



P.O. Box 119  
Gjoa Haven, NU X0B 1J0  
Tel: (867) 360-6338  
Fax: (867) 360-6369

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NUNAVUT WATER BOARD  
NUNAVUT IMALIRIYIN KATIMAYINGI  
OFFICE DES EAUX DU NUNAVUT

File No.: **1BR-DYE0914**

June 9, 2009

Douglas Craig  
Defence Construction Canada  
Constitution Square, Suite 1720  
350 Albert Street  
Ottawa, ON K1A 0K3

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

**RE: NWB LICENCE No. 1BR-DYE0914**

Dear Mr. Craig:

Please find attached Licence No. **1BR-DYE0914** issued to Defence Construction Canada by the Nunavut Water Board **Motion #: 2009-04-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 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.

NWB strongly recommends that the Licensee consult the comments received by interested persons on issues identified. This information is attached for your consideration

Sincerely,

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

Thomas Kabloonas  
Nunavut Water Board  
Chair

TK/dc

Enclosure: Licence No. **1BR-DYE0914**  
Comments: EC and GN-CLEY

Cc: Qikiqtani Distribution List



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OFFICE DES EAUX DU NUNAVUT

## DECISION

### LICENCE NUMBER: 1BR-DYE0914

This is the decision of the Nunavut Water Board (NWB) with respect to an application for a Licence renewal dated and received January 8, 2009 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 DYE-M, Cape Dyer Distant Early Warning Line site, which is located approximately 150 km east of Qikiqtarjuaq within the Qikiqtani Region, Nunavut, at general latitude 66°40'N and general longitude 61°21'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<sup>1</sup> 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* (NWNSTRTA) 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 NWNSTRTA, decided to waive the requirement to hold a public hearing and determined that:

**Licence Number 1BR-DYE0914 be issued subject to the terms and conditions contained therein. (Motion #: 2009-04-L07)**

SIGNED this 9<sup>th</sup> day of June 2009 at Gjoa Haven, NU.

Thomas Kabloona, Nunavut Water Board, Chair

<sup>1</sup> NIRB Screening Decision Report, NIRB File No.: 04DN001, March 25, 2004

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## INTRODUCTION

The DYE-M, Cape Dyer Distant Early Warning (DEW) Line Site is located approximately 150 km east of Qikiqtarjuaq within the Qikiqtani Region, Nunavut, at general latitude 66°40'N and general longitude 61°21'W.

The DYE-M site has been determined to be surplus, and accordingly operations at the site have ceased. As has been the practice at other DEW line facilities, a detailed site investigation was undertaken prior to the commencement of remediation activities. This site assessment took place between 1997 and 2002. The DYE-M site remediation is scheduled to occur between 2004 and 2012, and will include the following activities:

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

The existing site airstrip will be used to access the site, and existing roads will be used for site travel. A temporary camp will be set up at the site to facilitate the site remediation activities. Upon completion of site remediation, all camp facilities, including equipment and excess fuel, will be removed from the site. Long term monitoring of site landfills will be undertaken upon completion of clean-up activities and continue for twenty five (25) years, after which these monitoring requirements will be re-evaluated

## PROCEDURAL HISTORY

On January 5, 2004, Defence Construction Canada (DCC) first applied to the Nunavut Water Board for a water licence associated with water use and waste disposal activities required to remediate the DYE-M DEW Line Site located at Cape Dyer, Nunavut. Pursuant to Article 13 of the *Nunavut Land Claims Agreement* (NLCA), the application was referred to the Nunavut Impact Review Board (NIRB) for environmental screening. In its February 25, 2004 screening decision, the NIRB concluded that the project could proceed without an environmental review under Article 12 Part 5 or 6.

In accordance with the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* S. 55.1 and Article 13 of the NLCA, public notice of the application was posted on March 2, 2004. In this notice, the NWB invited the public and interested parties to comment on the application. No

public concerns were expressed, and the NWB waived the requirement to hold a public hearing for the application. Authority to approve the application was delegated to the Chief Administrative Officer pursuant to S. 13.7.5 of the *Agreement*. After review and consideration of the comments submitted by interested parties, the NWB issued license NWB5DYE0409 - Type “B” (1BR-DYE0409).

On January 8, 2009 the NWB received an application from Defense Construction Canada to renew the 1BR-DYE0409 Licence. The application was distributed on February 11, 2009 for a public review period with a deadline of March 11, 2009. Comments were received from Environment Canada and the Government of Nunavut – Department of Culture, Language, Elders and Youth. As no public concerns were expressed, the NWB waived the requirement to hold a public hearing for the application.

Based upon the results of the detailed assessment, including consideration of any potential accidents, malfunctions, or impacts to water that the overall project might have in the area, the Board approved the application and has issued Licence 1BR-DYE0914.

## **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. In the application, the Licence requested a 2012 expiry date with long term monitoring to follow. As long term monitoring will require a Licence, the NWB believes that a term of approximately five (5) years is appropriate. The licence term will allow the Licensee to properly carry out the terms and conditions of the licence 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 requirements for an Annual Report 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 each calendar year. This information is maintained on the Public Registry and is available to any interested person 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 at the Cape Dyer DYE-M site, will utilize water from Summer Water Supply Lake, Winter Water Supply Lake and Lower Site Water Supply Lake. Water requirements for camp operations during the period of the Licence are expected to be a maximum of sixty (60) m<sup>3</sup> *per* day. Water for industrial purposes shall not exceed 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 one hundred and ten (110) m<sup>3</sup> *per* day.

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

##### **Sewage**

The Licensee has indicated that camp sewage and greywater will undergo primary treatment at a portable treatment facility and then be discharged into two independent single cell lagoons. The lagoons each have a total capacity of fifty days or one half of the duration of the construction season.

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.

##### **Solid Waste**

The Licensee has indicated that camp solid waste will be incinerated and that any non-combustible residual waste will be buried in a Non-Hazardous Waste Landfill. Additionally, pre-existing landfills on the DYE-M Site will be remediated in accordance with protocols described in the 2003 Project description. Non-hazardous waste will be placed in an appropriately designed and engineered Non-Hazardous Waste Landfill. Hydrocarbon contaminated soils will be remediated in a landfarm. Tier II soils will be deposited in a Secure Soil Disposal Facility.

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 Licensee has submitted with the renewal application, a revised “Spill Response Plan (Updated) DYE-M, Cape Dyer DEW Line Site” dated Jan 7, 2009. The NWB has approved the plan with the condition that an addendum be submitted with the plan within sixty (60) days of issuance of the renewal. The addendum is to include a copy of the NT/NU Spill Report form, a contact list and identify where on site MSDS are kept. Also relevant sections from previously approved contingency plans should be incorporated into the Spill Contingency Plan to reduce the number of contingency plans on site. The requirement for this Plan is detailed under Part I.

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

To ensure that all facilities are reclaimed in an appropriate manner upon abandonment, the NWB requires Licensees to prepare and submit an Abandonment and Restoration Plan. The Licensee shall submit to the Board six (6) months prior to the completion of onsite activities an Abandonment and Reclamation Plan to address contractor demobilization and site remediation operations.

#### **G. Monitoring**

Following the 2012 remediation activities, the site is scheduled to enter a long term monitoring phase. An addendum to the approved Monitoring Plan is required to update the monitoring program, six (6) months prior to the commencement of long term monitoring. The details of the addendum are listed under Part K, Item 2.



## LICENCE NO. 1BR-DYE0914

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

### DEFENCE CONSTRUCTION CANADA

(Licensee)

Of

### CONSTITUTION SQUARE, SUITE 1720

350 ALBERT STREET, OTTAWA, ON K1A 0K3

(Mailing Address)

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

**1BR-DYE0914**

Licence Number

**NUNAVUT 05**

Water Management Area

**DYE-M, CAPE DYER DEW LINE SITE, QIKIQTANI REGION, NUNAVUT**

Location

**WATER USE AND WASTE DISPOSAL  
FOR SITE REMEDIATION**

Purpose

**INDUSTRIAL – TYPE “B”**

Classification of Undertaking

**ONE HUNDRED TEN (110) CUBIC METRES *PER DAY***

Quantity of Water Not to Exceed

**JUNE 9, 2009**

Date of Licence

**MAY 31, 2014**

Expiry Date of Licence

Dated this 9<sup>th</sup> day of June 2009 at Gjoa Haven, NU.



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 DYE-M Cape Dyer site, located approximately 150 km east of Qikiqtarjuaq within the Qikiqtani Region, Nunavut, at general latitude 66°40'N and general longitude 61°21'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-DYE0914

“**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*;

**“Landfarm Facility”** means an area designed to biologically treat Type B soils, as described in the Application for Water License filed by the Applicant on January 5, 2004 and illustrated in Drawings H-C75/1-9101-103/108/113;

**“Licensee”** means the individual or organization to which Licence 1BR-DYE0914 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;

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

**“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 area and engineered structures designed to contain and treat sewage as described in the initial Water Licence Application filed by the Applicant on January 5, 2004 and illustrated in Drawing # H-C75/1-9101-106;

**“Solid Waste”** means non-hazardous waste and Type A soil;

**“Non-Hazardous Waste Landfill”** comprises the landfill as described in the 2003 project description submitted January 5, 2004 and illustrated in Drawings H-C75/1-9101-103/109/112/113/122-124/160/ 165/171/174/175;

**“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);

**“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;

**“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;

**“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.

**“Waste Disposal Facilities”** means all facilities designated for the disposal of waste, and includes the Sewage Disposal Facilities, Non-Hazardous Waste Landfill and Landfarm Facility:

**“Water Supply Facilities”** comprises the lakes (Summer Water Supply Lake, Winter Water Supply Lake and Lower Site Water Supply Lakes) utilized as a water source and associated infrastructure designed to collect and supply water;

### 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 effluent discharged;
  - c. The monthly and annual quantities (in cubic metres) of material deposited in Solid 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 any construction work, modification and major maintenance work (including as-built diagrams) carried out on the Solid Waste Disposal Facilities and Sewage Disposal Facility, including all associated structures;
  - f. Tabular summaries for all data and information generated under the “Monitoring Program”;
  - g. An analysis of data collected during the “Monitoring Program” and a brief description of any future studies planned by the Licensee;
  - h. A summary of all contaminated soil and hazardous wastes backhauled;
  - 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 Spill Contingency Plan, submitted under Part I, Item 1;
  - m. 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;
  - n. A public consultation/participation report describing consultation with local organizations and the residents of the nearby communities;
  - o. A brief summary of work done to address concerns or deficiencies listed in the inspection reports and/or compliance reports prepared by an Inspector;
  - p. An executive summary in English and Inuktitut of all plans, reports, or studies conducted under this Licence; and
  - q. 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:**  
 Water Resources Officer  
 Nunavut District, Nunavut Region  
 P.O. Box 100  
 Iqaluit, NU X0A 0H0  
 Telephone: (867) 975-4298  
 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 not assignable except as provided in Section 44 of the *Act*.

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

1. The Licensee shall obtain water for all purposes from Summer Water Supply Lake, Winter Water Supply Lake and Lower Site Water Supply Lake. Water for camp operations shall not exceed a maximum of sixty (60) m<sup>3</sup> per day. Water for construction

purposes shall not exceed fifty (50) m<sup>3</sup> *per* day with an allowable total of one hundred and ten (110) m<sup>3</sup> *per* day.

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 the Water Supply Lakes 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, waste oil and non-combustible waste generated through the course of the operation in an approved waste disposal site.
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, Part B, Item 1. These records shall be made available to an Inspector upon request.
6. The Licensee shall direct all sewage to the Sewage Disposal Facility, 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, Non-Hazardous Waste



Landfill or Landfarm Facility.

8. All waste discharged from the Final Discharge Point of the Sewage Disposal Facility at Monitoring Program Stations DYE-2a and DYE-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 and potential seepage from the Non-Hazardous Waste Disposal Facility and Secure Soil Disposal Facility Monitoring Program Stations DYE-3a, DYE-3b, DYE-4, DYE-5a and DYE-5b, shall meet the following wastewater discharge limits prior to being released onto land to a location at least thirty (30) metres distance 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:

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 treatment or 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 Non-Hazardous Waste Disposal Facility for the disposal of all non-hazardous 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 depositing in Secure Soil Disposal Facilities.
17. The Licensee shall not mix or blend soils that exceed the maximum levels of Tier II criteria for the expressed 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.
19. The Licensee shall, prior to the removal of any treated soil for future use, confirm with the Government of Nunavut, Environmental Protection Service that the soils have been treated so as to meet all legislatively-required treatment objectives.

#### **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, landscaped 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 for the purpose of installing 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, within ninety (90) days of completion of construction, as-built plans and drawings of the facilities referred to in this Licence. These plans and drawings shall be stamped by an Engineer. For the solid waste storage facilities that are to remain on site following completion of remediation activities, final As-Built drawings, stamped and signed by an Engineer, shall be submitted to the Board within ninety (90) days of completion.
2. 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. 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.
3. Modifications for which all of the conditions referred to in Part H, Item 2 have not been met can be carried out only with written approval from the Board.
4. 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 Response Plan (updated) DYE-M, Cape Dyer DEW Line Site*” dated Jan 7, 2009 that was submitted with the renewal Application.
2. An addendum to the approved Spill Plan shall be submitted for review within sixty (60) days following issuance of this renewal to address the following:
  - a. Include the NT/NU Spill report form;
  - b. Contact list shall be included within the Plan;
  - c. MSDS are to be 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 Water Resources Inspector 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 AND RESTORATION**

1. The Licensee shall submit to the Board six (6) months prior to the completion of onsite activities an Abandonment and Reclamation Plan to address contractor demobilization and site remediation operations.
2. The Licensee shall backfill and restore, all temporary containment sumps, to the pre-existing natural contours of the land.
3. 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 employ the approved plan entitled “*Defence Construction Canada, Monitoring Program, DYE-M, Cape Dyer*” dated March 2005.
2. An addendum to the approved Monitoring Plan shall be submitted for review six (6) months prior to the commencement of long term monitoring to address the following:
  - d. Inclusion of GPS coordinates for all monitoring locations;
  - e. Update the plan for any changes that may have occurred over the life of the project; and
  - f. Include as-builts for Non-Hazardous Waste Landfills, Landfarm Facility and Secure Soil Disposal Facilities;
3. The Licensee shall maintain Monitoring Program Stations at the following locations:

<b>Monitoring Program Station Number</b>	<b>Description</b>	<b>Status</b>
DYE-1a	Raw water supply intake at Summer Water Supply Lake	Active (Volume)
DYE-1b	Raw water supply intake at Winter Water Supply Lake	Active (Volume)
DYE-1c	Raw water supply intake at Lower Site Water Supply Lake	Active (Volume)
DYE-2a	Final Point of Discharge from the Sewage Lagoon Cell 1	Active (Volume and Water Quality)
DYE-2b	Final Point of Discharge from the Sewage Lagoon Cell 2	Active (Volume and Water Quality)
DYE-3a	Final Point of Discharge from the Non-Hazardous Waste Landfill (upper)	Active (Water Quality)
DYE-3b	Final Point of Discharge from the Non-Hazardous Waste Landfill (lower)	Active (Water Quality)
DYE-4	Final Discharge Point from the Landfarm Facility	Active (Water Quality)
DYE-5a	Down gradient of the Tier II Soil Disposal Facility (upper)	Active (Water Quality)
DYE-5b	Down gradient of the Tier II Soil Disposal Facility (lower)	Active (Water Quality)

4. 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 Stations DYE-1a, DYE-1b and DYE-1c
5. The Licensee shall measure and record in cubic metres, the daily quantities of effluent discharged from the Sewage Disposal Facilities at monitoring stations DYE-2a and DYE-2b.
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 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 DYE-2a and DYE-2b:

9. 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 Non-Hazardous Waste Landfill, Monitoring Program Stations DYE-3a and DYE-3b.
10. 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 Landfarm Facility Monitoring Program Station DYE-4.
11. The Licensee shall monitor the Tier II Landfill Facilities to ensure they function as intended. Down gradient of the facilities shall be monitored for compliance to Part D Item 12 at Monitoring Program Stations DYE-5a and DYE-5b.
12. 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.
13. All analyses shall be performed in a laboratory accredited according to ISO/IEC Standard 17025 for all required analyses. The accreditation shall be current and in good standing
14. The Licensee shall conduct sampling in accordance with the 2005 QA/QC plan approved by the Analyst.
15. The Licensee shall annually review the Quality Assurance/Quality Control Plan in Part H, Item 9 and modify it as necessary. Proposed modifications shall be submitted to the accredited laboratory for approval.
16. The Licensee shall review the Monitoring 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.
17. Additional monitoring requirements may be requested by the Inspector.
18. 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>

Substance	DCC Tier I <sup>bc</sup> (mg/L)	DCC Tier II <sup>d</sup> (mg/L)
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.