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NUNAVUT WATER BOARD  
NUNAVUT IMALIRIYIN KATIMAYINGI  
OFFICE DES EAUX DU NUNAVUT

**File No.:** 1BR-CAP1623/  
Renewal – Amendment

October 25, 2016

Tamara Van Dyck  
Director General Military Engineering  
National Defence Headquarters  
101 Colonel By Drive  
Ottawa, Ontario K1A 0K2

Email: [Tamara.Van.Dyck@dcc-cdc.gc.ca](mailto:Tamara.Van.Dyck@dcc-cdc.gc.ca)

**RE: NWB Renewal – Amended Licence No. 1BR-CAP1623**

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Dear Ms. Van Dyck:

Please find attached Licence No. **1BR-CAP1623** issued to Defence Construction Canada (DCC) by the Nunavut Water Board (NWB) 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 (Nunavut Land Claims Agreement or NLCA)*. 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 may be in contravention of the *Nunavut Land Claims Agreement* and the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*. 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 are acknowledged by the Manager of Licensing.

The NWB strongly recommends that the Licensee consult the comments received from 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/sj/ip

Enclosure: Licence No. **1BR-CAP1623**  
Comments – AANDC, KIA

Cc: Kitikmeot Distribution List

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<sup>1</sup> Aboriginal Affairs and Northern Development Canada (AANDC), August 29, 2014; and the Kitikmeot Inuit Association (KIA), August 29, 2014.

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## **A. INTRODUCTION**

The PIN 2, Cape Young, former Distant Early Warning (DEW) Line site is located approximately 150 kilometres north of the Hamlet of Kugluktuk, in the Kitikmeot Region of Nunavut. The facility was constructed and commissioned in the 1950s and operated from that time until the 1990s when the DEW Line System was replaced by the North Warning System (NWS). The PIN-2 facility was decommissioned in 1993 and a Short Range Radar (SRR) site was established approximately eight (8) kilometres southwest of it.

Following decommissioning of the facility, site investigations were completed in 1990, 1992, 1993, and 2004. The engineering component of the assessment was conducted by AECOM Canada Ltd., and the environmental component carried out by the Environmental Science Group of the Royal Military College of Canada. The environmental clean-up and site demolition work for the project was completed in the summer of 2011. Most, if not all of the work with respect to water use and waste deposit was carried out under authorizations or water licences issued at different times to the Project by the NWB, all of which have since expired. The most recently issued water licence, No. 1BR-CAP0914, expired on May 31, 2014. Prior to expiry of this Licence the NWB received from the Licensee, on May 23, 2014, an application to renew and amend the Licence.

## **B. APPLICATION SCOPE**

The application and supporting information (the Application) to renew and amend the Licence was submitted by AECOM Canada Ltd. on behalf of Defence Construction Canada (DCC) and the Department of National Defence (DND). The scope of the Application included amendments to specific terms and conditions of the now expired Licence that are no longer applicable to the undertaking, renewal of the expired Licence for a term of seven (7) years, and the continued use of water and deposit of waste during the post-construction, landfill monitoring phase of the Project.

The monitoring phase of the Project is designed to collect adequate information about the performance of the landfills from geotechnical and environmental perspectives. A total of nine (9) new and existing landfills are associated with the Project. The monitoring program is expected to be generally carried out by approximately three (3) personnel for approximately 1 – 2 days during each monitoring period. Bottled water will be transported for use by site personnel who will reside at a temporary camp facility established to support the monitoring program. Water use is expected to be limited to sampling and related purposes.

There will be four (4) Components (visual, soil, ground water, and thermal) and three Phases associated with the landfill monitoring program. Phase I monitoring is anticipated to last approximately five (5) years and will involve the monitoring of on-site conditions to confirm whether or not thermal equilibria have been achieved. Phase II monitoring will involve verification of any equilibrium conditions established under Phase I. The monitoring frequency under Phase II monitoring will be at 7, 10, 15, and 25 years following the completion of the site remediation. Phase III monitoring will be conducted for the purposes of determining potential long-term issues such as liner integrity, permafrost stability and significant storm events. Although the scope and duration of Phase III monitoring has not been developed as yet, it is anticipated that it will be based on 10-year intervals.

An Environmental Working Group (EWG) established and consisting of qualified engineering and environmental scientists with expertise in environmental remediation and clean-up under northern conditions will review the results obtained during the monitoring program and provide recommendations to the Department of National Defence – Nunavut Tunngavik Incorporated (DND-NTI) Steering Committee. The decision on whether to continue or terminate the monitoring program will be made after 25 years and following an assessment of performance carried out jointly by the NTI and the DND Steering Committee.

### **C. PROCEDURAL HISTORY**

The above-mentioned Application, which was received by the Nunavut Water Board (NWB or Board) on May 23, 2014, consisted of the following documents:

- 1998 NTI Agreement;
- Amendment Renewal Application;
- Amendment Renewal Application Cover Letter;
- PIN-2, Cape Young Landfill Monitoring;
- Project Summary in English;
- Project Summary in Inuktitut;
- Remote Camp Questionnaire;
- Spill Contingency Plan;
- PIN-2 Cape Young As-Built Drawings, December 2012;
- The Collection of Landfill Monitoring Report; and
- Lagoon Disposal Facility Design.

Following receipt, the NWB conducted an internal review of the Application in which additional information was requested and received. The Application was then distributed on July 29, 2014 for a thirty (30) day public comment and/or review period with the deadline for submission set for August 29, 2014. On or before the deadline for comments elapsed, submissions were received from Aboriginal Affairs and Northern Development Canada (AANDC) and the Kitikmeot Inuit Association (KIA). With respect to pre-licencing consideration, the NWB received the Nunavut Planning Commission's (NPC), Land Use Conformity Determination for the Application on September 22, 2014, and the Nunavut Impact Review Board's (NIRB) Screening Exemption Decision on July 31, 2014.

### **D. FILE HISTORY**

The NWB has previously issued two (2) Type "B" water licences and one (1) amendment, to Defence Construction Canada (DCC) for remediation activities associated with the Cape Young, PIN-2 DEW Line Site Remediation Project:

Licence No. NWB5CAP0406, was issued to DCC on May 6, 2004 and expired on May 31, 2006. The Licence allowed for the use of ten (10) cubic metres of water daily and the deposit of waste in support of an Industrial undertaking. On May 29, 2009 Licence No. NWB5CAP0406 was renewed as Licence No. 1BR-CAP0914 for a five (5) year term with the expiry date set for May 31, 2014. The Licence allowed DCC to use up to sixty-five (65) cubic metres of water daily and to continue to deposit waste in support of the Project. On August 26, 2010, Licence No. 1BR-CAP0914 was amended to allow DCC to use water from an unnamed lake located approximately

3.5 kilometres south of the camp instead of from the Harding River, the water source included in the pre-amended Licence.

## **E. GENERAL CONSIDERATIONS**

The following sections provides background information regarding the Board's rationale surrounding some of the main terms and conditions include in the Licence:

### *Term of the Licence*

In accordance with s. 45 of the *Act*, the NWB may issue a licence for a term not exceeding twenty-five (25) years. The Applicant requested a seven (7) year licence from the date of expiry for the current Licence. The requested term was supported by AANDC and considered by the NWB as being consistent with the nature of the undertaking. The Board has therefore granted the term requested by the Licensee. However, the commencement of the Licence term will be from they year 2016 instead of 2015.

### *Annual Report*

Similar to conditions generally included in licences issued by the Board, the NWB has included, under Part B, Item 1 of the renewed and amended Licence, the requirements for the Licensee to submit to the Board for review prior to the 31<sup>st</sup> of March, annually, a report detailing water use and waste deposit activities for the preceding year.

The Board provides public access to the information submitted in annual reports submitted by licensees through its ftp site as well as upon request from interested parties.

The NWB has included on its website a standardized form for Annual Reporting that licensees can use to submit Annual Reporting information, supplemented by other relevant details. A copy of the NWB's generic annual reporting form can be obtained from the NWB upon request or electronically through the NWB's FTP site and using the following link:

<ftp://ftp.nwb-oen.ca/other%20documents/Standardized%20Forms/>

### *Water Use*

Under the expired Licence, the Licensee was authorized to use a maximum of sixty-five (65) cubic metres of water annually in support of site remediation activities. The Licensee requested, as part of its Application to renew and amend the Licence, the use of ground water for sampling purposes. The NWB has authorized the use of up to five (5) cubic metres of water annually for sampling and related purposes under Part C, Item 1 of this Licence.

### *Waste Deposit*

Under the expired Licence, the Licensee was authorized to dispose of sewage, solid waste, hazardous waste, waste oil, greywater, sludge and bulky items/scrap metal. With completion of the remediation phase of the Project, the Licensee indicated that only sewage and empty barrels / fuel drums will be generated.

### *Sewage*

Following completion of remediation work, the sewage lagoon (Sewage Disposal Facility) associated with the Project was decommissioned and the camp facility dismantled. The Licensee

stated that the personnel carrying out the monitoring program will reside at a temporary camp established to support the program and that the small quantities of sewage and greywater generated by those personnel will be disposed of in a pit toilet. Accordingly, the NWB has included terms and conditions under Part D of the Licence authorizing the disposal of sewage including greywater to a sump.

#### Solid Waste

As stated above, Licensee indicated that empty barrels /fuel drums generated by the project will be backhauled to an approved facility for disposal. Terms and conditions related to the disposal of the aforementioned waste has been included under Part D of the Licence

### **F. SPILL CONTINGENCY PLANNING**

The NWB had approved with the issuance of the expired Licence a spill contingency plan. However, as part of the Application to renew and amend the Licence, the Licensee submitted an updated Spill Contingency Plan, which the Board has approved under Part I, Item 1 of the renewed and amended Licence to supersede the previously approved plan. The Plan will need to be updated, as required under Part I, Item 2 of the renewed and amended Licence to include a topographic map showing the fuel cache, spill response equipment, a spill report form and updated contact information for relevant government agencies.

### **G. ABANDONMENT AND RESTORATION**

Under the expired Licence, the NWB had approved the document entitled *Project Description and Environmental Screening Report PIN-2, Cape Young DEW Line Site Clean Up* dated October 17, 2008. Now that the remediation phase of the project is completed, the Licensee is required to carry out any remaining abandonment and restoration work in accordance with conditions included under Part J of the renewal and amended licence.

### **H. MONITORING**

Consistent with the requirement under Part K, Item 1 of the expired Licence, the Licensee was required to submit to the Board for review and approval a Post-Closure Monitoring Plan, which the Licensee has submitted as part of its Application to renew and amend the Licence. The Board has reviewed and approved the Plan under the monitoring section of the Licence, Part K, Item 1.

In accordance with requirements contained under Part K, Item 10 of the expired Licence, the Licensee was required to submit a Quality Assurance and Quality Control Plan, complete with a letter of approval from an accredited laboratory, for review by the Board. As this requirement was not fulfilled under the expired Licence, it has been carried over to the renewed and amended Licence, under Part K, Item 10.

### **I. AS-BUILT DRAWINGS AND PLANS**

As a requirement of the terms and conditions in the expired Licence, the Licensee was required to submit to the Board for review and acceptance, as-built drawing and/or plans, stamped and signed by an Engineer, the facilities associated with the Licence, which the Licensee submitted as additional information with the Application. The Board has therefore removed this requirement from the Licence.

# DECISION

## LICENCE NUMBER: 1BR-CAP1623

This is the decision of the Nunavut Water Board (NWB) with respect to an application dated May 23, 2014 for the renewal and amendment of a Water Licence made by:

### DEFENCE CONSTRUCTION CANADA (DCC)

to allow for the use of water and deposit of waste during temporary camp operations and activities in support of post-construction monitoring at the Pin-2, Cape Young Landfill Monitoring Program, located within the Kitikmeot Region, Nunavut, at the following general geographical coordinates:

Latitude: 68° 56' N

Longitude: 116° 56' W

## DECISION

After having been satisfied that the Application was for a location that falls outside of an area with an approved Land Use Plan<sup>1</sup> and exempt from the requirement for screening as described within Schedule 12-1 by the Nunavut Impact Review Board<sup>2</sup> in accordance with Article 12 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 (Act)* 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 considering the 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 *Act*, waived the requirement to hold a public hearing, and determined that:

**Licence No. 1BR-CAP0914 be renewed and amended as Licence No. 1BR-CAP1623 subject to the terms and conditions contained therein (Motion #: 2016-B1-014).**

Signed this 25<sup>th</sup> day of October, 2016 at Gjoa Haven, NU.

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Thomas Kabloona  
Nunavut Water Board  
Chair

TK/sj/ip

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<sup>1</sup> Nunavut Planning Commission (NPC) Conformity Determination, September 22, 2014.

<sup>2</sup> Nunavut Impact Review Board (NIRB) Screening Exemption Decision, July 21, 2014.



## NUNAVUT WATER BOARD WATER LICENCE RENEWAL – AMENDMENT

Licence No. 1BR-CAP1623

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 (DCC)

(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-CAP1623 / TYPE “B”

Water Management Area: AMUNDSEN GULF WATERSHED (#27)

Location: PIN-2 CAPE YOUNG, LANDFILL MONITORING PROGRAM  
KITIKMEOT REGION, NUNAVUT

Classification: INDUSTRIAL UNDERTAKING

Purpose: DIRECT USE OF WATER AND DEPOSIT OF WASTE

Quantity of Water use not  
to Exceed: FIVE (5) CUBIC METRES PER ANNUM

Date of Licence Issuance: OCTOBER 25, 2016

Expiry of Licence: OCTOBER 24, 2023

This Licence renewal, 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**

This Licence allows for the use of water and the deposit of waste for an Industrial undertaking classified as per Schedule 1 of the *Regulations* for the PIN-2, Cape Young, Landfill Monitoring Program, located approximately 150 kilometres north of the Hamlet of Kugluktuk within the Kitikmeot Region, Nunavut.

- a. 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
- b. 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-CAP1623**

“**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;

“**Appurtenant Undertaking**” means an undertaking in relation to which a use of water 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* and the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*;

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

“**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;

“**Greywater**” means all liquid wastes from showers, baths, sinks, kitchens and domestic washing facilities, but does not include toilet wastes;

“**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;

“**High Water Mark**” means the usual or average level to which a body of water rises at its highest point and remains for sufficient time so as to change the characteristics of the land (ref. Department of Fisheries and Oceans Canada, Operational Statement: Mineral Exploration Activities);

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

“**Licensee**” means the holder of this Licence;

“**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 program established to collect data on surface water and groundwater quality to assess impacts to the environment of an appurtenant undertaking.

“**Non-Hazardous Waste Landfill**” comprises the engineered landfill designed to contain double bagged asbestos, all non-hazardous wastes including demolition materials, excavated materials from previous landfills, Tier I soils and Type A soils as described in the engineering diagrams H-C81/1-9101-115 and H-C81/1-9101-116 submitted with the application on December 4, 2008;

“**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;

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

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

**“Solid Waste”** means non-hazardous waste;

**“Spill Contingency Plan”** means a Plan developed to deal with unforeseen petroleum and hazardous materials events that may occur during the operations conducted under the Licence;

**“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 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 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”** comprises the engineered facility designed to separate Tier II contaminated soils from the environment as described in the engineering diagrams H-C81/1-9101-117 and H-C81/1-9101-118 submitted with the application on December 4, 2008);

**“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 in the F3 and F4 fraction;

**“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 in the F1 and F2 fraction;

**“Waste”** means, as defined in s. 4 of the *Act*, any substance that, by itself or in combination with other substances found in water, would have the effect of altering the quality of any water to which the substance is added to an extent that is detrimental to its use by people or by any animal, fish or plant, or any water that would have that effect because of the quantity or concentration of the substances contained in it or because it has been treated or changed, by heat or other means;

**“Water” or “Waters”** means waters as defined in section 4 of the *Act*;

**“Waste Disposal Facilities”** means all facilities designated for the disposal of waste, and includes the NHWL, Tier II Soil Disposal Facility and existing on-site landfills as described in the Application for Water Licence filed by the Applicant on December 4, 2008 and/or Renewal Application dated May 23, 2014.

### 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. The Licensee shall file an Annual Report on the Appurtenant Undertaking with the Board no later than the 31<sup>st</sup> of March of the year following the calendar year being reported, containing the following information:
  - a. A summary report of water use and waste disposal activities;
  - b. A list of unauthorized discharges and a summary of follow-up actions taken;
  - c. A summary of all waste backhauled for disposal at approved facilities as required under Part D;
  - d. A summary of any construction work, modification and major maintenance work (Including as-built drawings), carried out on the Waste Disposal Facilities, including all associated structures;
  - e. Tabular summaries and analyses of all data and information generated under the “Monitoring Program”
  - f. 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;
  - g. Any revisions to the Plans, as required by Part B, Item 7, submitted in the form of Addendums;
  - h. A description of all progressive and or final reclamation work undertaken, including photographic records of site conditions before, during and after completion of operations;
  - i. 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;
  - j. A copy of any public consultation/participation report describing consultation with local organizations and the residents of the nearby communities;
  - k. A brief summary of work done to address any concerns or deficiencies listed in the inspection reports and/or compliance reports prepared by an Inspector;
  - l. An executive summary in English, Inuktitut, and Inuinnaqtun of all plans, reports, or studies conducted under this Licence; and
  - m. Any other details on water use or waste disposal requested by the Board by the 1<sup>st</sup> of November 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, where applicable, install flow meters or other such devices, or implement suitable methods required for the measuring of water volumes, as required under Part K, Item 4.
4. The Licensee shall, for all Plans submitted under this Licence, include a proposed timetable for implementation. Plans submitted, cannot be undertaken without subsequent Board approval and direction in writing. The Board may alter or modify a Plan if necessary to achieve the legislative objectives and will notify the Licensee in writing of acceptance, rejection or alteration of the Plan.
5. The Licensee shall, for all Plans submitted under this Licence, implement the Plan as approved by the Board in writing.
6. Every Plan to be carried out pursuant to the terms and conditions of this Licence shall become a part of this Licence, and any additional terms and conditions imposed upon approval of a Plan by the Board become part of this Licence. All terms and conditions of the Licence should be contemplated in the development of a Plan where appropriate.
7. The Licensee shall review the Plans referred to in this Licence, as required by changes in operation and/or technology, and modify the Plan accordingly. Revisions to the Plans shall be submitted in the form of an Addendum to be included with the Annual Report.
8. The Licensee shall, within thirty (30) days of arrival on site, post signs in the appropriate areas identifying, where applicable, the locations of the Water Supply Facilities, Solid Waste Disposal Facilities, and the “Monitoring Program Stations”. All postings shall be in the Official Languages of Nunavut.
9. The Licensee shall maintain a copy of this Licence 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@nwb-oen.ca](mailto:licensing@nwb-oen.ca)

**(b) Inspector Contact:**  
Manager of Field Operations, INAC  
Nunavut District, Nunavut Region  
P.O. Box 100  
Iqaluit, NU X0A 0H0

Telephone: (867) 975-4295  
Fax: (867) 979-6445

10. 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 and Inuinnaqtun.
11. The Licensee shall ensure that any document(s) or correspondence submitted by the Licensee to the NWB is received and acknowledged by the Manager of Licensing.
12. This Licence is assignable as provided for in section 44 of the *Act*.

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

1. The Licensee is authorized to use up to five (5) cubic metres of water annually for sampling and related purposes. Total quantity of water allowed for all purposes under this Licence shall not exceed five (5) cubic metres per year.
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 unless authorized.
4. The Licensee shall implement sediment and erosion control measures to prevent the deposition of dust and/or sediment into local water bodies, arising from contractor activities or on-site vehicular travel.

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

1. The Licensee shall locate areas designated for waste disposal at a minimum distance of thirty-one (31) metres from the ordinary High Water Mark of any water body such that the quality, quantity or flow of water is not impaired, unless otherwise approved by the Board in writing.
2. The Licensee shall utilize the NHWL for the continued treatment of acceptable waste generated by the Project, including Type A soil and contaminated soils that exceed Tier I criteria and are less than Tier II criteria, until appropriate treatment objectives are met.
3. The Licensee shall continue to treat soils containing substances in excess of Tier II criteria, as indicated in Table No.1, at the Tier II Soil Disposal Facility, until the appropriate treatment objectives are met.
4. The Licensee shall provide to the Board for review, documented authorization from any community in Nunavut receiving backhauled wastes from the PIN-2, Cape Young

Landfill Monitoring Program Project for storage or disposal.

5. The Licensee shall backhaul and dispose of all hazardous wastes and waste oil generated through the course of the operations, to an approved waste disposal facility.
6. The Licensee shall maintain records of all waste backhauled and records of confirmation of proper disposal of backhauled waste and include this information within the Annual Report, under Part B, Item 1. These records shall be made available to an Inspector upon request. The Licensee shall not transport hazardous wastes prior to registering with the Government of Nunavut as a waste generator and utilizing the prescribed manifests.
7. The Licensee shall provide notice to an Inspector at least ten (10) days' prior to initiating any decant or discharge from the Waste Disposal Facilities.
8. All discharged and/or contact water from the Waste Disposal Facilities shall not exceed the following discharge limits prior to being released in to the receiving environment:

Parameter	Maximum Allowable Concentration (µg/L)
pH	6 to 9 (pH units)
Oil and Grease	5000
Arsenic (total)	100
Cadmium (dissolved)	10
Chromium (dissolved)	100
Cobalt (dissolved)	50
Copper (dissolved)	200
Lead (dissolved)	50
Mercury (total)	0.6
Nickel (dissolved)	200
PCB (total)	1000
Zinc (total)	500
Benzene	370
Toluene	2
Ethylbenzene	90

9. If the effluent referred to in Part D, Item 8 does not meet discharge limits, it shall be considered hazardous waste and require disposal off-site at an approved facility or as otherwise approved by the Board in writing.
10. The discharge point for all treated effluents described in Part D, Item 8, shall be located at a minimum of thirty-one (31) metres from the ordinary High Water Mark of any water body and where direct flow into a water body is not possible and no additional impacts are created.
11. The Licensee shall not mix or blend soils that exceed the maximum levels of Tier II criteria for the purpose of attaining the specific limits of Table No.1.

12. 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.
13. 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, upon the failure of any constructed facilities, repair such facilities immediately to the appropriate standards as recommended by an Engineer.
2. The Licensee shall minimize disturbance to terrain, permafrost and drainage during extraction of granular material, development and closure of landfills, movement of contractor's equipment and personnel around the site and removal of site debris.
3. The Licensee shall not cause erosion to the banks of any body of water and shall provide necessary controls to prevent such erosion.
4. Sediment and erosion control measures shall be implemented prior to and maintained during the operation to prevent entry of sediment into water.
5. The Licensee shall design and construct all stream crossings to minimize erosion and/or deposition of waste into water.
6. The Licensee shall ensure that existing creek channels are maintained at their normal width and depth to the extent possible, during and after site remediation.
7. Granular materials and rock rip-rap used for any temporary stream crossings, approaches or as may be required for bank stabilization must be obtained from a source approved by an Inspector, and be clean and free of contaminants. Such material must not be removed or gathered from below the ordinary High Water Mark of a creek, stream or from any water body.
8. All sites affected by remediation activities shall be stabilized, contoured as necessary, and suitable erosion control measures implemented to minimize sediment deposition into watercourses located on or adjacent to the site.
9. The Licensee shall restore and stabilize all areas affected by the undertaking upon completion of the work.

10. 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.
11. Areas designated for waste disposal shall be located at a minimum of thirty (31) metres from the ordinary High Water Mark of any body of water, unless otherwise authorized.

**PART F: CONDITIONS FOR CAMP, ACCESS INFRASTRUCTURE AND OPERATION**

1. The Licensee shall not erect camps or store material on the surface of frozen streams or lakes except what is for immediate use. Camps shall be located to minimize impacts on surface drainage.
2. 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.
3. Winter lake and stream crossings, including ice bridges, shall be constructed entirely of water, ice or snow, and shall be removed prior to spring break-up.
4. With respect to access road, pad construction, demolition or other earthworks, the deposition of debris or sediment into any water body is prohibited. These materials shall be disposed of above the ordinary High Water Mark in such a fashion that they do not enter the water.

**PART G: CONDITIONS APPLYING TO DRILLING OPERATIONS**

1. The Licensee is authorized to conduct drilling activities for the purposes of installing monitoring instrumentation including monitoring wells and thermistors.
2. The Licensee shall not conduct any land-based drilling within thirty-one (31) metres of the ordinary High Water Mark of any water body, unless otherwise approved by the Board in writing.
3. The Licensee shall dispose of all drill waste, including water, chips, muds and salts (CaCl<sub>2</sub>) in any quantity or concentration, from land-based drilling, in a properly constructed sump or an appropriate natural depression located at a distance of at least thirty-one (31) metres from the ordinary High Water Mark of any adjacent water body, where direct flow into a water body is not possible and no additional impacts are created.

**PART H: CONDITIONS APPLYING TO CONSTRUCTION AND MODIFICATIONS**

1. The Licensee may, without written consent from the Board, carry out Modifications to the Water Supply Facilities and 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. such Modifications are consistent with the NIRB Screening Decision;
  - d. 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
  - e. 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 Licence 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 Board has approved the Plan entitled “*Spill Contingency Plan*” that was submitted on May 23, 2014 as additional information with the Application.
2. The Licensee shall submit within the next annual report for the Project, an Addendum to the Plan referred to in Part I, Item 1, in the format set out by the Consolidation of Spill Contingency Planning and Reporting Regulations R-068-93 addressing the following issues:
  - a. Inclusion of a NT – NU spill report form;
  - b. Updates to section 3.2 providing revised contact information for Indigenous and Northern Affairs Canada (INAC) Water Resources Operations and confirm others;
  - c. Section 4.1, refer to the NT/NU Spill Report Form; and
  - d. Inclusion of a site or topographic map (Section 2.4) of the Project area depicting fuel caches, nearby water bodies, spill response equipment, and other relevant information.
3. 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-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 facilities associated with this undertaking.

4. The Licensee shall conduct any equipment maintenance and servicing 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.
5. 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 Inspector at (867) 975-4295; and
  - c. For each spill occurrence, submit to the Inspector, no later than thirty (30) days after initially reporting the event, a detailed report that will include the amount and type of spilled product, the GPS location of the spill, and the measures taken to contain and clean up the spill site.
6. The Licensee shall, in addition to Part I, Item 5, regardless of the quantity of releases of harmful substances, report to the NWT/NU Spill Line if the release is near or into a Water body.

**PART J: CONDITIONS APPLYING TO ABANDONMENT AND RESTORATION OR TEMPORARY CLOSING**

1. The Licensee shall, where applicable, implement relevant aspects of the previously approved the document entitled "*Project Description and Environmental Screening Report PIN-2, Cape Young DEW Line Site Clean Up*" dated October 17, 2008.
2. The Licensee shall complete all restoration work for the temporary camp facilities and waste disposal activities not included under Part J, Item 1 of this Licence, prior to the expiry of this Licence or completion of the monitoring program.
3. The Licensee shall carry out progressive reclamation of any components of the project no longer required for the Licensee's operations
4. The Licensee shall backfill and restore all sumps to the pre-existing natural contours of the land.
5. All disturbed areas shall be stabilized and re-vegetated as required, upon completion of work, and restored as practically as possible to a pre-disturbed state.

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

1. The Board has approved the plan entitled *Water Use License Amendment and Renewal PIN-2, Cape Young Landfill Monitoring*, dated May 2014 that was submitted as additional information with the Application.

2. The Licensee shall conduct monitoring in accordance with the plan approved under Part K, Item 1 of this Licence.
3. In addition to the monitoring stations that may be established to address the monitoring requirements under Part K, Item 1, the Licensee shall maintain, as needed, Monitoring Program Stations at the following locations:

Monitoring Station Number	Description	Status
CAP-3	Final Point of Discharge from the Tier II Soil Disposal Facility	Active (Water Quality)
CAP-4	Final Point of Discharge from the Non- Hazardous Waste Landfill	Active (Water Quality)
CAP-5	Final Point of Discharge from the Landfarm	Active (Water Quality)

4. The Licensee shall measure and record in cubic metres, the daily quantities of water utilized for all purposes of the is Licence
5. The Licensee shall measure and record in cubic metres, the daily quantities of effluent discharged the Disposal Facilities associated with this Licence.
6. The Licensee shall determine the GPS co-ordinates (in degrees, minutes and seconds of latitude and longitude) of all locations where sources of water are utilized for all purposes.
7. The Licensee shall determine the GPS co-ordinates (in degrees, minutes and seconds of latitude and longitude) of all locations where wastes associated with camp operations are deposited.
8. The Licensee shall monitor compliance with respect to Part D, Item 8, by collecting a representative composite sample from a minimum of 5% of the total volume to be released from the Final Discharge Point of each of the Waste Disposal Facilities
9. 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.
10. The Licensee shall submit to the Board for review, ninety (90) following issuance of this Licence, a Quality Assurance/Quality Control Plan that conforms to the guidance document “*Quality Assurance (QA) and Quality Control (QC) Guidelines For Use by Class “B” Licensees in Collecting Representative Water Samples in the Field and for Submission of a QAQC Plan*” INAC (1996). The Plan shall include a cover letter from the accredited laboratory, under Part K, Item 9, confirming acceptance of the Plan for analyses to be performed under this Licence.

11. The Licensee shall review the Plan referred to in this Part as required by changes in operation and/or technology and modify the Plan accordingly. Revisions to the Plan are to be submitted in the form of an addendum to be included with the Annual Report, unless directed otherwise by the Board
12. Additional monitoring requirements may be requested by the Inspector.
13. The Licensee shall include in the Annual Report required under Part B, Item 1 all data, monitoring results and information required by the approved monitoring plan and this Part his Part.

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

<b>Substance</b>	<b>DCC Tier I<sup>b, c</sup></b>	<b>DCC Tier II<sup>b, d</sup></b>
Arsenic	-	30
Cadmium	-	5.0
Chromium	-	250
Cobalt	-	50
Copper		100
Lead	200	500
Mercury	-	2.0
Nickel	-	100
Zinc	-	500
PCB's	1.0	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