



ᓄᓇᓂᓪ ᐃᓕᓕᓂᓪ ᓅᓂᓕᓂᓪ
NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI
OFFICE DES EAUX DU NUNAVUT

File No.: 1BR-SWT1924

June 13, 2019

Glen Molloy
Nunavut Excavating 2007 Inc.
1825 Federal Road
P.O. Box 1984
Iqaluit, NU X0A 0H0

Email: nunavutexcavating@northwestel.net

RE: NWB New Water Licence No. 1BR-SWT1924

Dear Glen Molloy:

Please find attached Licence No. 1BR-SWT1924 issued to Nunavut Excavating 2007 Inc. 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 (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 (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 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 (CIRNAC) and Environment and Climate Change Canada (ECCC) on issues identified. This information is attached for your consideration.¹

Sincerely,

Lootie Toomasie
Nunavut Water Board,
Chair

LT/ak/rqd

Enclosure: New Licence No. 1BR-SWT1924

Comments – CIRNAC, ECCC

Cc: Distribution List – Kitikmeot

¹ Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC), May 3, 2019; Environment and Climate Change Canada (ECCC), April 25, 2019.

TABLE OF CONTENTS

DECISION	ii
INTRODUCTION	iv
PROCEDURAL HISTORY	iv
GENERAL CONSIDERATIONS	v
A. Term of the Licence.....	v
B. Annual Report.....	v
C. Water Use	v
D. Deposit of Waste	v
E. Camps, Access Infrastructures and Operations	v
F. Drilling Operations	vi
G. Construction and Modifications.....	vi
H. Spill Contingency Planning	vi
I. Closure and Reclamation or Temporary Closure.....	vi
J. Monitoring Program	vi
WATER LICENCE	1
PART A: SCOPE, DEFINITIONS AND ENFORCEMENT	2
1. Scope	2
2. Definitions	2
3. Enforcement	5
PART B: GENERAL CONDITIONS	5
PART C: CONDITIONS APPLYING TO WATER USE	7
PART D: CONDITIONS APPLYING TO WASTE DISPOSAL	7
PART E: CONDITIONS FOR CONSTRUCTION AND OPERATIONS	9
PART F: CONDITIONS APPLYING TO DRILLING OPERATIONS	11
PART G: CONDITIONS APPLYING TO MODIFICATIONS	11
PART H: CONDITIONS APPLYING TO SPILL CONTINGENCY PLANNING	12
PART I: CONDITIONS APPLYING TO CLOSURE AND RECLAMATION OR TEMPORARY CLOSURE	12
PART J: CONDITIONS APPLYING TO THE MONITORING PROGRAM	13
TABLES	16
Table 1 Remediation Requirements	16

DECISION

LICENCE NUMBER: 1BR-SWT1924

This is the decision of the Nunavut Water Board (NWB or Board) with respect to an application dated January 24, 2019 for a new Water Licence made by:

NUNAVUT EXCAVATING 2007 INC.

to allow for the deposit of Waste associated with the Soil and Water Treatment Facility – Cambridge Bay located within the Kitikmeot Region, Nunavut, generally located at the geographical coordinates as follows:

Project Extents:

Latitude: 69° 07' 40.5624" N	Longitude: 105° 02' 54.0847" W
Latitude: 69° 07' 41.6604" N	Longitude: 105° 02' 44.0280" W
Latitude: 69° 07' 39.2088" N	Longitude: 105° 02' 44.0229" W
Latitude: 69° 07' 37.7076" N	Longitude: 105° 02' 54.0847" 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 as determined by the Nunavut Planning Commission (NPC)¹, and is subject to the terms and conditions recommended by the Nunavut Impact Review Board's (NIRB)² Screening Decision Report in accordance with Article 12 of the Nunavut Agreement and s. 88, 92(1) and 92(2)(a) of Nunavut Planning and Project Assessment Act (*NuPPAA*), 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* 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:

New Licence No. 1BR-SWT1924 be issued subject to the terms and conditions contained therein. (Motion #: 2019-B1-007)

Signed this 13th day of June, 2019 at Gjoa Haven, NU.

Lootie Toomasie

¹ Nunavut Planning Commission, Conformity Determination, July 31, 2018.

² Nunavut Impact Review Board (NIRB) Screen Determination, September 4, 2018.

Nunavut Water Board,
Chair

LT/ak/rqd

INTRODUCTION

Nunavut Excavating 2007 Inc. plans to construct a soil and water treatment facility in the vicinity of the Cambridge Bay municipal landfill. The facility will consist of:

- A cell for storage and treatment of petroleum-hydrocarbon-contaminated soil;
- A cell for storage of petroleum-hydrocarbon-contaminated snow and water;
- A cell for storage of hazardous waste awaiting shipment to an authorized facility;
- A water treatment plant;
- Treated water storage tanks; and
- A storage for supplies, documentation, and health and safety equipment.

Currently, Nunavut Excavating has excavated approximately 1000 m³ of soil contaminated by leaking fuel tanks in three houses in Cambridge Bay. The facility will be used to treat this soil and any fuel-contaminated soil, snow or water collected from the community in the future. The quantity of contaminated water to be treated is expected to be 250 m³ per year, but the facility can have a potential for water treatment of up to 800 m³ per year.

PROCEDURAL HISTORY

On July 31, 2018, the Nunavut Planning Commission (NPC) issued correspondence indicating that the project proposal is outside the area of an applicable regional land use plan. On September 4, 2018, the Nunavut Impact Review Board issued its Screening Decision notifying that a review of the project is not required in accordance with paragraph 92(1)(a) of the Nunavut Planning and Project Assessment Act (NuPPAA). The Screening Decision was issued with recommendations.

On February 3, 2019, the Nunavut Water Board (NWB or Board) received the following documents as part of the water licence application (Application) by Nunavut Excavating 2007 Inc. (Nunavut Excavating or Licensee) for the project:

- Water Licence Application;
- Soil Treatment Facility Site Plan dated June 2018;
- Post [sic] Construction Reclamation Plan Summary, undated;
- Soil Treatment Facility Site Conceptual Design dated June 2018;
- Emergency Response Plan dated June 2018;
- Environmental Protection Plan dated July 2018;
- Financial Statements dated March 31, 2018;
- Articles of Incorporation dated February 27, 2007;
- Operations and Maintenance Plan dated June 2018;
- Project description and English, Inuktitut and Inuinnaqtun;
- Spill Contingency Plan dated June 2018;
- Topographic Plan dated October 30, 2018; and
- Waste Management Plan dated June 2018.

In addition, during the course of the technical review, the Licensee provided the following information:

- Baseline Conditions Assessment, Environmental Monitoring, Reclamation and Post-Closure Plan Cambridge Bay Soil and Water Treatment Facility dated March 26, 2019;
- Newterra Statement of Qualifications, undated;
- Specifications sheet for a trailer-mounted water treatment plant;
- Water treatment plant process and instrumentation diagram;
- Updated Environmental Protection Plan dated July 2018;
- Updated Operations and Maintenance Plan dated June 2018;
- Updated Spill Contingency Plan dated June 2018; and
- Updated Waste Management Plan dated June 2018.

GENERAL CONSIDERATIONS

A. Term of the Licence

In accordance with the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* S. 45, the NWB may issue a licence for a term not exceeding twenty-five years. The applicant requested a five-year term for the licence, which the NWB believes is consistent with and appropriate for the type of undertaking and schedule of activities proposed in the application. The Board has therefore granted the requested term.

B. Annual Report

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. Water Use

No water use is authorized under this Licence except for the purposes of groundwater monitoring and sampling.

D. Deposit of Waste

The Board has approved the Plan entitled *Waste Management Plan* dated June 2018 with issuance of this Licence. As per Part D, Item 2 the Licensee shall provide within sixty (60) days of issuance of this Licence an update to the Plan referred to in Part D, Item 1 to reflect the Licence terms and conditions. The Board granted the Licensee's request to discharge treated water into a watercourse as described in the Nunavut Excavating's submission dated May 30, 2019; however, the Board imposed effluent quality limits to ensure protection of aquatic environment. The Board also set quality limits for discharge from drainage management systems during construction. In addition, the requirements for treatment of contaminated soils are listed in Part D with the Treatment Objective as defined in Part A, Item 2 and Table 1 of the Licence.

E. Camps, Access Infrastructures and Operations

The Board has approved the Plan entitled *Operations and Maintenance Plan* dated June 2018. The Licensee shall provide within sixty (60) days of issuance of this Licence an update to the Plan referred to in Part E, Item 2 to reflect the Licence terms and conditions.

F. Drilling Operations

The Licensee is authorized to drill for the purposes of installing monitoring wells and/or thermistors, and other instrumentation required for the monitoring of the Waste Disposal Facilities.

G. Construction and Modifications

The Applicant is required to obtain permission from the NWB for modifications that do not meet the definition of modifications or requirements of Part G, Item 1 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 modification under the Licence or the requirements of Part G may be considered amendments to the Licence.

H. Spill Contingency Planning

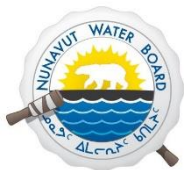
The Board has approved the Plan entitled *Spill Contingency Plan* dated June 2018. The Licensee shall provide within sixty (60) days of issuance of this Licence an update to the Plan to include CIRNAC Inspector contact information and a requirement to notify the Inspector in case of spills.

I. Closure and Reclamation or Temporary Closure

The Licensee shall submit to the Board for approval, an Abandonment and Restoration Plan at least six (6) months prior to abandoning any facilities or the construction of new facilities to replace existing ones.

J. Monitoring Program

The Board has approved the *Baseline Conditions Assessment, Environmental Monitoring, Reclamation and Post-Closure Plan Cambridge Bay Soil and Water Treatment Facility* dated March 26, 2019. The Licensee shall provide within sixty (60) days of issuance of this Licence an update to the Plan to reflect the Licence terms and conditions. Conditions have been included that require the Licensee to monitor water quality up-gradient and down-gradient of the Waste Disposal Facilities and the quality of soil treated in the Landfarm, as well as quality of treated water.



NUNAVUT WATER BOARD WATER LICENCE

Licence No. 1BR-SWT1924

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

NUNAVUT EXCAVATING 2007 INC.

(Licensee)

1825 FEDERAL ROAD, P.O.BOX 1984, IQALUIT, NU X0A 0H0

(Mailing Address)

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

Licence Number/Type: **1BR-SWT1924 / TYPE "B"**

Water Management Area: **SOUTHERN VICTORIA ISLAND WATERSHED (38)**

Location: **KITIKMEOT REGION, NUNAVUT**

Classification: **INDUSTRIAL UNDERTAKING**

Purpose: **WATER USE FOR MONITORING AND DEPOSIT OF WASTE**

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

Date of Licence Issuance: **JUNE 13, 2019**

Expiry of Licence: **JUNE 12, 2024**

This Licence amendment, 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 use of Water and deposit of Waste for an Industrial undertaking classified as per Schedule 1 of the *Regulations* at the Soil and Water Treatment Facility – Cambridge Bay, located approximately 650 metres northeast of the Hamlet of Cambridge Bay within 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*;

“**Borrow Pits**” means sites for which materials, such as gravel or sand, are excavated for the purposes of constructing site infrastructure and facilities;

“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;

“Contaminated Water Retention Cell” means the cell designed to store contaminated water and located upstream of the Water Treatment Plant as described in the Nunavut Excavating 2007 Inc.’s application for the water licence received by the Board on February 3, 2019;

“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;

“Hazardous Waste Storage Cell” means the cell designed for Hazardous Waste storage at the Soil and Water Treatment Facility – Cambridge Bay prior to Hazardous Waste shipment to an authorized facility;

“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” means the cell designed to contain and remediate hydrocarbon-impacted soils as described in the Nunavut Excavating 2007 Inc.’s application for the water licence received by the Board on February 3, 2019;

“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 18th 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” 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 (F3 – F4 Fractions);

“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 (F1 – F2 Fractions);

“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 all facilities designated for the purpose of disposing and/or treating waste including the Hazardous Waste Storage Cell, Landfarm, Contaminated Water Retention Cell as described in the Nunavut Excavating 2007 Inc.’s application for the water licence received by the Board on February 3, 2019;

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

“Water Treatment Package” means a water treatment plant and all accompanying infrastructure, such as atmospheric storage tanks, as described in the Nunavut Excavating 2007 Inc.’s application for the water licence received by the Board on February 3, 2019 and designed to treat contaminated water from the Contaminated Water Retention Cell.

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. Quantity of Waste disposed of on-site Waste Disposal Facilities;
 - 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. Any records pertaining to the depth of permafrost as determined based on Part F, Item 5.
 - g. A description of all progressive and or final reclamation work undertaken, including photographic records of site conditions before, during and after completion of operations;
 - h. A summary of all information requested and results of the Monitoring Program;
 - 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. If applicable, a description of any trenches and sumps excavated, including but not limited to the following: GPS coordinates, dimensions, depth below active layer, and secondary containment features;
 - k. A summary of public consultation/participation, describing consultation with local organizations and residents of the nearby communities, if any were conducted;
 - l. A summary of work done to address concerns or deficiencies listed in inspection reports and/or compliance reports prepared by an Inspector;
 - m. An executive summary in English and Inuktitut of all plans, reports, or studies conducted under this Licence; and
 - n. Any other details on Waste disposal requested by the Board by the 1st 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, for all Plans submitted under this Licence, include a proposed timetable for implementation. Plans submitted, cannot be undertaken without subsequent written Board approval and direction. The Board may alter or modify a Plan if necessary to achieve the legislative objectives and will notify the Licensee in writing of acceptance, rejection or alteration of the Plan.
 - 4. The Licensee shall, for all Plans submitted under this Licence, implement the Plan as approved by the Board in writing.
 - 5. The Licensee shall review the Plans referred to in this Licence, as required by changes in operation and/or technology, and modify the Plan accordingly. Revisions to the Plans shall be submitted in the form of an Addendum to be included with the Annual Report.
 - 6. Every Plan to be carried out pursuant to the terms and conditions of this Licence shall become a part of this Licence, and any additional terms and conditions imposed upon approval of a Plan by the Board become part of this Licence. All terms and conditions of the Licence should be contemplated in the development of a Plan where appropriate.
 - 7. The Licensee shall ensure a copy of this Licence is maintained at the site of operations at all times. Any communication with respect to this Licence shall be made in writing to the attention of:

(a) **Manager of Licensing:**
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU X0B 1J0
Telephone: (867) 360-6338
Fax: (867) 360-6369
Email: licensing@nwb-oen.ca

(b) **Inspector Contact:**
Manager of Field Operations, CIRNAC
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 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.
9. 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.
10. This Licence is assignable as provided for in Section 44 of the *Act*.
11. 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. Water use is not authorized under this Licence except for the purposes of groundwater sampling.
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 Board has approved the Plan entitled *Waste Management Plan* dated June 2018.
2. The Licensee shall submit for Board's review within (60) days of issuance of the Licence an update to the Plan referred to in Part D, Item 1 to reflect the Licence terms and conditions.
3. The Licensee shall operate the Waste Disposal Facilities as per the Plan referred to in Part D, Item 1 and to the satisfaction of the Inspector.
4. 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.

5. The exception to the requirement set out in Part D, Item 4 is the Final Discharge Point SWT-1 as described in the Licensee's submission dated May 30, 2019.
6. The Licensee shall direct appropriate Waste originating from the Soil and Water Treatment Facility – Cambridge Bay to the Waste Disposal Facilities authorized under this Licence or as otherwise approved by the Board in writing.
7. The Licensee shall not practice on-site land filling of domestic Waste, unless otherwise approved by the Board in writing.
8. 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.
9. The Licensee shall provide to the Board documented authorization from all communities in Nunavut receiving Waste from the Soil and Water Treatment Facility – Cambridge Bay prior to any backhauling and disposal of Wastes to those communities.
10. The Licensee shall backhaul and dispose of all hazardous Waste, Waste oil and non-combustible Waste 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 and include this information within the Annual Report, under Part B, Item 1. These records shall be made available to an Inspector upon request. The Licensee shall not transport Hazardous Waste prior to registering with the Government of Nunavut as a waste generator and utilizing the prescribed manifests.
12. The Licensee shall provide notice to an Inspector at least ten (10) days prior to initiating any decant or discharge from the Waste Disposal Facilities. The notice shall include an estimated discharge volume, Effluent quality or results of monitoring under Part J, Item 5, and the proposed location for the discharge.
13. All contact water associated with the Waste Disposal Facilities including seepage from Monitoring Program Station SWT-1 shall meet the following Effluent quality limits prior to being released:

Parameter	Maximum Allowable Concentration (mg/L)
pH	6 to 9 (pH units)
TSS	50
Oil and Grease	15 and no visible sheen
Total Lead	0.001

Benzene	0.37
Toluene	0.002
Ethylbenzene	0.090

14. Effluent that exceeds Effluent quality limits in Part D, Item 13 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.
15. All surface runoff and/or discharge from drainage management systems and during the construction of any facilities and infrastructure associated with this project, where flow may directly or indirectly enter a water body, shall not exceed the following Effluent quality limits:

Parameter	Maximum Average Concentration (µg/L)	Maximum Concentration of Any Grab Sample (µg/L)
Total Suspended Solids	50.0	100
Oil and Grease	15,000 and no visible sheen	15,000 and no visible sheen
pH	Between 6.5 and 9.5 pH units	Between 6.0 and 9.5 pH units

16. All water being pumped from excavated areas shall be contained at a holding facility and shall be treated if necessary, to meet Effluent quality limits set in Part D, Item 13, prior to being released.
17. The Licensee shall treat, to the Treatment Objective as set out in Table 1, contaminated soil in the Landfarm. The Licensee shall, prior to the removal of any treated soil for future use, confirm with the Government of Nunavut, Environmental Protection Service that the soils have been treated to meet all legislatively-required treatment objectives.
18. The Licensee shall not mix or blend soils for the expressed purpose of attaining the specific limits of the relevant quality criteria.

PART E: CONDITIONS FOR CONSTRUCTION AND OPERATIONS

1. No camp activities are authorized under the provisions of this Licence.
2. The Board has approved the Plan entitled *Operations and Maintenance Plan* dated June 2018.
3. The Licensee shall submit for Board's review within sixty (60) days of issuance of the Licence an update to the Plan referred to in Part E, Item 2 to reflect the Licence terms and conditions.
4. The Licensee shall, upon the failure of any constructed facilities, repair such facilities immediately to the appropriate standards as recommended by an Engineer.

5. The Licensee shall implement proper handling, storage and transportation procedures for hazardous materials during remediation activities.
6. The Licensee shall minimize disturbance to terrain, permafrost and drainage during development and closure, movement of contractor's equipment and personnel around the site, and removal of site debris.
7. The Licensee shall not cause erosion to the banks of any body of water and shall provide and implement necessary controls prior to and maintained during the activities to prevent such erosion and entry of sediment into Water.
8. The Licensee shall design and construct all stream crossings to minimize erosion and/or deposition of Waste into water.
9. The Licensee shall ensure that existing creek channels are maintained at their normal width and depth to the extent possible, during and after construction.
10. Granular materials and rock rip-rap used for any temporary stream crossings, approaches or required for bank stabilization must be obtained from a source that is approved by an Inspector, and is clean and free of contaminants. Such material must not be removed or gathered from below the ordinary High Water Mark of any water body.
11. All sites affected by construction or removal activities shall be stabilized, landscaped as necessary, and suitable erosion control measures implemented to minimize sediment deposition into watercourses located on or adjacent to the site.
12. The Licensee shall not store material on the surface of frozen streams or lakes including the immediate banks except what is for immediate use.
13. 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.
14. The Licensee shall construct all winter lake and stream crossings, including ice bridges, entirely of Water, ice or snow. The Licensee shall minimize disturbance by locating ice bridges in an area that requires the minimum approach grading and the shortest crossing route. Stream crossings shall be removed or the ice notched prior to spring break-up.
15. Stream crossing shall be a minimum of five hundred (500) meters from spawning areas.
16. 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.
17. The Licensee shall not mobilize heavy equipment or vehicles for trenching or other activities 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.

PART F: CONDITIONS APPLYING TO DRILLING OPERATIONS

1. The Licensee is authorized to drill for the purposes of installing groundwater monitoring wells and/or thermistors, and other instrumentation required for the monitoring.
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_2) 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.
5. The Licensee shall, where drilling activity has penetrated below the permafrost layer, record the depth of permafrost and location of the drill hole for inclusion in the annual report required by Part B, Item 1.

PART G: CONDITIONS APPLYING TO MODIFICATIONS

1. The Licensee may, without written consent from the Board, carry out Modifications to the Waste Disposal Facilities provided that such Modifications are consistent with the terms of this Licence and the following requirements are met:
 - a. the Licensee has notified the Board in writing of such proposed Modifications at least sixty (60) days prior to beginning the Modifications;
 - b. such Modifications do not place the Licensee in contravention of the Licence or the *Act*;
 - c. such Modifications are consistent with the NIRB Screening Decision;
 - d. the Board has not, during the sixty (60) days following notification of the proposed Modifications, informed the Licensee that review of the proposal will require more than sixty (60) days; and
 - e. the Board has not rejected the proposed Modifications.
2. Modifications, for which all of the conditions referred to in Part G, Item 1 have not been met, can be carried out only with written approval from the Board.
3. The Licensee shall provide as-built plans and drawings of the Modifications referred to

in this Licence within ninety (90) days of completion of the Modification. These plans and drawings shall be stamped by an Engineer.

4. The Licensee shall submit to the Board for review and acceptance, at least sixty (60) days prior to construction or in a timeframe otherwise approved by the Board in writing, final design and for-construction drawings, stamped and signed by a Professional Engineer, for all infrastructure and/or facilities designed to contain, withhold, divert or retain Water and/or Waste.

PART H: CONDITIONS APPLYING TO SPILL CONTINGENCY PLANNING

1. The Board has approved the Plan entitled *Spill Contingency Plan* dated June 2018.
2. The Licensee shall submit for Board's review within sixty (60) days of issuance of the Licence an update to the Plan referred to in Part H, Item 1 to include CIRNAC Inspector contact information and a requirement to notify the Inspector in case of spills.
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. 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.
6. The Licensee shall, in addition to Part H, Item 4, 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 I: CONDITIONS APPLYING TO CLOSURE AND RECLAMATION OR TEMPORARY CLOSURE

1. The Licensee shall submit to the Board for approval, an Abandonment and Restoration Plan at least six (6) months prior to abandoning any facilities or the construction of new facilities to replace existing ones.
2. Licensee shall implement the Plan specified in Part I, Item 1, following approval in writing by the Board.
3. The Licensee shall complete all restoration work prior to the expiry of this Licence.
4. The Licensee shall carry out progressive reclamation of any components of the project no longer required for the Licensee's operations.
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. All roads, if any, shall be re-graded to match natural contour to reduce erosion.
7. Areas that have been contaminated by hydrocarbons from normal fuel transfer procedures shall be reclaimed to meet objectives as outlined in the Government of Nunavut's Environmental Guideline for Site Remediation, 2010. The use of reclaimed soils for the purpose of back fill or general site grading may be carried out only upon consultation and approval by the Government of Nunavut, Department of Environment and an Inspector.
8. The Licensee shall contour and stabilize all disturbed areas to reduce erosion and sedimentation to Water, upon completion of the undertaking.
9. All disturbed areas shall be stabilized and re-vegetated as required, upon completion of work, and restored as practically as possible to a pre-disturbed state.

PART J: CONDITIONS APPLYING TO THE MONITORING PROGRAM

1. The Board has approved the *Baseline Conditions Assessment, Environmental Monitoring, Reclamation and Post-Closure Plan Cambridge Bay Soil and Water Treatment Facility* dated March 26, 2019.
2. The Licensee shall submit for Board's review within sixty (60) days of issuance of the Licence an update to the Plan referred to in Part J, Item 1 to reflect the Licence terms and conditions.
3. The Licensee shall maintain Monitoring Program Stations at the following locations:

Monitoring Program Station	Description	Frequency	Parameters

SWT-1	Final Discharge Point of Effluent from the Waste Disposal Facilities	In accordance with Part J, Item 6	Volume in accordance with Part J Item 4 Quality in accordance with Part J Item 5
SWT-2	Monitoring Well installed up-gradient of the Waste Disposal Facilities	Once during late summer-fall	Quality in accordance with Part J Item 5
SWT-3	Monitoring Well installed up-gradient of the Waste Disposal Facilities	Once during late summer-fall	Quality in accordance with Part J Item 5
SWT-4	Monitoring Well installed down-gradient of the Waste Disposal Facilities	Once during late summer-fall	Quality in accordance with Part J Item 5
SWT-5	Monitoring Well installed down-gradient of the Waste Disposal Facilities	Once during late summer-fall	Quality in accordance with Part J Item 5
SWT-6	Monitoring Well installed down-gradient of the Waste Disposal Facilities	Once during late summer-fall	Quality in accordance with Part J Item 5
SWT-7	Surface water	Twice – during spring freshet and late summer-fall	Quality in accordance with Part J Item 5
SWT-8	Surface water	Twice – during spring freshet and late summer-fall	Quality in accordance with Part J Item 5
SWT-9	Surface water	Twice – during spring freshet and late summer-fall	Quality in accordance with Part J Item 5
SWT-10	Surface water	Twice – during spring freshet and late summer-fall	Quality in accordance with Part J Item 5

4. The Licensee shall measure and record, in cubic metres, the daily quantities of Effluent discharged from the Waste Disposal Facilities at Monitoring Program Station SWT-1.
5. The Licensee shall sample by collecting a representative composite sample from the total volume to be released from the Final Discharge Point at Monitoring Program Station SWT-1, to confirm compliance with the Effluent quality limits under Part D, Item 13.
6. The Licensee shall sample the Effluent, prior to discharge, at Monitoring Program Stations SWT-1 analyze for the following parameters:

pH	Conductivity
Total Suspended Solids (TSS)	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
Polycyclic Aromatic Hydrocarbons (PAH)	Total Petroleum Hydrocarbons (TPH)
Benzene, Toluene, Ethylbenzene, Xylene (BTEX)	Polychlorinated Biphenyls (PCBs)

7. 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 project operations are deposited.
8. The Licensee shall sample yearly (during late summer-fall) water at Monitoring Program Stations SWT-2, SWT-3, SWT-4, SWT-5, and SWT-6 for the purpose of analyzing samples for the parameters listed under Part J Item 5.
9. The Licensee shall sample twice per year (once during spring freshet and once during late summer) water at Monitoring Program Stations SWT-7, SWT-8, SWT-9, and SWT-10 for the purpose of analyzing samples for the parameters listed under Part J Item 5.
10. 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 17.
11. 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 17.
12. 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.
13. All analyses shall be performed in a laboratory accredited according to ISO/IEC Standard 17025. The accreditation shall be current and in good standing.
14. The Licensee shall include in the Annual Report required under Part B, Item 1 all data, monitoring results and information required by this Part.

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 ^a)	210 (170 ^a)	320 (170 ^a)	320 (170 ^a)
	Coarse	30 ^b	30 ^b	320 (240 ^a)	320 (240 ^a)
Fraction 2	Fine	150	150	260 (230 ^a)	260 (230 ^a)
	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).