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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI
OFFICE DES EAUX DU NUNAVUT

**Licence No.: 1BR-LOR1727 /
Renewal-Amendment**

April 27, 2017

Jean Allen, A/Contaminants Specialist
Indigenous and Northern Affairs Canada
Nunavut Regional Office
P.O. Box 2200, Iqaluit, NU, X0A 0H0
Email: jean.allen@aadnc-aadnc.gc.ca

RE: NWB Renewal-Amendment Licence No. 1BR-LOR1727

Dear Ms. Allen:

Please find attached Licence No. **1BR-LOR1727** issued to Indigenous and Northern Affairs Canada (INAC) 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 deposit of Waste 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 deposit must cease, or the Licensee may be in contravention of the *Nunavut 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 any 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 from interested

persons on issues identified. This information is attached for your consideration.¹

Sincerely,

Thomas Kabloona
Nunavut Water Board
Chair

TK/ce/ip

Enclosure: Renewal-Resentment Licence No. **1BR-LOR1727**
Comments – **INAC – Water Resources Division and ECCC**

Cc: Qikiqtani Distribution List

¹ Indigenous and Northern Affairs Canada (INAC) – Water Resources Division, August 31, 2015 and February 1, 2017; and Environment and Climate Change Canada (ECCC), January 27, 2017.

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A. INTRODUCTION

The Cape Christian Site was a former US Coast Guard Long Range Navigation (LORAN) communication station that operated between 1954 and 1974. It is located roughly sixteen (16) kilometres northeast of the Hamlet of Clyde River, bordering Patricia Bay, on the east coast of Baffin Island within the Qikiqtani Region of Nunavut. In 1975 the site was abandoned without proper decommissioning, prompting INAC to initiate several environmental assessments of the site between 1974 and 2006, before developing a remediation strategy in 2007 as described in the *Former U.S. Coast Guard LORAN Station, Cape Christian, Nunavut, Remedial Action Plan (RAP)*.

Consistent with the RAP, remediation activities at the Cape Christian site occurred between 2008 and 2010, and included the demolition of buildings and site infrastructure, off-site disposal of hazardous waste, excavation and disposal of non-hazardous metals and petroleum hydrocarbon contaminated soils, and a general cleanup and removal of debris. All non-hazardous Waste was placed in a Non-Hazardous Waste Landfill (NHWL) constructed on-site in 2009, and decommissioned following the conclusion of remediation activities in 2010. INAC summarized the remediation activities at Cape Christian in the report entitled *Remediation Closure Report for Cape Christian Long-Range Navigation (LORAN) Station Near Clyde River, Nunavut*, dated March 2011. The Closure Report identifies sustained environmental monitoring of the NHWL as the only activity remaining to be performed at the site.

A long-term monitoring program for the NHWL, encompassing visual, soil, groundwater and natural environment monitoring, was initiated in August 2011. The Monitoring Program, described in the *Cape Christian Long Term Monitoring Plan* (2009) is scheduled to last up to twenty-five years and is segmented into the following phases:

- Phase I: Years 1, 3 and 5 (2011, 2013, and 2015);
- Phase II: (if required): Years 7, 10, 15 and 25 (2017, 2020, 2025 and 2035); and
- Phase III: (if required): Beyond 25 years (> 2035).

Monitoring will continue until monitoring data demonstrates that the geochemical and water quality regimes have reached equilibrium and the remaining site infrastructure poses no risk or a negligible risk to surrounding water resources. Phase I monitoring concluded after the monitoring event in summer 2015, at which point INAC conducted an evaluation of the Phase I monitoring data and determined that Phase II Monitoring is required. Phase II monitoring is scheduled to commence in 2017 and end in 2025, and it is expected that at the end of Phase II, another evaluation of the monitoring data will occur in 2035 to assess the need for Phase III monitoring.

The undertaking will not involve any camp activities as the personnel conducting the sampling will be based out of the Hamlet of Clyde River and each sampling event is not expected to last longer than one day. Potable Water for these activities will be sourced from the Hamlet, and all Waste will be backhauled to an approved facility.

B. PROCEDURAL HISTORY

File History:

On **April 30, 2008**, the Nunavut Water Board (NWB) issued Licence 1BR-LOR0813, which allowed for the use of Water and deposit of Waste associated with the remediation of the Cape Christian Long Range Navigation Site. The Licence expired on May 1, 2013, prior to the NWB receiving a renewal application for the expired licence.

Current Application:

On July 18, 2014, the NWB received an Application from Indigenous and Northern Affairs Canada (INAC) to renew and amend Licence 1BR-LOR0813, to support the continuation of long-term monitoring activities at the former Cape Christian Long Range Navigation Site, which comprised the following documents, some of which were provided under separate submissions following receipt of the initial Application:

- Application for Water Licence Amendment, dated July 18, 2014;
- Application Cover Letter;
- Cape Christian Long Term Monitoring Plan, dated February 10, 2009;
- Annual Reports: 2011, 2012, 2013, 2014, 2015;
- Long Term Monitoring Report, 2011;
- Long Term Monitoring Report, 2013;
- Executive Summary, English and Inuktituk;
- NIRB Screening Decision, dated June 4, 2010; and
- NPC Conformity Determination, dated April 16, 2007.

On December 4, 2014, the NWB requested additional information related to the undertaking's Monitoring Program, to which INAC responded adequately through an email to the NWB sent on July 27, 2015.¹

On July 31, 2015, following a preliminary internal technical review, the NWB distributed a notice of the Application to interested parties. All parties were invited to make representations to the NWB by August 31, 2015. A submission was received on August 31, 2015 from INAC's Water Resources Division. INAC-Water Resources Division supported the Licence term requested by the applicant and recommended that the Licence be amended to include a daily water consumption limit of one (1) cubic metre to allow for the collection of ground water samples, and that the Licensee be required to provide an addendum to the 2009 Cape Christian Long Term Monitoring Plan. Lastly, INAC recommends that the NWB should confirm, with the INAC Contaminated Sites Division, who is the current contact this Licence.

Given that the documents required for a complete application was received after the NuPPAA came into effect, on July 9, 2015, the NWB required NPC's conformity determination prior to advancing the application through the licensing process.

On January 10, 2017, the NPC confirmed that the previous conformity determination issued on

¹ Email communication from Lilianne Arsenault (INAC), July 27, 2015.

April 16, 2007 is still applicable. The NPC stated that the project proposal conforms to the North Baffin Regional Land Use Plan (NPC File No: 148412). In addition, the NPC confirmed that the application is exempt from further screening from the NIRB, pursuant to section 12.4.3 of the Nunavut Agreement, and that the previous terms and conditions included in the June 7, 2007 NIRB Screening Decision Report are still applicable (NIRB File No: 07DN027).

On January 11, 2017, the NWB invited interested persons to review the application and submit comments on or before February 1, 2017. ECCC responded that it had no comments while INAC – Water Resources Division recommended that the licensee submit an updated Abandonment and Restoration plan, and a revised Spill Contingency Plan for the long-term monitoring program for Cape Christian former distant early warning line site. In response, the following additional submissions were then made by the Applicant:

- Cape Christian Long Term Monitoring Plan, Revised February 28, 2017, submitted March 27, 2017;
- Evaluation of Phase I Long Term Monitoring Report, PIN-B Clifton Point and Cape Christian, dated March 21, 2016, submitted March 31, 2016;
- Cape Christian Report 2015 Executive Summary Inuktitut, submitted April 21, 2016;
- Annual Reports: 2016, submitted March 20, 2017; and
- Cape Christian Abandonment and Restoration Plan, submitted March 27, 2017;

The Applicant requested that the Licence be amended to reduce the daily water consumption limit from fifteen (15) cubic metres to one (1) cubic metre. One (1) cubic metre is sufficient to allow for the collection of ground water samples. Based upon the results of the detailed assessment of the Application, including consideration of any potential impacts to freshwater that the overall project might have on the area, the Board has approved the Application and has therefore amended and renewed the Water Licence No. 1BR-LOR0813 as Water Licence No. 1BR-LOR1727.

C. GENERAL CONSIDERATIONS

Term of Licence

In accordance with the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* s. 45, the NWB may issue a Licence for a term not exceeding twenty-five years. The applicant requested an eighteen (18) year renewal-amendment Licence (for a Licence expiry in 2035), under which it plans to monitor, assess and confirm the stability of the landfill at the project site at specific intervals during the monitoring program. In its review of the Application, in August 31, 2015, INAC supported the request eighteen (18) year Licence term. In determining an appropriate term of a Water Licence, the Board considers a number of factors, including the compliance record of the Applicant and the risk to Water resources posed by the undertaking. The Licensee has demonstrated a strong compliance record since the initial Licence was issued in 2008; however, the NWB's review of landfill monitoring data presented in the 2013 and 2015 Long Term Monitoring Report revealed exceedances relative to *Federal Interim Groundwater Quality Guidelines* (EC, 2010). Given the current stage of the program, the Board has decided to issue the Licence for a term of ten (10) years—two years after the 2025, Phase II monitoring activities. This 2027 Licence term will allow the Licensee sufficient time to submit water quality reports from the 2025 monitoring site visit, along with recommended actions to be taken in term of

whether or not it plans to proceed with Phase III monitoring.

Annual Report

As a requirement of section 14(1) of the *Nunavut Waters Regulations* and similar to the terms and conditions generally included in all licences issued by the Board, the NWB has included under Part B, Item 1 of this Licence, requirements for the Licensee to submit to the Board for review, prior to the 31st of March, annually, a report detailing Water use and/or Waste deposit activities for the undertaking for the preceding year. The submission of Annual Reports ensure that the NWB has on file accurate updates of all Water use and/or Waste deposit activities related to an undertaking for any particular year preceding one in which the report is filed.

The Board provides public access to the information submitted in licensees' annual reports through its ftp site as well as upon request from interested parties.

The NWB has included on its website a standardized form for annual reporting that licensees can use to submit annual reporting information, supplemented by other project-specific, relevant details. A copy of the NWB's generic Annual Report Form can be obtained from the NWB upon request or electronically from the NWB's FTP site using the following link:

<ftp://ftp.nwb-oen.ca/other%20documents/>

Major Conditions Removed/Amended with this Licence

The following section summarizes the terms and conditions that have been removed or amended with issuance of the renewed licence:

- Part C, item 1 of Licence 1BR-LOR0813 has been amended to reflect the reduced water use needs from fifteen (15) cubic meters to one (1) cubic meter.
- In Part D, all terms pertaining to Camps, Sewage Disposal Facilities, a Solid Waste Disposal Facility, a Landfarm Facility, and the demolition Rinse Wastewater, have been removed as this no longer exist on the monitoring site.
- In Part E, for the conditions applying to the Undertaking, all terms pertaining to the existing Operations and Maintenance Manual has been removed given that there are no longer any facilities to be operated on site. All other terms related to the repair of facilities and the removal of hazardous materials from site have also be removed, given that the Phase II monitoring activities on site does not reflect that there are any facilities on site, nor is an hazardous material being removed.
- In Part F, of the 1BR-LOR0813 License, all terms pertaining to establishment and use of a camp have now been removed. The renewed and amended Licence now includes a term, in Part F item 1, stating that camps are not authorized under this Licence.
- In Part G, of this Licence, all terms pertaining to land-based drilling have been removed, the only drilling activities allowed are for the purpose of installing monitoring wells and other instrumentation for monitoring the site during Phase II activities.
- In Part H, Conditions applying to Construction and Modifications, all terms pertaining to the submission of as-built plans/drawings and construction of the Solid Waste Disposal Facility and the Landfarm Facility have been removed given that they are no longer applicable to the scope of this Licence.
- In Part I, all terms pertaining to the "Preliminary Fuel Containment and Spill Contingency Plan" have been removed because no chemical or fuel will be stored or used on site.

- In Part J, the terms now only reference the Abandonment and Restoration of the monitoring site, with the reduced scope of just the monitoring wells that are on site.
- In Part K, Conditions for the Monitoring Program, all terms that were related to monitoring the on-site camp activities and the Sewage Treatment Facility were removed in this renewed and amended Licence given that no camp and Sewage Treatment Facilities are permitted on site.

Water Use

The Board has authorized maximum water usage as one (1) cubic metre per day to allow for sampling and related purposes. The Licensee indicated in the Application that all potable Water necessary to support field personnel during monitoring events will be sourced from an approved source off-site.

Deposit of Waste

With decommissioning of the site completed and no camp activities planned, the Application identifies domestic solid Waste (Paper towels, food wrappers, etc) resulting from monitoring field events as the only Waste type expected as a result of the undertaking. As the Licensee intends to backhaul all solid Waste generated to relevantly approved off-site facilities for disposal or treatment, no deposit of Waste is permitted under the Licence.

Drilling

Neither the Application nor the Monitoring Program indicates the need for further drilling at the Cape Christian Long Range Navigation Site. Nevertheless, the Board has maintained conditions related to drilling, should the Licensee find it advantageous to augment its monitoring program through the installation of additional monitoring wells or instrumentation.

The Undertaking

To fulfill Part E, Item 2 of Licence 1BR-LOR0813, the Licensee submitted on February 23, 2010, revised Operation and Maintenance Plans for the Bio-treatment Area, the Non-hazardous Waste Landfill and the Sewage Lagoon, which had been built to support remediation activities. As remediation activities at Cape Christian Long Range Navigation Site and the decommissioning of these sites concluded before the Plans were distributed for comments these plans were never approved.

The undertaking involves no further operation of infrastructure related to Water and Waste Management.

Spill Contingency Planning

On June 30, 2010, INAC submitted a Spill Contingency Plan to the Board, which detailed general spill contingency measures to consider during the decommissioning of the Cape Christian Long Range Navigation Site. The Applicant has further identified in 2017, that no further chemicals will be utilized at site for the upcoming monitoring activities therefore no further revision was required to the Spill Contingency Plan. In an email dated April 25, 2017, INAC WRD confirmed they are satisfied with removing the requirement for the applicant to revise the Site Spill Contingency Plan. All other requirements for the Spill Contingency Plan are detailed under Part H of the Licence.

Abandonment and Restoration

Information included with the Application states that abandonment and restoration activities for the site concluded in 2010, with post-construction, long-term monitoring beginning in 2011. The Licensee summarized the remediation activities for the Cape Christian Long Range Navigation Site in the report entitled *Remediation Closure Report for Cape Christian LORAN Station* (EBA, 2011), submitted to the NWB on March 31, 2011. The completed remediation tasks between 2009 and 2010, identified by the report include: management of hazardous waste, construction and operation of a Non-Hazardous Waste Landfill (NHWL), decommissioning and demolition of site infrastructure, processing of buried Wastes, construction and decommissioning of on-site landfill, decommissioning of former Water reservoir, and restoration of areas affected by work and general re-grading of the work areas.

Under the terms and conditions in the Licence applying to abandonment and restoration, the Licensee is required to follow the prescribed activities identified in the revised Cape Christian Abandonment and Restoration Plan, submitted March 27, 2017, which is approved under this licence. These activities include the removal of any remaining equipment and facilities associated with the project upon completion. Additional conditions for restoration have been included under Part I of this Water Licence.

Monitoring

The Board notes that the Licensee has submitted an addendum to the *Cape Christian Long Term Monitoring Plan*, on March 27, 2017. The revised plan addressed the comments made by ECCC and INAC during the review process. The Board has now approved this revised plan.

The Licensee's Monitoring Plan broadly reflects the strategy outlined in the *Abandoned Military Site Remediation Protocol* (INAC, 2009), long-term monitoring is separated into phases. Phase I monitoring at the Cape Christian site involves monitoring events in years 1, 3 and 5 (i.e. 2011, 2013 and 2015). Phase II, will include subsequent monitoring events in 2017, 2020, 2025 and 2035. The NWB has extended the Licence term to two years after the 2025 monitoring event (i.e. 2027), in order to allow the Licensee necessary time to the results from the 2025 monitoring. Should the Licensee decide to alter the Monitoring Program before the end of Phase II, it shall apply to the Board to amend its Licence, and include appropriate scientific reasoning for the alterations.

As stipulated in Section 2.3 of the *Cape Christian Long Term Monitoring Plan*, it is understood that the decision to cease or continue monitoring into Phase III (i.e. >2035) will rest on the evaluation of Phase I and Phase II monitoring results. Under Part J, Item 8, the Licence requires the submission of a Phase II Monitoring Summary Report to the Board for review before the expiry of the Licence, which shall summarize the Phase I and Phase II monitoring results and provide justification for the continuation or cessation of the Monitoring Program.

Importantly, the Board notes that both the 2013 and 2015 Long Term Monitoring Report revealed exceedances relative to *Federal Interim Groundwater Quality Guidelines* (EC, 2010) for Aluminum, Cadmium, Chromium, Copper, Iron, Lead and Zinc. For these reasons, the Board supports the decision to continue Monitoring activities of the NHWL under Phase II.

D. DECISION

LICENCE NUMBER: 1BR-LOR1727

This is the decision of the Nunavut Water Board (NWB or Board) with respect to an application, originally dated July 18, 2014 with the complete application received July 27, 2015, for renewal – amendment of a Water Licence made by:

INDIGENOUS AND NORTHERN AFFAIRS CANADA

to allow for the use of Water and deposit of Waste during activities related to a long-term monitoring program at the former Cape Christian Long Range Navigation Site, located near the Hamlet of Clyde River, within the eastern Qikiqtani Region of Nunavut, at the following geographical coordinates:

Latitude: 70° 31' 17" N Longitude: 68° 17' 56" W

DECISION

After having been satisfied that the Application was for a location that falls outside of an area with an approved Land Use Plan and exempt from screening in accordance with section 12.4.3 of the Nunavut Agreement such that the June 7, 2007 screening decision remains applicable² as determined by the NPC, 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 an intervening party, 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-LOR0813 be renewed and amended as Licence No. 1BR-LOR1727 subject to the terms and conditions contained therein. (Motion #: 2017-B1-001)

Signed this 27th day of April 2017 at Gjoa Haven, NU.

Thomas Kabloona
Nunavut Water Board
Chair
TK/ce/ip

² Nunavut Planning Commission (NPC) Determination, January 10, 2017.



NUNAVUT WATER BOARD WATER LICENCE RENEWAL

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

INDIGENOUS AND NORTHERN AFFAIRS CANADA

(Licensee)

P.O. BOX 2200 IQUALUIT, 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 Licence Amendment/Renewal:

Licence Number/Type:	1BR-LOR1727 / TYPE "B"
Water Management Area:	SOUTHWESTERN BAFFIN BAY WATERSHED (49)
Project / Location:	CAPE CHRISTIAN LONG RANGE NAVIGATION SITE, QIKIQTANI REGION, NUNAVUT
Classification:	INDUSTRIAL UNDERTAKING
Purpose:	DIRECT USE OF WATER AND DEPOSIT OF WASTE
Quantity of Water use not to Exceed:	ONE (1) CUBIC METRE PER DAY
Date of Licence Issuance:	April 27, 2017
Expiry of Licence:	April 26, 2027

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

**Thomas Kabloona,
Nunavut Water Board
Chair**

PART A. SCOPE, DEFINITIONS AND ENFORCEMENT

1. Scope

- a. This Licence allows for the use of Water and deposit of Waste associated with the implementation of a post-closure monitoring program, for an undertaking classified as an Industrial, as per Schedule 1 of the *Regulations*, at the Cape Christian Long Range Navigation Site, located approximately 16 kilometres northeast of the Hamlet of Clyde River, within the Qikiqtani Region of Nunavut, at the general latitude of 70° 31' 17" N and general Longitude of 68° 17' 56" W.
- b. 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
- c. 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

In this Licence: 1BR-LOR1727

“**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;

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

“**Application**” means the application for amendment and renewal of Licence No. 1BR-LOR0813, received by the NWB on July 18, 2014;

“**Appurtenant Undertaking**” means the application for amendment and renewal of Licence No. 1BR-LOR0813, received by the Board July 18, 2014;

“**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.2* and the *Engineering and Geoscience Professions Act S.N.W.T. 2006, c.16 Amended by S.N.W.T. 2009, c.12*;

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

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

“**Hazardous Waste**” means waste classified as “hazardous” by Nunavut Territorial or Federal Legislation, or as “dangerous goods” under the *Transportation of Dangerous Goods Act* at the time of clean-up;

“**High Water Mark**” means the usual or average level to which a body of Water rises at its highest point and remains for sufficient time so as to change the characteristics of the land;

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

“**Landfarm Facility**” means an engineered facility and associated appurtenance designed and constructed for the treatment and storage of hydrocarbon impacted soil and/or Water;

“**Licensee**” means the individual or organization to which 1BR-LOR1727 Type “B” is issued or assigned;

“**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 the monitoring program established to collect data on surface Water and groundwater quality to assess impacts to the environment of the appurtenant undertaking;

“**Non-Hazardous Waste Landfill**” comprises the landfill constructed for the disposal of non-hazardous Waste derived from the site cleanup, as described in the *Cape Christian Long Term Monitoring Plan*, dated February 2009, submitted with the Application;

“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;

“Solid Waste” means non-hazardous waste and Type-A soil;

“Solid Waste Disposal Facilities” comprises the area and associated structures designed to contain solid Waste and to permanently isolate the contents of the disposal facility from the environment as described in the Application for Water Licence filed by the Applicant on January 23, 2007;

“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” 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;

“Waste” means, as defined in S.4 of the *Act*, any substance that, by itself or in combination with other substances found in water, would have the effect of altering the quality of any water to which the substance is added to an extent that is detrimental to its use by people or by any animal, fish or plant, or any water that would have that effect because of the quantity or concentration of the substances contained in it or because it has been treated or changed, by heat or other means;

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

3. Enforcement

- a. Failure to comply with this Licence will be a violation of the *Act*, subjecting the Licensee to the enforcement measures and the penalties provided for in the *Act*;
- b. All inspection and enforcement services regarding this Licence will be provided by Inspectors appointed under the *Act*; and
- c. For the purpose of enforcing this Licence and with respect to the use of Water and deposit or discharge of Waste by the Licensee, Inspectors appointed under the *Act*, hold all powers, privileges and protections that are conferred upon them by the *Act* or by other applicable law.

PART B. GENERAL CONDITIONS

1. The Licensee shall file an Annual Report on the Appurtenant Undertaking with the Board no later than the 31st of March of the year following the calendar year being reported, containing the following information:
 - a. A summary report of Water use activities;
 - b. A summary of any construction work, modification and major maintenance work (including as-built diagrams) carried out;
 - c. Tabular summaries for all data and information generated under the Monitoring Program;
 - d. A review and analysis of data collected during the Monitoring Program and a brief description of any future studies planned by the Licensee;
 - e. The results of any review conducted and any recommendations regarding any changes to the Monitoring Program and/or remediation requirements;
 - f. A summary of any remediation work undertaken during the year and an outline of any work anticipated for the next year;
 - g. A list of unauthorized discharges and summary of follow-up actions taken;
 - h. Any updates or revisions for manuals and plans as required by changes in operation and/or technology;
 - i. If applicable, a description of any trenches and sumps excavated, including the following: GPS coordinates, dimensions, depth below active layer, and secondary containment features;
 - j. A brief summary of work done to address any concerns of deficiencies listed in the inspection reports and/or compliance reports prepared by an Inspector;
 - k. An executive summary in English and Inuktitut of all plans, reports, or studies conducted under this Licence; and
 - l. Any other details on Water use or deposit of Waste requested by the Board by 1st of 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 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.
4. The Monitoring Program and compliance dates specified in the Licence may be modified at the discretion of the Board.
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, for all Plans submitted under this Licence, implement the Plan as approved by the Board in writing.
7. 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.
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 post signs in the appropriate areas to identify the stations of the Monitoring Program associated with the undertaking. All signage postings shall be in the Official Languages of Nunavut
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, INAC
Nunavut District, Nunavut Region
P.O. Box 100
Iqaluit, NU X0A 0H0
Telephone: (867) 975-4295
Fax: (867) 979-6445

11. The Licensee shall submit one paper copy and one 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*.

PART C. CONDITIONS APPLYING TO WATER USE

1. The Licensee is authorized to use up to one (1) cubic metre of Water per day for sampling and related purposes.
2. The Licensee shall not remove any material from below the ordinary High Water Mark of any Water body.
3. The Licensee shall implement measures to prevent the deposition of dust and/or sediment into Water arising from contractor activities or any on-site vehicular traffic.
4. Equipment used should be well cleaned and free of oil and grease and maintained free of fluid leaks. The Licensee shall ensure that pollutants from machinery used during construction do not enter Water.

PART D. CONDITIONS APPLYING TO WASTE DISPOSAL

1. The Licensee shall locate areas designated for Waste disposal including all pump-out Water 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 practice on-site land filling of domestic waste, unless otherwise approved by the Board in writing.
3. The Licensee shall backhaul and dispose of all Waste not covered in Part D, Item 1, at a licensed waste disposal facility.
4. The Licensee shall provide to the Board documented authorization from all communities in Nunavut receiving wastes from Cape Christian Long Range Navigation Site prior to any backhauling and disposal of Wastes to those communities.
5. 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, Part B, Item 1.

PART E. CONDITIONS APPLYING TO THE UNDERTAKING

1. The Licensee shall conduct all activities in such a way as to minimize impacts on surface drainage and the Licensee shall immediately undertake any corrective measures in the event of any impacts on surface drainage.

2. The Licensee shall not cause erosion to the banks of any body of Water and shall provide necessary controls to prevent such erosion.
3. The Licensee shall minimize disturbance to terrain, permafrost and drainage during movement of contractor's equipment and personnel around the site during post closure monitoring activities.
4. All sites affected by sampling 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.
5. The Licensee shall implement proper handling, storage and transportation procedures for hazardous materials to prevent entry to any Water body.

PART F. CONDITIONS FOR CAMPS, ACCESS INFRASTRUCTURES AND OPERATIONS

1. Establishment and use of a camp is not authorized under this Licence
2. All activities shall be conducted in such a way as to minimize impacts on surface drainage and the Licensee shall immediately undertake any corrective measures in the event of any impacts on surface drainage.
3. Winter lake and stream crossings, including ice bridges, shall be constructed entirely of water, ice or snow, and shall be removed prior to spring break-up.
4. With respect to access road, pad construction or other earthworks, the deposition of debris or sediment into any water body is prohibited. These materials shall be disposed of above the ordinary high water mark in such a fashion that they do not enter the water.

PART G. CONDITIONS APPLYING TO DRILLING OPERATIONS

1. The Licensee is authorized to conduct drilling for the purposes of installing monitoring wells and other instrumentation.
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 Wastes in a sump or an appropriate natural depression at a distance of at least thirty-one (31) metres from the ordinary High Water Mark of any adjacent Water body, where any flow into a Water body is not possible and no additional impacts are created.

4. The Licensee shall restore all drill holes and disturbed areas to natural conditions immediately upon completion of the projects. The restoration of drill holes must include the removal of any drill casing materials and the capping of holes with a permanent seal.

PART H. CONDITIONS APPLYING TO CONSTRUCTION AND MODIFICATIONS

1. The Licensee may, without written consent from the Board, carry out Modifications to the Water and Waste management structures or 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 H, 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 I. CONDITIONS APPLYING TO SPILL CONTINGENCY PLANNING

1. 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.
2. 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.
3. 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.

PART J. CONDITIONS APPLYING TO CLOSURE AND RECLAMATION OR TEMPORARY CLOSING

1. The Board has approved the Cape Christian Abandonment and Restoration Plan, submitted March 27, 2017.
2. All roads shall be re-graded to match natural contours to reduce erosion.
3. In order to promote growth of vegetation and the needed microclimate for seed deposition, all disturbed surfaces shall be prepared by ripping, grading, or scarifying the surface to conform to the natural topography.
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. 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 Contaminated Site Remediation*, 2009. 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.
6. All disturbed areas shall be contoured and stabilized upon completion of work and restored to a pre-disturbed state.

PART K. CONDITIONS APPLYING TO THE MONITORING PROGRAM

1. The Board has approved the Cape Christian Long Term Monitoring Plan, Revised February 28, 2017, and submitted as additional information for the application.
2. The Licensee shall carry-out the monitoring in accordance with the Plan approved under Part K, Item..
3. 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.
4. All analyses shall be performed in a laboratory accredited according to ISO/IEC Standard 17025. The accreditation shall be current and in good standing.

5. The Licensee shall ensure that tabular summaries for all data and information generated under the Monitoring Program, as well as an analysis of data collected during the Monitoring Program, are provided to the Board in the Annual Report, in accordance with Part B, Item 1.
6. The Licensee shall determine the GPS co-ordinates (in degrees, minutes, and seconds of latitude and longitude) of all locations where sources of Water are utilized for all purposes.
7. The Licensee shall review the Quality Assurance/Quality Control Plan (QA/QC) included in Section 3.0 of the *Cape Christian Long Term Monitoring Plan* for changes in operation and/or technology and modify the Plan accordingly. Any revisions to the QA/QC Plan shall be acceptable to an accredited laboratory and include, when being submitted to the Board, a cover letter from an accredited laboratory confirming acceptance of the Plan for analyses to be performed under the Licence. The revisions to the QA/QC Plan and the *Cape Christian Long Term Monitoring Plan* are to be submitted in the form of an addenda to be included with the Annual Report, unless directed otherwise by the Board.
8. The Licensee shall submit a Phase II Monitoring Summary Report the year after the 2035 onsite Monitoring activities. The Monitoring Summary Report should be submitted with the Annual Report. The Report shall summarize data collected during Phase I and II monitoring, and include information on the integrity of the Waste Disposal Facilities. The Report shall also address whether the facilities have performed as expected and encased in permafrost. The report must include an assessment of how the facilities are expected to perform in the long term as well as appropriate recommendations.
9. The Licensee conduct any additional monitoring requested by the Inspector.