



ᓄᓇᓂᓪ ᐃᓕᓕᓂᓪᓃᓪ ᑲᓂᓕᓂᓪᓃᓪ
NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI
OFFICE DES EAUX DU NUNAVUT

File No.: 1BR-LON1422

March 17, 2014

Tamara Van Dyck (DCC)
Director General Military Engineering
National Defence Headquarters
101 Colonel By Drive, Ottawa, ON K1A 0K2
Email: Tamara.VanDyck@dcc-cdc-gc.ca

RE: NWB Renewal Licence No. 1BR-LON1422

Dear Ms. Van Dyck:

Please find attached Licence No. **1BR-LON1422** issued to Defence Construction Canada (DCC) by the Nunavut Water Board (NWB or 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 (Nunavut Land Claims Agreement or NLCA)*. The terms and conditions of the attached Licence related to water use and waste disposal are an integral part of this approval.

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

If the Licensee contemplates or requires an amendment to this licence, the NWB may decide, in the public's interest, to hold a public hearing. The Licensee should submit applications for amendment as soon as possible to give the NWB sufficient time to go through the amendment process. The process and timing may vary depending on the scope of the amendment; however, a minimum of sixty (60) days is required from time of acceptance by the NWB. It is the responsibility of the Licensee to ensure that all application materials have been received and are acknowledged by the Manager of Licensing.

The NWB strongly recommends that the Licensee consult the comments received from interested person(s) on the issues identified. This information is attached for your consideration.¹

Sincerely,



Thomas Kabloona
Nunavut Water Board
Chair

TK/cz/mp

Enclosure: Licence No. **1BR-LON1422**
Comments – AANDC, EC, and DFO

Cc: Qikiqtani Distribution List
Eva.Schulz@aecom.com

¹ Aboriginal Affairs and Northern Development Canada (AANDC), September 16, 2013; Environment Canada (EC), September 19, 2013; and Fisheries and Ocean Canada (DFO), August 29, 2013.

TABLE OF CONTENTS

DECISION..... ii

I. INTRODUCTION iii

II. PROCEDURAL HISTORY iv

III. GENERAL CONSIDERATIONS iv

WATER LICENCE RENEWAL 1

PART A. SCOPE, DEFINITIONS AND ENFORCEMENT 2

 1. Scope2

 2. Definitions2

 3. Enforcement4

PART B. GENERAL CONDITIONS 5

PART C. CONDITIONS APPLYING TO WATER USE 6

PART D. CONDITIONS APPLYING TO WASTE DISPOSAL 7

PART E. CONDITIONS FOR CAMPS, ACCESS INFRASTRUCTURES AND OPERATIONS 8

PART F. CONDITIONS APPLYING TO MODIFICATIONS 8

PART G. CONDITIONS APPLYING TO SPILL CONTINGENCY PLANNING 8

PART H. CONDITIONS APPLYING TO ABANDONMENT AND RESTORATION OR TEMPORARY CLOSING..... 9

PART I. CONDITIONS APPLYING TO THE MONITORING PROGRAM..... 10

DECISION

LICENCE NUMBER: 1BR-LON1422

This is the decision of the Nunavut Water Board (NWB or Board) with respect to an application, dated July 14, 2013, for amendment and renewal of a Water Licence made by:

DEFENCE CONSTRUCTION CANADA

to allow for the use of water and disposal of waste during camp operations and activities related to a post construction landfill monitoring program at the FOX-2, Longstaff Bluff former Distant Early Warning (DEW) Line Site, located on Baffin Island within the Qikiqtani Region of Nunavut, generally at the following geographical coordinates:

Latitude: 68° 53' 49" N Longitude: 75° 09' 37" W

DECISION

After having been satisfied that the application was for a location in which there is no approved Land Use Plan¹ and that the application was exempt from the requirement for screening pursuant to Schedule 12-1, by the Nunavut Impact Review Board², in accordance with Article 12 of the *Nunavut Land Claim Agreement (NLCA)*, the NWB decided that the application could proceed through the regulatory process. In accordance with s.55.1 of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act (Act)* and Article 13 of the *NLCA*, public notice of the application was given and interested persons were invited to make representations to the NWB.

After reviewing the submission of the Applicant and considering the written representations made by intervening parties, the NWB, having given due regard to the facts and circumstances, the merits of the submissions made to it and to the purpose, scope and intent of the *NLCA* and of the *Act*, waived the requirement to hold a public hearing, and determined that:

Licence No. 1BR-LON0813 be amended and renewed as Licence No. 1BR-LON1422 subject to the terms and conditions contained therein. (Motion #: 2013-B1-055)

Signed this 17th day of March 2014 at Gjoa Haven, NU.



Thomas Kabloona
Nunavut Water Board
Chair

TK/cz/mp

¹ Nunavut Planning Commission (NPC) Conformity Determination, March 4, 2014.

² Nunavut Impact Review Board (NIRB) Screening Exemption Decision, August 30, 2013.

I. INTRODUCTION

The FOX-2, Longstaff Bluff former Distant Early Warning (DEW) Line site (FOX-2) is located on the south-western coast of Baffin Island, Nunavut, approximately fifteen (15) km inland from an airstrip on the southern end of a small peninsula extending into Nauja Bay. The nearest communities to the FOX-2 site are Igloolik (~270 km west of site), Hall Beach (~250 km west of site), and Clyde River (~300 km northeast of site). In 1985, Canada and the United States agreed to modernize the North American Air Defence System by replacing the DEW Line system with the North Warning System (NWS).

The FOX-2, DEW Line was one of the sites decommissioned during the modernization process. The decommissioning phase and remediation phase for the site were completed in 1991 and 2011, respectively. During the remediation phase, five (5) existing landfill sites were cleaned-up to prevent the release of physical debris and/or contaminants into the receiving environment. A new Non-Hazardous Waste Landfill for treating demolition and off-site debris and a Tier II Disposal Facility for treating Tier II contaminated soil were constructed in support of the project

The following is a list of the two (2) new and five (5) existing landfills associated with the FOX-2 site:

- Airstrip West Landfill (completely excavated)
- Airstrip Landfill (completely excavated)
- Airstrip Camp Landfill Lobe A
- Hangar Non-Hazardous Waste Landfill (new)
- West Landfill Lobe E
- Tier II Disposal Facility (new)
- Upper Site Landfill Lobe A

The activities carried out under the project's site remediation phase completed in 2011 included the following:

- Mobilization to the site via sea lift or barge, and air transport;
- Establishment of a seasonally occupied camp;
- Demolition, removal, disposal, and/or containerization of structures and utilizes;
- Removal, handling, and transportation of hazardous materials;
- Excavation of contaminated soil;
- On-site disposal of hazardous contaminated soil;
- Construction of the two (2) new landfills;
- Remediation of the five (5) existing landfills;
- Quarrying of nine (9) borrow areas to obtain material for closure of existing landfills, development of new landfills, upgrading of access roads, backfilling of contaminated soil areas, and general site grading;
- Re-contouring of disturbed land areas;
- Landfarm construction and decommissioning;
- Temporary on-site storage of hazardous materials, equipment, and fuels;
- Demobilization of equipment, materials, wastes, and personnel; and
- Initiation of long-term monitoring of the site (i.e. 25 year monitoring program).

A post-construction, long-term, Landfill Monitoring Program (Program) for the site was initiated in 2012 and is expected to be completed in 2023. The Program consists of Phases I, II, and III. Phase I monitoring is scheduled for years 1 through 5 while Phase II is schedule for years 7, 10, 15, and 25. Year 25 is expected to mark the conclusion of Phase II monitoring, and it will be followed by a joint re-evaluation of the overall Program by the DND and NTI. The scope of Phase III has not been determined at this stage; however, it is anticipated to be based on a 10 year monitoring interval. During the monitoring program surface soil, groundwater samples, and thermal recordings of ground temperatures will be collected annually in the summer months.

II. PROCEDURAL HISTORY

The original licence for the project, NWB5LON0308, was issued to Defence Construction Canada (DCC) on August 5, 2003, with an expiry date of August 8, 2008. The licence allowed for DCC to conduct site remediation activities. On July 5, 2005, Licence was amended (Amendment No. 1), following a request from the Licensee, to allow for environmental site assessment work to be included in the scope of the project.

On July 19, 2008, the Board issued to the project a renewed licence, 1BR-LON0813, with an expiry date of July 21, 2013. The licence allowed for the use of water and the deposit of waste in support of camp operations and site remediation activities at the FOX-2 site.

On July 14, 2013, the NWB received an application and supporting information for the amendment and renewal of Licence 1BR-LON0813 to allow for the continued implementation of the Program, which had started in 2012, at the FOX-2 site.

Following a preliminary internal review, the NWB issued notice in which it invited interested persons to comment on the Application. Before the September 19, 2013 deadline for comment, submissions were received from Aboriginal Affairs and Northern Development Canada (AANDC), Environment Canada (EC), and Fisheries and Oceans Canada (DFO),

On August 30, 2013, the Nunavut Impact Review Board (NIRB) issued its screening exemption determination for the file.

III. GENERAL CONSIDERATIONS

A. Term of Licence

In accordance with s. 45 of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*, the NWB may issue a licence for a term not exceeding twenty-five (25) years. The Board has considered the content of the Landfill Monitoring Program (Program) submitted with the application, the twenty-three (23)-year term requested by the proponent, and the comments provided by intervening parties in determining that an eight (8) year term is more appropriate at this time for this licence.

The Board believes that an eight (8) year term for this licence will provide the opportunity for the Licensee to achieve its data acquisition objectives as well as undertake the evaluation(s) required to confirm whether stability of the site is achieved during Phase I monitoring. Furthermore, this Licence term will allow for the commencement of parts of Phase II monitoring and two verification events, scheduled for 2018 and 2021, which may assist in guiding subsequent stages of the Program. As the information obtained under Phase I and parts of Phase II Monitoring will be available prior to renewal of this licence, the Board and interested parties will be able to consider such information during renewal process for a potentially longer term renewal licence.

B. Annual Report

Under PART B of the terms and conditions in this licence, the Licensee is required to submit Annual Reports for the purpose of ensuring that the NWB has on file accurate updates of all water use and/or waste disposal activities that occurred during any particular calendar year. This information is maintained in the NWB's public registry and is made available to interested persons upon request and/or through the NWB's ftp site. A standard form for annual reporting can be downloaded from administration folder located on the NWB ftp site: <http://nunavutwaterboard.org/ftp/>.

C. Water Use

The Board has included conditions in this licence to prevent the use of water except for the purposes of carrying out sampling requirements under the Program. Under the Program, water use will be limited to the extraction of water samples from the existing groundwater monitoring wells that surround each landfill. Approximately one (1) litre of water will be extracted from each well during each sampling event. Water will be flown in for the purposes of domestic camp use. Accordingly, for the purposes of the Program, the total amount of water use permitted under this Licence is limited to one (1) m³ per day.

D. Deposit of Waste

The Licensee has proposed to dispose of camp sewage and greywater in latrine pits and sumps. Accordingly, the Board has included conditions in this Licence requiring that all latrine pits and sumps be located at least thirty-one (31) metres from the ordinary high water mark any water body. All other types of wastes generated through the monitoring activities are to be backhauled for disposal at a licensed facility.

E. Spill Contingency Planning

The Board has approved, under PART G of the Licence, the comprehensive Spill Contingency Plan provided in support of the Project. The Licensee is required to update the plan as necessary to reflect changes in operations and scope of the project.

F. Abandonment and Restoration

To ensure that the site is restored, to the extent possible, to a pre-disturbed state upon completion of the project, the NWB requires all Licensees to prepare and submit to the Board for approval an Abandonment and Restoration Plan (A&R Plan). The document entitled "*Construction Canada Project Description for the Clean Up of the FOX-2, Longstaff Bluff DEW Line Site* (August 2007)" was submitted with the Water Licence Application in

September 2007 and approved with the issuance of the licence. Conditions applying to the final abandonment of the site under this A&R Plan continue to apply, as do the conditions for restoration specified under PART H of this Water Licence.

G. Monitoring

The post-construction, Landfill Monitoring Program being carried out under this licence is anticipated to last approximately twenty-five (25) years, ending in 2036. The Program will be conducted in accordance with the approved Plan entitled “*Water Use Licence Amendment and Renewal FOX-2, Longstaff Bluff Landfill Monitoring*”, dated July 2013. Components of the monitoring program will include: (i.) visual inspection, (ii.) groundwater sampling, (iii.) soil sampling, and (iv.) thermal monitoring. Conditions related to monitoring the requirements under this licence are included under PART I of this.



**NUNAVUT WATER BOARD
WATER LICENCE RENEWAL**

Licence No. 1BR-LON1422

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)

**DIRECTOR GENERAL MILITARY ENGINEERING, NATIONAL DEFENCE
HEADQUARTERS, 101 COLONEL BY DRIVE, OTTAWA, ON, K1A 0K2**

(Mailing Address)

hereinafter called the Licensee, the right to alter, divert or otherwise use water or dispose of waste for a period subject to restrictions and conditions contained within this Licence Amendment/Renewal:

Licence Number/Type: 1BR-LON1422 TYPE "B"

Water Management Area: MACDONALD WATERSHED (22)

Location: QIKIQTANI REGION, NUNAVUT

Classification: INDUSTRIAL UNDERTAKING (LANDFILL MONITORING)

Purpose: WATER USE AND DEPOSIT OF WASTE

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

Date of Licence Issuance: MARCH 17, 2014

Expiry of Licence: MARCH 16, 2022

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

**Thomas Kabloona,
Nunavut Water Board
Chair**

PART A. SCOPE, DEFINITIONS AND ENFORCEMENT

1. Scope

This Licence allows for the use of water and disposal of waste for an undertaking classified as an Industrial Undertaking, as per Schedule 1 of the *Regulations*, at the FOX-2, Longstaff Bluff Landfill Monitoring Program Project, located nearest to the communities of Igloodik (~270 km west of site), Hall Beach (~250 km west of site), and Clyde River (~300 km northeast of site), within the Qikiqtani Region of Nunavut.

- a. This Licence is issued subject to the conditions contained herein with respect to the taking of water and the depositing of waste of any type in any waters or in any place under any conditions where such waste or any other waste that results from the deposits of such waste may enter any waters. Whenever new *Regulations* are made or existing *Regulations* are amended by the Governor in Council under the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*, or other statutes imposing more stringent conditions relating to the quantity or type of waste that may be so deposited or under which any such waste may be so deposited, this Licence shall be deemed, upon promulgation of such *Regulations*, to be subject to such requirements; and
- b. Compliance with the terms and conditions of this Licence does not absolve the Licensee from responsibility for compliance with the requirements of all applicable Federal, Territorial and Municipal legislation.

2. Definitions

“**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;

“**Airstrip Camp Landfill Lobe A**” means the landfill located approximately 380 metres northeast of the hangar, as specified in the Monitoring Program;

“**Amendment**” means a change to original terms and conditions of this Licence requiring correction, addition or deletion of specific terms and conditions of the Licence; modifications inconsistent with the terms of the set terms and conditions of the Licence;

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

“**Board**” means the Nunavut Water Board established under the *Nunavut Land Claims Agreement* and the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*;

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

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

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

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

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

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

“Licensee” means the holder of this Licence;

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

“Monitoring Program” means the plan entitled “*Water Use Licence Amendment and Renewal FOX-2, Longstaff Bluff Landfill Monitoring*” dated July 2013;

“Non-Hazardous Waste Landfill” means the landfill located in the airstrip area west of Borrow Area #4, as specified in the Monitoring Program;

“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-Environment Provisions*” 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;

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

“Sump” means an excavation in impermeable soil for the purpose of catching or storing water or waste;

“Tier I Soil” means soil containing contaminant concentrations within the types and ranges defined as DCC Tier I in Appendix E of the NTI Agreement, including its preamble and schedules, and any amendment to that agreement made pursuant to it (see **Error! Reference source not found.**);

“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 **Error! Reference source not found.**);

“Tier II Soil Disposal Facility” means the landfill located approximately 100 metres east of the main station area, as specified in the Monitoring Program;

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

“Upper Site Landfill Lobe A” means the landfill located approximately 200 metres east of the warehouse, as specified in the Monitoring Program;

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

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

“West Landfill Lobe E” means the landfill located approximately 0.9 km south of the beach POL area, as specified in the Monitoring Program.

3. Enforcement

- a. Failure to comply with this Licence will be a violation of the *Act*, subjecting the Licensee to the enforcement measures and the penalties provided for in the *Act*;
- b. All inspection and enforcement services regarding this Licence will be provided

by Inspectors appointed under the *Act*; and

- c. For the purpose of enforcing this Licence and with respect to the use of water and deposit or discharge of waste by the Licensee, Inspectors appointed under the *Act*, hold all powers, privileges and protections that are conferred upon them by the *Act* or by other applicable law.

PART B. GENERAL CONDITIONS

1. The Licensee shall file an Annual Report on the Appurtenant Undertaking with the Board no later than March 31 of the year following the calendar year being reported, containing the following information:
 - a. Tubular summaries for all data and information generated under the Monitoring Program;
 - b. A review and analysis of data collected during the Monitoring Program and a brief description of any future studies planned by the Licensee;
 - c. The results of any review conducted and any recommendations regarding any changes to the Monitoring Program and/or remediation requirements;
 - d. A summary of any abandonment and restoration work undertaken during the year and an outline of any work anticipated for the next year;
 - e. A list of unauthorized discharges and summary of follow-up actions taken;
 - f. If applicable, a description of any trenches and sumps excavated, including the following: GPS coordinates, dimensions, depth below active layer, and secondary containment features;
 - g. A brief summary of work done to address any concerns of deficiencies listed in the inspection reports and/or compliance reports prepared by an Inspector;
 - h. An executive summary in English and Inuktitut of all plans, reports, or studies conducted under this Licence; and
 - i. Any other details on water use or waste disposal requested by the Board by November 1 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, 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.
4. The Licensee shall, for all Plans submitted under this Licence, implement the Plan as approved by the Board in writing.

5. The Licensee shall review the Plans referred to in this Licence, as required by changes in operation and/or technology, and modify the Plan accordingly. Revisions to the Plans shall be submitted in the form of an Addendum to be included with the Annual Report.
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 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

8. 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.
9. The Licensee shall ensure that any document(s) or correspondence submitted by the Licensee to the NWB is received and acknowledged by the Manager of Licensing.
10. This Licence is assignable as provided for in Section 44 of the *Act*.

PART C. CONDITIONS APPLYING TO WATER USE

1. Total water use shall not exceed one (1) cubic metre per day.
2. The Licensee shall not remove any material from below the ordinary high water mark of any water body unless authorized.

3. The Licensee shall not cause erosion to the banks of any body of water and shall provide necessary controls to prevent such erosion.
4. Sediment and erosion control measures shall be implemented prior to and maintained during the undertaking to prevent entry of sediment into water.

PART D. CONDITIONS APPLYING TO WASTE DISPOSAL

1. The Licensee shall locate areas designated for waste disposal at a minimum distance of thirty-one (31) metres from the ordinary high water mark of any water body such that the quality, quantity or flow of water is not impaired, unless otherwise approved by the Board in writing.
2. The Licensee shall not practice on-site land filling of domestic waste, unless otherwise approved by the Board in writing.
3. The Licensee is authorized to dispose of all acceptable food waste, paper waste and untreated wood products in an incinerator.
4. The Licensee shall not open burn plastics, wood treated with preservatives, electric wire, Styrofoam, asbestos or painted wood to prevent the deposition of waste materials of incomplete combustion and/or leachate from contaminated ash residual, from impacting any surrounding waters, unless otherwise approved by the Board in writing.
5. The Licensee shall provide to the Board documented authorization from all communities in Nunavut receiving wastes from the FOX-2 Longstaff Bluff Landfill Monitoring Program prior to any backhauling and disposal of wastes to those communities.
6. The Licensee shall backhaul and dispose of all hazardous wastes, waste oil and non-combustible waste generated through the course of the operation at a licensed waste disposal site.
7. 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.
8. The Licensee shall contain all greywater in a sump located at a distance of at least thirty one (31) metres above the ordinary high water mark of any water body, at a site where direct flow into a water body is not possible and no additional impacts are created, unless otherwise approved by the Board in writing.
9. The Licensee shall contain all toilet wastes in latrine pits or use incineration, chemical, portable or composting toilets. Latrine pits shall be located at a distance of at least thirty one (31) metres above the ordinary High Water Mark of any water body, treated with lime and covered with native material to achieve the pre-existing natural contours of the land prior to abandonment.

PART E. CONDITIONS FOR CAMPS, ACCESS INFRASTRUCTURES AND OPERATIONS

1. The Licensee shall not erect camps or store material on the surface of frozen streams or lakes including the immediate banks except what is for immediate use. Camps shall be located such as to minimize impacts on surface drainage.
2. The Licensee shall conduct all activities in such a way as to minimize impacts on surface drainage and the Licensee shall immediately undertake corrective measures in the event of any impacts on surface drainage.
3. With respect to access road, pad construction or other earthworks, the deposition of debris or sediment into or onto any water body is prohibited. These materials shall be disposed a distance of at least thirty-one (31) metres from the ordinary high water mark in such a fashion that they do not enter the water.

PART F. CONDITIONS APPLYING TO MODIFICATIONS

1. The Licensee may, without written consent from the Board, carry out Modifications to the Water Supply Facilities and Waste Disposal Facilities provided that such Modifications are consistent with the terms of this Licence and the following requirements are met:
 - a. the Licensee has notified the Board in writing of such proposed Modifications at least sixty (60) days prior to beginning the Modifications;
 - b. such Modifications do not place the Licensee in contravention of the Licence or the *Act*;
 - c. such Modifications are consistent with the NIRB Screening Decision;
 - d. the Board has not, during the sixty (60) days following notification of the proposed Modifications, informed the Licensee that review of the proposal will require more than sixty (60) days; and
 - e. the Board has not rejected the proposed Modifications.
2. Modifications for which all of the conditions referred to in PART F, 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 G. CONDITIONS APPLYING TO SPILL CONTINGENCY PLANNING

1. The Licensee shall implement the “Spill Contingency Plan” received July 14, 2013 that was approved by the Board and submitted as additional information with the application. The Licensee shall update the Spill Contingency Plan with AANDC’s Manager of Field Operations contact information (i.e. telephone: 867-975-4295; fax: 867-975-6445) and confirm that this information has been updated in the Annual Report that is submitted in the year that follows the issuance of this Licence.

2. The Licensee shall prevent any chemicals, petroleum products or wastes associated with the project from entering water. All sumps and fuel caches shall be located at a distance of at least thirty one (31) metres from the ordinary high water mark of any adjacent water body and inspected on a regular basis.
3. The Licensee shall conduct any equipment maintenance and servicing in designated areas and shall implement special procedures (such as the use of drip pans) to manage motor fluids and other waste and contain potential spills.
4. If during the term of this Licence, an unauthorized discharge of waste occurs, or if such a discharge is foreseeable, the Licensee shall:
 - a. Employ the approved Spill Contingency Plan;
 - b. Report the spill immediately to the 24-Hour Spill Line at (867) 920-8130 and to the Inspector at (867) 975-4295; and
 - c. For each spill occurrence, submit to the Inspector, no later than thirty (30) days after initially reporting the event, a detailed report that will include the amount and type of spilled product, the GPS location of the spill, and the measures taken to contain and clean up the spill site.

PART H. CONDITIONS APPLYING TO ABANDONMENT AND RESTORATION OR TEMPORARY CLOSING

1. The Licensee shall complete all restoration work prior to the expiry of this Licence.
2. The Licensee shall carry out progressive reclamation of any components of the project no longer required for the Licensee's operations.
3. The Licensee shall backfill and restore all sumps to the pre-existing natural contours of the land.
4. The Licensee shall remove from the site, all infrastructure and site materials, including all fuel caches, drums, barrels, buildings and contents, docks, water pumps and lines, material and equipment prior to the expiry of this Licence.
5. All roads and airstrip, if any, shall be re-graded to match natural contour to reduce erosion.
6. In order to promote growth of vegetation and the needed microclimate for seed deposition, all disturbed surfaces shall be prepared by ripping, grading, or scarifying the surface to conform to the natural topography.
7. Areas that have been contaminated by hydrocarbons from normal fuel transfer procedures shall be reclaimed to meet objectives as outlined in the Government of Nunavut's *Environmental Guideline for Contaminated Site Remediation*, 2010. The use of reclaimed soils for the purpose of back fill or general site grading may be carried out only upon consultation and approval by the Government of Nunavut, Department of Environment and an Inspector.

8. The Licensee shall contour and stabilize all disturbed areas to a pre-disturbed state upon completion of work.

PART I. CONDITIONS APPLYING TO THE MONITORING PROGRAM

1. The NWB has approved the Monitoring Plan entitled “Water Use Licence Amendment and Renewal FOX-2, Longstaff Bluff Landfill Monitoring”, dated July 2013, that was submitted as additional information with the application.
2. 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 in writing.
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. 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 2021. The Report shall be prepared by a certified geotechnical Engineer and summarize data collected during Phase I and II monitoring, and assess 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.
5. 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.
6. The Licensee shall include in the Annual Report, as required under PART B, Item 1, all monitoring results and information required by PART I. The Licensee shall provide the GPS co-ordinates (in degrees, minutes and seconds of latitude and longitude) of all locations where monitoring activities are conducted.

Table 1. Tier I and Tier II – DEW Line Clean-up Criteria (DCC)^a

Aboriginal Affairs and Northern Development Canada^b
Abandoned Military Site Remediation Protocol

Substance	DCC Tier I^c	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

Note: soil criteria are given in 'parts per million' (ppm).

- a. Formerly known as *Indian and Northern Affairs Canada*.
- b. 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.
- 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).