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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI
OFFICE DES EAUX DU NUNAVUT

File No.: **3BC-ERK1015**

June 18, 2010

Colonel R.C. Baker
Director A4 Construction Engineering
&
Scott Edwards, Environment Manager
Department of National Defence
1 Canadian Air Division
A4 Construction Engineering
PO Box 17000 Stn Forces
Winnipeg, MB R3J 3Y5
Email: scott.edwards2@forces.gc.ca

RE: NWB Licence No. 3BC-ERK1015

Dear Colonel Baker,

Please find attached Licence No. **3BC-ERK1015** issued to the Department of National Defence by the Nunavut Water Board (NWB) 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* (NLCA) and the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (NWNSRTA). However, the expiry or cancellation of a licence does not relieve the Licensee from any obligations imposed by the licence. The NWB recommends that an application for the renewal of this Licence be filed at least three (3) months prior to the Licence expiry date.

If the Licensee contemplates or requires an amendment to this licence, the NWB may decide, in the public interest, to hold a public hearing. The Licensee should submit applications for amendment as soon as possible to give the NWB sufficient time to go through the amendment process. The process and timing may vary depending on the scope of the amendment, however

a minimum of sixty (60) days is required from time of acceptance by the NWB. It is the responsibility of the Licensee to ensure that all application materials have been received and acknowledged by the Manager of Licensing.

The NWB notes that, among other items, recommendations were made by parties concerning the requirement for incineration to comply with the Canada-wide Standards (CWS) for Dioxins and Furans and the CWS for Mercury Emissions. This requirement is supported by the Government of Nunavut and Indian and Northern Affairs Canada. Environment Canada outlined appropriate incineration equipment and best management practices required to achieve the CWS for dioxins/furans and mercury. The NWB strongly recommends that the Licensee consult the comments received from interested persons on issues identified. This information is attached for your consideration.¹

Sincerely,



Thomas Kabloona
Nunavut Water Board
Chair

TK/tla

Enclosure: Licence No. **3BC-ERK1015**
 Comments

cc: Distribution –

¹ Environment Canada, February 6, 2010; Indian and Northern Affairs Canada, February 2, 2010; and Government of Nunavut – Department of Environment, February 5, 2010.

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DECISION

LICENCE NUMBER: 3BC-ERK1015

This is the decision of the Nunavut Water Board (NWB) with respect to an application dated November 16, 2009 for a new Water Licence made by:

DEPARTMENT OF NATIONAL DEFENCE

to allow for the use of water and disposal of waste during operation and maintenance of the Canadian Forces Station Eureka, located on Ellesmere Island within the Qikiqtani Region, Nunavut, generally located at the geographical coordinates as follows:

Latitude: 79° 59' 20"N Longitude: 85° 56' 30"W

DECISION

After having received a positive land use plan conformity determination from the Nunavut Planning Commission on February 8, 2010, and following notification of exemption from screening by the Nunavut Impact Review Board on November 30, 2009, 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 *Nunavut Land Claims Agreement (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 comments provided by interested 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 *NWNSRTA*, waived the requirement to hold a public hearing, and determined that:

Licence Number 3BC-ERK1015 be issued subject to the terms and conditions contained therein. (Motion #: 2010-11-L03)

SIGNED this 18th day of June 2010 at Gjoa Haven, NU.



Thomas Kabloona
Nunavut Water Board
Chair

TK/tla

LICENCE NO: 3BC-ERK1015**I. INTRODUCTION**

Canadian Forces Station (CFS)-Eureka is located on the shore of Slidre Fiord on the west coast of Ellesmere Island, approximately 450 km northwest of the Hamlet of Grise Fiord. CFS-Eureka was first established in 1947 as a High Arctic Weather Station. The site is maintained as a military station for personnel maintaining the communications equipment at CFS-Alert and is the military quarters for training missions to the North.

Facilities at CFS-Eureka are located at the main camp and include accommodations buildings, vehicle maintenance garage, aircraft refuelling apron, fuel storage, sewage lagoon and several landfills.

II. PROCEDURAL HISTORY

The Nunavut Water Board (NWB) received an application for a new water licence from the Department of National Defence (DND) on November 16, 2009. Following an internal completeness review of the application, the NWB requested additional information from DND on November 26, 2009.

Following receipt of additional information provided by DND on December 18, 2009, the NWB notified parties on January 6, 2010 and distributed the file for review. Following a thirty (30) day public review period, and after reviewing all submissions, the new Licence 3BC-ERK1015 has been issued.

III. GENERAL CONSIDERATIONS

The following section outlines the issues identified by the NWB and raised by interested parties and provides the background for the terms and conditions imposed within the body of the licence.

A. Term of 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. In determining an appropriate term of a water licence, the Board considers a number of factors including, but not limited to; the results of Indian and Northern Affairs Canada (INAC) site inspections and the corresponding compliance record of the Applicant, as well as intervener comments provided during the application review process. Given that this is a new application, the NWB has relied mostly on the comments provided by parties during the review process.

The applicant did not request a specific term for the licence. In the past the NWB has issued 10 year licences for other sites operated by DND. However, because this is a new Licence with numerous issues that need to be addressed by the Licensee, the NWB finds that a five (5) year term is more appropriate in this case.

The Licence duration will allow the Licensee to properly carry out the terms and conditions of the Licence and will ensure that sufficient time is given to submit and implement the plans required under the licence.

B. Annual Reporting

The NWB has imposed on the Licensee, the requirement to produce an Annual Report. These Reports, which are standard requirements for most licences, are for the purpose of ensuring that the NWB has an accurate annual update of the Licensee's activities related to water use and waste disposal during a calendar year. This information is maintained on the NWB Public Registry and is available to interested parties upon request. A "*Standardized Form for Annual Reporting*" is to be used by the Licensee and is available from the NWB file transfer protocol (FTP) site under the Public Registry link at the NWB Website.

Website Public Registry:

(<ftp://nunavutwaterboard.org/ADMINISTRATION/Standardized%20Forms/>).

This form provides the basis for annual reporting and format, however individual licences with project specific reporting requirements will need to provide information in addition to that of the standard form.

C. Water Use

CFS-Eureka obtains its water from the Environment Canada (EC) weather station located adjacent to the site. The water used by EC is regulated under Licence 3BC-EUR0611. Water is trucked from the EC reservoir to CFS-Eureka, where it is placed into a cistern system.

DND did not apply to obtain water from any other freshwater source, and therefore, this Licence does not include consideration of water use. In the event DND requires water in addition to what is obtained from the EC facility, an application to amend this Licence will be required.

D. Waste Disposal

Sewage Waste

Camp sewage passes through a digester prior to being pumped via piping to a two-celled lagoon. Effluent from the lagoon passes over land and flows downhill into Slidre Fiord, less than one kilometre away. During the review of the application, the Licensee clarified that it had also been using a second lagoon that is licensed to EC. However, DND confirmed that starting in 2010, DND would only use its own two-celled lagoon facility.

In their comments, EC and INAC raised concerns regarding the operation of the sewage treatment system. For similar projects in Nunavut, the NWB has required that the Licensee submit, for review and approval, an Operation and Maintenance Manual for wastewater treatment facilities. In agreement with the Government of Nunavut Department of

Environment (GN-DoE), INAC and EC, the NWB finds that an O&M Manual would help ensure that sewage treatment objectives are met. The O&M Manual shall be developed in accordance with the *Guidelines for the Preparation of an Operations and Maintenance Manual for Sewage and Solid Waste Disposal Facilities in the Northwest Territories*, (Duong and Kent, 1996) and other regulatory guidelines as deemed appropriate. In accordance with the recommendation made by EC, the Manual should also include a plan to deal with sewage sludge that will require management action from time to time.

The Licensee did not submit proposed Effluent quality discharge criteria for review. In order to protect the receiving environment, the NWB has included Effluent standards for Total Suspended Solids and Biological Oxygen Demand that are consistent with the *Guidelines for the discharge of treated municipal wastewater in the Northwest Territories* (1992). Effluent discharge quality is set based on annual release to a marine fiord environment. Other standard parameters have been included for consistency with other municipal licences.

Solid Waste

DND indicated in the application that combustible solid waste is incinerated using a forced air enclosed chamber incinerator. The ash from the incinerator, along with other non-combustible waste, is placed in the landfill located near the east end of the runway. For the existing landfill facility, the NWB will require stamped as-built engineered drawings, to be submitted for review and approval, in order that the NWB has on record, engineered drawings for the approved facilities. Also, for proper management of the waste disposal facilities, including material segregation and maintenance, the Licensee is required to submit as part of the O&M Manual mentioned above, an O&M Plan for the landfill and incinerator.

Finally, where there are other landfill areas on site that have reached capacity or are no longer in use, the Licensee is required to submit an Abandonment and Restoration Plan for those facilities under Part I.

Hazardous Waste

The NWB notes that the incinerator ash is not being tested prior to disposal in the landfill and its chemical composition is unknown. In order to avoid the potential for hazardous waste being deposited in the landfill, the Licensee is required to backhaul the incinerator ash along with other hazardous waste produced at the site. Incinerator ash must be backhauled until such time as the NWB considers the submission of the O&M Plan for the incinerator required under Part H, Item 1 of the Licence.

The GN-DoE requested that hazardous materials stored on-site should be clearly marked. This recommendation is intended to help prevent possible injuries to camp personnel and/or damage to the containers. All hazardous waste should be accompanied by hazardous waste manifests with the appropriate information (generator number, carrier number, and receiver number) and backhauled annually to avoid an accumulation of waste on-site.

Landfarm

The supplemental information received on December 18, 2009 indicated that there had been fuel spills on-site and that hydrocarbon contaminated soil had been excavated and placed in a landfarm. The water licence application also indicated the operation of a landfarm on site. The construction, operation and discharge of any waste from landfarms in Nunavut requires the approval by the NWB. As engineered drawings and O&M Plan for the landfarm were not provided for review as part of the application, the NWB agrees with the GN-DoE that this information must be provided. In accordance with condition Part H, Item 1 the Licensee shall submit the required information for review and approval, including an O&M Plan for the Landfarm that addresses water, snow and runoff management.

Finally, in accordance with Part F, Item 3, the Licensee is required to submit stamped as-built engineered drawings for review and approval so that the NWB has on record, engineered drawings for the Waste Disposal Facilities.

E. Spill Contingency Plan

The Spill Contingency Plan (SCP) is generally acceptable to the NWB and has been approved by the Board. However, the SCP must be updated to include the necessary contact information and procedures identified by INAC and GN-DoE.

The NWB also notes that fuel storage on-site consists of four (4) 30,000L storage tanks located on the north side of the airstrip. The SCP does not indicate whether the fuel storage facility is lined or bermed. An as-built drawing of the facility is required.

F. Abandonment and Restoration Plan

The NWB notes that several facilities require reclamation. For example, drawing 102 in the supplemental information package shows a number of old buildings and debris areas. In addition, the Characterization of Contaminated Sites Final Report 2007/08 indicates that the Battery Dump and Barrel Dump can be closed. There is potential over the long term for impacts on water quality if these facilities are not properly reclaimed. INAC also noted in its submission that an abandonment and reclamation plan is required and the NWB agrees. The requirement for an abandonment and reclamation plan is included under Part I of the Licence.

G. Monitoring

To be consistent with other similar projects licensed by the NWB, the Board requires that the Licensee establish, implement and report on the Monitoring Program outlined in Part J of the licence. EC provided comments on the need for a monitoring program to be established.

To supplement the monitoring program, the Licensee is required to submit a Quality Assurance/Quality Control Plan, within ninety (90) days of issuance of the Licence, that provides documentation of proper methods for field sampling, preservation, shipping/sample control and is accompanied by an approval letter from an accredited laboratory responsible for the analytical requirements of the Licence. This requirement is detailed under Part J, Items 8 and 9. The Licensee shall include a map in the Annual Report showing the locations of monitoring stations for project facilities as determined through consultation with the Inspector.



NUNAVUT WATER BOARD WATER LICENCE

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

DEPARTMENT OF NATIONAL DEFENCE, 1 CANADIAN AIR DIVISION
(Licensee)

DEPARTMENT OF NATIONAL DEFENCE, 1 CANADIAN AIR DIVISION
A4 CONSTRUCTION ENGINEERING
PO BOX 17000 STN FORCESWINNIPEG, MB, R3J 3Y5
(Mailing Address)

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

Licence Number/Type: 3BC-ERK1015 TYPE "B"

Water Management Area: NUNAVUT 05

Location: CANADIAN FORCES STATION-EUREKA
ELLESmere ISLAND, QIKIQTANI REGION, NUNAVUT

Classification: MUNICIPAL UNDERTAKING

Purpose: DEPOSIT OF WASTE

Quantity of Water use not to Exceed: NO WATER USE AUTHORIZED

Date of Licence Issuance: JUNE 18, 2010

Expiry of Licence: JUNE 30, 2015

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

Thomas Kabloona,
Nunavut Water Board Chair

PART A: SCOPE, DEFINITIONS AND ENFORCEMENT**1. Scope**

This Licence allows for the disposal of waste for a Municipal Undertaking classified as per Schedule II of the *Regulations*, at the Canadian Forces Station Eureka, located on the western shore of Ellesmere Island within the Qikiqtani Region, 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.

“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*;

“Fuel Storage Facility” means the facility consisting of four (4) 30,000 L double-walled storage tanks as described in the water licence application dated November 16, 2009;

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

“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 the facility designed to treat hydrocarbon contaminated soil as describe in the water licence application dated November 16, 2009.

“Landfill” means the facility designed to contain non-hazardous solid waste as described in the application dated November 16, 2009;

“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;

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

“Regulations” means the *Northwest Territories Water Regulations* s0r/93-303 8th June, 1993, omitting Section 5, Water Use or Waste Deposit Without a Licence;

“Sewage” means all Toilet Wastes and Greywater;

“Sewage Treatment Facility” means the two-celled lagoon described in the water licence application dated November 16, 2009;

“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;

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

“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 the Sewage Treatment Facility, Landfill and Landfarm;

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 31st of the year following the calendar year being reported, containing the following information:
 - a. A summary report of waste disposal activities;
 - b. A list of unauthorized discharges and a summary of follow-up actions taken;
 - c. An up-to-date copy of the Spill Contingency Plan, including contact information;
 - d. The location of waste deposition in accordance with Part J, Item 2.
 - e. A description of all progressive and or final reclamation work undertaken, including photographic records of site conditions before, during and after completion of restoration work;
 - f. A summary of all results and information requested under the Monitoring Program;
 - g. Map of monitoring program locations; and
 - h. Any other details on 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 are to 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 maintain a copy of this Licence 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

(b) Inspector Contact:

Water Resources Officer, INAC
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, Plans 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 Board 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. Withdrawal of water is not authorized under this Licence.

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 is authorized to deposit nonhazardous, non-combustible waste in the onsite Landfill.
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 backhaul and dispose of all hazardous wastes and waste oil generated through the course of the operation in a licensed waste disposal facility.
6. The Licensee shall backhaul and dispose of incinerator ash generated through the course of the operation in a licensed waste disposal facility, unless otherwise approved by the Board in writing.
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 provide at least ten (10) days notification to an Inspector, prior to initiating any Effluent discharge from the Sewage Treatment Facility or Landfarm.
9. The Licensee shall direct all Sewage to the Sewage Treatment Facility.

10. Effluent discharged from the Sewage Treatment Facility at monitoring station ERK-1 shall not exceed the following Effluent quality limits:

| Parameter | Maximum Concentration of any Grab Sample |
|------------------------|--|
| BOD ₅ | 80 mg/L |
| Total Suspended Solids | 70 mg/L |
| Fecal Coliforms | 1 x 10 ⁶ CFU/100 mL |
| Oil and grease | No visible sheen |
| pH | between 6 and 9 |

11. Effluent discharge from the Landfarm Facility at monitoring station ERK-2 shall not exceed the following Effluent quality limits:

| Parameter | Maximum Concentration of any Grab Sample |
|----------------------|--|
| Benzene(µg/L) | 370 |
| Toluene(µg/L) | 2 |
| Ethylbenzene(µg/L) | 90 |
| Lead(µg/L) | 1 |
| Oil and Grease(mg/L) | 15 and no visible sheen |
| Phenols (µg/L) | 20 |

12. If Effluent does not meet the Effluent quality limits of Part D, Item 11, it shall be considered hazardous waste and disposed off-site at an approved facility.

PART E: CONDITIONS FOR CAMPS, ACCESS INFRASTRUCTURES AND OPERATIONS

1. The Licensee shall not store material on the surface or banks of frozen streams or lakes except what is for immediate use.
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. 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 AND CONSTRUCTION

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 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 and construction referred to in this Licence within ninety (90) days of completion of the Modification and construction. These plans and drawings shall be stamped by an Engineer.
4. The Licensee shall within ninety (90) days following issuance of the Licence, provide to the Board as-built drawings signed and stamped by an Engineer for the Landfill, Landfarm, Sewage Lagoon and Fuel Storage Facility.

PART G: CONDITIONS APPLYING TO SPILL CONTINGENCY PLANNING

1. The Board has approved the Plan entitled Spill Contingency Plan, Fort Eureka, dated November, 2009 that was submitted as additional information with the Application.
2. Licensee shall provide an addendum to the Plan referred to in Part G, Item 1, and submit to the Board within ninety (90) days of issuance of the Licence, including the contact information as identified in submissions provided by parties during its review.
3. The Licensee shall prevent any chemicals, petroleum products or wastes associated with the project do not enter 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.
4. The Licensee shall ensure that any equipment maintenance and servicing be conducted 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.

5. 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 appropriate 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 OPERATIONS AND MAINTENANCE

1. The Licensee shall submit to the Board for approval in writing, within ninety (90) days of issuance of the Licence, an Operations and Maintenance Manual prepared where appropriate, in accordance with the *“Guidelines for the Preparation of an Operation and Maintenance Manual for Sewage and Solid Waste Disposal Facilities in the Northwest Territories; 1996”*. The Manual shall take into consideration the comments received during the application review process and shall contain the following plans:
 - a. *Sewage Treatment Facility Operation and Maintenance Plan;*
 - b. *Sewage Sludge Management Plan;*
 - c. *Landfill Operation and Maintenance Plan;*
 - d. *Incineration Management Plan containing:*
 - i. *Best management practices for ash disposal; and*
 - ii. *Testing protocol and criteria should ash be disposed of in the Landfill.*
 - e. *Landfarm Facility Operation and Maintenance Plan; and*
 - f. *Monitoring Program Quality Assurance/Quality Control Plan (QA/QC Plan).*
2. An inspection of all engineered facilities related to the management of water and waste shall be carried out annually in July or August by a Geotechnical Engineer. The engineer’s report shall be submitted to the Board within sixty (60) days of the inspection, including a covering letter from the Licensee outlining an implementation plan addressing the Engineer’s recommendations.
3. The Licensee shall perform more frequent inspections of the engineered facilities at the request of an Inspector.

PART I: CONDITIONS APPLYING TO ABANDONMENT AND RESTORATION OR TEMPORARY CLOSING

1. The Licensee shall submit to the Board for approval in writing, within six (6) months of Licence issuance, an Abandonment and Restoration Plan for the Battery Dump, Barrel Dump and other on-site facilities no longer in use and areas where debris has been identified as requiring restoration. The Plan shall be prepared in accordance with applicable sections of the *Guidelines for Abandonment and Restoration Planning for Mines in the Northwest Territories* (1990).
2. The Licensee shall submit to the Board for approval in writing, six (6) months prior to the abandonment of the CFS-Eureka site, an Abandonment and Restoration Plan prepared in accordance with applicable sections of the *Guidelines for Abandonment and Restoration Planning for Mines in the Northwest Territories* (1990).
3. The Licensee shall revise the Plans referred to in Part G, Item 1 and Part G, Item 2 if not approved, and submit to the Board for approval in writing within thirty (30) days of receiving notification of the Board's decision.
4. The Licensee shall complete the restoration work within the time schedule specified in the Plan, or as subsequently revised and approved by the Board in writing.
5. The Licensee shall restore all areas that have been contaminated by hydrocarbons, reclaimed to meet objectives as outlined in the Government of Nunavut's Environmental Guideline for Site Remediation, January 2002. The use of reclaimed soils from the Soil Remediation Facility may be carried out only upon consultation and approval by the Government of Nunavut, Department of Environment and an Inspector.

PART J: CONDITIONS APPLYING TO THE MONITORING PROGRAM

1. The Licensee shall maintain Monitoring Stations at the following locations:

| Monitoring Program Station Number | Description | Status |
|-----------------------------------|--|------------------|
| ERK-1 | Final Discharge Point of the Sewage Treatment Facility | Active (Quality) |
| ERK-2 | Final Discharge Point of the Landfarm Facility | Active (Quality) |
| ERK-3 | Runoff and leachate from the Landfill | Active (Quality) |
| ERK-4 | Runoff and leachate from the Battery Dump | Active (Quality) |
| ERK-5 | Runoff and leachate from the Barrel Dump | Active (Quality) |

2. The Licensee shall determine, in consultation with the Inspector, the GPS co-ordinates (in degrees, minutes and seconds of latitude and longitude) of all locations where wastes associated with operations and maintenance are deposited and have been deposited. Locations shall be reported in the Annual Report.
3. The Licensee shall analyze samples, prior to the release of Effluent from the Sewage Treatment Facility at ERK-1 for the purpose of demonstrating compliance with the parameters listed under Part D, Item 10.
4. The Licensee shall analyze samples, prior to the release of effluent from the Landfarm Facility at ERK-2 for the purpose of demonstrating compliance with the parameters listed under Part D, Item 11.
5. The Licensee shall sample at Monitoring Program Station ERK-3, 4 and 5 monthly during periods of runoff or seepage. Samples shall be analyzed for the following parameters:

TPH (Total Petroleum Hydrocarbons)
 PAH (Polycyclic Aromatic Hydrocarbons)
 BTEX (Benzene, Toluene, Ethylbenzene, Xylene)

| | |
|------------------------|------------------|
| BOD ₅ | Fecal Coliforms |
| pH | Conductivity |
| Total Suspended Solids | Oil and Grease |
| Nitrate-Nitrite | Ammonia Nitrogen |
| Total Phenols | Total Alkalinity |
| Total Hardness | Calcium |
| Magnesium | Potassium |
| Sodium | Sulphate |
| Total Arsenic | Total Cadmium |
| Total Copper | Total Chromium |
| Total Iron | Total Lead |
| Total Mercury | Total Nickel |

6. 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.
7. All analyses shall be performed in a laboratory accredited according to ISO/IEC Standard 17025. The accreditation shall be current and in good standing.

8. The Licensee shall, within ninety (90) days following issuance of the Licence, submit to the Board a Quality Assurance/Quality Control (QA/QC) Plan. The Plan shall include up-to-date field sampling methods to all applicable standards, acceptable to an accredited laboratory as required by Part J, Item 6 and Part J, Item 7. The Plan shall include an approval letter from the accredited laboratory confirming acceptance of the Plan for analyses to be performed under this Licence
9. The Licensee shall annually review the QA/QC plan submitted under Part J, Item 8 and modify accordingly as required by changes in operation and/or technology. Revisions to the Plans are to be submitted to the NWB in the form of an Addendum, complete with an approval letter from an accredited lab that meets standards set in Part J, Item 6 and, Item 7, to be included with the Annual Report.
10. The Licensee shall include in the Annual Report required under Part B, Item 1 all data, monitoring results and information required by this Part.