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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI
OFFICE DES EAUX DU NUNAVUT

File No: **1BR-COR2325**

June 15, 2023

Charlotte Lamontagne
Director – Contaminated Sites Program
Crown-Indigenous Relations & Northern Affairs Canada – Nunavut Region
P.O. Box 2200
Iqaluit, NU, X0A 0H0
Email: Charlotte.lamontagne@rcaanc-cirnac.gc.ca

RE: NWB Licence No: 1BR-COR2325

Dear Ms. Lamontagne,

Please find attached Licence No: **1BR-COR2325** (Licence) issued to the Crown-Indigenous Relations & Northern Affairs Canada – Contaminated Sites Program (CIRNA-CSP or Licensee) for the Coral Harbour Site Remediation Project 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 water use and waste disposal are an integral part of this approval.

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

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

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

The NWB strongly recommends that the Licensee consult the comments received from CIRNA and ECCC on issues identified. This information is attached for your consideration¹.

Sincerely,

Lootie Toomasie
Nunavut Water Board
Chair

LT/as/rqd

Enclosure: Licence No: **1BR-COR2325**
Comments – CIRNA, ECCC

Cc: Kivalliq Distribution List

¹ Crown-Indigenous Relations & Northern Affairs Canada (CIRNA), May 9, 2023 and Environment and Climate Change Canada (ECCC), May 12, 2023.

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DECISION

LICENCE NUMBER: 1BR-COR2325

This is the decision of the Nunavut Water Board (NWB or Board) with respect to an application received on April 6, 2023 for a new Water Licence made by:

CROWN-INDIGENOUS RELATIONS & NORTHERN AFFAIRS CANADA – CONTAMINATED SITES PROGRAM (CIRNA-CSP), GOVERNMENT OF CANADA

to allow for the camp operations, water use and deposit of waste during remediation activities for the Coral Harbour Site Remediation Project located near Coral Harbour within the Kivalliq Region, Nunavut, generally located at the geographical coordinates as follows:

| | | | |
|-----------|------------------|------------|------------------|
| Latitude: | 64° 11' 58.55" N | Longitude: | 83° 21' 12.54" W |
| Latitude: | 64° 12' 6.10" N | Longitude: | 83° 15' 50.44" W |
| Latitude: | 64° 07' 34.08" N | Longitude: | 83° 15' 3.14" W |
| Latitude: | 64° 07' 26.30" N | Longitude: | 83° 21' 6.10" W |

DECISION

After having been satisfied that the Application is in conformity with the Keewatin Regional Land Use Plan² and receiving the Nunavut Impact Review Board (NIRB) Screening Decision³ stating that a review of the project is not required in accordance with s. 92(1)(a) of the *Nunavut Planning and Project Assessment Act*, S.C. 2013, c. 14, s. 2 (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* (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:

Licence No: 1BR-COR2325 be issued subject to the terms and conditions contained therein (Motion #: 2023-B1-009)

Signed this 15th day of June, 2023 at Gjoa Haven, NU.

Lootie Toomasie
Nunavut Water Board, Chair

LT/as/rqd

² Nunavut Planning Commission (NPC) Confirmation Determination, June 21, 2022;

³ Nunavut Impact Review Board (NIRB) Screening Decision, October 6, 2022.

I. BACKGROUND

The Coral Harbour Site Remediation Project location (Site) is at the site of a former military/army base located approximately 10 kilometers northwest of the Hamlet of Coral Harbour. The Site was used by Canadian and American Forces during the construction of the Distant Early Warning (DEW) Line in Northern Canada during the Second World War. The Site, which was active from the 1940s until the 1970s, was also used to support various other northern projects. Site infrastructure included an airstrip, hospital, and military personnel housing. When the Site was decommissioned in the 1970s, most buildings were decommissioned, and remaining equipment was abandoned. The purpose of the Project is to conduct remedial activities to reduce future risk to the biophysical and human environment due to potential wastes and physical hazards that currently exist on Site.

The areas of environmental concerns identified at the Site are:

- area of tar barrels,
- area of fuel barrels,
- a barrel cache,
- a former army base,
- area of the debris of the former airport and,
- the former farm tank area.

These areas contain non-hazardous wastes (barrels, structures and surface debris); hazardous wastes (batteries, asbestos, lead paint, gas cylinders and contents of barrels); contaminated soils (soil exceeding human health and ecological risk assessment targets and petroleum hydrocarbon-stained surficial soils); and waste disposal areas (containing buried debris).

Works started on the Site with site investigation conducted in 2020 followed by a supplemental site assessment in 2021. Based on the reports of the site assessment and the supplemental site assessment, a human health and ecological risk assessment report was developed together with the remedial action plan for the cleanup of the site. Also developed was the project proposal report to identify the effects of the proposed remediation plan on the Coral Harbour and its environs. The site remediation field work is planned to commence in May/June 2023 and will be completed about September/October 2024.

The main environmental issues identified on the site are as follows:

- Non-Hazardous Wastes (NHW) including empty barrels, infrastructure (tank farm, wooden sheds, empty tanks, dilapidated building, concrete anchor and former maintenance building), buried debris at the solid waste disposal areas, and surface debris;
- Petroleum Hydrocarbon (PHC) Contaminated Soil including Type A (nonmobile PHCs), Type B (mobile PHCs) soil, and surficial staining;

- Hazardous Wastes (HW) including asbestos minimum, poorly adhered lead amended paint, batteries, and aqueous liquids.

Based on the limited availability of accommodations in the Hamlet of Coral Harbour, a temporary camp is anticipated to be required to facilitate remediation. The camp will be constructed with suitable infrastructure to meet Nunavut guidelines and community land use zoning restrictions. The camp is anticipated to have a capacity for up to 25 workers, and associated camp staff, for a maximum of 105 days per year.

The camp location is in an area with minimal to no vegetation thus ensuring minimal vegetation disturbance when setting up the camp and grading of the camp area. The camp location is also at a safe distance from water bodies on the site. No nests or animal activity were noted in the area during the site assessments. In the vicinity of the selected camp location there is good drainage and minimal to no tundra ponding.

Project activities are anticipated to occur for 2 years following the issuance of the Licence, followed by long-term monitoring from 2025 to 2049, with final closure in 2050.

II. PROCEDURAL HISTORY

On **April 6, 2023**, the Nunavut Water Board received an application for a Type “B” Water Licence for a Remediation Project. The following documents were submitted with the Application:

- Application for Water Licence
- Nunavut Planning Commission (NPC) Letter of Conformity (149576)
- NIRB-Screening Decision Report
- ARCHAEOLOGICAL IMPACT ASSESSMENT – PUBLIC REPORT Coral Harbour Site, Nunavut (Final Report) dated February 2022
- Coral Harbour Former Military Site Remediation Project, Project Proposal Report (Final Report) dated April 1, 2022
- Fuel and Hazardous Material Spill Contingency Plan Coral Harbour Site Remediation Project, Near Coral Harbour Hamlet, Nunavut dated March 2023
- Updated Remedial Action Plan, Coral Harbour Site, Nunavut (Final Report) dated March 31, 2023
- E-mail clarification regarding ESA and HHERA
- Site Maps

On **April 14, 2023**, the NWB concluded that the Application generally met the requirements of section 48(1) of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (NWNSTRA or Act)

and forwarded notice of the Application to interested parties. Parties were invited to make representations to the NWB within four (4) weeks by **May 12, 2023**.

Submissions were received from Crown-Indigenous Relations and Northern Affairs (CIRNA) and Environment and Climate Change Canada (ECCC). The Licensee provided responses on May 23, 2023. By May 30, 2023, Intervenor had confirmed that their recommendations were adequately addressed.

The NWB has placed in its Public Registry copies of the Application and all comments received from intervenors. This information can be accessed on the NWB's FTP site using the following link:

<ftp://ftp.nwb-oen.ca/registry/1%20INDUSTRIAL/1B/1BR%20-%20Remediation/1BR-COR2325%20Coral%20Harbour%20Landfarm/4%20LICENCE>

III. GENERAL CONSIDERATIONS

The following sections provide background information relevant to the terms and conditions included in this Licence, in the context of submissions received and/or the Board's rationale.

Scope of Undertaking

The scope of this Licence allows the following activities in support of a remediation project:

- Mobilization of equipment, materials / wastes and personnel
- Improvement of access routes and site routes
- Camp set-up and operation
- Hazardous material removal & off-site disposal
- Construction and operation of on-site non-hazardous waste landfill
- Building and structure demolition, removal and disposal of debris in the on-site landfill
- Non hazardous materials / Debris consolidation and off-site disposal
- Excavation & treatment / off-site disposal of contaminated soils
- Quarrying of gravel and overburden materials
- Landfarm construction / operation / decommissioning
- Construction / decommissioning of a sewage lagoon or discharge pit
- Site regrading
- Final demobilization from site of equipment, materials / wastes and personnel

Term

In accordance with s. 45 of the Nunavut Waters and Nunavut Surface Rights Tribunal Act (NWNSTRA or the Act), the NWB may issue a licence for a term not exceeding twenty-five (25) years. In determining an appropriate term for a renewal licence, the Board generally takes into consideration several factors including interveners' comments, the Licensee's compliance history, as well as the rationale contained in the Application.

The Licensee requested in its Application, a two (2) year term for this Licence. The intervening parties in their submissions did not comment on the term requested for the Licence. The Board has decided to approve the Licence for a **two (2) year term**. In so doing, the Board believes and expects that this two-year term will provide the Licensee with opportunities to remediate the site and consistently abide by the terms and conditions in the Licence over time and provide ongoing compliance record prior to a need for renewal. It should be noted that the 2-year term of Licence will cover mostly the construction phase of Project along with the operation and closure of some facilities/activities requested. Prior to initiating the post-closure monitoring the Licence shall be amended to include post-closure monitoring requirements.

Annual Reports

Under Part B, Item 1 of the Licence, the Licensee is required to submit Annual Reports for the purpose of ensuring that the NWB has an accurate annual update of activities related to Water use and Waste disposal during each calendar year. This information is maintained on the Public Registry and is available to interested parties upon request. A "Standardized Form for Annual Reporting" is to be used by the Licensee and is available from the NWB file transfer protocol (FTP) site under the Public Registry link at the NWB Website:

<ftp://ftp.nwb-oen.ca/other documents/Standardized Forms/>

Water Use

The Licensee has stated that they will use water from the municipal water supply of Coral Harbour. Up to 5 m³ of water is estimated to be required for camp use and up to 10 m³ of water per day for construction activities.

As an alternative, the Licensee may use water from a small lake on site. If this small lake is used, the raw water will be pumped to the camp via a small horsepower pump and water intake pipe placed overland and equipped with a small mesh screen.

The Board has authorized the use of fifteen (15) cubic meters of water per day. Terms and conditions related to water use are included under Part C, Item 1 of the Licence.

Deposit of Waste

The Licensee has indicated that they will use the Hamlet or Coral Harbour's waste disposal facilities for disposal of sewage and greywater generated at the camp. It was also stated, if required, a Sewage Lagoon or a Sewage Treatment Plant may be constructed on Site.

Greywater may also be directed to a discharge pit excavated at a minimum of 30m from the camp, any natural drainage course, or any water body. Upon completion of site activities, the pit will be filled in and finished to grade.

Combustible solid waste will be incinerated on-site using an approved incinerator unit. All non-combustible solid waste will be disposed of in the on-site non-hazardous waste landfill (NHWL). All scrap metal and bulky items will be disposed of at on-site NHWL.

All waste oil and hazardous waste will be consolidated and shipped off-site, in accordance to the Transportation of Dangerous Goods Act, for disposal at an approved southern facility.

Empty barrels will be collected, crushed and disposed of at the NHWL.

The Licensee plans to construct landfarms to treat hydrocarbon contaminated soils on site. The Licensee is required to submit an operation, maintenance and closure plan for the landfarm prior to commencing remedial activities.

The Board included Effluent discharge limits or criteria for any discharge associated with the Sewage Disposal Facility or Lagoon, Landfarm Facility, Non-Hazardous Waste Landfill (NHWL), quarry and excavation areas under Part D of the Licence.

Monitoring

Conditions have been included in the Licence, under Part J, requiring the Licensee to install general Monitoring Stations at the Water Supply Facility, Sewage Disposal Facility and at the Landfarm Facility.

The Board had decided that CCME Canadian Water Quality Guidelines for the Protection of Aquatic Life (CCME WQG) for surface water reception shall be applied to effluent discharged from the Landfarm. As such, the Board has set Effluent quality limits in Part D Item 17 of this Licence for pH, oil and grease, benzene, toluene, and ethylbenzene that are consistent with the CCME Guidelines.

The Application states that *the groundwater/active zone water was encountered in two test pits conducted in summer 2021*". It was also stated *"that there are areas of the Site that have not adequately been assessed to determine what remedial activities they may require. As such, the following additional assessment activities will be conducted: Phase II ESA at AEC 10. Recommended additional assessment includes delineation of soil impacted with PHCs and/or PAHs, assessment of groundwater/active zone water to characterize the Site conditions and determination of locations of potential historical underground utilities and infrastructure. The Applicant indicated that groundwater monitoring wells will be installed in and around NHWL facility that will allow to establish baseline conditions prior to using the facility and for long-term monitoring to detect potential leachate. The Board recommends installation of 3 groundwater wells around the NHWL facility to be monitored and compared to appropriate CCME WQG.*

The Application states that *the NHW facility has potential to degrade surface water quality if not constructed, operated and closed according to design. This facility will collect surface water snowmelt and precipitation, which when they come in contact with deposited waste has the potential to become leachate. The NHW facility is expected to incorporate a cover design that is of low permeability and promotes drainage away from it to reduce the potential for leachate generation... Discharge of wastewater from remediation activities has the potential to degrade surface water quality. Wastewater will be treated to meet applicable discharge criteria prior to discharge to the environment. Water meeting criteria will be discharged to ground a minimum 30 m distance and, in a direction away from natural drainage courses.*

While the Board included Effluent discharge limits and associated monitoring regarding discharge/run-off from Sewage Disposal, Landfarm facilities and NHWL facility the expectation is that the Applicant shall develop a Long-Term or Post-closure Monitoring Program for Board approval prior to initiating this monitoring program. It is expected that this monitoring program will be implemented starting 2025 for up to 25 years.

Also, under Part I of the Licence, the Applicant is required to submit to the Board for review, at least 30 days prior to the first release, a Quality Assurance/Quality Control (QA/QC) Plan. The Plan must be approved by an accredited laboratory so as to confirm that the plan is acceptable.

The Applicant will submit a post-closure monitoring plan, once remediation activities on site are complete.



NUNAVUT WATER BOARD WATER LICENCE

Licence No: 1BR-COR2325

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

**CROWN-INDIGENOUS RELATIONS & NORTHERN AFFAIRS CANADA –
CONTAMINATED SITES PROGRAM (CIRNA-CSP), GOVERNMENT OF CANADA**
(Licensee)

P.O. BOX 2200, IQALUIT, NUNAVUT 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 replacement Licence:

| | |
|--------------------------------------|--|
| Licence Number/Type: | 1BR-COR2325 TYPE “B” |
| Water Management Area: | HUDSON BAY ISLANDS WATERSHED (16) |
| Location: | CORAL HARBOUR, KIVALLIQ REGION, NUNAVUT |
| Classification: | INDUSTRIAL UNDERTAKING (REMEDIATION) |
| Purpose: | USE OF WATER AND DEPOSIT OF WASTE |
| Quantity of Water use not To Exceed: | FIFTEEN (15) CUBIC METER PER DAY |
| Effective Date: | JUNE 15, 2023 |
| Expiry of Licence: | JUNE 14, 2025 |

This Licence 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 the deposit of Waste for an Industrial (remediation) undertaking classified as per Schedule 1 of the *Regulations* at the Coral Harbour Remediation Project, located near Coral Harbour, within the Kivalliq Region of Nunavut, generally at the following geographical coordinates:

| | | | |
|-----------|------------------|------------|------------------|
| Latitude: | 64° 11' 58.55" N | Longitude: | 83° 21' 12.54" W |
| Latitude: | 64° 12' 6.10" N | Longitude: | 83° 15' 50.44" W |
| Latitude: | 64° 07' 34.08" N | Longitude: | 83° 15' 3.14" W |
| Latitude: | 64° 07' 26.30" N | Longitude: | 83° 21' 6.10" W |

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

2. Definitions

“**Act**” means the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*;

“**Addendum**” means the supplemental text that is added to a full plan or report usually included at the end of the document and is not intended to require a full resubmission of the revised report;

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

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

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

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

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

“**Geotechnical Engineer**” means a professional engineer registered with the Association of Professional Engineers, Geologist and Geophysicists of Nunavut and whose principal field of specialization with the engineering properties of earth materials in dealing with man-made structures and earthworks that will be built on a site. These can include shallow and deep foundations, retaining walls, dams, and embankments;

“**Grab Sample**” means an undiluted quantity of material collected at a particular time and place that may be representative of the total substance being sampled at the time and place it was collected;

“**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 body of water rises at its highest point and remains for sufficient time so as to change the characteristics of the land (ref. Department of Fisheries and Oceans Canada, Operational Statement: Mineral Exploration Activities);

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

“**Licensee**” means the holder of this Licence;

“**Non-hazardous Waste Landfill or NHWL**” means a facility designed to dispose of non-combustible and non-hazardous solid waste as described in the Application;

“**Landfarm**” means the area designated to contain and biologically treat hydrocarbon impacted Type B soils as indicated in the Application;

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

“**Monitoring Program**” means a monitoring program established to collect data on surface water and groundwater quality to assess impacts to the freshwater aquatic environment of an appurtenant undertaking;

“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*;

“Sewage” means all toilet Wastes and greywater;

“Sewage Disposal Facility (Lagoon) or Sewage Treatment Plant” a structure or depression or prefabricated (modular) structure designed for the collection and the treatment of Sewage as described in the Application;

“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 site-specific treatment objective for the Land Treatment Unit which is based on the Canadian Council of Ministers of the Environment (CCME) Canada – Wide Standard for Petroleum Hydrocarbon in Soil, revised January 2008; and the Abandoned Military Site Remediation Protocol for Contaminated Soils;

“Type A Soil” means soil contaminated with hydrocarbons in which the primary petroleum product present in the soil as determined by laboratory analysis consists of lubricating oil and grease;

“Type B Soil” means soil contaminated with petroleum 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; this soil does not contain polychlorinated biphenyl (PCB);

“Waste” or “Wastes” 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 disposal of waste including temporary and permanent storage and sorting areas, Sewage Disposal Facility, Landfarm Facility, NHL Landfill and others as described in the Application; and

“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 the 31st March of the year following the calendar year being reported, containing the following information:
 - a. A summary report of water use and waste disposal activities;
 - i. Quantity of water used for sampling purposes;
 - ii. Quantity and quality of Effluent discharged from Landfarm;
 - iii. Quantity and characterization of soils placed within the Landfarm for treatment.
 - b. A list of unauthorized discharges and a summary of follow-up actions taken;
 - c. Any revisions to the Spill Contingency Plan, Closure and Reclamation Plan, and other plans associated with the Licence, as required by Part B, Item 9, submitted in the form of an Addendum;
 - d. Description of all progressive and or final reclamation work undertaken, including photographic records of site conditions before, during and after completion of operations;
 - e. A summary of all information requested and results of the Monitoring Program;
 - f. Report all artesian flow occurrences as required under Part F, Item 4;
 - g. A summary of work done to address concerns or deficiencies listed in the inspection reports and/or compliance reports prepared by an Inspector;
 - h. An analysis of the progress achieved in remediating the contaminated soil in the Landfarm;
 - i. A summary of any construction work, modification and major maintenance work (including as-built diagrams) carried out on the Landfarm Facility, including all associated structures;
 - j. An executive summary in English and Inuktitut of all plans, reports, or studies conducted under this Licence; and

- k. Any other details on water use or waste disposal requested by the Board by the 1st November of the year being reported.
2. The Licensee shall comply with the Monitoring Program described in this Licence, and any amendments to the Monitoring Program as may be made from time to time, pursuant to the conditions of this Licence.
 3. The Licensee shall post signs in the appropriate areas to identify the stations of the Monitoring Program associated with the project. All signage postings shall be in the Official Languages of Nunavut.
 4. 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.
 5. 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.
 6. The Licensee shall implement suitable methods required for measuring the volumes of Water and soil associated with the project as required under Part J, Item 5 and Part J, Item 11, respectively.
 7. The Licensee shall, for all Plans submitted under this Licence, implement the Plan as approved by the Board in writing.
 8. 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.
 9. The Licensee shall review the Plans referred to in this Licence as required by changes in operation and/or technology and modify the Plans accordingly. Revisions to the Plans are to be submitted in the form of an Addendum to be included with the Annual Report required by Part B, Item 1, complete with a revisions list detailing where significant content changes are made.
 10. The Licensee shall ensure a copy of this Licence is maintained at the site of operations at all times. Any communication with respect to this Licence shall be made in writing to the attention of:

(a) **Manager of Licensing:**
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU X0B 1J0

Telephone: (867) 360-6338
Fax: (867) 360-6369
Email: licensing@nwb-oen.ca

(b) **Inspector Contact:**
Manager of Field Operations, AANDC
Nunavut District, Nunavut Region
P.O. Box 100
Iqaluit, NU X0A 0H0
Telephone: (867) 975-4284
Fax: (867) 979-6445

11. The Licensee shall submit one (1) 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.
12. The Licensee shall ensure that any document(s) or correspondence submitted by the Licensee to the NWB is received and acknowledged by the Manager of Licensing.
13. This Licence is assignable as provided for in Section 44 of the Act.
14. 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 authorized to use up to fifteen (15) cubic metres of Water per day, for domestic uses and to support remediation activities, from small water lake on-site, as described in the Application.
2. The use of Water from streams or any water body not identified in Part C, Item 1, is prohibited unless authorized and approved by the Board in writing.
3. The Licensee shall not remove any material from below the ordinary High Water Mark of any water body unless authorized.
4. The Licensee shall not cause erosion to the banks of any water body and shall provide necessary controls to prevent such erosion.
5. The Licensee shall implement and maintain sediment and erosion control measures prior to and during the operation to prevent entry of sediment and/or dust into Water.

PART D: CONDITIONS APPLYING TO WASTE AND WASTE MANAGEMENT

1. The Licensee shall locate areas designated for Waste disposal at a minimum distance of thirty-one (31) metres from the ordinary High-Water Mark of any water body such that the quality, quantity or flow of Water is not impaired, unless otherwise approved by the Board in writing.
2. The Licensee shall not 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.
3. The Licensee shall provide to the Board, documented authorization from the Hamlet of Coral Harbour prior to the backhauling and disposal of any Waste.
4. The Licensee shall direct all Sewage and Greywater to the Sewage Disposal Facility or Sewage Treatment Plant for treatment prior to releasing into receiving environment.
5. The Licensee may contain all greywater in a Sump located at a distance of at least thirty-one (31) metres above the ordinary High-Water Mark of any water body, at a site where direct flow into a water body is not possible and no additional impacts are created, unless otherwise approved by the Board in writing.
6. All Effluent discharged from the Final Discharge Point of the Sewage Disposal Facility or Sewage Treatment Plant at Monitoring Program Station COR-2 shall meet the following Effluent quality standards prior to being released:

| Parameter | Maximum Concentration of any Grab Sample |
|------------------------|--|
| Faecal Coliforms | 1×10^4 CFU/dl |
| BOD ₅ | 120 mg/L |
| Total Suspended Solids | 180 mg/L |
| Oil and grease | No visible sheen |
| PH | Between 6 and 9 |

7. A Freeboard limit of at least 1.0 metre, or as recommended by a qualified Geotechnical Engineer and as approved by the Board in writing, shall be maintained at all dams, dykes, or structures intended to contain, withhold, divert or retain water or wastes.
8. The Sewage Disposal Facility shall be maintained and operated, in such a manner as to prevent structural failure.
9. The Licensee shall provide notice to an Inspector at least ten (10) days prior to initiating discharge from the Sewage Disposal Facility.

10. The Licensee shall incorporate seepage management at Quarries using best management practices including ditches, diversions, sumps and berms where necessary.
11. The Licensee is authorized to dispose and treat, to the Treatment Objective, petroleum hydrocarbon contaminated soils within the Landfarm Facility. The Licensee shall limit this treatment to those soils as acceptable for treatment, outlined in the Updated Remedial Action Plan dated March 31, 2022.
12. Surface contact water and seepage collected from the perimeter of the Landfarm Facility shall not exceed the following Effluent discharge criteria at Monitoring Station COR-5 prior to being released into the receiving environment:

| Parameter | Maximum Concentration of any Grab Sample (mg/L) |
|------------------|--|
| pH | 6 to 9 (pH units) |
| Oil and Grease | no visible sheen |
| Total Lead | 0.001 |
| Benzene | 0.370 |
| Toluene | 0.002 |
| Ethylbenzene | 0.090 |

13. The Licensee shall maintain the Landfarm Facility to the satisfaction of the Inspector.
14. All Contact water, including demolition rinse water, associated with the storage and cleaning of contaminated areas and equipment at Monitoring Program Station COR-3 shall not exceed the following Effluent discharge criteria prior to releasing into the receiving environment:

| Parameter | Maximum Allowable Concentration (µg/L) |
|-------------------------------|---|
| pH | 6 to 9 (pH units) |
| Total Suspended Solids (mg/L) | 50 |
| Arsenic (total) | 100 |
| Cadmium (dissolved) | 10 |
| Chromium (dissolved) | 100 |
| Cobalt (dissolved) | 50 |
| Copper (dissolved) | 200 |
| Lead (dissolved) | 50 |
| Mercury (total) | 0.6 |
| Nickel (dissolved) | 200 |
| PCB (total) | 1000 |
| Zinc (total) | 500 |
| Benzene (µg/L) | 370 |
| Toluene (µg/L) | 2 |
| Ethylbenzene (µg/L) | 90 |
| Oil & Grease (mg/L) | 15 and no visible sheen |

15. The Licensee shall collect and temporarily store in preparation for future disposal, all water generated from the storage and segregation of solid waste, demolition rinse water resulting from decontamination processes or procedures as well as water derived from, quarry sites and excavation activities that does not meet the Effluent quality limits in Part D, Item 14.
16. The Final Discharge Points for the Effluent described in Part D, Items 6, 12 and 14 shall be situated at a minimum of thirty-one (31) metres from the ordinary High-Water Mark of any water body and where direct or indirect flow into a water body is not possible and no additional impacts are created.
17. The Licensee shall backhaul all hazardous Waste, Waste oil, in accordance with the Transportation of Dangerous Goods Act, for disposal at an approved Waste disposal facility.
18. 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.

PART E: CONDITIONS APPLYING TO CAMPS, ACCESS INFRASTRUCTURE AND OPERATIONS

1. The Licensee shall, at least sixty (60) days prior construction of Landfarm, submit to the Board for review a standalone Operation and Maintenance Plan for the landfarm including location map, expected volume of contaminated soils accepted/treated and soils removed, list of people with their contact information, safety procedures, frequency of maintenance activities and any other information that may help in the effective operation of the Landfarm.
2. The Licensee shall not erect camps or store material on the surface of frozen streams or lakes including the immediate banks except what is for immediate use. Camps shall be located such as to minimize impacts on surface drainage
3. With respect to access road, pad construction or other earthworks, the deposition of debris or sediment into or onto any water body is prohibited. These materials shall be disposed a distance of at least thirty-one (31) metres from the ordinary High-Water Mark in such a fashion that they do not enter the Water.
4. Licensee shall use material that is free of contaminants for construction, operation, and maintenance activities and that is obtained from approved sources and has been demonstrated not to be potentially acid generating and metal leaching.
5. The Licensee shall implement appropriate measures prior to, during, and following excavation of soil from the Landfarm Facility, to prevent or minimize impact to water.

6. The Licensee shall not mix or blend PHC contaminated soils with non-contaminated soils.
7. The Licensee shall implement proper handling, storage and transportation procedures for the management of hazardous materials during execution of the Project.
8. The Licensee shall minimize disturbance to terrain, permafrost and drainage during extraction of granular material, movement of contractor's equipment and personnel around the site and removal of site debris.
9. The Licensee shall submit a Quarry Operations Plan, 60 days prior to commencing quarrying operations.
10. The Licensee shall maintain a minimum of thirty-one (31) metres large undisturbed buffer zone between the periphery of quarry sites and the High-Water Mark of any water body. The Licensee shall not excavate and/or remove material from the quarry beyond a depth of one (1) metre above the High-Water Mark or above the groundwater table. The quarrying shall be in accordance with all applicable legislation and industry standards including the Northern Land Use Guidelines, Pits and Quarries (INAC, 2010).

PART F: CONDITIONS APPLYING TO DRILLING OPERATIONS

1. The Licensee is authorized to drill for the purpose of installing groundwater monitoring wells and other instrumentation related to monitoring, and associated with quarrying operations.
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 ensure that all drill waste, including water, chips, muds and salts (CaCl₂) in any quantity or concentration, from land-based drilling, shall be disposed of 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 required by Part B, Item 1, including the location (GPS coordinates) and dates.
5. 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 AND CONSTRUCTION

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

PART H: CONDITIONS APPLYING TO SPILL CONTINGENCY PLANNING

1. The Licensee shall implement the Plan entitled *Fuel and Hazardous Material Spill Contingency Plan*, dated March 2023, that was submitted as additional information with the Application and was approved by the Board with the issuance of this Licence.
2. The Licensee shall prevent any chemicals, petroleum products or wastes associated with the project from entering water. All sumps and fuel caches shall be located at a distance of at least thirty-one (31) metres from the ordinary High Water Mark of any adjacent water body and inspected on a regular basis.
3. The Licensee shall carry out 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) 975-4284; and

- c. For each spill occurrence, submit to the Inspector, no later than thirty (30) days after initially reporting the event, a detailed report that will include the amount and type of spilled product, the GPS location of the spill, and the measures taken to contain and clean up the spill site.

PART I: CONDITIONS APPLYING TO CLOSURE AND RECLAMATION

1. The Board has approved the Plan entitled Updated Remedial Action Plan, Coral Harbour Site, Nunavut (Final Report) dated March 31, 2023 that was submitted as additional information with the Application.
2. The Licensee shall submit a Closure and Reclamation Plan for the infrastructure constructed to support site remediation activities.
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 remove from the site, all infrastructure and site materials, including all fuel caches, drums, barrels, material and equipment prior to the expiry of this Licence.
5. The Licensee shall backfill and restore, all temporary containment sumps, to the preexisting natural contours of the land.
6. All roads shall be re-graded to match natural contours to reduce erosion.
7. 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 MONITORING PROGRAM

1. The Licensee shall submit to the Board for approval, at least sixty (60) days prior to initiating Long-Term Monitoring for the Project, a Post-closure Monitoring Plan for the site that includes information on Long-Term Monitoring of the Waste Disposal Facilities and that addresses water quality monitoring, stability of the site and the need for thermal and ground water monitoring.
2. The Licensee shall maintain Monitoring Program Stations at the following locations:

| Monitoring Program Station ID | Description | Status |
|-------------------------------|--------------------------------|--------------|
| COR-1 | Station for fresh water intake | New (volume) |

| | | |
|-------|--|----------------------------------|
| COR-2 | Station at the Sewage Disposal Facility or Sewage Treatment Plant discharge point | New (volume and water quality) |
| COR-3 | Station installed at the discharge point of demolition waste rinse water collection area. | Water (volume and water quality) |
| COR-4 | Monitoring Station installed at the discharge point of the surface water collection system for the Landfarm Facility | New (Volume and Water Quality) |
| COR-5 | Monitoring Station installed at the discharge point of the surface water collection system for the NHWL Facility | New (Volume and Water Quality) |
| COR-5 | Monitoring well installed down-gradient of the NHWL Facility | New (Water Quality) |
| COR-6 | Monitoring well installed down-gradient of the NHWL Facility | New (Water Quality) |
| COR-7 | Monitoring well installed up-gradient of the NHWL Facility | New (Water Quality) |

3. The Licensee shall measure and record, in cubic metres, the daily quantities of water utilized for camp and other purposes from Monitoring Station COR-1 and quantity of effluent discharged from the Waste Disposal Facilities at Monitoring Program Stations COR-2, COR-3, COR-4 and COR-5.
4. The Licensee shall sample prior to discharge at Monitoring Program Stations COR-5 and analyze for the following parameters:

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

5. Licensee shall measure and record the volume of all soil deposited and/or removed from the Landfarm Facility.
6. The Licensee shall record the GPS co-ordinates (in degrees, minutes and seconds of latitude and longitude) of all locations where wastes associated with camp operations are deposited.
7. The Licensee shall record the GPS co-ordinates (in degrees, minutes and seconds of latitude and longitude) of all locations where remediated soil is deposited.
8. The Licensee shall confirm the locations and GPS coordinates for all Monitoring Program Stations with an Inspector.
9. The Licensee shall sample soil being treated in the Landfarm twice per year, in the spring-summer following thaw and prior to freeze-up in the fall, for the period of active land treatment to monitor contaminant levels until analytical results indicate acceptable levels and are meeting the site-specific Treatment Objective.
10. The Licensee shall assess and record the concentration of F1 – F4 fractions in petroleum hydrocarbon contaminated soil, according to the CCME *Canada-Wide Standard for Petroleum Hydrocarbons (PHC) in Soil* that is entering and/or removed from the Landfarm Facility.
11. The Licensee shall measure and record the volume of Water used for all purposes under this Licence.
12. All sampling, sample preservation and analyses shall be conducted in accordance with methods prescribed in the most recent edition of *Standard Methods for the Examination of Water and Wastewater*, or by such other methods approved by the Board.
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 submit to the Board for review, at least 30 days prior to the first release of effluent, a Quality Assurance/Quality Control (QA/QC) Plan. The Plan shall include up-to-date sampling methods to all applicable standards and acceptable to an accredited laboratory as required by Part J, Item 8. The submission shall include a covering letter from the accredited laboratory that confirms acceptance of the Plan for analyses to be performed under this Licence.
15. Additional monitoring requirements may be requested by the Inspector.
16. The Licensee shall include in the Annual Report required under Part B, Item 1 all data, monitoring results and information required by this Part.