposed on the Licensee in this licence are for the purpose of ensuring that the NWB has an accurate annual update of water use and depositions of waste during a calendar year. This information is maintained on the public registry and is available to any interested persons upon request. The requirements of this Annual Report can be found in Part B, Item 1. A standard form for annual reporting under Part B, Item 1, can be downloaded from the NWB ftp site at <http://nunavutwaterboard.org/ftp/> in the administration folder.

**IV. LICENCE 1BR-QIK0712**

Pursuant to the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* and the *Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada*, the Nunavut Water Board, hereinafter referred to as the Board, hereby grants to

**DEFENCE CONSTRUCTION CANADA**

(Licensee)

Of

**CONSTITUTION SQUARE, SUITE 1720, 35 ALBERT ST, OTTAWA, ON K1A 0K3**

(Mailing Address)

hereinafter called the Licensee, the right to alter, divert or otherwise use water for a period subject to restrictions and conditions contained within this licence:

**1BR-QIK0712**

Licence Number

**NUNAVUT 04**

Water Management Area

**FOX-5 (BROUGHTON ISLAND) DEW LINE SITE, QIKIQTANI REGION, NUNAVUT**

Location

**SITE POST-CLOSURE MONITORING ACTIVITIES**

Purpose

**INDUSTRIAL – TYPE “B”**

Classification of Undertaking

**NOT REQUIRED**

Quantity of Water Not to Exceed

**AUGUST 12<sup>th</sup>, 2007**

Date of Licence

**DECEMBER 31, 2012**

Expiry Date of Licence

Dated this 12<sup>th</sup> day of August 2007 at Gjoa Haven, NU.



Thomas Kabloona  
A/Chief Executive Officer

**PART A: SCOPE, DEFINITIONS AND ENFORCEMENT**

**1. Scope**

This Licence allows the implementation of a post-closure landfill monitoring program, during an undertaking classified as Industrial, at the FOX-5 (Broughton Island) DEW Line site located approximately 26 km from the community of Qikiqtarjuaq, within the Qikiqtani Region, Nunavut (located at the general latitude of 67°33'N and general longitude 63°49' W).

- i. This Licence is issued subject to the conditions contained herein with respect to the taking of water and the depositing of waste of any type in any waters or in any place under any conditions where such waste or any other waste that results from the deposits of such waste may enter any waters. Whenever new Regulations are made or existing Regulations are amended by the Governor in Council under the Nunavut Waters and Nunavut Surface Rights Tribunal Act, or other statutes imposing more stringent conditions relating to the quantity or type of waste that may be so deposited or under which any such waste may be so deposited, this Licence shall be deemed, upon promulgation of such Regulations, to be subject to such requirements; and;
- ii. Compliance with the terms and conditions of this Licence does not absolve the Licensee from responsibility for compliance with the requirements of all applicable Federal, Territorial and Municipal legislation.

**2. Definitions**

In this Licence: **1BR-QIK0712**

**“Act”** means the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*;

**“Analyst”** means an Analyst designated by the Minister under Section 85 (1) of the *Act*;

**“Appurtenant undertaking”** means an undertaking in relation to which a use of waters or a deposit of waste is permitted by a licence issued by the Board;

**“Board”** means the Nunavut Water Board established under the *Nunavut Land Claims Agreement*;

**“Chief Administrative Officer”** means the Executive Director of the Nunavut Water Board;

**“Effluent”** means treated or untreated liquid waste material that is discharged into the environment from a structure such as a settling pond or following a treatment process;

**“Inspector”** means an Inspector designated by the Minister under Section 85 (1) of the *Act*;

**“Landfarm Facility”** means an area designed to biologically treat Type B soils, as described in the Application for Water License filed by the Applicant on May 23, 2007;

**“Licensee”** means the individual or organization to which License 1BR- QIK0712 Type “B” is issued or assigned;

**“Modification”** means an alteration to a physical work that introduces a new structure or eliminates an existing structure and does not alter the purpose or function of the work, but does not include an expansion;

**“Hazardous waste”** means waste classified as “hazardous” by Nunavut Territorial or Federal Legislation, or as “dangerous goods” under the *Transportation of Dangerous Goods Act* at the time of clean-up;

**“Monitoring Program”** means a program established to collect data on surface water and groundwater quality to assess impacts to the environment of an appurtenant undertaking, to be undertaken in accordance with the NTI Agreement;

**“Nunavut Land Claims Agreement”** (NLCA) means the “*Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada*,” including its preamble and schedules, and any amendments to that agreement made pursuant to it;

**“NTI Agreement”** means the “*Agreement Between Nunavut Tunngavik Incorporated and Her Majesty the Queen in the Right of Canada, as Represented by the Minister of National Defense for the Clean-up and Restoration of Distant Early Warning Sites within the Nunavut Settlement Area-Environmental Provisions*” including its preamble and schedules, and any amendments to that agreement made pursuant to it;

**“Sewage Disposal Facility”** comprises the area and engineered structures designed to contain and treat sewage, operated by the Hamlet of Qikiqtarjuaq;

**“Sewage”** means all toilet wastes and greywater;

**“Solid Waste”** means non-hazardous waste, Type A soil, Tier I soil and Tier II soil;

**“Solid Waste Disposal Facility”** comprises the area and associated structures designed

to contain solid waste and to permanently isolate the contents of the disposal facility from the environment, as described in the Application for Water Licence filed by the Applicant on May 23, 2007;

**“Tier I Soil”** means soil containing contaminant concentrations within the types and ranges defined as DCC Tier I in Appendix E of the NTI Agreement, including its preamble and schedules, and any amendments to that agreement made pursuant to it (see Table I);

**“Tier II Soil”** means soil containing contaminant concentrations within the types and ranges defined as DCC Tier II in Appendix E of the NTI Agreement including its preamble and schedules, and any amendments to that agreement made pursuant to it (see Table I);

**“Type A Soil”** means soil contaminated with hydrocarbons in which the primary petroleum product present in the soil as determined by laboratory analysis consists of lubricating oil and grease;

**“Type B Soil”** means soil contaminated with hydrocarbons in which the primary petroleum product present in the soil as determined by laboratory analysis consists of fuel oil and/or diesel fuel and /or gasoline;

**“Toilet Wastes”** means all human excreta and associated products, but does not include greywater;

**“Waste”** means waste as defined in Section 85 (1) of the *Act*;

**“Water Supply Facilities”** comprises the Water Supply Lake area and associated infrastructure designed to collect and supply water, as described in the Application filed by the Applicant on May 23, 2007 and illustrated in Drawings H-B264/1-9101/101;

**“Waste Disposal Facilities”** means all facilities designated for the disposal of waste, and includes the Sewage Disposal Facilities, Solid Waste Disposal Facilities, and Landfarm Facility, as described in the Application for Water Licence filed by the Applicant on May 23, 2007.

### **3. Enforcement**

- i. Failure to comply with this Licence will be a violation of the *Act*, subjecting the Licensee to the enforcement measures and the penalties provided for in the *Act*;
- ii. All inspection and enforcement services regarding this Licence will be provided by Inspectors appointed under the *Act*; and

- iii. For the purpose of enforcing this Licence and with respect to the use of water and deposit or discharge of waste by the licensee, Inspectors appointed under the *Act*, hold all powers, privileges and protections that are conferred upon them by the *Act* or by other applicable law.

## **PART B: GENERAL CONDITIONS**

1. Licensee shall file an Annual Report on the appurtenant undertaking with the Board no later than March 31st of the year following the calendar year being reported which shall contain the following information:
  - i. Tabular summaries for all data and information generated under the “Monitoring Program”;
  - ii. An analysis of data collected during the “Monitoring Program” and a brief description of any future studies planned by the Licensee;
  - iii. A summary of any abandonment and restoration work undertaken during the year and an outline of any work anticipated for the next year;
  - iv. A summary of any studies requested by the Board that relate to waste disposal, water use or reclamation, and a brief description of any future studies planned;
  - v. A list of unauthorized discharges and summary of follow-up actions taken;
  - vi. If applicable, a description of any trenches and sumps excavated, including but not limited to the following: GPS coordinates, dimensions, depth below active layer, and secondary containment features;
  - vii. A public consultation/participation report describing consultation with local organizations and the residents of the nearby communities;
  - viii. A brief summary of work done to address concerns or deficiencies listed in the inspection reports and/or compliance reports prepared by an Inspector;
  - ix. An executive summary in English and Inuktitut of all plans, reports, or studies conducted under this Licence; and
  - x. Any other details on water use or waste disposal requested by the Board by November 1<sup>st</sup> of the year being reported
2. The Licensee shall notify the NWB of any changes in operating plans or conditions associated with this project at least thirty (30) days prior to any such change.
3. The Licensee shall ensure a copy of this Licence is maintained at the site of operations at all times. Any communication with respect to this Licence shall be made in writing to the attention of:

(i) **Manager of Licensing**  
Nunavut Water Board  
P.O. Box 119  
Gjoa Haven, NU X0B 1J0  
Telephone: (867) 360-6338  
Fax: (867) 360-6369  
Email: [licensing@nunavutwaterboard.org](mailto:licensing@nunavutwaterboard.org)

(ii) **Inspector Contact:**  
Water Resources Officer  
Nunavut District, Nunavut Region  
P.O. Box 100  
Iqaluit, NU X0A 0H0  
Telephone: (867) 975-4298  
Fax: (867) 979-6445

4. The Licensee shall submit one paper copy and one electronic copy of all reports, studies, and plans to the Board. Reports or studies submitted to the Board by the Licensee shall include a detailed executive summary in Inuktitut.
5. The Licensee shall ensure that any document(s) or correspondence submitted by the Licensee to the Board is received and acknowledged by the Manager of Licensing.
6. This Licence is not assignable except as provided in Section 44 of the *Act*.

**PART C: CONDITIONS APPLYING TO WATER USE**

1. The Licensee shall obtain water for domestic use from the Water Supply Facilities operated by the Hamlet of Qikiqtarjuaq.
2. The Licensee shall not remove any material from below the ordinary high water mark of any water body.
3. The Licensee shall not do anything that will cause erosion to the banks of any body of water and shall provide necessary controls to prevent such erosion.
4. The Licensee shall implement sediment and erosion control measures to prevent the deposition of dust and/or sediment into water, arising from contractor activities or on-site vehicular travel.

**PART D: CONDITIONS APPLYING TO SEWAGE DISPOSAL**

1. The Licensee shall direct all sewage to the Sewage Disposal Facility operated by the Hamlet of Qikiqtarjuaq, or as otherwise approved by the Board.
2. The Licensee shall provide to the Board documented authorization from the Hamlet of Qikiqtarjuaq prior to the backhauling of any waste.
3. All pump out water from water sampling activities shall be pumped to an area approved by an Inspector.

**PART E: CONDITIONS APPLYING TO SOLID WASTE DISPOSAL**

1. The Licensee shall direct all solid waste to the Solid Waste Disposal Facility operated by the Hamlet of Qikiqtarjuaq, or as otherwise approved by the Board.
2. The Licensee shall provide to the Board documented authorization from the Hamlet of Qikiqtarjuaq prior to the backhauling of any waste.

**PART F: CONDITIONS APPLYING TO THE UNDERTAKING**

1. The Licensee shall, if any constructed landfill facilities were to fail, repair such facilities immediately to the satisfaction of an Inspector.
2. The Licensee shall minimize disturbance to terrain, permafrost and drainage during movement of contractor's equipment and personnel around the site during post-closure monitoring activities.
3. All sites affected by sampling activities shall be stabilized, landscaped as necessary, and suitable erosion control measures implemented to minimize sediment deposition into watercourses located on or adjacent to the site, to the satisfaction of an Inspector.
4. The Licensee shall restore and stabilize all areas affected by sampling activities upon completion of the work, to the satisfaction of an Inspector.
5. The Licensee shall not deposit any waste in any body of water, or on the banks thereof, which may impair the quality, quantity, or flow of water.

**PART G: CONDITIONS FOR CAMPS, ACCESS INFRASTRUCTURES AND OPERATIONS**

1. The Licensee shall ensure that that all activities shall be conducted in such a way as to minimize impacts on surface drainage and the Licensee shall immediately undertake any corrective measures in the event of any impacts on surface drainage.
2. With respect to the undertaking, the deposition of debris or sediment into any water body is prohibited.

**PART H: CONDITIONS APPLYING TO MODIFICATIONS**

1. The Licensee may, without written consent from the Board, carry out Modifications to the Waste Disposal Facilities provided that such Modifications are consistent with the terms of this License and the following requirements are met:
  - i. the Licensee has notified the Board in writing of such proposed Modifications at least sixty (60) days prior to beginning the Modifications;
  - ii. such Modifications do not place the Licensee in contravention of the License or the *Act*;
  - iii. the Board has not, during the sixty (60) days following notification of the proposed Modifications, informed the Licensee that review of the proposal will require more than sixty (60) days; and
  - iv. the Board has not rejected the proposed Modifications.
2. Modifications for which all of the conditions referred to in Part H, Item 1 have not been met can be carried out only with written approval from the Board.
3. The Licensee shall provide as-built plans and drawings of the Modifications referred to in this License within ninety (90) days of completion of the Modification. These plans and drawings shall be stamped by an Engineer.

**PART I: CONDITIONS APPLYING TO SPILL CONTINGENCY PLANNING**

1. The Licensee shall ensure that any chemicals, petroleum products or wastes associated with the project do not enter water. All sumps and fuel caches shall be located a minimum of thirty (30) metres above the ordinary high water mark of any adjacent water body and inspected on a regular basis. The Licensee is encouraged to use some form of secondary containment on fuel and chemical storage facilities associated with this undertaking.

License No: 1BR-QIK0712

2. The Licensee shall ensure that any equipment maintenance and servicing be conducted only in designated areas and shall implement special procedures (such as the use of drip pans) to manage fluids, waste and contain potential spills.
3. If during the term of this Licence, an unauthorized discharge of waste occurs, or if such a discharge is foreseeable, the Licensee shall:
  - i. Employ measures to minimize the unauthorized discharge of waste, and to mitigate the effects of any such spill as may occur;
  - ii. Report the spill immediately to the 24-Hour Spill Line at (867) 920-8130 and to the DIAND Water Resources Inspector at (867) 975-4295; and
  - iii. Submit to the DIAND Water Resources Inspector on each occurrence, a detailed report including the GPS location, no later than thirty (30) days after initially reporting the event.

**PART J: CONDITIONS APPLYING TO ABANDONMENT AND RESTORATION**

1. The Licensee shall ensure that, upon completion of work, any areas disturbed as a result of the undertaking are stabilized and re-vegetated as required and restored as practically as possible to a pre-disturbed state to the satisfaction of an Inspector.
2. The Licensee shall carry out progressive reclamation of any components of the project no longer required for the Licensee's operations.
3. The Licensee shall complete all restoration work prior to the expiry of this Licence.

**PART K: CONDITIONS APPLYING TO THE MONITORING PROGRAM**

1. The Licensee shall undertake post-closure monitoring of the Solid Waste Disposal Facilities in accordance with the Monitoring Program contained within the Application filed with the Board on May 23, 2007, as outlined in the provisions and requirements of the NTI Agreement.
2. The Licensee shall ensure that all sampling, sample preservation and analyses shall be conducted in accordance with methods prescribed in the current edition of *Standard Methods for the Examination of Water and Wastewater*, or by such other methods approved by the Board.

3. The Licensee shall ensure that tabular summaries for all data and information generated under the “Monitoring Program”, as well as an analysis of data collected during the “Monitoring Program”, are provided to the Board in the Annual Report, in accordance with Part B, Item 1 (1 and ii).
4. All analyses shall be performed in a laboratory accredited according to ISO/IEC Standard 17025. The accreditation shall be current and in good standing.
5. An Inspector may impose additional monitoring requirements.

**Table I: Tier I and Tier II  
DEW Line Clean-up Criteria**

Substance	Units	DCC Tier I	DCC Tier II
Arsenic	ppm	-	30
Cadmium	ppm	-	5.0
Chromium	ppm	-	250
Cobalt	ppm	-	50
Copper	ppm		100
Lead	ppm	200	500
Mercury	ppm	-	2.0
Nickel	ppm	-	100
Zinc	ppm	-	500
PCB's	ppm	1.0	5.0