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NUNAVUT WATER BOARD  
NUNAVUT IMALIRIYIN KATIMAYINGI  
OFFICE DES EAUX DU NUNAVUT

File No: **1BR-CST2328**

April 5, 2023

Kitikmeot Environmental Ltd.  
P.O. Box 6  
30B Mitik Street  
Cambridge Bay, NU  
X0B 0C0

Email: [regulatory@kblenv.com](mailto:regulatory@kblenv.com)

**RE: NWB Replacement Water Licence No: 1BR-CST2328**

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Dear Kitikmeot Environmental Ltd.:

Please find attached Water Licence No: **1BR-CST2328** issued to Kitikmeot Environmental Ltd. 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 renewal 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 renewal 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 (NWNSRTA or 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.

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 application 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 by Crown-Indigenous Relations and Northern Affairs Canada (CIRNA) and Environment and Climate Change Canada (ECCC) on issues identified. This information is attached for your consideration.<sup>1</sup>

Sincerely,

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Lootie Toomasie  
Nunavut Water Board,  
Chair

LT/ak/rh

Enclosure: Replacement Licence No: **1BR-CST2328**

Comments—CIRNA, ECCC

Cc: Distribution List—Kitikmeot

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<sup>1</sup> Crown-Indigenous Relations and Northern Affairs (CIRNA), March 3, 2023; Environment and Climate Change Canada (ECCC), March 3, 2023.

## TABLE OF CONTENTS

DECISION .....	ii
I. BACKGROUND .....	iii
II. PROCEDURAL HISTORY .....	iii
III. GENERAL CONSIDERATIONS .....	iii
A. Scope, Definitions and Enforcement .....	iv
B. General Conditions .....	iv
C. Conditions Applying to Water Use.....	iv
D. Conditions Applying to Waste and Waste Management .....	iv
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.....	v
WATER LICENCE .....	1
PART A: SCOPE, DEFINITIONS AND ENFORCEMENT .....	2
1. Scope .....	2
2. Definitions .....	2
3. Enforcement .....	4
PART B: GENERAL CONDITIONS .....	5
PART C: CONDITIONS APPLYING TO WATER USE .....	6
PART D: CONDITIONS APPLYING TO WASTE DISPOSAL .....	7
PART E: CONDITIONS APPLYING TO MODIFICATIONS AND CONSTRUCTION .....	8
PART F: CONDITIONS APPLYING TO DRILLING OPERATIONS .....	9
PART G: CONDITIONS APPLYING TO SPILL CONTINGENCY PLANNING .....	10
PART H: CONDITIONS APPLYING TO CLOSURE AND RECLAMATION OR TEMPORARY CLOSURE.....	10
PART I: CONDITIONS APPLYING TO THE MONITORING PROGRAM.....	11
TABLES .....	14
Table 1 Remediation Requirements .....	14

## DECISION

### LICENCE NUMBER: 1BR-CST2328

This is the decision of the Nunavut Water Board (NWB or Board) with respect to an application dated December 21, 2022 for a renewal of a Water Licence made by:

#### KITIKMEOT ENVIRONMENTAL LTD.

to allow for the use of Water and the deposit of Waste during operation of the proposed Cambridge Bay Soil and Water Treatment Facility located within the Kitikmeot Region, Nunavut, generally located at the geographical coordinates as follows:

Project Extents:

Latitude: 69° 07' 44" N	Longitude: 105° 02' 46" W
Latitude: 69° 07' 44" N	Longitude: 105° 02' 27" W
Latitude: 69° 07' 38" N	Longitude: 105° 02' 27" W
Latitude: 69° 07' 36" N	Longitude: 105° 02' 47" 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 is exempt from the requirements for screening as described within s. 12.4.3 / Schedule 12-1 of the *Nunavut Agreement* as determined by the Nunavut Planning Commission (NPC)<sup>1</sup>, 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-CST2328 be issued subject to the terms and conditions contained therein. (Motion #: 2022-B1-024)**

Signed this 5<sup>th</sup> day of April, 2023 at Gjoa Haven, NU.

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Lootie Toomasie  
Nunavut Water Board, Chair  
LT/ak/rh

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<sup>1</sup> Nunavut Planning Commission, Conformity Determination, February 6, 2023.

## **I. BACKGROUND**

The Cambridge Bay Soil and Water Treatment Facility (Facility) is located approximately 700 metres northwest of the Hamlet of Cambridge Bay and adjacent to the Hamlet’s sewage lagoon. The Facility consists of three sections consisting of a landfarm for remediation of petroleum-hydrocarbon contaminated soil, a pond for contaminated snow, and a storage area of used drums. Contaminated water and/or snow is treated on-site using a mobile wastewater treatment plant.

## **II. PROCEDURAL HISTORY**

The previous Type “B” Water Licence No: 1BR-CST1723 was issued on March 23, 2017 to Kitnuna Environmental Ltd. The Board set a six-year licence term resulting in the licence expiring on March 23, 2023. On May 22, 2020, an Assignment of Water Licence No: 1BR-CST1723 was granted by the NWB from Assignor Kitnuna Environmental Ltd. to Assignee Kitikmeot Environmental Ltd.

On December 21, 2022, a licence renewal application (Application) was received from Kitikmeot Environmental Ltd. by the NWB, requesting that the licence be renewed for a five-year term.

On February 6, 2023, the Nunavut Planning Commission (NPC) confirmed that the Project proposal falls outside of an area with an approved land use plan, and, as such, a conformity determination is not required. In addition, the NPC determined that the Project proposal is exempt from the requirements for screening by the Nunavut Impact Review Board (NIRB).

The Board distributed the Application for public review on February 10, 2023, once the Board received the conformity determination from the NPC.

On March 3, 2023, the NWB received comments submissions on the Application from Crown-Indigenous Relations and Northern Affairs (CIRNA) and Environment and Climate Change Canada (ECCC). On March 28, 2023, KEL provided responses and necessary updates to its management plans as recommended by the interveners.

## **III. GENERAL CONSIDERATIONS**

On the basis of the Application, the written materials filed with the Board, and submissions of the parties, the Board has decided to issue Type “B” Water Licence No: 1BR-CST2328 (the Licence) subject to the terms and conditions set out below. The Licence authorizes the Kitikmeot Environmental Ltd. (KEL or Licensee) to continue the 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 five-year term for this Licence, which the NWB believes is appropriate for the Project. The Board has, therefore, granted the five-year term requested by KEL.

## **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 Facility.

### *Enforcement*

To ensure that the Licensee complies with the terms and conditions of the Licence, inspectors designated and empowered by the Minister of 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>2</sup>

### *Compliance*

KEL 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**

The Board has approved the Plan entitled “Waste Management Plan” dated March 2022 that was submitted as additional information with the Application.

Under this Licence, the original effluent discharge criteria have been revised as per the feedback from ECCC, with which the Licensee agreed. The revisions include removing the Effluent limit for oil and grease and including the limit for total petroleum hydrocarbons.

The Board has approved the Plan entitled “Operations and Maintenance Plan” dated March 2022 and submitted as additional information with the Application. However, the Licensee is required to submit an update to the Plan addressing in full ECCC’s recommendations regarding the quality

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<sup>2</sup> Sections 85-88 of the *NWNSRTA*.

assurance and quality control procedures for sampling. The recommendations were provided by ECCC on March 3, 2023 as the result of the public review of the Application.

#### **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 G, Item 2 of the Licence. Changes that do not meet the definition of a Modification under the Licence or the requirements of Part G may be considered amendments to the Licence.

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

The Licensee is authorized to drill for the purposes of installing monitoring instrumentation, including monitoring wells and thermistors.

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

The Board has approved the Plan entitled “Spill Contingency Plan” dated March 2022 that was submitted as additional information with the Application.

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

The Board has approved the Plan entitled “Closure and Reclamation Plan” dated March 2022 that was submitted as additional information with the Application.

#### **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 WATER LICENCE

**Licence No: 1BR-CST2328**

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

**KITIKMEOT ENVIRONMENTAL LTD.**

(Licensee)

**P.O. BOX 6, 30B MITIK STREET, 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-Amendment:

Licence Number/Type: **1BR-CST2328 / TYPE "B"**

Water Management Area: **SOUTHERN VICTORIA ISLAND WATERSHED (8)**

Location: **CAMBRIDGE BAY SOIL AND WATER TREATMENT  
FACILITY PROJECT  
KITIKMEOT REGION, NUNAVUT**

Classification: **INDUSTRIAL UNDERTAKING**

Purpose: **DIRECT DEPOSIT OF WASTE**

Quantity of Water use not  
to Exceed: **WATER USE IS NOT AUTHORIZED**

Date of Licence Issuance: **APRIL 5, 2023**

Expiry of Licence: **APRIL 4, 2028**

This Licence replacement, 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 Cambridge Bay Soil and Water Treatment Facility Project, located within the Hamlet of Cambridge Bay in the Kitikmeot Region, Nunavut.

- a. This Licence is issued subject to the conditions contained herein with respect to the taking of Water and 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*;

“**Cambridge Bay Soil and Water Treatment Facility**” means the engineered facility designed and constructed to manage petroleum hydrocarbon contaminated soil, contaminated snow/water, used drums, and hazardous material as described in the Application dated December 21, 2022;

**“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*;

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

**“High Water Mark”** means the usual or average level to which a water body 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;

**“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;

**“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”** means 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 in the F3 and F4 fraction;

**“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 in the F1 and F2 fraction;

**“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;
  - b. Quantity of Waste disposed of on on-site Waste disposal facility;
  - c. Quantity of Waste backhauled to approved facility for disposal;
  - d. A list of unauthorized discharges and a summary of follow-up actions taken;
  - e. Any revisions to the management plans, as required by Part B, Item 6, submitted in the form of an Addendum;
  - f. A description of all progressive and or final reclamation work undertaken, including photographic records of site conditions before, during and after completion of operations;
  - g. A summary of all information requested and results of the Monitoring Program;
  - h. Details pertaining to locations of sump(s) and drill holes;
  - i. 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;
  - j. Detailed discussion on the performance, installation, and evaluation, including the use of photographic record, of the primary and secondary containment functions used in fuel storage to safeguard impacts to freshwaters;
  - k. A summary of public consultation/participation, describing consultation with local organizations and residents of the nearby communities, if any were conducted;
  - l. Any other details on Water use or 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, where applicable, install flow meters or other such devices, or implement suitable methods required for measuring the volume of Effluent generated by the undertaking, as required under Part I, Item 2 of this Licence.
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) 975-4284  
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 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 Licensee is not authorized to use Water 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 water body 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 Board has approved the Plan entitled “Waste Management Plan” dated March 2022 that was submitted as additional information with the Application.
2. The Licensee shall treat, to the Treatment Objective, Type B Soil in the Landfarm, or as otherwise approved by the Board.
3. Effluent discharged from the Cambridge Bay Soil and Water Treatment Facility at Monitoring Station CST-1 shall not exceed that the following discharge limits:

Parameter	Maximum Allowable Concentration (mg/L)
pH	6 to 9 (pH units)
TSS	50
Total Lead	0.001
Benzene	0.37
Toluene	0.002
Ethylbenzene	0.090
Total Petroleum Hydrocarbons (TPH)	5.0

4. If the Effluent associated with Part D, Item 3 does not meet the Effluent limits under Part D, Item 3, it shall be considered hazardous Waste and disposed off-site at an approved facility or as otherwise approved by the Board in writing.
5. The discharge location for all treated Effluent described in Part D, Item 3, shall be at a minimum of thirty-one (31) metres from the ordinary High Water Mark of any water body and where direct flow into a water body is not possible and no additional impacts created.
6. The Licensee shall provide at least ten (10) days written notice to the Inspector prior to any planned discharges from the Cambridge Bay Soil and Water Treatment Facility. The notice shall include an estimated discharge volume, Effluent quality or results of monitoring under Part I, Item 5, and the proposed location for the discharge.
7. The Board has approved the Plan entitled “Operations and Maintenance Plan” dated March 2022 and submitted as additional information with the Application.
8. The Licensee shall, within sixty (60) days of issuance of the Licence, submit to the Board for review an updated Plan referred to in Part D, Item 7, addressing the issues on quality assurance/quality control as discussed during the 2023 licensing process.

9. The Licensee shall implement appropriate measures to minimize erosion during any discharge of Effluent into the receiving environment.
10. The Licensee shall backhaul and dispose of all hazardous Wastes generated through the course of the operation at a licensed Waste disposal site.
11. 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.
12. 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.
13. The Licensee shall, prior to the removal of any treated soil from the Cambridge Bay Soil and Water Treatment Facility confirm with the Government of Nunavut, Environmental Protection Service that the soils have been treated to meet all legislatively-required treatment objectives.
14. The Licensee shall not mix or blend soils for the expressed purpose of attaining the specific limits of the relevant quality criteria.
15. The Licensee shall dispose of any material coated with Polychlorinated Biphenyl (PCB) amended paints, hazardous materials and soils containing contaminants in excess of *Canadian Environmental Protection Act* (CEPA) Guidelines, with the exception of asbestos, off site at an approved treatment facility, in accordance with relevant regulations.
16. The Licensee shall maintain the Cambridge Bay Soil and Water Treatment Facility to the satisfaction of the Inspector.

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

1. Licensee shall, at least sixty (60) days prior to commencing construction activities for the facility approved under this Licence, provide to the Board for review and acceptance for-construction drawings and design plans and specifications.
2. The Licensee may, without written consent from the Board, carry out Modifications to the Cambridge Bay Soil and Water Treatment Facility 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.
- 3. Modifications for which all of the conditions referred to in Part G, Item 2 have not been met can be carried out only with written approval from the Board.
- 4. The Licensee shall provide as-built plans and drawings of the construction and Modifications referred to in this Licence within ninety (90) days of completion of the Modification or construction. These plans and drawings shall be stamped by an Engineer.
- 5. 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.
- 6. 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.
- 7. 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.
- 8. Stream crossing shall be a minimum of five hundred (500) meters from spawning areas.
- 9. The Licensee shall design and construct all stream crossings to minimize erosion and/or deposition of Waste into Water.
- 10. Granular materials and rock rip-rap used for any temporary stream crossings, approaches or as may be required for bank stabilization must be obtained from a source approved by an Inspector, and be clean and free of contaminants. Such material must not be removed or gathered from below the ordinary High Water Mark of any Water body.

**PART F: CONDITIONS APPLYING TO DRILLING OPERATIONS**

- 1. The Licensee is authorized to drill for the purposes of installing monitoring instrumentation, including monitoring wells and thermistors.
- 2. The Licensee shall not conduct any land-based drilling within thirty-one (31) metres of the ordinary High Water Mark of any water body, unless otherwise approved by the Board in writing.
- 3. The Licensee shall dispose of all drill waste, including Water, chips, muds and salts (CaCl<sub>2</sub>) in any quantity or concentration, from land-based drilling, in a properly



constructed Sump or an appropriate natural depression located at a distance of at least thirty-one (31) metres from the ordinary High Water Mark of any adjacent water body, where direct flow into a water body is not possible and no additional impacts are created.

4. If artesian flow is encountered, drill holes shall be immediately sealed and permanently capped to prevent induced contamination of groundwater or salinization of surface Waters. The Licensee shall report all artesian flow occurrences within the Annual Report, including the location (GPS coordinates) and dates.

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

1. The Board has approved the Plan entitled “Spill Contingency Plan” dated March 2022 that was submitted as additional information with the Application.
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 NWT/NU 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.
5. The Licensee shall, in addition to Part H, Item 4, regardless of the quantity of releases of harmful substances, report to the NWT/NU 24-Hour 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 Board has approved the Plan entitled “Closure and Reclamation Plan” dated March 2022 that was submitted as additional information with the Application.
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 backfill and restore all sumps to the pre-existing natural contours of the land.
5. 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.
6. The Licensee shall remove any culverts and restore the drainage to match the natural channel. Measures shall be implemented to minimize erosion and sedimentation.
7. 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.
8. Areas that have been contaminated by hydrocarbons 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.
9. The Licensee shall restore all drill holes and disturbed areas to natural conditions. The restoration of drill holes must include the removal of any drill casing materials and if having encountered artesian flow, the capping of holes with a permanent seal. Where drill casings cannot be removed the Licensee shall cut off the casings at ground level and identify with signage.
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 I, Item 3.

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

1. The Licensee shall establish and maintain at least the following Monitoring Program Stations at locations described in the Table below or as otherwise approved by the Board in writing:

<b>Monitoring Program Station ID</b>	<b>Description</b>	<b>Status</b>
CST-1	Final discharge point from the Cambridge Bay Soil and Water Treatment Facility	Active (Volume & Quality)
CST-2	Monitoring Station located up-gradient of the discharged from the	Active (Volume & Quality)

CST-3	Monitoring station located down-gradient of the Cambridge Bay Soil and Water Treatment Facility	Active (Volume & Quality)
CST-4	Monitoring station located down-gradient of the Cambridge Bay Soil and Water Treatment Facility	Active (Volume & Quality)

2. The Licensee shall measure and record, in cubic metres, the daily quantities of Effluent discharged from the Cambridge Bay Soil and Water Treatment Facility.
3. The Licensee shall determine the GPS co-ordinates (in degrees, minutes and seconds of latitude and longitude) of all locations where Wastes associated with the undertaking are deposited.
4. The Licensee shall monitor compliance with respect to Part D, Item 3 by collecting a representative composite sample from a minimum of 5% of the total volume to be released from the Final Discharge Point of the Cambridge Bay Soil and Water Treatment Facility at Monitoring Program Stations CST-1.
5. The Licensee shall sample Monitoring Program Stations CST-1, CST-2, CST-3, and CST-4 and analyze the samples collected 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)	BOD <sub>5</sub>
Polycyclic Aromatic Hydrocarbons (PAH)	Total Coliform
Benzene, Toluene, Ethylbenzene, Xylene (BTEX)	

6. 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 13.
7. The Licensee shall determine the GPS coordinates of all locations where remediated soil

is deposited.

8. The Licensee shall record the date, amount, soil quality and final destination of all treated soil removed from the Cambridge Bay Soil and Water Treatment Facility under Part D, Item 13.
9. Modifications to the Monitoring Program may be made only upon written request and subsequent approval of the Board in writing.
10. 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.
11. All analyses shall be performed in a laboratory accredited according to ISO/IEC Standard 17025. The accreditation shall be current and in good standing.
12. The Licensee shall include in the Annual Report required under Part B, Item 1 all data, monitoring results and information required by this Part.
13. An Inspector may impose additional monitoring requirements.

## **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).