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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI
OFFICE DES EAUX DU NUNAVUT

File No.: 1BR-HAL1533

June 2, 2015

Tamara Van Dyck
Coordinator, Environmental Services
Defence Construction Canada
180 Kent St., 14th Floor
Ottawa, ON
K1P 0B6

E-mail: Tamara.VanDyck@dcc-cdc.gc.ca

RE: NWB Renewal Licence No. 1BR-HAL1533

Dear Ms. Van Dyck:

Please find attached Licence No. **1BR-HAL1533** issued to Defence Construction Canada by the Nunavut Water Board pursuant to its authority under Article 13 of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada*. The terms and conditions of the attached Licence related to Water use and Waste disposal are an integral part of this approval.

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

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

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

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

Sincerely,

DRAFT

Thomas Kabloona
Nunavut Water Board
Chair

TK/bm/ri

Enclosure: Licence No. **1BR-HAL1533**
Comments – AANDC

Cc: Qikiqtani Distribution List

¹ Aboriginal Affairs and Northern Development Canada (AANDC) – Water Resources Division, May 1, 2015

DECISION

LICENCE NO.: 1BR-HAL1533

This is the decision of the Nunavut Water Board (NWB) with respect to an application, dated January 21, 2015, for the renewal and amendment of a Licence made by:

DEFENCE CONSTRUCTION CANADA

to allow for the continued implementation of a post-construction Landfill Monitoring Program at the former FOX-M (Hall Beach) Distant Early Warning (DEW) Line site, located approximately two (2) kilometres south of the Hamlet of Hall Beach within the Qikiqtani Region of Nunavut, at the following geographical coordinates:

Latitude: 68° 46' N

Longitude: 81° 12' W

DECISION

After having been satisfied that the application falls outside an area with an approved land use plan² and is exempt from the requirement for screening by the Nunavut Impact Review Board³ in accordance with Schedule 12-1 of the *Nunavut Land Claims Agreement (NLCA)*, the NWB decided that the application could proceed through the regulatory process. In accordance with S.55.1 of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act (NWNSRTA)* and Article 13 of the *NLCA*, public notice of the application was given and interested persons were invited to make representations to the NWB.

After reviewing the submission of the Applicant and representations made by interested persons, the NWB, having given due regard to the facts and circumstances, the merits of the submissions made to it and to the purpose, scope and intent of the *NLCA* and of the *NWNSRTA*, decided to waive the requirement to hold a public hearing and determined that:

Licence No. 1BR-HAL0815 be renewed as Licence No. 1BR-HAL1533 subject to the terms and conditions contained therein (Motion No.: 2015-B1-010).

Signed this 29th day of May 2015 at Gjoa Haven, NU.

DRAFT

Thomas Kabloona
Nunavut Water Board, Chair

² Nunavut Planning Commission (NPC) Land Use Conformity Determination, dated April 2, 2015.

³ Nunavut Impact Review Board (NIRB) Screening Exemption Decision, dated April 10, 2015.

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I. BACKGROUND

The FOX-M (Hall Beach) Distant Early Warning (DEW) Line Site is located on the east coast of the Melville Peninsula, approximately two (2) kilometers south of the Hamlet of Hall Beach. Built in the 1950s and continuously manned ever since, FOX-M was a main site within the original DEW Line system before being decommissioned in 1989 to become a North Warning System (NWS) Long Range Radar (LRR) Station and Logistical Support Site (LSS).

The environmental clean-up and demolition of facilities not required for the operation of the LRR site commenced in 2003 and was completed in 2007. The clean-up included the closure and remediation of seven landfills (East Beach—North, East Beach—South, Communications—North, Communications—Northwest, G217, Billboards and Hazmat), cleanup of site debris, construction of a Tier II Disposal Facility, and the construction of a Non-Hazardous Waste Landfill which continues to be used and was therefore not remediated.

The objective of the landfill monitoring program is to collect sufficient information to assess the performance of the landfills from a geotechnical and environmental perspective. *The Defence Construction Canada (DCC) Landfill Monitoring Program, FOX-M Hall Beach DEW Line Site (2008)* specifies the requirements for visual inspection, and chemical and thermal monitoring of landfills at the FOX-M Site.

The Licensee has indicated that the continued implementation of the phased landfill Monitoring Program shall be undertaken in accordance with any renewed licence issued for the project. Phase I Monitoring occurred on an annual basis from 2008-2012, which established baseline monitoring parameters and verified that the thermal and chemical conditions of the landfills had reached equilibrium. Phase II Monitoring, under which the undertaking exists at the issuance of this Licence, involves monitoring events in 2014, 2017, 2022 and 2032. All monitoring results obtained from Phase I and Phase II will be reviewed and recommendations will be provided to the Department of National Defence – Nunavut Tunngavik Incorporated (DND/NTI) Steering Committee, by an Environmental Working Group (EWG) established to provide technical support to the Steering Committee. Decisions on whether to terminate or continue the Monitoring Program—under a Phase III monitoring program—will be made after the final Phase II monitoring event occurs in 2032, and following an assessment of performance carried out jointly by the DND and NTI.

II. PROCEDURAL HISTORY

File History

On **April 18, 2003**, the Nunavut Water Board (NWB) issued Licence NWB5HAL0308, which allowed for Water use and Waste disposal associated with the remediation of the FOX-M DEW Line Site. The Licence was amended on March 22, 2006, to allow for increased Water use from thirty (30) to one-hundred (100) cubic metres per day. The Licence expired on April 30, 2008, at

which time an application for amendment and renewal of the licence had been received by the NWB.

On **November 3, 2008**, the NWB issued Licence 1BR-HAL0815, which allowed for Waste disposal activities associated with long-term, landfill monitoring at the FOX-M DEW Line Site. The Licence had an expiry date of October 30, 2015.

Current Application

The Nunavut Water Board (“NWB and Board) received on January 21, 2015, an application and supporting information for the renewal and amendment of Licence 1BR-HAL0815, from Defence Construction Canada (DCC). The application included the following documents:

- Cover letter dated January 20, 2015;
- Application for Water Licence Renewal;
- Executive Summary, English and Inuktitut;
- Remote Camp Questionnaire;
- NIRB Screening Decision, dated October 31, 2003;
- Post-Construction Landfill Monitoring Program, dated February 2008;
- Appendix A: DND/NTI Agreement; and
- Appendix B: Figures

The above-mentioned application documents have been placed in the NWB’s public registry and access provided through the NWB’s FTP site using the following link:

<ftp://ftp.nwb-oen.ca/1%20PRUC%20PUBLIC%20REGISTRY/1%20INDUSTRIAL/1B/1BR%20-%20Remediation/1BR-HAL0815%20FOX%20M/1%20APPLICATION/2015%20Renewal/>

The NWB distributed the application on April 1, 2015, for a thirty (30) day public review period, and comments were received from Aboriginal Affairs and Northern Development Canada (AANDC). AANDC provided comments with respect to the spill contingency plan and drilling; however, no objections were expressed, in principle, about any potential board decision that would result in issuance of a renewal licence.

Also on April 1, 2015, in accordance with s.11.5.10 of the *Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada* (“NLCA”), the NWB sent the project proposal to the Nunavut Planning Commission (NPC), to determine whether the project proposal is in conformity with an approved land use plan. In accordance with s.13.5.1 of the NLCA, the NWB requested that the Nunavut Impact Review Board (NIRB) determine whether the project requires environmental screening. The NWB received confirmation from the NPC on April 2, 2015, that the project is located outside the boundary of an approved land use

plan; and received a determination from the NIRB on April 10, 2015, that the proposal is exempt from screening pursuant to item 5 of Schedule 12-1 of the NCLA.

III. GENERAL CONSIDERATIONS

A. Term of the Licence

In accordance with the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* s. 45, the NWB may issue a licence for a term not exceeding twenty-five years. The applicant requested a twenty-five (25) year renewal licence under which it plans to monitor, assess and confirm the stability of the landfills at the project site at specific intervals during the monitoring program. In its review of the Application AANDC supported the request for a twenty-five (25) year licence term. In determining an appropriate term of a Water licence, the Board considers a number of factors, including the compliance record of the Applicant and the risk to Water resources posed by the undertaking. The Licensee has demonstrated a strong compliance record since the initial licence was issued in 2003, and the NWB's review of landfill monitoring data collected by the Licensee thus far produced no alarming environmental or geotechnical indicators. Given the current stage of the program, the Board has decided to issue the licence for a term of eighteen (18) years, during which the Applicant may complete Phase II monitoring, assess the results, and determine the characteristics of a Phase III Monitoring Program, if the NTI and DND determine that extended monitoring is required.

B. Annual Report

Long-term monitoring at the FOX-M DEW Line Site involves intermittent monitoring events often separated by a number of years, as described in the DND-NTI Agreement and *Defence Construction Canada Post-Construction Landfill Monitoring Program Water Use Licence Renewal, FOX-M, Hall Beach DEW Line Site*. At the issuance of this Licence the Board has received monitoring reports for every year that long-term monitoring events occurred at the FOX-M DEW Line Site. The Board does not require a comprehensive Annual Report from the Licensee during non-active years, however, in place of an Annual Report the Licensee shall continue to provide written notification to the Board indicating that no sampling events occurred at the site for the given year. These conditions are reflected in the Licence under Part B.

This information is kept in the NWB's public registry and made available to interested persons upon request. In addition, the NWB maintains reporting information on its FTP site, which can be accessed using the following link: <ftp.nwb-oen.ca>

C. Water Use

Reflecting the Licensee's Water use request in the Application, the Board has authorized one (1) cubic metre per day of Water use to allow for groundwater sampling. The Licensee indicated in

the Application that all potable Water necessary to support field personnel during monitoring events will be sourced from Hall Beach.

D. Deposit of Waste

The Licensee indicated in the Application that the landfill monitoring contractor will utilize the Hall Beach community services to manage any Waste produced by field personnel, and therefore the Licensee is not allowed to deposit any Waste without authorization from the Board.

E. Drilling

Licence 1BR-HAL0815 permitted drilling activities for the installation of additional monitoring wells. Neither the Application nor the Monitoring Program indicates the need for further drilling at the FOX-M Site, and therefore the Board has removed conditions related to drilling from the Licence.

F. Abandonment and Restoration

According to information provided by the Licensee, the abandonment and restoration activities for the site have been completed since 2007. The Licensee initiated the post-construction monitoring program in 2008 and plans to continue doing so for a period of 25 years. Under the terms and conditions in the Licence applying to abandonment and restoration, the Licensee is required to remove any remaining equipment and facilities associated with the project upon completion

G. Monitoring

The Licensee shall conduct its monitoring activities in accordance with the *Defence Construction Canada Post-Construction Landfill Monitoring Program Water Use Licence Renewal, FOX-M, Hall Beach DEW Line Site* (Monitoring Program) and the requirements of the DND-NTI Agreement, both submitted as additional information with the Application. The Monitoring Program indicates that long-term monitoring of the landfills will conclude in 2032, and the NWB has extended the licence term to one year after this date to allow the Licensee necessary time to consolidate, assess and respond appropriately to the accumulated results of Phase I and Phase II monitoring. As stipulated in Section 2.5 of the Monitoring Program, it is understood that the decision to conduct further monitoring past the year 2032 will rest on the conclusions of a performance assessment to be completed jointly by the NTI and DND, which will evaluate Phase I and Phase II monitoring data from an environmental, geotechnical and thermal perspective. Rather than impose evaluation criteria of its own, the NWB has included conditions within the Licence for the submission to the Board for review of the DND-NTI Assessment Report before the end of the licence term. Also, the Board requires that before the end of the licence term the DND inform the Board in writing of any new agreement negotiated between DND and NTI related to further monitoring of the landfills, as mentioned in s.28.3 of the DND-NTI Agreement.

H. Spill Contingency Planning

Licence 1BR-HAL0815 waived the requirement for a Spill Contingency Plan and this decision has been upheld in the current Licence. The Licensee can find general conditions related to spill contingency under Part H.



NUNAVUT WATER BOARD WATER LICENCE RENEWAL

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

DEFENCE CONSTRUCTION CANADA

(Licensee)

180 KENT ST., 14th FLOOR, OTTAWA, ON, K1P 0B6

(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-HAL1533 TYPE "B"

Water Management Area: KINGORA WATERSHED (20)

Project/Location: FOX-M DEW LINE SITE CLEAN-UP PROJECT,—HALL BEACH, QIKIQTANI REGION, NUNAVUT

Classification: INDUSTRIAL UNDERTAKING

Purpose: MONITORING

Quantity of Water use not to Exceed: ONE (1) CUBIC METRE *PER DAY*

Date of Licence Issuance: June 2, 2015

Expiry of Licence: June 1, 2033

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

DRAFT

Thomas Kabloona
Nunavut Water Board, Chair

PART A: SCOPE, DEFINITIONS AND ENFORCEMENT

1. Scope

- a. This Licence allows for the implementation of a post-closure monitoring program following remediation activities, during an undertaking classified as Industrial, at the FOX-M Hall Beach DEW Line site, located approximately two (2) kilometres south of the Hamlet of Hall Beach on the Melville Peninsula, within the Qikiqtani Region, Nunavut (at general latitude 68°46' and general longitude 81°12'W).
- b. This Licence is issued subject to the conditions contained herein with respect to the taking of Water and the depositing of Waste of any type in any Waters or in any place under any conditions where such Waste or any other Waste that results from the deposits of such Waste may enter any Waters. Whenever new Regulations are made or existing Regulations are amended by the Governor in Council under the Nunavut Waters and Nunavut Surface Rights Tribunal Act, or other statutes imposing more stringent conditions relating to the quantity or type of Waste that may be so deposited or under which any such Waste may be so deposited, this Licence shall be deemed, upon promulgation of such Regulations, to be subject to such requirements; and;
- c. Compliance with the terms and conditions of this Licence does not absolve the Licensee from responsibility for compliance with the requirements of all applicable Federal, Territorial and Municipal legislation.

2. Definitions

In this Licence: **1BR-HAL1533**

“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;

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

“Application” means the application for amendment and renewal of Licence No. 1BR-HAL0815, received by the NWB on January 21, 2015;

“Billboards Landfill” comprises the landfill, approximately 1,400 m² in size, located less than 100 metres south of the main station area, as described in the *Defence Construction Canada Post-Construction Landfill Monitoring Program Water Use Licence Renewal, FOX-M, Hall Beach DEW Line Site*, dated February 2008;

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

“Communications Northwest Landfill” comprises the landfill, approximately 2,600 m² in size, located off the northwest corner of the tropospheric communications infrastructure pad, as described in the *Defence Construction Canada Post-Construction Landfill Monitoring Program Water Use Licence Renewal, FOX-M, Hall Beach DEW Line Site*, dated February 2008;

“Communications North Landfill” comprises the landfill located off the northward edge of the tropospheric communications infrastructure pad, as described in the *Defence Construction Canada Post-Construction Landfill Monitoring Program Water Use Licence Renewal, FOX-M, Hall Beach DEW Line Site*, dated February 2008;

“DND-NTI Agreement” means the *Agreement between Nunavut Tunngavik Incorporated and Her Majesty in the Right of Canada as Represented by the Minister of National Defence for the Clean-up and Restoration of Distant Early Warning Sites within the Nunavut Settlement Area*, dated September 1, 1998;

“East Landfill” comprises the landfill located southeast of the main station which runs parallel to the ocean shoreline, as described in the *Defence Construction Canada Post-Construction Landfill Monitoring Program Water Use Licence Renewal, FOX-M, Hall Beach DEW Line Site*, dated February 2008;

“Effluent” means treated or untreated liquid Waste material that is discharged into the environment from a structure such as a settling pond or following a treatment process;

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

“Environmental Working Group” means the group established to provide technical support to the Steering Committee comprised of qualified engineering and environmental scientists with expertise in environmental remediation and clean up in northern climates as described in the document entitled *Defence Construction Canada Post-Construction*

Landfill Monitoring Program Water Use Licence Renewal, FOX-M, Hall Beach DEW Line Site dated February 2008;

“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;

“G217-West Landfill” comprises the landfill, approximately 4,400 m² in size, located 200 metres southwest of the main station area, as described in the *Defence Construction Canada Post-Construction Landfill Monitoring Program Water Use Licence Renewal, FOX-M, Hall Beach DEW Line Site*, dated February 2008;

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

“Hazmat Storage-East Landfill” comprises a lobe, approximately 1,200 m² in size, located on the east side of the East Beach area access road, as described in the *Defence Construction Canada Post-Construction Landfill Monitoring Program Water Use Licence Renewal, FOX-M, Hall Beach DEW Line Site*, dated February 2008;

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

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

“Licensee” means the individual or organization to which Licence 1BR- HAL1533 Type “B” is issued or assigned;

“Maximum Average Concentration” means the average concentration of any four consecutively collected samples taken from the identical sampling location and taken during any given timeframe;

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

“Monitoring Program” means the monitoring program established to collect data on surface Water and groundwater quality as well as ground temperature to assess impacts to the environment of the appurtenant undertaking as described in *Defence Construction Canada Post-Construction Landfill Monitoring Program Water Use Licence Renewal, FOX-M, Hall Beach DEW Line Site*, dated February 2008;

“Non-Hazardous Waste Landfill” comprises the landfill constructed for the disposal of non-hazardous Waste derived from the site cleanup, as described in *Defence Construction Canada Post-Construction Landfill Monitoring Program Water Use Licence Renewal, FOX-M, Hall Beach DEW Line Site*, dated February 2008;

“Nunavut Land Claims Agreement” (NLCA) means the “*Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada*,” including its preamble and schedules, and any amendments to that agreement made pursuant to it;

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

“Sewage” means all toilet Wastes and greywater;

“Solid Waste Disposal Facilities” comprises the area and associated structures designed to contain solid Waste and to permanently isolate the contents of the disposal facility from the environment as described in the Application for Water Licence filed by the Applicant on January 29, 2003;

“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;

“Steering Committee” means the Steering Committee described in the “*Agreement between Nunavut Tunngavik Incorporated and Her Majesty in the Right of Canada as Represented by the Minister of National Defence for the Clean-up and Restoration of Distant Early Warning Sites within the Nunavut Settlement Area*” dated September 1, 1998, to monitor progress, develop recommendations and suggest alternative solutions for achieving the commitments set forth in the Agreement;

“Sump” A structure or depression that collects, controls, and filters liquid Waste before it is released to the environment. This structure should be designed to prevent erosion while allowing percolation of liquid Waste;

“Tier I Soil” means soil containing contaminant concentrations within the types and ranges defined as DCC Tier I in Appendix E of the *Agreement Between Nunavut Tunngavik Incorporated and Her Majesty the Queen in the Right of Canada, as Represented by the Minister of National Defence for the Clean-up and Restoration of Distant Early Warning Sites within the Nunavut Settlement Area-Environmental Provisions* including its preamble and schedules, and any amendments to that agreement made pursuant to it (See Table No. 1);

“Tier II Disposal Facility” comprises the facility, located approximately 800 metres south of the main station area, and designed to contain Tier II Soil, as described in

Defence Construction Canada Post-Construction Landfill Monitoring Program Water Use Licence Renewal, FOX-M, Hall Beach DEW Line Site, dated February 2008;

“Tier II Soil” means soil containing contaminant concentrations within the types and ranges defined as DCC Tier II in Appendix E of the *Agreement Between Nunavut Tunngavik Incorporated and Her Majesty the Queen in the Right of Canada, as Represented by the Minister of National Defence for the Clean-up and Restoration of Distant Early Warning Sites within the Nunavut Settlement Area-Environmental Provisions* including its preamble and schedules, and any amendments to that agreement made pursuant to it (See Table No. 1);

“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;

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

3. **Enforcement**

- a. Failure to comply with this Licence will be a violation of the *Act*, subjecting the Licensee to the enforcement measures and the penalties provided for in the *Act*;
- b. All inspection and enforcement services regarding this Licence will be provided by Inspectors appointed under the *Act*; and
- c. For the purpose of enforcing this Licence and with respect to the use of Water and deposit or discharge of Waste by the Licensee, Inspectors appointed under the *Act*, hold all powers, privileges and protections that are conferred upon them by the *Act* or by other applicable law.

PART B: GENERAL CONDITIONS

1. The Licensee shall file a Monitoring Report on the appurtenant undertaking with the Board no later than March 31st of the year following the calendar year being reported, according to the monitoring schedule presented in *Defence Construction Canada Landfill Monitoring Program Water Use Licence Application FOX-M, Hall Beach DEW Line Site*. The Report shall contain the following information:

- i. A summary report of Water use and Waste disposal activities;
 - ii. A summary of any construction work, modification and major maintenance work (including as-built diagrams) carried out on Solid Waste Disposal Facilities;
 - iii. Tabular summaries for all data and information generated under the “Monitoring Program”;
 - iv. An analysis of data collected during the Monitoring Program and a brief description of any future studies planned by the Licensee;
 - v. The results of any review conducted by the Environmental Working Group and any recommendations regarding any changes to the Monitoring Plan and/or remediation requirements;
 - vi. A summary of remediation work undertaken during the year and an outline of work anticipated for the following year;
 - vii. 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;
 - viii. A list of unauthorized discharges and summary of follow-up actions taken;
 - ix. Any revisions to the remediation plan;
 - x. Any updates or revisions for manuals and plans as required by changes in operation and/or technology;
 - xi. 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;
 - xii. A brief summary of work done to address concerns or deficiencies listed in the inspection reports and/or compliance reports prepared by an Inspector;
 - xiii. An executive summary in English and Inuktitut of all plans, reports, or studies conducted under this Licence; and
 - xiv. Any other details on Water use or Waste disposal requested by the Board by November 1st of the year being reported
2. In years where no monitor events occur, pursuant to Part B, Item 1, the Licensee shall file a written notice with the Board, informing it that no monitoring event took place for the given year, no later than March 31st of the year following the calendar year being reported
3. 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.
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 post signs in the appropriate areas identifying the locations of the 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@nwb-oen.ca
 - (b) **Inspector Contact:**
Manager of Field Operations, AANDC
Nunavut District, Nunavut Region
P.O. Box 100
Iqaluit, NU X0A 0H0
Telephone: (867) 975-4295
Fax: (867) 979-6445
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 volume of Water for the purpose of groundwater sampling shall not exceed one (1)

cubic metre per day.

2. No other Water use, except for the purpose described in Part C, Item 1, is allowed under this Licence.
3. The Licensee shall implement measures to prevent the deposition of dust and/or sediment into Water arising from contractor activities or on-site vehicular traffic.

PART D: CONDITIONS APPLYING TO WASTE DISPOSAL

1. All pump-out Water from sampling activities shall be pumped to an area located at a minimum of thirty one (31) meters 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.
2. No other deposit of Waste, except for purposes described in Part D, Item 1, is authorized under this Licence.
3. All Sewage and solid Waste generated as a result of the Monitoring Program must be disposed of in an approved Waste disposal facility.
4. The Licensee shall not deposit any Waste in any body of Water, or on the banks thereof.

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.

PART F: CONDITIONS APPLYING TO DRILLING OPERATIONS

1. No drilling activities are permitted under this Licence.

PART G: CONDITIONS APPLYING TO CONSTRUCTION AND 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. Modifications 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. 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 for fuel and chemical storage and transfer facilities associated with this undertaking.
2. 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.
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. Report the spill immediately to the 24-Hour Spill Line at (867) 920-8130 and to AANDC's Manager of Field Operations at (867) 975-4295; and

- b. Submit to the AANDC Water Resources Inspector on each occurrence, a detailed report including the GPS location, no later than thirty (30) days after initially reporting the event.

PART I: CONDITIONS APPLYING TO ABANDONMENT AND RESTORATION

1. The Licensee shall complete all restoration work prior to the expiry of this Licence.
2. Upon completion of work, all disturbed areas shall be scarified, stabilized and restored as practically as possible to a pre-disturbed state.
3. Where possible the Licensee shall revegetate disturbed areas using native vegetation.

PART J: CONDITIONS APPLYING TO THE MONITORING PROGRAM

1. The Licensee shall undertake post-closure monitoring activities of the Solid Waste Disposal Facilities in accordance with the Monitoring Plan entitled *Defence Construction Canada Post-Construction Landfill Monitoring Program Water Use Licence Renewal, FOX-M, Hall Beach DEW Line Site* dated February 2008, and revisions to the Monitoring Plan, approved by the Board in writing.
2. Any changes or updates to the Plan referred to in Part J, Item 1, shall be submitted as an addendum with the subsequent Monitoring Report referred to in Part B, Item 1.
3. The Licensee shall submit a written summary of the DND-NTI Assessment of Satisfactory Performance Report, reviewing the Phase I and Phase II monitoring results, and as mentioned in s. 2.5 of the *Defence Construction Canada Post-Construction Landfill Monitoring Program Water Use Licence Renewal, FOX-M, Hall Beach DEW Line Site*, to the Board for review at least sixty (60) days prior to the end of the licence term. The Summary Report shall indicate any new monitoring agreement or the intention for any new monitoring agreement between NTI and DND, which may affect the characteristics or duration of the monitoring schedule defined under the Monitoring Program.
4. 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 a laboratory certified by the Canadian Association of Environmental Analytical Laboratories (CAEAL).
5. All analyses shall be performed in a laboratory accredited according to ISO/IEC Standard 17025. The accreditation shall be current and in good standing.

6. The Licensee shall conduct sample collection, storage, transportation and testing in accordance with the submitted Quality Control and Quality Assurance Plan (QA/QC) dated September 2005.
 7. The Licensee shall review the QA/QC 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.
 8. The Licensee shall submit to the Board as part of the Annual Report required under Part B Item 1, the results of any review conducted by the Environmental Working Group as indicated in the Plan and any recommendations regarding any changes to the Monitoring Plan and/or remediation requirements.
 9. The results of the Monitoring Program shall be included in the annual report submitted to the Board under Part B, Item 1.
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Table 1 : DEW Line Clean-up Criteria (DCC)^a

Substance	DCC Tier I^{bc}	DCC Tier II^d
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.