



ᓄᓇᓂᓪ ᐃᓕᓂᓪᓴᓪ ᑲᓂᓕᓪᓴᓪ  
NUNAVUT WATER BOARD  
NUNAVUT IMALIRIYIN KATIMAYINGI  
OFFICE DES EAUX DU NUNAVUT

**File No.: 1BR-KRK1929**

March 27, 2019

Shah Alam, P. Eng.  
Municipal Planning Engineer,  
Government of Nunavut - Community and Government Services  
Helen Maksagak Centre  
Cambridge Bay, NU  
X0B 0C0

Email: [salam@gov.nu.ca](mailto:salam@gov.nu.ca)

**RE: NWB Replacement Water Licence No. 1BR-KRK1929**

---

Dear Mr. Alam:

Please find attached Licence No. 1BR-KRK1929 issued to the Government of Nunavut - Community and Government Services (GN-CGS) 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 Agreement)*. The terms and conditions of the attached Licence related to the use of Water and the deposit of Waste are an integral part of this approval.

If the Licensee contemplates the continuing of this Undertaking after the Water Licence expires, it is the responsibility of the Licensee to apply to the NWB for a replacement water licence. 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 replacement Water Licence. Note that if the Licence expires before the NWB issues a new one, then the use of Water and the deposit of Waste must cease, or the Licensee may be in contravention of the *Nunavut Agreement* and the *Nunavut Waters and Nunavut Surface Rights Tribunal Act (NWNSTRA)*. 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 replacement of this Licence be filed at least **three (3) months** prior to the Licence expiry date. It should be noted that in accordance with s. 75(1)(a) of the *Nunavut Planning and Project Assessment Act (NuPPAA)*, the Board is not allowed to issue a permit or authorization for any project proposal that has not been submitted to the Nunavut Planning Commission (NPC) in accordance with s. 76 of *NuPPAA*.

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 Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) on issues identified. This information is attached for your consideration.<sup>1</sup>

Sincerely,

---

Lootie Toomasie  
Nunavut Water Board,  
Chair

LT/ak/ip

Enclosure: Renewal Licence No. 1BR-KRK1929

Comments – CIRNAC

Cc: Distribution List – Kitikmeot

---

<sup>1</sup> Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) submission, dated February 28, 2019.

## TABLE OF CONTENTS

<b>LIST OF TABLES .....</b>	<b>i</b>
<b>DECISION.....</b>	<b>ii</b>
I.    BACKGROUND .....	iii
II.   PROCEDURAL HISTORY .....	iii
A.    Requirements of the NWSRTA and the Nunavut Agreement .....	iii
III.  GENERAL CONSIDERATIONS .....	iv
A.    Scope, Definitions and Enforcement .....	iv
B.    General Conditions .....	v
C.    Conditions Applying to Water Use.....	v
D.    Conditions Applying to Waste and Waste Management .....	v
E.    Conditions Applying to Modifications and Construction .....	v
F.    Conditions Applying to Drilling.....	v
G.    Conditions Applying to Spill Contingency Planning.....	v
H.    Conditions Applying to Closure and Reclamation or Temporary Closure .....	v
I.    Conditions Applying to the Monitoring Program .....	vi
<b>REPLACEMENT WATER LICENCE .....</b>	<b>1</b>
<b>PART A:  SCOPE, DEFINITIONS AND ENFORCEMENT .....</b>	<b>2</b>
1. <b>Scope</b> .....	2
2. <b>Definitions</b> .....	2
3. <b>Enforcement</b> .....	5
<b>PART B:  GENERAL CONDITIONS .....</b>	<b>5</b>
<b>PART C:  CONDITIONS APPLYING TO WATER USE .....</b>	<b>7</b>
<b>PART D:  CONDITIONS APPLYING TO WASTE DISPOSAL .....</b>	<b>7</b>
<b>PART E:  CONDITIONS APPLYING TO MODIFICATIONS AND CONSTRUCTION .....</b>	<b>8</b>
<b>PART F:  CONDITIONS APPLYING TO DRILLING .....</b>	<b>9</b>
<b>PART G:  CONDITIONS APPLYING TO SPILL CONTINGENCY PLANNING .....</b>	<b>9</b>
<b>PART H:  CONDITIONS APPLYING TO CLOSURE AND RECLAMATION OR           TEMPORARY CLOSURE.....</b>	<b>10</b>
<b>PART I:  CONDITIONS APPLYING TO THE MONITORING PROGRAM.....</b>	<b>11</b>
<b>TABLES    15</b>	
Table 1 Remediation Requirements .....	15

## LIST OF TABLES

Table 1 Remediation Requirements

## DECISION

### LICENCE NUMBER: 1BR-KRK1929

This is the decision of the Nunavut Water Board (NWB) with respect to an application dated December 17, 2018 for a renewal of a Water Licence made by:

### GOVERNMENT OF NUNAVUT - COMMUNITY AND GOVERNMENT SERVICES

to allow for the deposit of Waste during the operation of the Kugaaruk Landfarm Facility located within the Kitikmeot Region, Nunavut, generally located at the geographical coordinates as follows:

Project Extents:

Latitude: 68° 31' 10" N	Longitude: 89° 48' 22" W
Latitude: 68° 31' 12" N	Longitude: 89° 48' 09" W
Latitude: 68° 31' 10" N	Longitude: 89° 48' 07" W
Latitude: 68° 31' 07" N	Longitude: 89° 48' 23" W

### DECISION

After having been satisfied that the Application is for a proposal that falls outside of an area with an approved land use plan, and, as such, a conformity determination is not required, and the proposal is exempt from the requirements for screening as described within s. 12.4.3 / Schedule 12-1 of the *Nunavut Agreement*, the NWB decided that the application could proceed through the regulatory process. In accordance with s. 55.1 of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act (NWNSTRA or Act)* and Article 13 of the *Nunavut Agreement*, 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 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 *Nunavut Agreement* and of the *Act*, waived the requirement to hold a public hearing, and determined that:

**Replacement Licence No. 1BR-KRK1929 be issued subject to the terms and conditions contained therein. (Motion #: 2018-B1-036).**

Signed this 27<sup>th</sup> day of March, 2019 at Gjoa Haven, NU.

---

Lootie Toomasie  
Nunavut Water Board,  
Chair

LT/ak/ip

## I. BACKGROUND

In 2005, the Government of Nunavut – Department of Community and Government Services (GN-CGS or Applicant) constructed the Kugaaruk Landfarm Facility (Landfarm) approximately 1.5 kilometres southeast of the Hamlet of Kugaaruk. The facility consists of a soil treatment cell and a water retention cell. Following the construction of the Landfarm, a Phase III Environmental Site Assessment (ESA) was conducted in 2006 that identified approximately 3,500 m<sup>3</sup> of petroleum hydrocarbon contaminated soil located at a former fuel storage compound.

Treatment of approximately 2,172 m<sup>3</sup> of the soil identified in the ESA commenced in 2007 and continues to date with the aim of meeting the remediation objectives. An additional quantity of 120 m<sup>3</sup> is awaiting placement at the moment. All effluent collected from the Landfarm and meeting discharge criteria is to be discharged into the local drainage system that eventually reports to St. Peter's Bay, approximately 1,2 kilometres downstream of the Landfarm Facility.

## II. PROCEDURAL HISTORY

The Applicant has previously held three water licences, the most recent one of which having expired on August 15, 2018. On December 18, 2019, GN-CGS applied for licence renewal providing:

- an application cover letter;
- executive summary in English;
- a filled-out application form;
- the results of the 2018 CIRNAC inspection; and
- lab analyses results for soil and water sampled at the Landfarm in 2018.

On January 18, 2019, the Applicant submitted additional documentation consisting of an executive summary in Inuktitut and a compliance plan.

### A. Requirements of the NWNSTRA and the Nunavut Agreement

On December 19, 2018, the Nunavut Planning Commission (NPC) issued correspondence<sup>1</sup> indicating that the Application is for a project proposal that falls outside the area of an applicable Regional Land Use Plan. In addition, NPC indicated that no screening by the Nunavut Impact Review Board (NIRB) is required, as the scope of the project proposal did not change. Therefore, the previous NIRB communication<sup>2</sup> determining that, according to s. 12.4.4 (a) of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada* (Nunavut Agreement), the project proposal is exempt from screening remains valid. Therefore, NWB initiated the licensing process.

On February 28, 2019, the NWB received submissions from Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) and Environment and Climate Change Canada (ECCC).

---

<sup>1</sup> Nunavut Planning Commission, Conformity Determination 149000, December 19, 2018.

<sup>2</sup> Letter from Rober Maksagak (NIRB) to Phyllis Beaulieu (NWB), Re: Application exempt from Screening pursuant to NLCA Schedule 12-1: Government of Nunavut - Community & Government Services' "Kugaaruk Landfarm" project proposal, February 28, 2013.

ECCC indicated it had no comments on the application, while CIRNAC provided comments and recommendations related to improving the overall operational aspects of the Landfarm.

### **III. GENERAL CONSIDERATIONS**

GN-CGS plans to continue the operation of the Landfarm. Water use was not authorized under any of the previous licences. This condition will be maintained in the replacement licence, as the Applicant indicated that no modifications would take place that would trigger a requirement for water use. With respect to waste, the original volume of contaminated soil of 2,172 m<sup>3</sup> will be supplemented with 120 m<sup>3</sup> that are currently stored on location in bags. In addition, the Applicant indicated that it forecasts a total of 3,300 m<sup>3</sup> of contaminated soil and gravel placed in the Landfarm.

On the basis of the Application, the written materials filed with the Board, and submissions of the parties, the Board has decided to issue a Type “B” Water Licence No. 1BR-KRK1929 (the Licence) subject to the terms and conditions set out below. The Licence authorizes the Government of Nunavut – Department of Community and Government Services (GN-CGS or Licensee) to continue deposit of waste for an Industrial Undertaking as defined under Schedule 1 of the Nunavut Waters Regulations, and also contains terms and conditions necessary to protect the environment and provide appropriate safeguards in respect of the deposit of waste in accordance with the Application.

In accordance with the *Nunavut Waters and Nunavut Surface Rights Tribunal Act (NWNSRTA)* s. 45, the NWB may issue a licence for a term not exceeding twenty-five years. The applicant requested a ten-year term for this Licence, which the NWB believes is appropriate for the Project. The Board has, therefore, granted the ten-year term requested by GN-CGS.

#### **A. Scope, Definitions and Enforcement**

##### *Scope*

The Licence allows for the deposit of Waste in support of an Industrial Undertaking.

##### *Definitions*

Several definitions were added to the list of definitions in this Licence to reflect the actual status of the Landfarm. The definition of Water Treatment Facilities was removed, as the Licensee indicated the intent to employ natural remediation processes only.

##### *Enforcement*

To ensure that the Licensee complies with the terms and conditions of the Licence, inspectors designated and empowered by the Minister of Crown-Indigenous Relations and Northern Affairs Canada may inspect or examine works, activities, and undertakings associated with the use of waters and/or the deposit of waste for the purposes of exercising their powers in accordance with the *NWNSRTA*.<sup>3</sup>

---

<sup>3</sup> Sections 85-88 of the *NWNSRTA*.

## *Compliance*

GN-CGS should note that compliance with the terms and conditions of this Licence does not necessarily absolve the Licensee from the responsibility to comply with all other applicable legislation, guidelines, and directives.

### **B. General Conditions**

Part B of the Licence addresses the general terms and conditions that apply to the undertaking, such as annual report submission, protocols for handling documents related to the Licence, posting of signage at sites associated with the undertaking, and more.

### **C. Conditions Applying to Water Use**

No water use is authorized under this Licence.

### **D. Conditions Applying to Waste and Waste Management**

Under this replacement licence, the original effluent discharge criteria are maintained.

Under Part D, Item 14 in this Licence, the Licensee is required to submit to the Board for approval a revised *Operations and Maintenance Manual*. This requirement was carried over from expired licences 1BR-KRK1112 and 1BR-KRK1318. A revised copy of the Manual was submitted to the Board in April 2011, which the Board had reviewed and identified a number of deficiencies to be addressed before approval is granted as per NWB's December 8, 2011 correspondence as well as taking into consideration the Federal Guidelines for Landfarming Petroleum Hydrocarbon Contaminated Soils (2013). The Licensee committed<sup>4</sup> to providing the updated Manual in July 2019.

### **E. Conditions Applying to Modifications and Construction**

The Applicant is required to obtain permission from the NWB for modifications that do not meet the definition of modifications or the criteria of Part E, Item 5 of the Licence. Without written consent from the NWB, the Licensee is not allowed to carry out any modifications. Changes that do not meet the definition of a Modification under the Licence or the requirements of Part F may be considered amendments to the Licence.

### **F. Conditions Applying to Drilling**

No drilling is authorized under this Licence.

### **G. Conditions Applying to Spill Contingency Planning**

The Licensee previously provided the Plan entitled "Spill Contingency Plan" and embedded in the *Operations and Maintenance Manual*. Under Part G, Item 2 of this Licence, the Licensee is required to submit to the Board for approval a revised *Spill Contingency Plan*. This requirement was carried over from expired licence 1BR-KRK1318.

### **H. Conditions Applying to Closure and Reclamation or Temporary Closure**

The Board had previously approved the Plan entitled "*Interim Abandonment and Reclamation Plan for the Kugaaruk Landfarm Facility*" dated December 2012.

---

<sup>4</sup> Land farm Licence Renewal Application, submitted by Shah Alam (GN-CGS), dated December 18, 2018.

## **I. Conditions Applying to the Monitoring Program**

All of the monitoring requirements under the expired licence were carried over to this Licence.





## NUNAVUT WATER BOARD REPLACEMENT WATER LICENCE

---

**Licence No. 1BR-KRK1929**

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

**GOVERNMENT OF NUNAVUT - COMMUNITY AND GOVERNMENT SERVICES**

---

(Licensee)

**HELEN MAKSAGAK CENTRE, CAMBRIDGE BAY, NU X0B 0C0**

---

(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-KRK1929 / TYPE "B"**

---

Water Management Area: **GULF OF BOOTHIA WATERSHED (34)**

---

Location: **KUGAARUK LANDFARM FACILITY, HAMLET OF KUGAARUK, KITIKMEOT REGION, NUNAVUT**

---

Classification: **INDUSTRIAL UNDERTAKING**

---

Purpose: **DEPOSIT OF WASTE**

---

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

---

Date of Licence Issuance: **MARCH 27, 2019**

---

Expiry of Licence: **MARCH 26, 2029**

---

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

---

**Lootie Toomasie**  
**Nunavut Water Board, Chair**

## **PART A: SCOPE, DEFINITIONS AND ENFORCEMENT**

### **1. Scope**

This Licence allows for the deposit of Waste for an Industrial undertaking classified as per Schedule 1 of the *Regulations* at the Kugaaruk Landfarm Facility Project, located approximately 1.5 kilometres southeast of the Hamlet of Kugaaruk within the Kitikmeot Region, Nunavut.

- a. This Licence is issued subject to the conditions contained herein with respect to the deposit 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;

“**Applicant**” means the Licensee;

“**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 Agreement* and the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*;

“**Closure and Reclamation Plan**” means a Plan developed to reach the closure goal and taking in account the “Guidelines for the Closure and Reclamation of Advanced Mineral Exploration and Mine Sites in the Northwest Territories” 2013;

**“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*;

**“Final Discharge Point”** means the point, at which the Licensee no longer exerts care and/or control over the quality and/or quantity of the Effluent from a treatment process;

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

**“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*;

**“Landfarm”** comprises the area and associated infrastructure, including the soil disposal cell, water retention cell, and Splash Pad, designed to contain and remediate hydrocarbon impacted soils as described in the application for water licence filed by the Applicant on May 25th, 2005 and as illustrated in drawings signed and stamped by S. Sebastian entitled “Contaminated Soil Site Plan and Section”, drawings no’s 01-4109-C1001 Rev C and 01-4109-C1002 Rev B.

**“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 Agreement”** 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 18<sup>th</sup> April, 2013;

**“Splash Pad”** means the infrastructure designed to minimize the potential for erosion during discharge of Effluent from the Landfarm as illustrated in the drawing stamped by S. Sebastian, P. Eng., entitled “Landfarm Water Handling Facilities, Kugaaruk Nunavut,

Overall Site Plan” Drawings No. 022880805-SKT-V0002-01, prepared by Wardrop for GN-CGS, dated 10/02/01;

“**Secondary Containment**” means an impermeable structure, external to and separate from primary containment, which prevents unplanned spills of hazardous materials and provides a minimum capacity of 110% of the original vessel. Where multiple vessels are stored within the containment, it must provide a minimum capacity equal to the sum of the largest vessel and 10% of the aggregate volume of all other vessels located in the containment. This structure shall also provide containment and control of hoses and nozzles;

“**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 or Sumps**” 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;

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

“**Treatment Objective**” means the treatment objective for the Landfarm, which is based on the Canadian Council of Ministers of the Environment (CCME) *Canada – Wide Standard for Petroleum Hydrocarbon in Soil*; and as determined by the Government of Nunavut, Environmental Protection Service based on the *Environmental Guideline for Site Remediation*; refer to Table 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;

“**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*.

### 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<sup>st</sup> of the year following the calendar year being reported, containing the following information:
  - a. A summary report of Waste disposal activities including:
    - i. quantity and quality of effluent discharged from Landfarm; and
    - ii. quantity and characterization of soils placed within the Landfarm for treatment.
  - b. Quantity of Waste backhauled to an approved facility for disposal;
  - c. A list of unauthorized discharges and a summary of follow-up actions taken;
  - d. Any revisions to the management plans, as required by Part B, Item 6, submitted in the form of an Addendum;
  - e. A description of all progressive and/or final reclamation work undertaken, including photographic records of site conditions before, during and after completion of operations;
  - f. A summary of all information requested and results of the Monitoring Program, an analysis and interpretation of the results, and any follow-up measures that may be required ;
  - g. A summary, including photographic records before, during and after any relevant construction activities or Modifications and/or major maintenance work carried out on facilities under this Licence and an outline of any work anticipated for the next year;
  - h. A summary of public consultation/participation, describing consultation with local organizations and residents of the nearby communities, if any were conducted;
  - i. Any other details on Waste disposal requested by the Board by the 1<sup>st</sup> November of the year being reported.
2. The Licensee shall notify the NWB of any changes in operating plans or conditions associated with this project at least thirty (30) days prior to any such change.
3. The Licensee shall install flow meters or other such devices, or implement suitable

methods to the satisfaction of the Inspector for the measurement of Effluent volumes discharged into the receiving environment at Monitoring Program Station SW2 as set out in Part I, Item 5.

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. 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.
7. 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.
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](mailto:licensing@nwb-oen.ca)

**(b) Inspector Contact:**

Manager of Field Operations, CIRNAC  
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 an 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 and Inuinnaqtun.
10. The Licensee shall ensure that all documents or correspondence submitted by the

Licensee to the NWB are received and acknowledged by the Manager of Licensing.

11. This Licence is assignable as provided for in Section 44 of the *Act*.
12. The expiry or cancellation of this Licence does not relieve the Licensee from any obligation imposed by the Licence, or any other regulatory requirement.

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

1. The use of Water is not authorized under the terms and conditions of this Licence.
2. The Licensee shall not conduct any work below the ordinary High Water Mark of any water body unless approved by the Board in writing.
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 treat, to the Treatment Objective, Type B Soil in the Landfarm, or as otherwise approved by the Board.
2. 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.
3. The Licensee shall maintain the Landfarm to the satisfaction of the Inspector.
4. The Licensee shall provide at least ten (10) days written notice to the Inspector prior to any planned discharges from the Landfarm. The notice shall include an estimated discharge volume, Effluent quality or results of monitoring under Part I, Item 7, and the proposed location for the discharge.
5. The Licensee shall implement appropriate measures to minimize erosion during any discharge of Effluent into the receiving environment.
6. All Effluent discharged from the Landfarm at Monitoring Program Station SW2 shall not exceed the following Effluent quality limits:

Parameter	Maximum Concentration of any Grab Sample (mg/L)
pH	6.5 to 9

TSS	50
Oil and grease	15 and no visible sheen
Total Lead	0.001
Benzene	0.37
Toluene	0.002
Ethylbenzene	0.090

7. Effluent that exceeds Effluent quality limits in Part D, Item 6 shall be treated until it meets the above limits or it shall be considered Hazardous Waste and disposed off-site at an approved facility or as otherwise authorized by the Board in writing.
8. The Licensee shall direct all Effluent from the Landfarm that meets the Effluent quality limits of Part D, Item 6 to the Splash Pad, unless otherwise approved by the Board in writing.
9. The Licensee shall dispose of soils containing contaminants in excess of the Treatment Objectives off site at an approved treatment facility or as otherwise approved by the Board in writing.
10. The Licensee shall, prior to the removal of any treated soil from the Landfarm Facility confirm with the Government of Nunavut, Environmental Protection Service that the soils have been treated to meet all legislatively-required treatment objectives.
11. The Licensee shall not mix or blend soils for the expressed purpose of attaining the specific limits of the relevant quality criteria.
12. 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.
13. The Licensee shall provide the Board with documented authorization from any community in Nunavut receiving waste related to the activities authorized under this Licence.
14. The Licensee shall submit an updated version of the Plan entitled “Operations and Maintenance Manual Kugaaruk Landfarm Facility NWB Licence No. 1BR-KRK1112”, dated April 2011 for Board approval on or before July 31, 2019, addressing the issues identified in the NWB’s December 8, 2011 correspondence as well as take into consideration the *Federal Guidelines for Landfarming Petroleum Hydrocarbon Contaminated Soils* (2013).

## **PART E: CONDITIONS APPLYING TO MODIFICATIONS AND CONSTRUCTION**

1. 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.



2. With respect to 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.
3. The Licensee shall not mobilize heavy equipment or vehicles unless the ground surface is capable of fully supporting the equipment or vehicles without rutting or gouging. Overland travel of equipment or vehicles shall be suspended if rutting occurs.
4. The Licensee shall use clean material for construction, operation, and maintenance activities obtained from an approved source which has been demonstrated not to produce acid rock drainage and to be non-metal leaching.
5. The Licensee may, without written consent from the Board, carry out Modifications to the Landfarm 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.
6. Modifications, for which all of the conditions referred to in Part E, Item 5 have not been met, can be carried out only with written approval from the Board.
7. 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 F: CONDITIONS APPLYING TO DRILLING**

1. Drilling is not authorized under this Licence.

#### **PART G: CONDITIONS APPLYING TO SPILL CONTINGENCY PLANNING**

1. Licensee shall implement the *Spill Contingency Plan* previously approved by the Board.
2. The Licensee shall submit on or before July 31, 2019 for Board review a revised *Spill Contingency Plan*, prepared in the format set out by the Consolidation of Spill Contingency Planning and Reporting Regulations R-068-93 and including the following:

- a. A site plan or topographical map of a suitable scale showing the facility location and surrounding sensitive environmental components including water bodies and
  - b. An interactive fillable copy of the NT-NU Spill Report Form should be appended to the Plan as well as the guide to spill reporting.
3. 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.
4. 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.
5. The Licensee shall provide secondary containment for fuel, chemical and contaminated water storage as required by applicable standards and acceptable industry practice.
6. If during the term of this Licence, an unauthorized discharge of Waste occurs, or if such a discharge is foreseeable, the Licensee shall:
  - a. Employ the approved Spill Contingency Plan;
  - b. Report the spill immediately to the 24-Hour Spill Line at (867) 920-8130 and to the 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.
7. The Licensee shall, in addition to Part G, Item 6, regardless of the quantity of releases of harmful substances, report to the NWT/NU Spill Line if the release is near or into a Water body.

**PART H: CONDITIONS APPLYING TO CLOSURE AND RECLAMATION OR TEMPORARY CLOSURE**

1. The Licensee shall implement the Plan entitled “Interim Abandonment and Reclamation Plan for the Kugaaruk Landfarm Facility” dated December 2012 that was originally approved by the Board.
2. The Licensee shall complete all restoration work prior to the expiry of this Licence.
3. The Licensee shall carry out progressive reclamation of any components of the project no longer required for the Licensee’s operations.
4. The Licensee shall notify the Board of its intention to proceed with final abandonment of undertaking at least six (6) months prior to the planned dates of closure.

5. The Licensee shall backfill and restore, all temporary containment sumps, to the pre-existing natural contours of the land.
6. The Licensee shall remove from the site, all infrastructure and site materials, including all fuel caches, drums, barrels, buildings and contents, docks, water intakes, pumps and lines, material and equipment prior to the expiry of this Licence.
7. The Licensee shall remove any culverts and restore the drainage to match the natural channel. Measures shall be implemented to minimize erosion and sedimentation.
8. 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.
9. 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 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.
10. The Licensee shall contour and stabilize all disturbed areas to reduce erosion and sedimentation to Water, upon completion of the undertaking and as per Part H, Item 2.

## **PART I: CONDITIONS APPLYING TO THE MONITORING PROGRAM**

1. The Licensee shall maintain, at a minimum, the following existing Monitoring Program Stations or as otherwise approved by the Board in writing:

<b>Monitoring Station Label</b>	<b>Description</b>	<b>Frequency</b>	<b>Parameters</b>
SW1	Monitoring station located within the run-off water retention cell	Prior to discharge	Quality in accordance with Part I, Item 6 and Part I, Item 7
SW2	Effluent discharged point for the Landfarm Facility	At least once during discharge	Volume in accordance with Part I, Item 5 Quality in accordance with Part I, Item 10
MW1	Groundwater monitoring station located approximately 3 m outside landfarm berm to west of the southwest corner and to north of stream	Twice per year (Once during spring freshet and once during mid-summer)	Quality in accordance with Part I, Item 8 Static groundwater level in accordance with Part I, Item 9

MW2	Groundwater monitoring station located approximately 3 m outside landfarm berm at approximately centre of the west-southwest wall and to northwest of MW1	Twice per year (Once during spring freshet and once during mid-summer)	Quality in accordance with Part I, Item 8  Static groundwater level in accordance with Part I, Item 9
MW3	Groundwater monitoring station located approximately 3 m outside landfarm berm to south of the west corner and to northwest of MW2	Twice per year (Once during spring freshet and once during mid-summer)	Quality in accordance with Part I, Item 8  Static groundwater level in accordance with Part I, Item 9
MW4	Groundwater monitoring station located approximately 3 m outside landfarm berm to north of the west corner and to north of MW3	Twice per year (Once during spring freshet and once during mid-summer)	Quality in accordance with Part I, Item 8  Static groundwater level in accordance with Part I, Item 9
MW5	Groundwater monitoring station located approximately 3 m outside landfarm berm to the northeast of the west corner and to northeast of MW4	Twice per year (Once during spring freshet and once during mid-summer)	Quality in accordance with Part I, Item 8  Static groundwater level in accordance with Part I, Item 9
MW6	Groundwater monitoring station located approximately 10 m outside landfarm to east of the east Corner	Twice per year (Once during spring freshet and once during mid-summer)	Quality in accordance with Part I, Item 8  Static groundwater level in accordance with Part J, Item 9

2. The Licensee shall confirm the locations and GPS coordinates for all Monitoring Program Stations referred to in Part J, Item 1 with an Inspector.
3. The Licensee shall measure and record the volume of all soil from all locations entering the Landfarm.
4. The Licensee shall assess and record the concentration of F1 – F4 fractions in petroleum hydrocarbon contaminated soil entering the Landfarm from all sources, as per the CCME *Canada-Wide Standard for Petroleum Hydrocarbons in (PHC) in Soil*.
5. The Licensee shall record the volume of all Effluent discharged from the Landfarm at Monitoring Program Station SW2.
6. The Licensee shall sample prior to discharge at Monitoring Program Station SW1, to verify compliance with the Effluent quality limits under Part D, Item 6.
7. The Licensee shall sample prior to discharge at Monitoring Program Station SW1 and analyze for the following parameters:

pH	Conductivity
Total Suspended Solids	Ammonia Nitrogen
Nitrate – Nitrite	Oil and Grease (visual)
Total Phenols	Sulphate
Total Hardness	Total Alkalinity
Sodium	Potassium
Magnesium	Calcium
Chloride	Total Cadmium
Total Copper	Total Chromium
Total Iron	Total Lead
Total Mercury	Total Nickel
Total Zinc	Total Phosphorous
Total Aluminum	Total Manganese
Total Cobalt	Total Arsenic
Total Petroleum Hydrocarbons (TPH)	
Polycyclic Aromatic Hydrocarbons (PAH)	
Benzene, Toluene, Ethylbenzene, Xylene (BTEX)	

8. The Licensee shall sample twice per year, once during spring freshet and once during mid-summer, at Monitoring Program Stations MW1, MW2, MW3, MW4, MW5, and MW6 and analyze for the parameters listed under Part I, Item 7.
9. During sampling events conducted under Part I, Item 8, the Licensee shall monitor the static depth to the groundwater level at Monitoring Program Stations MW1, MW2, MW3, MW4, MW5, and MW6.
10. The Licensee shall sample the Effluent discharged from Monitoring Program Station SW2 at least once during a particular discharge event to verify compliance with the Effluent quality limits under Part D, Item 6 and to analyze for the parameters listed under Part I, Item 7.
11. The Licensee shall maintain at least two groundwater monitoring wells down-gradient of the Landfarm.
12. The Licensee shall maintain at least one groundwater monitoring well up-gradient of the Landfarm for background data collection.
13. The Licensee shall sample soil being treated in the Landfarm no less frequently than once every four (4) months during the period of active land treatment to monitor contaminant levels until analytical results are below acceptable levels as determined under Part D, Item 10.
14. The Licensee shall determine the GPS coordinates of all locations where remediated soil is deposited.
15. The Licensee shall record the date, amount, soil quality and final destination of all treated soil removed from the Landfarm Facility under Part D, Item 10.

16. 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.
17. All analyses shall be performed in a laboratory accredited according to ISO/IEC Standard 17025. The accreditation shall be current and in good standing.
18. The Licensee shall include in the Annual Report required under Part B, Item 3 all data, monitoring results and information required by this Part.
19. The Board had previously accepted the Plan entitled “Quality Assurance and Quality Control Plan for the Kugaaruk Landfarm Facility NWB Licence No 1BR-KRK1112, dated April 2011.
20. Modifications to the Monitoring Program may be made only upon written request and subsequent approval of the Board in writing.

## **TABLES**

**Table 1 Remediation Requirements**

	Soil Texture	Agricultural Land Use	Residential/Parkland Land Use	Commercial Land Use	Industrial Land Use
Fraction 1	Fine	210 (170 <sup>a</sup> )	210 (170 <sup>a</sup> )	320 (170 <sup>a</sup> )	320 (170 <sup>a</sup> )
	Coarse	30 <sup>b</sup>	30 <sup>b</sup>	320 (240 <sup>a</sup> )	320 (240 <sup>a</sup> )
Fraction 2	Fine	150	150	260 (230 <sup>a</sup> )	260 (230 <sup>a</sup> )
	Coarse	150	150	260	260
Fraction 3	Fine	1300	1300	2500	2500
	Coarse	300	300	1700	1700
Fraction 4	Fine	5600	5600	6600	6600
	Coarse	2800	2800	3300	3300
Benzene	Fine	0.0068	0.0068	0.0068	0.0068
	Coarse	0.03	0.03	0.03	0.03
Toluene	Fine	0.08	0.08	0.08	0.08
	Coarse	0.37	0.37	0.37	0.37
Ethylbenzene	Fine	0.018	0.018	0.018	0.018
	Coarse	0.082	0.082	0.082	0.082
Xylene	Fine	2.4	2.4	2.4	2.4
	Coarse	11	11	11	11
Lead	Fine	70	140	260	600
	Coarse				
Polychlorinated biphenyls	Fine	0.5	1.3	33	33
	Coarse				

Notes: All values are in parts per million (ppm).

a = Where applicable, for protection of potable groundwater.

b = Assumes contamination near residence

Data from CCME *Canada-Wide Standards for Petroleum Hydrocarbons (PHC) in Soil*, (2001) Revised January 2008 and the Government of Nunavut *Environmental Guideline for Site remediation* (2009).