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NUNAVUT WATER BOARD  
NUNAVUT IMALIRIYIN KATIMAYINGI  
OFFICE DES EAUX DU NUNAVUT

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File No.: 1BR-PEL1016

October 25, 2010

Douglas Craig, Environmental Officer  
Defence Construction Canada  
Constitution Square, Suite 1720  
350 Albert St.  
Ottawa, ON, K1A 0K0  
E-mail: [douglas.craig@dcc-cdc.gc.ca](mailto:douglas.craig@dcc-cdc.gc.ca)

**RE: NWB LICENCE No. 1BR-PEL1016**

Dear Mr. Craig:

Please find attached Licence No. **1BR-PEL1016** issued to Defence Construction Canada by the Nunavut Water Board **Motion #: 2010-17-L07** pursuant to its authority under Article 13 of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada*. The terms and conditions of the attached Licence related to water use and waste disposal are an integral part of this approval.

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

If the Licensee contemplates or requires an amendment to this licence, the NWB may decide, in the public interest, to hold a public hearing. The Licensee should submit applications for amendment as soon as possible to give the NWB sufficient time to go through the amendment

process. The process and timing may vary depending on the scope of the amendment, however a minimum of sixty (60) days is required from time of acceptance by the NWB. It is the responsibility of the Licensee to ensure that all application materials have been received and acknowledged by the Manager of Licensing.

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

Sincerely,



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Thomas Kabloona  
Nunavut Water Board  
Chair

TK/tla

Enclosure: Licence No. **1BR-PEL1016**  
Comments

Cc: Kitikmeot Distribution List  
Eva Schulz, AECOM Canada Ltd.

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<sup>1</sup> Government of Nunavut – Department of Community, Language, Elders and Youth, April 28, 2010; Indian and Northern Affairs Canada, June 24, 2010; Kitikmeot Inuit Association, June 28, 2010 and Environment Canada, July 2, 2010.



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## DECISION

### LICENCE NO.: 1BR-PEL1016

This is the decision of the Nunavut Water Board (NWB) with respect to an application, dated April 27, 2010, for the renewal of a Licence made by:

#### DEFENCE CONSTRUCTION CANADA

to allow for the implementation of a Post Construction Monitoring Plan at the CAM-4 Pelly Bay Distant Early Warning (DEW) Line Site, located within the Kitikmeot Region, Nunavut generally located at the geographical coordinates as follows:

Latitude: 68°27'N      Longitude: 89°45'W

## DECISION

After having been satisfied that the application falls outside an area with an approved land use plan<sup>2</sup> and is exempt<sup>3</sup> from the requirement for Nunavut Impact Review Board screening under Article 12 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 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 *NWNSTRA*, decided to waive the requirement to hold a public hearing and determined that:

**Licence Number 1BR-PEL1016 be issued subject to the terms and conditions contained therein. (Motion #: 2010-17-L07)**

SIGNED this 22<sup>nd</sup> day of October 2010 at Gjoa Haven, NU.

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Thomas Kabloona  
Nunavut Water Board, Chair

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<sup>2</sup> NPC Email dated July 6, 2010 from Brian Aglukark of NPC to Richard Dwyer of the NWB.

<sup>3</sup> NIRB Email dated July 21, 2010 from Tara Arko of NIRB to Richard Dwyer of the NWB.

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## **I. INTRODUCTION**

The Former CAM-4 (Pelly Bay) DEW Line Site is located approximately 14 km southeast of Kugaaruk on the Simpson Peninsula, within the Kitikmeot Region, Nunavut.

The CAM-4 site was decommissioned in 1992. A Short Range Radar North Warning Site was constructed in 1990 about 200 m west of the original station.

A site investigation was conducted in 1997 and 1999 by UMA Engineering Ltd and the Environmental Sciences Group. An environmental cleanup of the site and facilities occurred from 2001 through 2007. Water and sewage requirements to support the reclamation project are provided by the Hamlet of Kugaaruk. Remediation of the CAM-4 site included the following activities:

- Demolition and removal of existing facilities not required for the North Warning System;
- Removal or remediation of contaminated soils;
- Remediation of landfills;
- Cleanup of surface debris;
- Construction, operation and closure of a landfarm;
- Construction of a Tier II Soil Disposal Facility;
- Construction of two Non-Hazardous Waste Landfills;
- Installation of Monitoring Wells and Thermistors; and
- Restoration of disturbed areas to a stable condition, shaped to match existing terrain.

In 2008, Phase I monitoring began which consists of annual on-site monitoring of the reclaimed landfills. Annual Phase I monitoring will be undertaken until 2012, at which time less frequent Phase II monitoring will begin. Phase II monitoring is the verification of equilibrium conditions established in Phase I. The monitoring frequency in Phase II is downgraded from Phase I and will be carried out according to the following schedule, year 7, year 10, year 15 and year 25. Year 25 marks the end of Phase II monitoring.

## **II. PROCEDURAL HISTORY**

The NWB issued water Licence NWB5PEL0104 on August 28, 2001 to Defence Construction Canada for water use and waste disposal activities associated with the CAM-4 site remediation.

On February 19, 2003 the NWB received an application for amendment to allow for a Landfarm to be used to treat petroleum hydrocarbon contaminated soils. Following the public review period, the Board issued an amendment to the Licence on July 4, 2003.

On December 16, 2004 the NWB received a renewal application for NWB5PEL0104. The application was distributed for a 30 day review and on May 5, 2010 the NWB issued NWB5PEL0510, now referred to as 1BR-PEL0510.

On April 24, 2010, the NWB received an application to renew Licence 1BR-PEL0510. However, on May 4, 2010 the NWB sent a letter to the Licensee requiring additional information to support the application, including an updated Spill Contingency Plan, the 2009 Annual Report, information regarding the performance of the Tier II Soil Disposal Facility and requested stamped and signed as-builts for the landfills. On May 31, 2010 the NWB received the additional information requested with notice that the 2009 Annual Report/Monitoring Report was not yet available.

On June 1, 2010 the renewal application was distributed for a 30-day public comment period. Comments were received from Indian and Northern Affairs Canada (INAC), Environment Canada (EC), Kitikmeot Inuit Association and the Government of Nunavut, Department of Culture, Language, Elders and Youth. Following a review of the application and comments received, the Board has issued Licence no. 1BR-PEL1016 to permit on-going monitoring of reclamation measures completed in 2007.

### **III. GENERAL CONSIDERATIONS**

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

In accordance with the *Nunavut Waters and Nunavut Surface Rights Tribunal Act (Act)* S. 45, the NWB may issue a licence for a term not exceeding twenty-five (25) years. In determining an appropriate licence term, The NWB has taken into consideration the Post-Construction Monitoring Program timeframe submitted by the applicant and also notes the applicant's request for a twenty (20) year licence term. At this time, the Licensee is partially through Phase I of the monitoring program, which includes annual site visits from 2008 to 2012.

The NWB understands that the proposed twenty (20) year term would allow the Licensee to complete Phase I, and all but one of the scheduled Phase II monitoring events. However, at this time, prior to the completion of Phase I monitoring, which is designed to confirm the establishment of chemical and thermal stability in the reclaimed landfills, the NWB finds that a six (6) year term is more appropriate. This shorter Licence term is intended to ensure that all necessary closure conditions are on track and functioning as designed early on in Phase II monitoring. The six (6) year term will allow the Licensee to complete Phase I monitoring, undertake an evaluation of all Phase I data, and will also allow for one Phase II verification monitoring event in 2014. The Licence term takes into account the additional time needed to synthesize the first part of Phase II monitoring into the program and make recommendations as may be necessary moving forward. Finally, the licence term will also allow the NWB and interested parties an opportunity to consider the results prior to renewing the Licence before Phase II close-out.

## **B. Annual Report**

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

The NWB notes that there are no annual reports on file 2007, 2008 and 2009. This was also noted in the comments submitted by INAC:

INAC recommends that the proponent provide the details and results of the monitoring program for the years of 2007, 2008 and 2009. Results from the monitoring program have yet to be submitted for any year, including annual reports, as per Part B Item of the Water License. INAC notes that the proponent acknowledged that 2009 was yet to be submitted. (INAC pg 2).

The NWB anticipates that this issue will be addressed by the Licensee for the duration of the renewal Licence.

## **C. Water Use**

The Licensee indicated that water use was not necessary for the project as a camp is not required given that personnel would be based out of the Hamlet of Kugaaruk. However, the application did state that a small amount of water, if needed, may be extracted from Water Supply Lake using bottles. Therefore, the renewed Licence authorizes (5) cubic metres of water per year from Water Supply Lake for project related purposes.

## **D. Deposit of Waste**

The Licensee has stated that no wastes will be generated from the landfill monitoring program. If any wastes are generated they shall be backhauled to a licensed facility for proper disposal.

## **E. Abandonment and Restoration**

The NWB notes that an Abandonment and Restoration (A&R) Plan was submitted January 23, 2006 for the project and the NWB responded on October 10, 2008 indicating that a revision was required. In the licence renewal application the Licensee stated that abandonment and restoration activities, consisting of the previously approved reclamation plans, have already been completed at this site and the current monitoring program is used to monitor the status of the site, post-clean up. The Licensee also clarified that no camp will be used to support monitoring and

all equipment used for the program will be removed each year upon completion. The NWB accepts this justification.

## **F. Monitoring**

The remediation activities at the CAM-4 Pelly Bay DEW Line site were completed in 2007 and long term monitoring of the site is on-going. Monitoring of remaining facilities will be on-going for at least twenty five years ending in 2032.

INAC requested clarification with respect to the number of landfill areas being monitored, noting a discrepancy in the application summary. The issue has been clarified with the NWB understanding that there are in fact five landfills but that the Lower Site Landfill contains three lobes, which is why there are seven areas being monitored.

The monitoring to be carried out under this licence shall be conducted in accordance with the approved Plan entitled “Water Use License Application Pelly Bay Landfill Monitoring” dated April 2010. The Plan includes visual monitoring, soil monitoring and groundwater sampling from monitoring wells for all Waste Disposal Facilities including the Upper Site Landfill, Lower Site Landfill, Station Area Non-Hazardous Waste Landfill (NHWL), Lower Site NHWL and Tier II Soil Disposal Facility. The Plan also includes thermal Monitoring for the Upper Site Landfill, Lower Site Landfill and Tier II Soil Disposal Facility. All monitoring results are to be provided to the NWB with an analysis/interpretation of results as part of the Annual Reports.

EC commented that the Monitoring Program does not include information regarding monitoring of the Landfarm Facility located on site, which was approved by the NWB in an amendment dated July 4, 2003. The Landfarm Facility was decommissioned in 2006. The NWB agrees that this is an important aspect of the monitoring program and requests in accordance with Part J, Item 6 that the Licensee submit a plan to monitor the reclaimed Landfarm Facility to the NWB for approval at least three (3) months prior to on site monitoring in 2011.

EC also noted that the monitoring plan does not currently include provisions for monitoring groundwater at the east lobe of the Lower Site Landfill. While soil monitoring is proposed for this lobe, no groundwater wells are indicated. EC requested clarification regarding whether groundwater will be monitored at this location, and if not a justification should be provided. The NWB requests that this information be submitted with the 2010 Annual Report.

Finally, the NWB has included a requirement for the Licensee to submit a Preliminary Phase II Monitoring Summary Report as part of an application to renew this Licence in 2016. The Report shall be prepared by a geotechnical Engineer to summarize data collected during Phase I and II monitoring, and assesses the integrity of the Waste Disposal Facilities. The Report shall address whether the facilities have performed as expected, whether they are encased in permafrost and shall include an assessment of how the facilities are expected to perform over the long term and provide additional recommendations where may be necessary. This requirement is detailed



under Part J, Item 5 and will help the NWB and interested parties assess the effectiveness of closure and monitoring measures undertaken during the course of this Licence term.



## 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 ST., OTTAWA, ON, K1A 0K0

(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-PEL1016 TYPE "B"

Water Management Area: NUNAVUT 07

Location: CAM-4, PELLY BAY, FORMER DEW LINE SITE  
KITIKMEOT REGION, NUNAVUT (68°27'N AND 89°45'W)

Classification: INDUSTRIAL UNDERTAKING

Purpose: DIRECT USE OF WATER & CLOSURE MONITORING

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

Date of Licence Issuance: OCTOBER 22, 2010

Expiry of Licence: OCTOBER 30, 2016

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 during the implementation of a Post Construction Monitoring Plan, an Industrial Undertaking, at the CAM-4, Pelly Bay Distant Early Warning (DEW) Line site located approximately 14 km northwest of Kugaaruk, within the Kitikmeot Region, Nunavut (at general latitude of 68°27'N and general longitude 89°45'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-PEL1016**

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

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

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

**“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

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

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

**“Landfarm Facility”** means the Landfarm constructed for the remediation of 6183 cubic metres of Type B soil and decommissioned in 2006, constructed as per drawings H-P44/1-9101-127 and H-P44/1-9101-127A;

**“Lower Site Landfill”** means the landfill located at the lower site including monitoring wells and thermistors and remediated as per drawings H-P44/1-9101-121, H-P44/1-9101-122, H-P44/1-9101-123, H-P44/1-9101-124, H-P44/1-9101-125 and H-P44/1-9101-126;

**“Lower Site Non-Hazardous Waste Landfill (NHWL)”** means the landfill constructed at the lower site to contain non-hazardous wastes, demolition and site debris and Tier I Soil and includes adjacent monitoring wells;

**“Licensee”** means the individual or organization to which Licence 1BR-PEL1030 Type “B” is issued or assigned;

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

**“Post Construction Monitoring Plan”** means the plan entitled “Water Use Licence Application Pelly Bay Landfill Monitoring” dated April 2010.

**“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;

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

**“Station Area Non-Hazardous Waste Landfill (NHWL)”** means the landfill constructed at the station area to contain non-hazardous wastes, demolition and site debris and Tier I Soil and includes adjacent monitoring wells;

**“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”** means the facility closed in 2006 containing approximately 2000 cubic metres of Tier II Soil and 580 cubic metres of Tier I Soil and includes adjacent monitoring wells and thermistors constructed as per drawings H-P44/1-9101-111, H-P44/1-9101-112, H-P44/1-9101-113 and H-P44/1-9101-114;

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

**“Type A Soil”** means soil contaminated with hydrocarbons in which the primary petroleum product present in the soil as determined by laboratory analysis consists of lubricating oil and grease (F3 – F4 Fractions);

**“Type B Soil”** means soil contaminated with hydrocarbons in which the primary petroleum product present in the soil as determined by laboratory analysis consists of fuel oil and/or diesel fuel and /or gasoline (F1 – F2 Fractions);

**“Upper Site Landfill”** means the landfill located at the Upper Site including monitoring wells and thermistors and remediated as per drawings H-P44/1-9101-115, H-P44/1-9101-116, H-P44/1-9101-117, H-P44/1-9101-118 and H-P44/1-9101-119;

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

**“Waste Disposal Facilities”** means the facilities designed to retain wastes including the Upper Site Landfill, Lower Site Landfill, Station Area NHWL, Lower Site NHWL and Tier II Soil Disposal Facility.

### **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. Tabular summaries for all data and information generated under the Post-Construction Monitoring Program;
  - b. A review and analysis of data collected during the Post-Construction Monitoring Program and a brief description of any future studies planned by the Licensee;
  - c. A summary of any abandonment and restoration work undertaken during the year and an outline of any work anticipated for the next year;
  - d. The results of any review conducted and any recommendations regarding any changes to the Monitoring Plan and/or remediation requirements;
  - e. A summary of any studies requested by the Board that relate to waste disposal, water use or reclamation, and a brief description of any future studies planned;
  - f. A list of unauthorized discharges and summary of follow-up actions taken;
  - g. If applicable, a description of any trenches and sumps excavated, including the following: GPS coordinates, dimensions, depth below active layer, and secondary containment features;
  - h. A public consultation/participation report describing consultation with local organizations and the residents of the nearby communities;
  - i. A brief summary of work done to address concerns or deficiencies listed in the inspection reports and/or compliance reports prepared by an Inspector;
  - j. An executive summary in English and Inuktitut of all plans, reports, or studies conducted under this Licence;
  - k. Any other details on water use or waste disposal requested by the Board by November 1<sup>st</sup> of the year being reported; and
  - l. For the first Annual Report following issuance of the Licence, include disposal information for soil treated in the Landfarm and details on the abandonment and restoration the Landfarm.
2. The Licensee shall notify the NWB of any changes in operating plans or conditions associated with this project at least thirty (30) days prior to any such change.
3. The Licensee shall ensure a copy of this Licence is maintained at the site of operations at all times. Any communication with respect to this Licence shall be made in writing to the attention of:
  - (a) Manager of Licensing  
Nunavut Water Board  
P.O. Box 119  
Gjoa Haven, NU X0B 1J0

Telephone: (867) 360-6338  
Fax: (867) 360-6369  
Email: [licensing@nunavutwaterboard.org](mailto:licensing@nunavutwaterboard.org)

(b) Inspector Contact:  
Manager of Field Operations  
Nunavut District, Nunavut Region  
P.O. Box 100  
Iqaluit, NU X0A 0H0  
Telephone: (867) 975-4295  
Fax: (867) 979-6445

4. The Licensee shall submit one paper copy and one electronic copy of all reports, studies, and plans to the Board. Reports or studies submitted to the Board by the Licensee shall include a detailed executive summary in Inuktitut.
5. The Licensee shall ensure that any document(s) or correspondence submitted by the Licensee to the Board is received and acknowledged by the Manager of Licensing.
6. This Licence is assignable as provided for in Section 44 of the *Act*.
7. The Licensee shall, for all Plans submitted under this Licence, implement the Plan as approved by the Board in writing.

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

1. The Licensee is authorized to use water for domestic use and for the purpose of obtaining monitoring samples for the Post-Construction Monitoring Program. Water withdrawn for domestic use shall come from Water Supply Lake or as otherwise approved by the Board in writing. Water use shall not exceed five (5) cubic metres per year.
2. The Licensee shall not remove any material from below the ordinary high water mark of any water body.
3. The Licensee shall not do anything that will cause erosion to the banks of any body of water and shall provide necessary controls to prevent such erosion.
4. The Licensee shall implement sediment and erosion control measures to prevent the deposition of dust and/or sediment into water, arising from contractor activities or on-site vehicular travel.

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

1. The Licensee shall provide to the Board documented authorization from all communities in Nunavut receiving wastes from the site prior to any backhauling and disposal of wastes to those communities.
2. The Licensee shall backhaul and dispose of all Waste generated through the course of the operation at a licensed waste disposal site.
3. The Licensee shall maintain records of all waste backhauled and records of confirmation of proper disposal of backhauled waste. These records shall be made available to an Inspector upon request.

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

1. The Licensee shall conduct all activities in such a way as to minimize impacts on surface drainage and the Licensee shall immediately undertake any corrective measures in the event of any impacts on surface drainage.
2. The Licensee shall not cause erosion to the banks of any body of water and shall provide necessary controls to prevent such erosion.
3. The Licensee shall minimize disturbance to terrain, permafrost and drainage during movement of contractor's equipment and personnel around the site during post-closure monitoring activities.
4. All sites affected by sampling activities shall be stabilized, landscaped as necessary, and suitable erosion control measures implemented to minimize sediment deposition into watercourses located on or adjacent to the site.
5. Licensee shall not deposit any Waste in any body of water, or on the banks thereof.

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

1. Camps are not authorized under this Licence.

**PART G: CONDITIONS APPLYING TO MODIFICATIONS**

1. The Licensee may, without written consent from the Board, carry out Modifications to the Waste Disposal Facilities provided that such Modifications are consistent with the terms of this Licence and the following requirements are met:
  - a. the Licensee has notified the Board in writing of such proposed Modifications at



- least sixty (60) days prior to beginning the Modifications;
  - b. such Modifications do not place the Licensee in contravention of the Licence or the *Act*;
  - c. the Board has not, during the sixty (60) days following notification of the proposed Modifications, informed the Licensee that review of the proposal will require more than sixty (60) days; and
  - d. the Board has not rejected the proposed Modifications.
2. Modification for which all of the conditions referred to in Part G, Item 1 have not been met can be carried out only with written approval from the Board.
  3. The Licensee shall provide as-built plans and drawings of the Modifications referred to in this Licence within ninety (90) days of completion of the Modification. These plans and drawings shall be stamped by an Engineer.

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

1. 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 motor fluids and other waste and contain potential spills.
2. All sumps and fuel caches shall be located a minimum of thirty one (31) metres above the ordinary high water mark of any adjacent water body and inspected on a regular basis. The Licensee is encouraged to use some form of secondary containment on fuel and chemical storage associated with this undertaking.
3. 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 I: CONDITIONS APPLYING TO ABANDONMENT, RESTORATION AND CLOSURE**

1. Any areas disturbed as a result of the undertaking are to be stabilized and re-vegetated as required, upon completion of work, and restored as practically as possible to a pre-disturbed state.

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

1. The NWB has approved the Post Construction Monitoring Plan entitled “Water Use License Application Pelly Bay Landfill Monitoring” dated April 2010.
2. The Licensee shall conduct all sampling, sample preservation and analyses in accordance with methods prescribed in the current edition of *Standard Methods for the Examination of Water and Wastewater*, or by such other methods approved by the Board.
3. All analyses shall be performed in a laboratory accredited according to ISO/IEC Standard 17025. The accreditation shall be current and in good standing.
4. The Licensee shall include in the Annual Report, required under Part B, Item 1, all monitoring results and information required by this Part.
5. In addition to the Annual Reporting requirements, the Licensee shall submit a Preliminary Phase II Monitoring Summary Report as part of an application to renew this Licence in 2016. The Report shall be prepared by a geotechnical Engineer and summarize data collected during Phase I and II monitoring, and assesses the integrity of the Waste Disposal Facilities. The Report shall address whether the facilities have performed as expected, whether they are encased in permafrost and shall include an assessment of how the facilities are expected to perform in the long term and provide additional recommendations where necessary.
6. The Licensee shall submit to the Board for approval, at least three (3) months prior to on site monitoring activities in 2011, a Landfarm Monitoring Plan to verify the stability of the closed facility.

**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.