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NUNAVUT WATER BOARD  
NUNAVUT IMALIRIYIN KATIMAYINGI  
OFFICE DES EAUX DU NUNAVUT

File No.: **1BR-CAP0914**

May 29, 2009

Douglas Craig, M.Sc.  
Environmental Officer  
Defence Construction Canada  
Constitution Square, Suite 1720  
350 Albert Street  
Ottawa, ON K1A 0K3

E-mail: [douglas.craig@dcc-cdc.gc.ca](mailto:douglas.craig@dcc-cdc.gc.ca)

**RE: NWB LICENCE No. 1BR-CAP0914**

Dear Mr. Craig:

Please find attached Licence No. **1BR-CAP0914** issued to Defence Construction Canada (DCC) by the Nunavut Water Board **Motion #: 2009-04-L08** 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 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 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.

No comments were received during the thirty day public review process. The NWB notes that there is a NIRB Decision requirement to install and operate an incineration device capable of meeting emission limits established under the *Canada-wide Standards (CWS) for Dioxins and Furans* and the *CWS for Mercury Emissions*.

Sincerely,

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

Thomas Kabloona  
Nunavut Water Board, Chair

TK/dc

Enclosure: Licence No. **1BR-CAP0914**  
Comments: none received  
NIRB Screening Decision File No.: 08DN081

Cc: Kitikmeot Distribution List



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NUNAVUT WATER BOARD  
NUNAVUT IMALIRIYIN KATIMAYINGI  
OFFICE DES EAUX DU NUNAVUT

## DECISION

### LICENCE NUMBER: 1BR-CAP0914

This is the decision of the Nunavut Water Board (NWB) with respect to an application for a new Licence dated October 14, 2008, received by the NWB on December 4, 2008, and made by:

#### DEFENCE CONSTRUCTION CANADA (DCC)

to allow for the use of water and disposal of waste during camp operations and site remediation activities at the former PIN-2, Cape Young Distant Early Warning Line site, which is located approximately 150 km north of Kugluktuk, within the Kitikmeot Region, Nunavut, at general latitude 68°56'N and general longitude 116°56'W.

### DECISION

After having been satisfied that the application was for a location within an area in which there is no valid Land Use Plan and subject to a 12.4.4(a) screening decision by the Nunavut Impact Review Board in accordance with Schedule 12.1, Paragraph 5 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* (NWNSTRA) 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 recognizing that no representations were received from 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 NWNSTRA, decided to waive the requirement to hold a public hearing and determined that:

**Licence Number 1BR-CAP0914 be issued subject to the terms and conditions contained therein. (Motion #: 2009-04-L08)**

SIGNED this 29<sup>th</sup> day of May 2009 at Gjoa Haven, NU.

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Thomas Kabloona, Nunavut Water Board, Chair

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## **1. INTRODUCTION**

The former PIN-2, Cape Young Distant Early Warning (DEW) Line Site is located along the shores of Dolphin and Union Strait, approximately 150 km north of Kugluktuk, within the Kitikmeot Region, Nunavut, at the general latitude of 68°56'N and general longitude 116°56'W.

The PIN-2, Cape Young DEW Line Site was constructed in 1950's as an auxiliary site to the DEW Line. The site was closed in March 1985 and is now scheduled by Defence Construction Canada (DCC) for restoration to remedy the effects that occurred as a result of its operation.

In 2004 DCC conducted a detailed site investigation for the:

- Collection of soils samples to delineate known areas of soil contamination;
- Collection of water samples, from both surface and sub-surface locations;
- Collection of structural material samples, and inventorying on-site buildings and facilities;
- Identification of surface debris areas, areas of buried waste and granular resources on-site;
- Topographical and location surveys; and
- Identification of potential locations for any site disposal facilities required for site clean-up.

Restoration is scheduled to commence in June 2009 and anticipated to be completed by October 2012. On site restoration activities will include:

- Mobilization of equipment, materials and personnel to site;
- Set-up of cleanup camp and equipment storage;
- Camp set-up and operation;
- Sewage Lagoon construction, operation and decommissioning;
- Quarrying of gravel and overburden materials;
- Closure and remediation of existing landfills;
- Construction, operation and closure of a Non-Hazardous Waste Landfill (NHWL);
- Creation, operation and closure of a Tier II Soil Disposal Facility;
- Hazardous material removal, handling and transportation;
- Temporary storage on site for hazardous materials, equipment and fuels;
- Building and infrastructure demolition;
- Debris consolidation and disposal;
- Excavation of hazardous soils and disposal off site;
- Excavation and removal of metals and PCB contaminated paint from site;
- Site grading;
- Demobilization of equipment, materials/wastes and personnel; and
- Long term site monitoring following remediation activities.

## **2. PROCEDURAL HISTORY**

On December 4, 2008 an application for a new water licence dated October 14, 2008, was received by the Nunavut Water Board (NWB) from DCC, for water use and waste disposal activities associated with camp operations and site remediation activities at the PIN-2, Cape Young DEW Line Site.

In accordance with the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* S.55.1 and S.55.4, notice of the application was posted in Cambridge Bay, Kugluktuk, Bathurst Inlet and Umingmaktok. The information was distributed to interested parties on December 12, 2008. The comment period deadline was January 12, 2009. No comments were received during the comment period from either the public or other interested parties and therefore the NWB waived the requirement for a public hearing.

### **3. GENERAL CONSIDERATIONS**

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

In accordance with the *Act* S. 45, the NWB may issue a licence for a term not exceeding twenty-five years. The application indicated a requested licence term of approximately three year extending to 2012. The NWB believes that a term of approximately five (5) years is appropriate, which will allow the remediation activities to be completed, followed by initial post remediation monitoring. The Licence term will also allow the Licensee to properly carry out the terms and conditions of the Licence and will ensure that sufficient time is given to permit the Licensee to develop, submit and implement the plans required under the Licence to the satisfaction of the NWB.

#### **B. Annual Report**

The requirement for the submission of Annual Reports by the Licensee in this Licence is 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 Register and is available to interested persons upon request. The requirements of this Annual Report can be found in Part B, Item 1.

#### **C. Water Use**

The camp, which will support remediation activities on site, will utilize water from the Harding River. Water requirements for camp use during the period of the Licence are expected to be a maximum of fifteen (15) m<sup>3</sup> *per* day. Water requirements for construction and remediation activities are expected to be a maximum of fifty (50) m<sup>3</sup> *per* day.

Based upon the projected requirements of the Licensee, the Board has set the terms and conditions in the water Licence, which govern water usage. The maximum permitted usage of water by the Licensee, over the term of the water Licence and for all purposes, has been set at sixty five (65) m<sup>3</sup> *per* day.

#### **D. Deposit of Waste**

##### **Sewage**

The Licensee has indicated that camp sewage and greywater will be discharged into two independent single cell lagoons located a minimum of 100 metres from the camp, each having a total capacity of forty-five days, or other alternative treatment that will meet the required effluent criteria.

The Licensee is required, under Part H, Item 1, to submit detailed information including the for

construction drawings of the proposed Sewage Disposal Facility within sixty (60) days following issuance of the Licence.

The Board, having duly considered these issues and the submission of the Applicant, has set the terms and conditions in the Water Licence, which govern the disposal of sewage during the proposed undertaking. As no comments were received in the public review process, conditions are consistent with those of other remediation licenses.

### **Solid Waste**

The Licensee has indicated that camp solid waste will be incinerated and that any non-combustible residual, petroleum hydrocarbon contaminated (PHC) and Type A (F3 and F4 soils), Tier I soils (or a combination of the two) and site debris will be buried in an on-site Non-Hazardous Waste Landfill (NHWL). Additionally, pre-existing landfills on the PIN-2 Site will be remediated in accordance with protocols described in the *“Project Description and Environmental Screening Report PIN-2, Cape Young DEW Line Site Clean Up”* dated October 17, 2008. Soils designated as Tier II under the *INAC Abandoned Military Site Remediation Protocol, March 2005* will be deposited in a Tier II Soil Disposal Facility. Soils designated Type B (F1 and F2 soils) will be deposited in the Landfarm. Materials coated with PCB amended paint, as well as other hazardous materials will be disposed of in approved off-site facilities.

The Board, having duly considered these issues and the submission of the Applicant, has set the terms and conditions in the water Licence, which govern the disposal of solid waste during the proposed undertaking accordingly.

### **E. Spill Contingency Planning**

The Board has approved the document entitled *“Spill Contingency Plan”* submitted with the application. As this plan was not submitted as a stand-alone document, an addendum to the approved plan will be required to be submitted within sixty (60) days following issuance of the Licence. Additional requirements for this addendum are detailed under Part I, Item 2.

### **F. Abandonment and Restoration**

To ensure that all facilities required for the undertaking are reclaimed in an appropriate manner upon abandonment, the NWB requires Licensees to prepare and submit an Abandonment and Restoration Plan. The activities proposed under this Licence are for the remediation of the site. The Board has approved the document entitled *“Project Description and Environmental Screening Report PIN-2, Cape Young DEW Line Site Clean Up”* dated October 17, 2008, which includes remediation protocols for the entire site and a brief Abandonment and Decommissioning Plan for site closure. Additional conditions for restoration have been included under Part J of this Water Licence.

### **G. Monitoring**

Following remediation activities, long term monitoring of the site is proposed to ensure that the facilities remaining (NHWL and the Tier II Soil Disposal Facility) are functioning as designed. A Post-Closure Long Term Monitoring Plan shall be submitted for Board approval six months prior to the completion of the remediation phase.



## NUNAVUT WATER BOARD WATER LICENCE

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)

CONSTITUTION SQUARE, SUITE 1720  
350 ALBERT STREET, OTTAWA, ON K1A 0K3

(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:

Licence Number/Type: 1BR-CAP0914 Type "B"

Water Management Area: NUNAVUT 07

Location: PIN-2 CAPE YOUNG  
KITIKMEOT REGION, NUNAVUT

Classification: INDUSTRIAL UNDERTAKING

Purpose: DIRECT WATER USE AND DEPOSIT OF WASTE

Quantity of Water use not  
to Exceed: SIXTY FIVE (65) CUBIC METRES PER DAY

Date of Licence Issuance: MAY 29, 2009

Expiry of Licence: MAY 31, 2014

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**

This Licence allows for the use of water and the disposal of waste for an undertaking classified as Industrial at the PIN-2 Cape Young DEW Line site, located on the Dolphin and Union Strait, approximately 150 km north of Kugluktuk, within the Kitikmeot Region, Nunavut, at the general latitude of 68°56'N and general longitude 116°56'W:

- 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-CAP0914

**“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 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*;

**“Demolition Rinse Wastewater”** means water and associated waste generated by the operation of decontamination and decommissioning activities;

**“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 Engineering, Geological and Geophysical Act (Nunavut) S.N.W.T. 1998, c.38, s.5;

**“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;

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

**“Licensee”** means the individual or organization to which Licence No. 1BR-CAP0914 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.

**“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 *Northwest Territories Water Regulations* sor/93-303 8th June, 1993, omitting Section 5, Water Use or Waste Deposit without a Licence;

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

**“Sewage Disposal Facility”** comprises the twin lagoon system and engineered structures designed to contain and treat sewage as described in the Water Licence Application filed by the Applicant on December 4 2008;

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

**“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;

**“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 Dew Line Cleanup Criteria (DCC) Tier I in Appendix B of the *INAC Abandoned Military Site Remediation Protocol, March 2005* (see Table 1);

**“Tier II Soil”** means soil containing contaminant concentrations within the types and ranges defined as Dew Line Cleanup Criteria (DCC) Tier II in Appendix B of the *INAC Abandoned Military Site Remediation Protocol, March 2005* (see Table 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 Supply Facilities”** comprises Harding River as a water source and associated infrastructure designed to collect and supply water;

**“Waste Disposal Facilities”** means all facilities designated for the disposal of waste, and includes the Sewage Disposal Facilities, 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.

### 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 31st of the year following the calendar year being reported which shall contain the following information:
  - a. The monthly and annual quantities (in cubic metres) of fresh water obtained from all sources;
  - b. The monthly and annual quantities (in cubic metres) of sewage generated;
  - c. The monthly and annual quantities (in cubic metres) of material deposited in the Waste Disposal Facilities;
  - d. A summary of all waste backhauled for disposal at approved facilities under Part D, Items 4 and 5;
  - e. A summary of all contaminated soil and hazardous wastes backhauled;
  - f. A summary of any construction work, modification and major maintenance work (including as-built diagrams) carried out on the Waste Disposal Facilities,

- including all associated structures;
  - g. Tabular summaries for all data and information generated under the “Monitoring Program”;
  - h. An analysis of data collected during the “Monitoring Program” and a brief description of any future studies planned by the Licensee;
  - i. A summary of remediation work undertaken during the year and an outline of work anticipated for the following year;
  - j. 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;
  - k. A list of unauthorized discharges and summary of follow-up actions taken;
  - l. Any revisions to the approved “*Project Description and Environmental Screening Report PIN-2, Cape Young DEW Line Site Clean Up*” dated October 17, 2008;
  - m. Any revisions to the site specific Spill Contingency Plan;
  - n. 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;
  - o. A public consultation/participation report describing consultation with local organizations and the residents of the nearby communities;
  - p. A brief summary of work done to address concerns or deficiencies listed in the inspection reports and/or compliance reports prepared by an Inspector;
  - q. An executive summary in English and Inuktitut of all plans, reports, or studies conducted under this Licence; and
  - r. 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 install flow meters or other such devices, or implement suitable methods required for the measuring of water volumes as required by the Monitoring Program under Part K.
  4. The Licensee shall, for all Plans submitted under this Licence, include a proposed timetable for implementation. Plans submitted, cannot be undertaken without subsequent written Board approval and direction. 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, within thirty (30) days of arrival on site, post signs in the appropriate areas identifying 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.
8. 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  
Nunavut District, Nunavut Region  
P.O. Box 100  
Iqaluit, NU X0A 0H0  
Telephone: (867) 975-4295  
Fax: (867) 979-6445
9. 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.
10. 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.
11. This Licence is assignable as provided in Section 44 of the *Act*.

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

1. The Licensee shall obtain water for all purposes from the Harding River. The Licensee is permitted up to a maximum of sixty five (65) cubic metres per day for all activities.
2. The Licensee shall equip all water intake hoses with a screen of an appropriate mesh size to ensure that there is no entrainment of fish and shall withdraw water at a rate such that fish do not become impinged on the screen.

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 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 (30) 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 is authorized to dispose of all acceptable food waste, paper waste and untreated wood products in an incinerator.
3. The Licensee shall provide to the Board, documented authorization from any community in Nunavut receiving backhauled wastes for storage or disposal.
4. The Licensee shall backhaul and dispose of all hazardous wastes and waste oil generated through the course of the operation in an approved waste disposal site. Double bagged asbestos is permitted to be buried in the NHWL.
5. 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.
6. The Licensee shall direct all sewage to the Sewage Disposal Facility as described in *“Project Description and Environmental Screening Report PIN-2, Cape Young DEW Line Site Clean Up”* dated October 17, 2008, or as otherwise approved by the Board in writing.
7. The Licensee shall provide notice to an Inspector at least ten (10) days prior to initiating any decant or discharge from the Sewage Disposal Facilities.
8. All waste discharged from the Final Discharge Point of the Sewage Disposal Facility at Monitoring Program Stations CAP-2a and CAP-2b shall not exceed the following effluent quality limits:

PARAMETER	MAXIMUM AVERAGE CONCENTRATION
BOD	120 mg/L
Total Suspended Solids	180 mg/L
Fecal Coliforms	100,000 CFU/100mL
pH	6.0 to 9.0
Oil and Grease	no visible sheen

9. The Licensee shall collect and temporarily store, in preparation for future disposal, all Demolition Rinse Wastewater from decontamination procedures.
10. All Demolition Rinse Wastewater, water from dewatering contaminated soil areas, contact water with the Tier II Soil Disposal Facility at CAP-3, contact water with the within the NHWL at Monitoring Program Station at CAP-4 and contact water with the Landfarm at CAP5, shall meet the following wastewater discharge limits prior to being released:

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

11. If the effluent referred to in Part D, Item 10 and Item 12 does not meet the wastewater discharge limits, it shall be considered hazardous waste and require disposal off-site at an approved facility.
12. The discharge location for all treated effluents described in Part D, Items 10 and 12, shall be located at a minimum of thirty (30) 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.



13. All pump out water from excavation and borrow pits shall be pumped to an area as described in Part D, Item 12, or as otherwise approved by the Board in writing.
14. The Licensee shall provide, proper storage, treatment and disposal at an approved facility for any hazardous waste materials, including waste oil generated through the demolition and remediation activities, unless otherwise approved by the Board in writing.
15. The Licensee shall utilize the NHWL for the disposal of all Solid Waste and waste generated during site demolition and remediation activities, including Type A soil and contaminated soils that exceed Tier I criteria and are less than Tier II criteria.
16. The Licensee shall dispose of all soils containing substances in excess of Tier II criteria, as indicated in Table No.1, by deposit into the Tier II Soil Disposal Facility.
17. 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.
18. The Licensee shall dispose of any material coated with Polychlorinated Biphenyl (PCB) - amended paints, hazardous materials and soils containing contaminants in excess of *Canadian Environmental Protection Act* (CEPA) Guidelines, with the exception of asbestos, off site at an approved treatment facility, in accordance with the application submitted to the Board by the Applicant on December 4, 2008.

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

1. The Licensee shall ensure that all borrow material used in construction is obtained from a source approved by an Inspector and shall be clean and free of contaminants.
2. Should any constructed facilities fail, the Licensee shall repair such facilities immediately to the appropriate standards as recommended by an Engineer.
3. The Licensee shall implement proper handling, storage and transportation procedures for hazardous materials during clean-up activities.
4. 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.
5. The Licensee shall not cause erosion to the banks of any body of water and shall provide necessary controls to prevent such erosion.
6. Sediment and erosion control measures shall be implemented prior to and maintained during the operation to prevent entry of sediment into water.

7. The Licensee shall design and construct all stream crossings to minimize erosion and/or deposition of waste into water.
8. 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.
9. 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.
10. 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.
11. The Licensee shall restore and stabilize all areas affected by the undertaking upon completion of the work.
12. 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.
13. Areas designated for waste disposal shall be located at a minimum of thirty (30) metres from the ordinary high water mark of any body of water, unless otherwise authorized.
14. The Licensee shall dispose of all scrap metal, discarded machinery and parts, and other bulky material in a manner that conforms to the Plans submitted to the Board.

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

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 such as 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 drill and install monitoring wells and thermistors.
2. The Licensee shall not conduct any land based drilling within thirty (30) metres of the ordinary high water mark of any water body, unless otherwise approved by the Board in writing.
3. The Licensee shall ensure that all drill waste, including water, chips, muds and salts (CaCl<sub>2</sub>) in any quantity or concentration, from land-based drilling, shall be disposed of in a properly constructed sump or an appropriate natural depression located at a distance of at least thirty (30) 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 shall provide to the Board for review, sixty (60) days following issuance of the Licence, detailed designs for the Sewage Disposal Facility complete with drawings for construction, signed and stamped by an Engineer. These designs shall consider, siting, operation, monitoring, sampling and analytical methods, decommissioning and closure options and plans for the proposed Facilities.
2. The Licensee shall provide to the Board, within ninety (90) days of completion of construction, as-built drawings of the facilities referred to in this Licence. These plans and drawings shall be stamped by an Engineer.
3. 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* or any other applicable laws or regulations;
  - 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.

4. Modifications for which all of the conditions referred to in Part H, Item 3 have not been met can be carried out only with written approval from the Board.
5. 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 and signed 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 with the Application on December 4, 2008.
2. The Licensee shall within sixty (60) days of issuance of this Licence, submit to the Board for review an addendum to the approved “*Spill Contingency Plan*” to address or include the following:
  - a. The Plan shall be a standalone document;
  - b. Include a Title Page and Table of Contents;
  - c. Include the prepared and effective period;
  - d. Include the site location;
  - e. Include a map showing the PIN-2 site in relation to local water bodies;
  - f. Update Table 13 and Section 9.4, INAC Water Resources Inspector to Manager of Field Operations at 867-975-4295;
  - g. Include a 24-hour on site contact number;
  - h. Contaminated soil disposal information;
  - i. Include the NT/NU Spill Report Form; and
  - j. MSDS shall be kept on site at all times.
3. 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.
4. 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.
5. 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.

6. 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 INAC Manager of Field Operations at (867) 975-4295; and
  - c. Submit to the INAC 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, RESTORATION AND CLOSURE**

1. The Board has approved the document entitled “*Project Description and Environmental Screening Report PIN-2, Cape Young DEW Line Site Clean Up*” dated October 17, 2008. The Licensee shall undertake site remediation and final closure in accordance with the approved document which includes instructions on the final Abandonment and Decommissioning of the site.
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.
3. The Licensee shall backfill and restore, all temporary containment sumps, to the pre-existing natural contours of the land.
4. 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 THE MONITORING PROGRAM**

1. The Licensee shall submit to the Board for approval six (6) months prior to the completion of remediation activities, a Post-Closure Monitoring Plan for the site. The Plan shall be site specific and a standalone document that addresses the monitoring requirements for the 25 year monitoring phase.
2. The Licensee shall maintain Monitoring Program Stations at the following locations:

<b>Monitoring Program Station Number</b>	<b>Description</b>	<b>Status</b>
CAP-1	Raw water supply intake at Harding River	Active (Volume)
CAP-2a	Final Discharge Point from the Sewage Disposal Facilities, Lagoon 1	Active (Volume and Water Quality)
CAP-2b	Final Discharge Point from the Sewage Disposal Facilities, Lagoon 2	Active (Volume and Water Quality)
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)

3. The Licensee shall measure and record in cubic metres, the daily quantities of water utilized for camp operations, for all purposes at the intake of the Water Supply Facility, Monitoring Program Station CAP-1.
4. The Licensee shall measure and record in cubic metres, the daily quantities of effluent discharged from the Sewage Disposal Facilities at monitoring stations CAP-2a and CAP-2b.
5. 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.
6. 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.
7. The Licensee shall monitor compliance with respect to Part D Item 10, by collecting a representative composite sample once at the beginning of discharge upon initial release and prior to the end of discharge, from the Final Discharge Point of the Sewage Treatment Facility, Monitoring Program Station CAP-2a and CAP-2b:
8. The Licensee shall monitor compliance with respect to Part D Item 12, by collecting a representative composite sample from a minimum of 5% of the total volume to be released from the Final Discharge Point of the Tier II Soil Disposal Facility, Monitoring Program Station CAP-3, the Final Discharge Point of the NHWL, Monitoring Program Station CAP-4, and the Final Discharge Point of the Landfarm CAP-5.

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, ninety (90) days prior to release of any effluent, 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 be acceptable to an accredited laboratory as required by Part K, Item 9 and Part K, Item 10. The Plan shall include a covering letter from the accredited laboratory 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 2 all data, monitoring results and information required by this Part.

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

<b>Substance</b>	<b>DCC Tier I<sup>bc</sup> (mg/L)</b>	<b>DCC Tier II<sup>d</sup> (mg/L)</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 precludes contact with the Arctic ecosystem.