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NUNAVUT WATER BOARD  
NUNAVUT IMALIRIYIN KATIMAYINGI  
OFFICE DES EAUX DU NUNAVUT

File No.: 1BR-FOD1320

October 15, 2013

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**RE: NWB Renewal Licence NO. 1BR-FOD1320**

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Dear Ms. Van Dyck and Ms. Schulz:

Please find attached Licence No. **1BR-FOD1320** issued to Defence Construction Canada by the Nunavut Water Board pursuant to its authority under Article 13 of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada*. The terms and conditions of the attached Licence related to Water use and Waste disposal are an integral part of this approval.

If the Licensee contemplates the renewal of this Licence, it is the responsibility of the Licensee to apply to the NWB for its renewal. The past performance of the Licensee, new documentation and information, and issues raised during a public hearing, if the NWB is required to hold one, will be used to determine the terms and conditions of the Licence renewal. Note that if the Licence expires before the NWB issues a new one, then Water use and Waste disposal must cease, or the Licensee will be in contravention of the Nunavut Land Claims Agreement. However, the expiry or cancellation of a licence does not relieve the holder from any obligations imposed by the licence. The NWB recommends that an application for the renewal of this Licence be filed at least three (3) months prior to the Licence expiry date.

If the Licensee contemplates or requires an amendment to this licence, the NWB may decide, in the public's 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 sixty (60) 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.

The NWB strongly recommends that the Licensee consult the comments received by interested persons on issues identified. This information is attached for your consideration.<sup>1</sup>

Sincerely,



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Thomas Kabloona  
Nunavut Water Board  
Chair

TK/kk/ri

Enclosure: Licence No. **1BR-FOD1320**  
Comments – AANDC and EC

Cc: Qikiqtani Distribution List

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<sup>1</sup> Aboriginal Affairs and Northern Development Canada (AANDC) October 07, 2013, and Environment Canada (EC) October 09, 2013

## DECISION

### LICENCE NO.: 1BR-FOD1320

This is the decision of the Nunavut Water Board (NWB) with respect to an application, dated February 14, 2013, for the renewal of a Licence made by:

#### DEFENCE CONSTRUCTION CANADA

to allow for the continued implementation of a post construction Landfill Monitoring Program at the former FOX-3 Dewar Lakes Distant Early Warning Line Site (DEW Line Site), located approximately 220 km south-west of the Hamlet of Clyde River within the Qikiqtani Region, Nunavut at the following general geographical coordinates:

Latitude: 68° 40" N

Longitude: 71° 14' W

## DECISION

After having been satisfied that the application falls outside an area with an approved land use plan<sup>2</sup> and is exempt from the requirement for screening by the Nunavut Impact Review Board<sup>3</sup> in accordance with Schedule 12-1 of the *Nunavut Land Claims 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 No. 1BR-FOD0813 be renewed as Licence No. 1BR-FOD1320 subject to the terms and conditions contained therein (Motion No.: 2013-B1-042).**

SIGNED this 10<sup>th</sup> day of October 2013 at Gjoa Haven, NU.



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Thomas Kabloona  
Nunavut Water Board, Chair

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<sup>2</sup> Nunavut Planning Commission (NPC) Conformity Determination, dated November 26, 2007.

<sup>3</sup> Nunavut Impact Review Board (NIRB) Screening Exemption Decision, dated September 16, 2013.

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## **I. INTRODUCTION**

The FOX-3, Dewar Lakes DEW Line Site is a former auxiliary land-locked station located in the central area of Baffin Island, approximately 220 km south-west of Clyde River within the Qikiqtani Region of Nunavut. FOX-3 was originally a main site within the original DEW Line system and was decommissioned in 1991. FOX-3 has been converted to a more modern North Warning System (NWS) Long Range Radar site, and NWS now holds the reserve on the site. Because of ongoing facilities use, most of the infrastructure was not slated for demolition, and no remedial activities were completed within operational areas. A Long Range Radar (LRR) station occupies currently the site.

Following decommissioning of the FOX-3 DEW Line site in 1991, the environmental clean-up commenced. The clean-up activities included the closure and remediation of the existing Station West and West Landfills, and the construction of a new landfill for non-hazardous wastes generated from demolition and collection of site debris. A DCC Tier II Disposal Facility was also constructed for disposal of Tier II contaminated soil. The landfills currently located at the site include the Station West Landfill, West Landfill, Non-Hazardous Waste Landfill and Tier II Disposal Facility.

The post-construction, landfill monitoring program, which involves three (3) phases, was initiated in 2012. The first two phases are scheduled to last approximately 25 years, and are designed to collect sufficient information to assess the performance of the landfills from a geotechnical and environmental perspective. The third phase of monitoring is expected commence after 25 years and although the scope of that phase is yet to be developed, it is expected to be based on a 10-year monitoring interval.

An Environmental Working Group (EWG) was established to provide a technical review and to support the DLCU Steering Committee. The monitoring results obtained will be reviewed by EWG and recommendations regarding changes to the monitoring plan and/or remediation requirements will be provided to the Department of National Defence – Nunavut Tunngavik Incorporated (DND/NTI) Steering Committee. Decisions on whether to continue or terminate monitoring will be made after the 25-year period and following an assessment of performance carried out jointly by the DND and NTI.

## **II. PROCEDURAL HISTORY**

On May 16, 2006, the Nunavut Water Board (NWB and Board) issued the licence 1BR-FOD0606 to Defence Construction Canada (DCC) for the Fox-3 Dewar Lake DEW Line Site to allow for carrying out site investigation work and preliminary scoping prior to developing final design and logistic plans for the remediation of the site. The licence expired on October 1, 2006. On July 18, 2008, the Board renewed/amended the licence as 1BR-FOD0813 to allow for the use of water (55 m<sup>3</sup> *per day*) and disposal of waste during camp operation and site remediation activities. The renewed licence expired on July 31, 2013.

The NWB received on July 15, 2013 from AECOM Canada Ltd. (AECOM) on behalf of DCC, Department of National Defence (DND) an application for the renewal and amendment of Licence 1BR-FOD0813. The application included the following documents:

- Renewal/Amendment Cover letter dated July 15, 2013;
- Application for Water Licence Amendment dated July 15, 2013;
- Executive Summary, English and Inuktitut;
- Exploration/Remote Camp Supplementary Questionnaire;
- Water Use License Amendment and Renewal Fox-3, Dewar Lakes Landfill Monitoring Report prepared by AECOM and dated July 2013;
- NIRB Screening Decision Report dated December 7, 2007; and
- Agreement between Nunavut Tunngavik Incorporated and Her Majesty in the Right of Canada as Represented by The Minister of National Defence for the Clean-up and Restoration of Distant Early Warning Sites within the Nunavut Settlement Area dated September 1998.

On September 9, 2013 as per NWB request, the Licensee submitted:

- Remediation Construction Final Report including draft As-built Engineered drawings as final drawings have not been completed yet.

The above-mentioned application documents have been placed in the NWB's public registry and access provided through the NWB's FTP site using the following link (User name: "*public*" Password: "registry"):

<ftp://nunavutwaterboard.org/1%20PRUC/1%20INDUSTRIAL/1B/1BR%20-%20Remediation/1BR-FOD0813%20FOX%203/1%20APPLICATION/2013%20Amend%20Renewal/>

The NWB distributed on September 9, 2013 the application for a thirty (30) day public review period, and comments were received from Aboriginal Affairs and Northern Development Canada (AANDC) and Environment Canada (EC). AANDC provided comments with respect to the spill contingency plan and the 2012 annual reporting; however, no objections were expressed by interveners in principle about any potential Board decision that would result in issuance of the Licence. Therefore following a review of the application and comments received, the Board has renewed the licence 1BR-FOD0813 as Licence No. 1BR-FOD1320. The scope of the Licence is limited to activities associated with the landfill monitoring program.

### **III. GENERAL CONSIDERATIONS**

#### **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 applicant requested a

twenty three (23) year renewal licence under which it plans to monitor and assess the stability of the site at specific intervals during the landfill monitoring program. Given the current stage of the monitoring program for the project, the Board has decided that a term of seven (7) years would be appropriate for the licence during which details on whether any significant change(s) might be to require to the monitoring program would become more evident. Any such change(s) could potentially be included in consideration of a longer term renewal licence in the future.

### **Annual Report**

Under the reporting section in the Licence, Part B, Item 1, the Licensee is required to submit, on an annual basis, a report that pertains to the activities carried out under the project. This information is kept in the NWB's public registry and made available to interested persons upon request. In addition, the NWB maintains annual reporting information on its FTP site, which can be accessed using the following link (username: "**public**" and password: "**registry**"): <http://nunavutwaterboard.org/>.

### **Water Use**

The Licensee has indicated that bottled water will be brought in for the people in the temporary camp. Therefore no water use will be required under the project except for the purposes of sampling in accordance with the monitoring obligations under the licence. The NWB does not consider the use of water for sampling purposes as use of Water. Therefore, no Water use has been authorized under the terms and conditions of this licence.

### **Deposit of Waste**

The Licensee stated that the remediation work is completed, and such as, no Waste is expected to be generated during the landfill monitoring program. As such, the Licensee is not allowed to deposit any Waste without authorization from the Board.

### **Spill Contingency Planning**

The Licensee has included a Spill Contingency Plan (SCP) as part of its application documents, which the Board has approved with the issuance of the Licence.

### **Abandonment and Restoration**

Full remediation activities were completed in 2012. The Licensee initiated the post-construction monitoring program in 2012 and plans to continue doing so up to 2036. Under the terms and conditions in the Licence applying to abandonment and restoration, the Licensee is required to remove all equipment and facilities associated with the project upon completion.

## **Monitoring**

The Landfill Monitoring program commenced in 2012 and consists of three phases. The five-year Phase I involves monitoring of conditions to confirm that equilibrium is achieved in the end of 2016. The Phase I monitoring program may be extended, if required, to provide sufficient data to establish equilibrium conditions. Phase II monitoring is the verification of equilibrium conditions established in Phase I and is scheduled to last up to 2036 under this licence and successive renewal license(s). Phase III involves the monitoring for long-term issues such as liner integrity, permafrost stability and significant storm events. At the end of the Phase II program, 25 years after construction, a re-evaluation of the landfill monitoring program will be carried out prior to initiating any Phase III program. The scope of the Phase III monitoring program is not included with the monitoring program, but is anticipated to be based on a 10 year monitoring interval.

The NWB has included a requirement for the Licensee to submit a Preliminary Phase II Monitoring Summary Report as part of the application to renew this Licence in 2020. The Report shall be prepared by a Geotechnical Engineer to summarize data collected during Phase I and II monitoring, and should assess the integrity of the Waste Disposal Facilities. The Report shall address whether the facilities have performed as expected, whether they are encased in permafrost and shall assess how the facilities are expected to perform over the long term. In addition, relevant recommendations should be included as deemed necessary. This requirement is detailed under Part J, Item 7 and will help the NWB and interested parties in assessing the effectiveness of closure and monitoring measures undertaken over the period for which the report is submitted.

Further the NWB has approved the Landfill Monitoring Plan submitted together with the application.

The Board, having appropriately considered the Application, intervener's submission and the requirements for the nature of the undertaking, has accordingly set terms and conditions in the Licence 1BR-FOD1320 to govern the FOX-3, Dewar Lakes Landfill Monitoring Program.





## NUNAVUT WATER BOARD WATER LICENCE RENEWAL

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)

101 COLONEL BY DRIVE, OTTAWA, ON K1A 0K2

(Mailing Address)

hereinafter called the Licensee, the right to alter, divert or otherwise use Water or dispose of Waste for a period subject to restrictions and conditions contained within this Licence renewal:

Licence Number/Type: 1BR-FOD1320 TYPE "B"

Water Management Area: NORTHWESTERN DAVIS STRAIT WATERSHED (50)

Project/Location: FOX-3, DEWAR LAKES LANDFILL MONITORING PROGRAM  
QIKIQTANI REGION, NUNAVUT

Classification: INDUSTRIAL UNDERTAKING

Purpose: LANDFILL MONITORING

Quantity of Water use not  
to Exceed: NO WATER USE AUTHORIZED

Date of Licence Issuance: OCTOBER 15, 2013

Expiry of Licence: OCTOBER 14, 2020

This Licence, issued and recorded at Gjoa Haven, Nunavut, includes and is subject to the annexed conditions.

**Thomas Kabloona**  
**Nunavut Water Board, Chair**

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

**1. Scope**

- a. This Licence allows for implementation of a Post-closure Landfill Monitoring Program, for an undertaking classified as Industrial as per Schedule I of the *Regulations* at the FOX-3 Dewar Lakes DEW Line site located approximately 220 kilometres southwest of Clyde River, within the Qikiqtani Region, Nunavut.
- b. 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
- c. 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**

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

“**Addendum**” means the supplemental text that is added to a full plan or report usually included at the end of the document and is not intended to require a full resubmission of the revised report;

“**Amendment**” means a change to original terms and conditions of this Licence requiring correction, addition or deletion of specific terms and conditions of the Licence; modifications inconsistent with the terms of the set terms and conditions of the Licence;

“**Applicant**” means the Licensee;

“**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*;

**“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;

**“Engineer”** means a professional engineer registered to practice in Nunavut in accordance with the *Consolidation of Engineers and Geoscientists Act S. Nu 2008, c.2* and the *Engineering and Geoscience Professions Act S.N.W.T. 2006, c.16 Amended by S.N.W.T. 2009, c.12*;

**“Final Discharge Point”** means the point at which the Licensee no longer exerts care and/or control over the quality and/or quantity of the Effluent from a treatment process;

**“Grab Sample”** means a single Water or Wastewater sample taken at a time and place representative of the total discharge;

**“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;

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

**“Licensee”** means the individual or organization to which Licence 1BR-FOD1320 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;

**“Monitoring Program”** means a monitoring program established to collect data on surface Water and groundwater quality to assess impacts to the freshwater aquatic environment of an appurtenant undertaking as described in the document entitled “Water Use Licence Amendment and Renewal FOX-3, Dewar Lakes Landfill Monitoring”, dated July 2013 and submitted with the application on July 15, 2013;

**“Non-Hazardous Waste Landfill”** means the Waste disposal facility as described in the document “Water Use License Amendment and Renewal, FOX-3, Dewar Lakes Landfill Monitoring” dated July 2013 and submitted with the application on July 15, 2013 and as shown on Figure FOX-3.5;

**“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 Defence 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;*

**“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;

**“Post Construction Landfill Monitoring Plan”** means the plan entitled “Water Use Licence Amendment and Renewal FOX-3, Dewar Lakes Landfill Monitoring”, dated July 2013 and submitted with the application on July 15, 2013;

**“Regulations”** means the *Nunavut Waters Regulations SOR 2013/69 18th April, 2013*;

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

**“Station West Landfill”** means the Waste disposal facility as described in the document “Water Use License Amendment and Renewal, FOX-3, Dewar Lakes Landfill Monitoring” dated July 2013 and submitted with the application on July 15, 2013 and as shown on Figure FOX-3.2;

**“Sump”** means an excavation in impermeable soil for the purpose of catching or storing Water or Waste;

**“Tier I 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 No.1);

**“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 No.1);

**“Tier II Soil Disposal Facility”** means the Waste disposal facility as described in the document “Water Use License Amendment and Renewal, FOX-3, Dewar Lakes Landfill Monitoring” dated July 2013 and submitted with the application on July 15, 2013 and as shown on Figure FOX-3.4;

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

**“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 (F3 – F4 Fractions);

**“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 (F1 – F2 Fractions);

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

**“Waste Disposal Facilities”** means all facilities designated for the disposal of Waste, and comprises the Non-Hazardous Waste Landfill, Station Waste Landfill, West Landfill and Tier II Soil Disposal Facility as described in the document “Water Use License Amendment and Renewal, FOX-3, Dewar Lakes Landfill Monitoring” dated July 2013 and submitted with the application on July 15, 2013, and as shown on Figure FOX-3.1; and

**“West Landfill”** means the Waste disposal facility as described in the document “Water Use License Amendment and Renewal, FOX-3, Dewar Lakes Landfill Monitoring” dated July 2013 and submitted with the application on July 15, 2013 and as shown on Figure FOX-3.3.

### **3. Enforcement**

- a. 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*;
- b. All inspection and enforcement services regarding this Licence will be provided by Inspectors appointed under the *Act*; and
- c. 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 31<sup>st</sup> of the year following the calendar year being reported, which shall contain the following information:
  - a. Tabular summaries for all data and information generated under the Post-construction monitoring program;
  - b. A review and analysis of data collected during the FOX-3, Dewar Lakes Landfill Monitoring Program and a brief description of any future studies planned by the

Licensee;

- c. A summary of any abandonment and restoration work undertaken during the year and an outline of any work anticipated for the next year;
  - d. The results of any review conducted and any recommendations regarding any changes to the Monitoring Plan and/or remediation requirements;
  - e. A summary of any studies requested by the Board, and a brief description of any future studies planned;
  - f. A list of unauthorized discharges and summary of follow-up actions taken;
  - g. If applicable, a description of any trenches and sumps excavated, including the following: GPS coordinates, dimensions, depth below active layer, and secondary containment features;
  - h. A public consultation/participation report describing consultation with local organizations and the residents of the nearby communities;
  - i. A brief summary of work done to address concerns or deficiencies listed in the inspection reports and/or compliance reports prepared by an Inspector;
  - j. An executive summary in English and Inuktitut of all plans, reports, or studies conducted under this Licence; and
  - k. Any other details on 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:

(a) 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)

(b) Inspector Contact:  
Manager of Field Operations, AANDC  
Nunavut District, Nunavut Region  
P.O. Box 100  
Iqaluit, NU X0A 0H0  
Telephone: (867) 975-4295  
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 assignable as provided for in Section 44 of the *Act*.
7. The Licensee shall, for all Plans submitted under this Licence, implement the Plan as approved by the Board in writing.

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

1. The Licensee is not authorized to use Water under the terms and conditions of this licence.
2. Streams cannot be used as a Water source unless authorized and approved by the Board in writing.
3. The Licensee shall not remove any material from below the ordinary High Water Mark of any Water body.
4. 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.
5. 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 WASTE DISPOSAL**

1. The Licensee is not allowed to discharge effluent from the facilities approved under the Licence unless written authorization is obtained from the Board.
2. The Licensee shall provide to the Board with documented authorization from all communities in Nunavut receiving Wastes from the site prior to any backhauling and disposal of Wastes from the FOX-3, Dewar Lakes Landfill Monitoring Program Project.
3. The Licensee shall backhaul and dispose of all Waste generated through the course of the operation at a licensed Waste disposal site.

4. The Licensee shall maintain records of all Waste backhauled and records of confirmation of proper disposal of backhauled Waste. These records shall be made available to the Inspector upon request.
5. The Licensee shall contain all greywater in a sump located at a distance of at least thirty-one (31) metres above the ordinary high water mark of any water body, at a site where direct flow into a water body is not possible and no additional impacts are created, unless otherwise approved by the Board in writing.
6. The Licensee shall contain all toilet wastes in latrine pits or use incineration, chemical, portable or composting toilets. Latrine pits shall be located at a distance of at least thirty one (31) metres above the ordinary high water mark of any water body, treated with lime and covered with native material to achieve the pre-existing natural contours of the land prior to abandonment.

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

1. The Licensee shall conduct all activities 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. The Licensee shall not cause erosion to the banks of any body of Water and shall provide necessary controls to prevent such erosion.
3. 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.
4. 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.
5. Licensee shall not deposit any Waste in any body of Water, or on the banks thereof.

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

1. No camp activities are authorized under the provisions of this Licence.
2. The Licensee shall conduct all activities in such a way as to minimize impacts on surface



drainage and the Licensee shall immediately undertake corrective measures in the event of any impacts on surface drainage.

3. With respect to access road, pad construction or other earthworks, the deposition of debris or sediment into or onto any Water body is prohibited. These materials shall be disposed at a distance of at least thirty-one (31) metres from the ordinary High Water Mark in such a fashion that they do not enter the Water.
4. The Licensee shall not mobilize heavy equipment or vehicles unless the ground surface is capable of fully supporting the equipment or vehicles without rutting or gouging. Overland travel of equipment or vehicles shall be suspended if rutting occurs.

**PART G: 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 Licence and the following requirements are met:
  - a. the Licensee has notified the Board in writing of such proposed Modifications at least sixty (60) days prior to beginning the Modifications;
  - b. such Modifications do not place the Licensee in contravention of the Licence or the *Act*;
  - c. 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
  - d. the Board has not rejected the proposed Modifications.
2. Modification for which all of the conditions referred to in Part G, 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 Licence within ninety (90) days of completion of the Modification. These plans and drawings shall be stamped by an Engineer.

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

1. The Licensee shall implement the Plan entitled "Spill Contingency Plan," received as additional information with the application on July 15, 2013 that was originally approved by the Board.
2. Licensee shall ensure that any equipment maintenance and servicing is conducted only in

designated areas and shall implement special procedures (such as the use of drip pans) to manage motor fluids and other Waste and contain potential spills.

3. All sumps and fuel caches shall be located a minimum of thirty one (31) 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 associated with this undertaking.
4. If during the term of this Licence, an unauthorized discharge of Waste occurs, or if such a discharge is foreseeable, the Licensee shall:
  - a. Employ the approved Spill Contingency Plan;
  - b. Report the spill immediately to the 24-Hour Spill Line at (867) 920-8130 and to the AANDC Manager of Field Operations at (867) 975-4295; and
  - c. Submit to the AANDC 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 I: CONDITIONS APPLYING TO ABANDONMENT, RESTORATION AND CLOSURE**

1. The Licensee shall backfill and restore all sumps to the pre-existing natural contours of the land.
2. The Licensee shall remove from the site, all infrastructure and site materials, including all fuel caches, drums, barrels, buildings and contents, docks, Water pumps and lines, material and equipment prior to the expiry of this Licence.
3. All roads and airstrip, if any, shall be re-graded to match natural contour to reduce erosion.
4. The Licensee shall remove any culverts and restore the drainage to match the natural channel. Measures shall be implemented to minimize erosion and sedimentation.
5. In order to promote growth of vegetation and the needed microclimate for seed deposition, all disturbed surfaces shall be prepared by ripping, grading, or scarifying the surface to conform to the natural topography.
6. Areas that have been contaminated by hydrocarbons from normal fuel transfer procedures shall be reclaimed to meet objectives as outlined in the Government of Nunavut's Environmental Guideline for Site Remediation, 2010. The use of reclaimed soils for the purpose of back fill or general site grading may be carried out only upon consultation and approval by the Government of Nunavut, Department of Environment and an Inspector.

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

1. The NWB has approved the plan entitled “Water Use License Amendment and Renewal FOX-3, Dewar Lakes Landfill Monitoring”, dated July 2013.
2. The Licensee shall monitor the Waste Disposal Facilities in accordance with the Post-construction Landfill Monitoring Program referred to in Part J, Item 1 and as outlined in the provisions and requirements of the Agreement between the Department of National Defence and the Nunavut Tunngavik Incorporated.
3. The Licensee shall submit as an addendum together with the annual report required for the period immediately following any changes or updates the Plan referred to in Part J, Item 1.
4. The Licensee shall conduct all sampling, sample preservation and analyses 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.
5. All analyses shall be performed in a laboratory accredited according to ISO/IEC Standard 17025. The accreditation shall be current and in good standing.
6. The Licensee shall include in the Annual Report, required under Part B, Item 1, all monitoring results and information required by this Part.
7. 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.
8. The Licensee shall submit a Preliminary Phase II Monitoring Summary Report as part of an application to renew this Licence in 2020. The Report shall be prepared by a geotechnical Engineer and summarize data collected during Phase I and II monitoring, and assesses the integrity of the Waste Disposal Facilities. The Report shall address whether the facilities have performed as expected, whether they are encased in permafrost. The report shall also include an assessment of how the facilities are expected to perform in the long term as well as recommendations where necessary.
9. An Inspector may impose additional monitoring requirements.

**Table No.1**  
**(From INAC Abandoned Military Site Remediation Protocol)**  
**DEW Line Clean-up Criteria (DCC)<sup>a</sup>**

<b>Substance</b>	<b>Tier I Criteria (ppm)</b>	<b>Tier II Criteria (ppm)</b>
Arsenic	-	30
Cadmium	-	5.0
Chromium	-	250
Cobalt	-	50
Copper	-	100
Lead	200	500
Mercury	-	2.0
Nickel	-	100
Zinc	-	500
PCB's	1	5.0

a. These criteria were adopted specifically for the cleanup of Arctic DEW Line Sites from the 1991 versions of the Quebec Soil Contamination Indicators and the Canadian Council of Ministers of the Environment Interim Canadian Environmental Criteria for Contaminated Sites

b. Soil criteria are given in parts per million, ppm.

c. Soils containing lead and/or PCBs at concentrations in excess of DCC I, but less than DCC II, may be landfilled,

d. Soils containing one or more substrates in excess of DCC II must be containerized - i.e. removed in a manner which precludes contact with the Arctic ecosystem.