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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI
OFFICE DES EAUX DU NUNAVUT

File No: **3BM-HAL2025**

April 23, 2020

Louis Primeau
Chief Administrative Officer
Municipality of Hall Beach
P.O. Box 3
Hall Beach, NU X0A 0K0

Bhabesh Roy, M.A. Sc., P. Eng
Municipal Planning Engineer
Baffin Region, GN-CGS
P.O. Box 379
Pond Inlet, NU X0X 0S0

Email: sao_hbhamlet@qiniq.com

Email: broy@gov.nu.ca

RE: NWB Renewal / Amendment Water Licence No: 3BM-HAL2025

Dear Mr. Primeau and Mr. Roy:

Please find attached Water Licence No: **3BM-HAL2025** issued to the Municipality of Hall Beach 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 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 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 by interested persons on issues identified. This information is attached for your consideration.¹

Sincerely,

Lootie Toomasie
Nunavut Water Board
Chair

LT/dd/rqd

Enclosure: Licence No: **3BM-HAL2025**
Comments – CIRNA

Cc: Qikiqtani Distribution List

¹ Crown Indigenous Relations and Northern Affairs (CIRNA), March 27, 2020.

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DECISION

LICENCE NUMBER: 3BM-HAL2025

This is the decision of the Nunavut Water Board (NWB or Board) with respect to a complete application received on February 28, 2020 for a renewal/amendment of a Water Licence made by:

HAMLET OF HALL BEACH

to allow for the use of Water and deposit of Waste for a Municipal undertaking by the Hamlet of Hall Beach located within the Qikiqtani Region, Nunavut, generally located at the geographical coordinates as follows:

Latitude: 68° 46' N

Longitude: 81° 13' W

DECISION

After having been satisfied that the application is outside the area with an applicable regional Land Use Plan as per Nunavut Planning Commission (NPC) November 8, 2019, Conformity Determination,¹ and exempt from the requirement for screening by the Nunavut Impact Review Board (NIRB) under section 12.4.3 of the *Nunavut Agreement*², 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: 3BM-HAL1520 be renewed as Licence No: 3BM-HAL2025 subject to the terms and conditions contained therein. (Motion #: 2020-B1-002).

Signed this 23rd day of April 2020 at Gjoa Haven, NU.

Lootie Toomasie
Nunavut Water Board
Chair
LT/dd/rqd

1 Nunavut Planning Commission (NPC) Conformity Determination, November 8, 2019

2 Nunavut Impact Review Board (NIRB), Exempt from Screening Decisions, dated September 2, 2010, and June 5, 2015.

I. BACKGROUND

The Hamlet of Hall Beach (Hamlet), with an estimated population of 848 (2016 census)⁴, is located on the western shore of Foxe Basin within the Qikiqtani Region of Nunavut.

The Hamlet owns and operates several municipal facilities aimed at providing relevant services to the residents of the community including a potable Water Supply Facility (WSF), Solid Waste Disposal Facility (SWDF), and a Sewage Disposal Facility (SDF).

Water Supply Facility

The Hamlet of Hall Beach's Water Supply Facility (WSF) consists of a storage reservoir, which is filled annually, and a Water Truck Fill Station (WTFS) located at the southern berm of the reservoir that is equipped with a disinfection system. Freshwater treated by the Hamlet's WSF is obtained from a natural freshwater lake, called Water Supply Lake, located approximately 3 kilometres from the community.

Sewage Disposal Facility

Sewage generated by the Hamlet is treated by a Sewage Disposal Facility (SDF) consisting of a two-cell, exfiltration lagoon system comprised of gravel and sand and located approximately 1 kilometre from the Hamlet's community centre. Effluent from the lagoon system is released seasonally with discharge from the first and southernmost cell (Cell 1) being ex-filtrated through a common berm to the second cell (Cell 2) of the lagoon system while effluent from Cell 2 is in turn ex-filtrated through the drainage channel of lagoon's eastern and northern berms before being pumped into a nearby wetland area. Effluent from the lagoon and/or wetland area is eventually discharged into Foxe Basin.

Solid Waste Disposal Facility

The Solid Waste Disposal Facility (SWDF) consists of a partially fenced landfill site located west of the lagoon system; and a bulky, unsegregated metal site, located south of the lagoon facility. The bulky metal site is also used to store household hazardous waste generated by the Hamlet.

II. FILE HISTORY

The Hamlet of Hall Beach has held Water Licences with the NWB since 2003, excluding the period of 2010 to 2015 when compliance issues inhibited the Licence renewal, as outlined in Table 1.

Table 1. Project Licensing History

| Licence No. | Date Issued | Comments |
|-------------|----------------|--|
| 3BM-HAL0308 | April 23, 2003 | Water use 35,000 m ³ per year and deposit of waste. |
| 3BM-HAL0810 | May 16, 2008 | Water use 35,000 m ³ per year and deposit of waste. |

4 Statistics Canada. 2017. Hall Beach, HAM [Census subdivision], Nunavut and Nunavut [Territory] (table). Census Profile. 2016 Census. Statistics Canada Catalogue no. 98-316-X2016001. Ottawa. Released November 29, 2017. <https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/prof/index.cfm?Lang=E>.

| | | |
|-------------|----------------|--|
| 3BM-HAL1520 | April 30, 2015 | Water use 35,000 m ³ per year and deposit of waste. |
|-------------|----------------|--|

III. APPLICATION PROCEDURAL HISTORY

On **February 28, 2020**, the Hamlet of Hall Beach submitted a renewal/amendment water licence application and pertinent documentation (Application), which included the following:

- Application Cover Letter;
- Application Renewal Form;
- NPC Conformity Determination Letter;
- Hazardous Waste Segregation , Storage and Transportation Plan;
- Authorization Letter; and
- Plan for Compliance.

On **March 9, 2020**, the NWB received the Executive Summaries in English and Inuktitut.

On **March 3, 2020**, the NWB requested additional information from the Licensee in support of the water licence renewal application, which was provided that same day.⁵ Specifically, the NWB advised the Licensee that management plans previously approved under the Licence were out of date and required additional information to be fully complete and functional. However, as the NWB and GN-CGS are in discussion regarding the development of Municipal O&M Plan templates for all applicable facilities in Nunavut communities, and these would be implemented within the 5-year Licence term the Board decided that the Application could be further processed.

On **March 3, 2020**, the NWB concluded that the Application met the requirements of section 48(1) of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (NWSRTA or Act) and forwarded notice of the Application to regulators, the council of the municipality most affected by the project, and other interested parties. All parties were invited to make representations to the Board by March 26, 2020.

On **March 27, 2020**, Crown-Indigenous Relations and Northern Affairs (CIRNA) submitted comments, noting recommendations previously mentioned by the Inspector and echoing NWB recommendations to update management plans. The Applicant provided a same-day response to these comments, which CIRNA responded to on April 14, 2020, requesting additional information that the Applicant provided on April 15, 2020.

All information received in support of the Application as well as the submissions provided by intervening parties can be found at the following link:

<ftp://ftp.nwb-oen.ca/registry/3%20MUNICIPAL/3B/3BM%20-%20Municipality/3BM-HAL2025/>

⁵ Email from Derek Donald (NWB) to Bhabesh Roy (Hamlet): Re: New Water licence application of the Municipality of Hall Beach WL 3BM-HALL 1520, dated March 3, 2020.

Based upon the results of the completed detailed assessment, including consideration of any potential accidents, malfunctions, or cumulative environmental effects that the overall project might have in the area, the Board has approved the application for the renewal and amendment of Licence No: 3BM-HAL1520 as Licence No: **3BM-HAL2025**.

IV. ISSUES

Compliance

The Board has granted the Applicant with the amended renewal Licence despite the need for the submission of up-to-date management plans for all operational facilities. It is the Board's understanding that Government of Nunavut Community and Government Services (GN-CGS) is currently in the process of developing standardized templates for all facilities for all communities, and that these manuals or plans will be commissioned and implemented before the expiry of this Licence in 2025.

Points identified in previous Inspection reports,⁶ outlined a number of issues of non-compliance for the Hamlet of Hall Beach. In brief and detailed below, the Hamlet of Hall Beach should address the following in their plan for Licence compliance:

- Measuring water use directly at the intake on Water Supply Lake (see PART H, Item 1);
- Improving segregation of hazardous and non-hazardous waste at the Solid Waste Disposal Facilities (see PART D, Item 9);
- Including the water control structures (dams/dykes) at Water Supply Lake in the Operations and Maintenance Plan for the Water Supply Facility (see PART F, Item 3);
- Ensuring that sediment and erosion control measures are installed and operational prior to, and maintained during all activities that have potential to cause erosion (see Part E, Item 6);
- Ensure that analytical results from the Monitoring program are organized, labeled properly, and include a brief interpretation of the results and any exceedances.

The NWB would like to highlight these issues with respect to the NWNSRTA in the context of the Licence issued to the Hamlet.

The Licensee submitted as part of its Application, a plan for compliance that highlighted the actions that the Licensee plans to take to address outstanding issues associated with its Application and/or the undertaking. While the information contained in the plan for compliance helps to provide the NWB with an overview in terms of the Licensee's long-term and short-term goal and objectives in terms of addressing outstanding issues, the information contained in the plan for compliance is not necessarily absolute or binding. The NWB has, therefore, decided to exclude conditions in this Licence relating to the approval of the plan for compliance as was done under the previous Licence. The Licensee is also advised to follow Inspector recommendations and address operational issues raised by the Inspector.

⁶ CIRNA Water Licence Inspection Form, Hamlet of Hall Beach, Joseph Monteith, August 19, 2018, (see also John Mesher, October 3, 2017, and earlier Inspection Reports).

Term of the Licence

In accordance with S. 45 of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (NWNSRTA or the Act), the NWB may issue a licence for a term not exceeding twenty-five (25) years. In determining an appropriate term of a water licence, the Board considers a number of factors, including the results of the CIRNA's annual site inspection and the compliance record of the Applicant.

The Licensee has requested a five (5) year term for the renewal Licence. The Board agrees and believes that a licence term of five (5) years will allow sufficient time for the Licensee to develop, submit, and implement the management plan updates required under this Licence.

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 municipal 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/>

The NWB has also taken this opportunity to review the Annual Reports submitted in recent years, and the following deficiencies in reporting have been identified:

- failure to submit the required Operation and Maintenance Plan for the Water Supply Facility, and the required updates to the Operation and Maintenance Plan for the Sewage Disposal Facility;
- incomplete/inconsistent monitoring data in accordance with the Monitoring Program;
- lack of interpretation for data provided, no explanation for missing data.

The Annual Report shall include all Monitoring Program results as per requirements included within Part H (Conditions applying to the Monitoring Program) of the Licence. The Board would like to remind the Licensee that the Annual Reporting requirements of the Licence should be adhered to at all times so as to help maintain full compliance with respective terms and conditions in the Licence. The Board strongly recommends that for all subsequent annual submissions the Licensee submit a more systematic monitoring report, in accordance with Part I, Item 2, of current Water Licence, including a short analysis and interpretation of the data.

Water Use

The Hamlet's freshwater supply is Water Supply Lake, a natural lake located 3 kilometers from the community and 1 km from the Airport. The yearly water requirement for the Hamlet is withdrawn around September of each year and stored in a 50,000 m³ capacity reservoir located

proximal to the water source. Trucks are then used to distribute the water from the storage reservoir to community members and business on an as-needed basis. Water use is currently measured at the “On Tap Water Delivery System,” and not at the water intake at Water Supply Lake. The Licensee noted that new Water Supply Facility are expected to be built in the next 3 to 4 years.

The Licensee originally requested water use of 35,000 m³ per year, however it was noted that water use reported in recent years has been as high as 36,829 m³, and following discussion was increased to 45,000 m³ per year. CIRNA noted that the total capacity of the two sewage lagoons is only 41,746 m³, and would not hold the total water use volume, and the Licensee responded stating that the lagoons could be decanted at 8 months intervals if required to increase the capacity. CIRNA also recommends the proponent provide an Operation and Maintenance Manual for the Water Supply Facility.

The Board considers the water total amount of 40,000 m³ per year to be appropriate for the Hamlets water needs for the next 5 years, within their ability to treat this volume of water in the Sewage Disposal Facility, and will require an Operation and Maintenance Manual for the Water Supply Facility. The Board has therefore granted, under Part C, Item 1 of the Licence, the water quantity requested by the Applicant, forty thousand (40,000) cubic metres annually and not more than two-hundred and ninety-nine (299) cubic metres per day from Water Supply Lake during the period in which the reservoir is replenished or otherwise.

Deposit of Waste

Sewage

The Hamlet of Hall Beach provides trucked sewage removal services for the Community. Sewage is collected by vacuum truck from community holding tanks and discharged to the sewage lagoon via the effluent discharge flume. The Sewage Treatment Facility are located approximately 1 km east from the Hamlet, and consists of a double-celled lagoon system with a combined working capacity of 41,746 m³, that was constructed in 2002 and upgraded in 2015-2016, with recent repairs done in 2018. The Licensee also noted that additional repairs were planned for the summer of 2020.

The most recent Sewage Disposal Facility Operations and Maintenance (O&M) Manual is from 2011, and CIRNA recommended the Licensee provide an updated Sewage Disposal Facility O&M Manual, confirming which operations are still relevant to the current lagoon System. The Licensee noted that the lagoon will be repaired this summer and an updated O&M will be finalized and provided to the NWB following. The Board has included a condition to provide an updated plan within ninety (90) days following issuance of the Licence, allowing the Licensee ample time to complete all required tasks.

Solid Waste

The Hamlet’s Solid Waste Disposal Facility are located adjacent to the sewage treatment lagoon, and includes the existing solid waste site used to manage household and non-segregated waste as

well as a hazardous material storage area. In addition, there are several bulky metal sites located on shore leading to the solid waste site. The bulky waste is generally unsorted and may contain a mixture of hazardous waste and other waste types. The Licensee noted that new Solid Waste Disposal Facility is expected to be built in the next 3 to 4 years. Conditions related to the management of solid waste generated by the undertaking are included under Part D in the renewal Licence.

Management Plans and Manuals

The NWB has reviewed the following plans that were approved under the previous Licence:

- *Hamlet of Hall Beach, NU, Spill Contingency Plan, Sewage Treatment and the Solid Waste Sites*, dated June 2011
- *Hamlet of Hall Beach, NU, Sewage Treatment Facility Operation and Maintenance Manual*, dated June 2011
- *Hamlet of Hall Beach, NU, Solid Waste Facility Operation and Maintenance Manual*, dated June 2011
- *Hamlet of Hall Beach Quality Assurance/Quality Control Plan*, dated August 15, 2013

The Board has determined, in combination with similar recommendations made by CIRNA, that management plans will require updates to be considered fully functional.

Spill Contingency

The review of the plan entitled *Hamlet of Hall Beach, NU, Spill Contingency Plan, Sewage Treatment and Solid Waste Sites*, dated June 2011, determined that the plan should include a topographical map with the main infrastructure, water bodies and spill kit locations, as detailed in the *Guideline for Spill Contingency Planning, Indian and Northern Affairs Canada, April 2007*, as well as general administrative updates. The Board therefore requires the Licensee to implement the plan under Part F, Item 4 in the Licence. In addition, the Licensee is required to provide an updated plan within ninety (90) days following issuance of the Licence to reflect these changes and any changes in operations or other factors that may impact the functionality of the plan.

Sewage Disposal Facility Operation and Maintenance Manual

The review of the manual entitled *Hamlet of Hall Beach, NU, Sewage Treatment Operations and Maintenance Manual*, dated June 2011, which includes a sludge management component/section, determined that the manual should be updated to include all upgrades and repairs, and specifically confirms which operations and infrastructure are still relevant to the Sewage Disposal Facility. The NWB therefore requires the Licensee to implement the plan under Part F, Item 1 in the Licence. In addition, the Licensee is required to provide an updated plan within ninety (90) days following issuance of the Licence to reflect these changes and any changes in operations or other factors that may impact the functionality of the plan.

Water Supply Facility Operations and Maintenance Manual

An Operations and Maintenance Manual was not submitted for the Water Supply Facility, therefore, the NWB has included conditions under Part F, Item 3 requiring the submission of an

Operations and Maintenance Manual for the potable Water Supply Facility within ninety (90) days following issuance of the Licence.

Solid Wastes Facility Operation and Maintenance Manual

The review of the plan, *Hamlet of Hall Beach, NU, Solid Wastes Facility Operation and Maintenance Manual*, dated June 2011, determined that the manual should be updated to reflect current conditions, but is otherwise generally functional. The NWB therefore requires the Licensee to implement the plan under Part F, Item 2 in the Licence. The Licensee is required to update the plan on an annual basis to reflect any changes in operations or other factors that may impact the functionality of the plan.

QA/QC Plan for Water Quality Management

The Licence submitted in 2013, a QA/QC Plan that addresses both water and wastewater issue jointly. The review of the 2013 plan determined the document to be functional and acceptable. The Board therefore has accepted the Plan under Part H, Item 9 in the Licence. The Licensee is required to update the plan on an annual basis to reflect any changes in operations or other factors that may impact the functionality of the plan

Abandonment and Restoration Plan

Under Part G, Item 1, an Abandonment and Restoration Plan (A&R Plan) is required six months prior to the abandonment of any facility. The Board believes that a template should be developed to standardize this process across all Nunavut communities.

Monitoring Program

Part H of the Licence details the environmental monitoring requirements. Requirements are similar to the previous Licence with a few changes in preparation for the development of standard management plans for Nunavut communities and the potential development of Northern Wastewater Discharge criteria. Notably, the Monitoring Program Station HAL-5 remains included because it falls after what would/could be considered a Wetland Treatment Area (WTA) and would be considered the compliance point if the WTA is eventually considered part of the Sewage Disposal Facility.

Sampling is required for all discharges from the Sewage Disposal Facility (HAL-4) and Solid Waste Disposal Facility (HAL-2). The Licensee is reminded to complete all monitoring as required under this Licence. Previous Annual Report were generally complete but missing data for Monitoring Program Station HAL-5 as per Part H, Item 1, which should be included in future Annual Reports.

The Licensee requested the removal of acute lethality testing on Rainbow Trout and *Daphnia magna* from the Monitoring Program, due to time constraint of sampling, shipping and getting the samples in time to a Southern Lab. Acute Lethality testing was previously requested by Environment and Climate Change Canada (ECCC) who did not provide any comments (or objections) regarding the renewal application. Therefore, the Board assumed that ECCC does not object to this request, and the acute lethality testing was removed from the Licence conditions

because of time/logistical constraints in meeting test water holding times. However, it is recommended that the Licensee establish reliable logistics to complete this monitoring, as it may become a future requirement.

It should also be noted that additional sampling may be required upon request by the Board or the Inspector.



NUNAVUT WATER BOARD WATER LICENCE RENEWAL

Water Licence No: 3BM-HAL20251924

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

HAMLET OF HALL BEACH

(Licensee)

P.O BOX 3 HALL BEACH, NUNAVUT, X0A 0K0

(Mailing Address)

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

| | |
|--------------------------------------|---|
| Licence Number/Type: | <u>3BM-HAL2025 TYPE "B"</u> |
| Water Management Area: | <u>KINGORA WATERSHED (20)</u> |
| Location: | <u>HAMLET OF HALL BEACH QIKIQTANI REGION, NUNAVUT</u> |
| Classification: | <u>MUNICIPAL UNDERTAKING</u> |
| Purpose: | <u>DIRECT WATER USE AND DEPOSIT OF WASTE</u> |
| Quantity of Water use not to Exceed: | <u>40,000 CUBIC METRES PER ANNUM OR MAXIMUM OF 299 CUBIC METRES PER DAY</u> |
| Licence Effective Date: | <u>APRIL 30, 2020</u> |
| Licence Expiry Date: | <u>APRIL 29, 2025</u> |

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

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

PART A: SCOPE, DEFINITIONS AND ENFORCEMENT

1. Scope

This Licence allows for the use of water and the deposit of waste for a Municipal undertaking classified as per Schedule 1 of the *Regulations* at the Hamlet of Hall Beach in Qikiqtani Region, Nunavut (Latitude: 68° 46' N and Longitude: 81° 13' 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;

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

“**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;

“**Average Concentration**” means the arithmetic mean of the last four consecutive analytical results for composite or grab samples collected from the monitoring stations identified in Part H;

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

“Composite Sample” means a water or wastewater sample made up of four (4) samples taken at regular periods over a 24 hour period;

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

“Freeboard” means the vertical distance between water line and crest on a dam or dyke's upstream slope;

“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;

“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” comprises the area and engineered lagoon, decant structures and wetland area designed to contain and treat sewage as described in the Application for Water Licence renewal and associated documents filed by the Applicant with the Application;

“Solid Waste Disposal Facility” means the facilities designated for the disposal of solid waste, as described in the Application for Water Licence renewal and associated documents filed by the Applicant with 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;

“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;

“Waste Disposal Facilities” means all facilities designated for the disposal of waste, and includes the Sewage Disposal Facility and Solid Waste Disposal Facility (including Hazardous Waste management area), as described in the Application for Water Licence renewal and associated documents filed by the Applicant with the Application;

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

“Water Supply Facility” comprises the area and associated infrastructure at Water Supply Lake, used for potable water uptake, storage, and treatment including: the Water storage reservoir and the truck-fill and water treatment station, as described in the Application for

Water Licence renewal and associated documents filed by the Applicant with the Application.

3. Enforcement

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

PART B: GENERAL CONDITIONS

1. The Licensee shall file an Annual Report on the Appurtenant Undertaking with the Board no later than March 31st of the year following the calendar year being reported, containing the following information:
 - a. tabular summaries and a brief written interpretation of all data generated under the “Monitoring Program”;
 - b. the monthly and annual quantities in cubic metres of freshwater obtained from all sources;
 - c. the monthly and annual quantities in cubic metres of each and all waste discharged; including the hazardous and non-hazardous waste accepted at the Solid Waste Disposal Facility;
 - d. a summary of modifications and/or major maintenance work and/or investigations carried out on the Water Supply Facility and Waste Disposal Facilities, including all associated structures and facilities;
 - e. a list of unauthorized discharges and summary of follow-up action taken;
 - f. a summary of any abandonment and restoration work completed during the year and an outline of any work anticipated for the next year;
 - g. Any updates or revisions for manuals and plans (*i.e., Operations and Maintenance, Abandonment and Restoration, QA/QC*) as required by changes in operation and/or technology;
 - h. a summary of any studies, reports and plans requested by the Board that relate to waste disposal, water use or reclamation, and a brief description of any future studies planned;
 - i. any other details on water use or waste disposal requested by the Board by November 1st 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 “Monitoring Program” and compliance dates specified in the Licence may be modified at the discretion of the Board.
4. The Licensee shall install flow meters or other such devices, or implement suitable methods required for the measuring of water volumes as required under Part H, Item 1.
5. The Licensee shall, post the necessary signs, where possible, to identify the stations of the “Monitoring Program”. All signage postings shall be in the Official Languages of Nunavut, and shall be located and maintained to the satisfaction of an Inspector.
6. The Licensee shall immediately report to the 24-Hour Spill Report Line at (867) 920-8130, any spills of Waste, which are reported to, or observed by the Licensee, within the municipal boundaries or in the areas of the Water Supply Facility or Waste Disposal Facilities.
7. 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/or 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.
8. The Licensee shall, for all Plans submitted under this Licence, implement the Plan as approved by the Board in writing.
9. 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.
10. 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.
11. 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, CIRNA
Nunavut District, Nunavut Region
P.O. Box 100
Iqaluit, NU X0A 0H0
Telephone: (867) 975-4295
Fax: (867) 979-6445

12. The Licensee shall submit 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.
13. 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.
14. This Licence is assignable as provided for in Section 44 of the *Act*.

PART C: CONDITIONS APPLYING TO WATER USE

1. The Licensee shall obtain all fresh water from Water Supply Lake using the Water Supply Facility or as otherwise approved by the Board. The annual quantity of water use for all purposes under this Licence shall not exceed forty thousand (40,000) cubic metres per year and a maximum of two hundred and ninety-nine (299) cubic metres per day.
2. Where the use of water is of a sufficient volume that the source Water body may be drawn down, the Licensee shall submit to the Board for approval in writing the following: the volume required a hydrological overview of the water body, details of impacts, and proposed mitigation measures.
3. The Licensee shall maintain the Water Supply Facility to the satisfaction of the Inspector.
4. The Licensee shall equip all water intake hoses with a screen of appropriate mesh size to ensure that fish are not entrained and shall withdraw water at a rate such that fish do not become impinged on the screen.
5. The Licensee shall not remove any material from below the ordinary High Water Mark of any water body unless approved by the Board in writing.
6. The Licensee shall not cause erosion to the banks of any body of water and shall provide necessary controls to prevent such erosion.

7. Sediment and erosion control measures shall be implemented prior to and maintained as required during Hamlet operations, to prevent entry of sediment into water.

PART D: CONDITIONS APPLYING TO WASTE DISPOSAL

1. The Licensee shall direct all Sewage to the Sewage Treatment Facility or as otherwise approved by the Board in writing.
2. The Licensee shall provide notice to an Inspector annually when flow is observed from the Sewage Treatment Facility and upon commencing the Monitoring Program at Monitoring Program Station HAL-4.
3. All Effluent discharged from the Sewage Disposal Facility at Monitoring Program Station HAL-4 shall meet the following effluent quality standards:

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

4. 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.
5. The Sewage Disposal Facility shall be maintained and operated, to the satisfaction of an Inspector in such a manner as to prevent structural failure.
7. The Licensee shall provide to the Board for approval, a Sewage Sludge Management Plan, at least sixty (60) days prior to the removal of sludge from the Sewage Disposal Facility. The Plan shall provide at minimum characterization, chemical composition, anticipated volume of the sludge and how it will be stored, treated and eventually disposed of.
8. The Licensee shall dispose of and permanently contain all Solid Wastes at the Solid Waste Disposal Facility or as otherwise approved by the Board in writing.
9. The Licensee shall segregate and store all hazardous materials and/or hazardous waste within the Solid Waste Disposal Facility in a manner as to prevent the deposit of deleterious substances into any water until such a time as proper disposal arrangements are made.
10. The Licensee shall implement measures to prevent hazardous materials and/or leachate from the Solid Waste Disposal Facility from entering water.

PART E: CONDITIONS APPLYING TO MODIFICATION AND CONSTRUCTION

1. The Licensee shall submit to the Board for approval, for construction drawings stamped and signed by a qualified Engineer registered in Nunavut, sixty (60) days prior to the construction of any dams, dykes or structures intended to contain, withhold, divert or retain water or wastes.
2. The Licensee may, without written consent from the Board, carry out Modifications to the Water Supply Facility 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. 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
 - d. the Board has not rejected the proposed Modifications.
3. The Modifications for which all of the conditions referred to in Part E, Item 2(a) through (d), have not been met, may only be carried out upon written approval from the Board.
4. The Licensee shall, within ninety (90) days of completion of Modification or Construction of facilities and/or infrastructure associated with the project, submit to the Board a Construction Summary Report along with stamped as-built plans and drawings, providing explanation to reflect any deviations from for construction drawings taking into account construction and field decisions and how they may affect the performance of engineered facilities.
5. 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.
6. The Licensee shall implement and maintain sediment and erosion control measures prior to and during activities carried out under this Part, to prevent impacts to water resulting from the release of sediment and to minimize erosion.
7. With respect to earthworks, the deposition of debris or sediment into or onto any water body is prohibited. These materials shall be disposed a distance of at least thirty-one (31) metres from the ordinary High Water Mark in such a fashion that they do not enter the water.

8. The 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.

PART F: CONDITIONS APPLYING TO OPERATION AND MAINTENANCE

1. The Licensee shall implement the Manual entitled *Hamlet of Hall Beach, Sewage Treatment Facility Operation and Maintenance Manual*, dated June 2011, which was previously approved by the Board.
2. The Licensee shall implement the Manual entitled *Hamlet of Hall Beach, NU, Solid Waste Facility Operation and Maintenance Manual*, dated June 2011, which was previously approved by the Board.
3. The Licensee shall submit to the Board for approval, within ninety (90) days following issuance of the Licence, an Operations and Maintenance Manual for the Water Supply Facility developed in accordance with applicable guidelines.
4. The Licensee shall implement the plan entitled *Hamlet of Hall Beach, NU, Spill Contingency Plan, Sewage Treatment and Solid Waste Sites*, dated June 2011, which was previously approved by the Board.
5. The Licensee shall submit to the Board for approval, within ninety (90) days of Licence issuance, updated versions of the following Management Plans:
 - a. Spill Contingency Plan;
 - b. Sewage Disposal Facility Operation and Maintenance Plan;
 - i. Including a detailed sludge management plan 60 days prior to removal of sludge (see Part D, Item 7);
 - c. Solid Waste Disposal Facility Operation and Maintenance Plan;
 - d. Abandonment and Restoration Plan submitted 6 months prior to the decommissioning of any facility (see Part G, Item 1);
 - e. QA/QA and Monitoring Program Plan (see Part H, Item 13).
6. An inspection of all engineered facilities related to the management of water and waste shall be carried by an Engineer (Civil, Municipal or Geotechnical) before commissioning any facility. The Engineer's report shall be submitted to the Board within sixty (60) days of the inspection, including a Cover Letter from the Licensee outlining an implementation plan addressing each of the Engineer's recommendations.
7. The Licensee shall perform more frequent inspections of the engineered facilities at the request of an Inspector.
8. If, during the period of this Licence, an unauthorized discharge of waste occurs, or if such

a discharge is foreseeable, the Licensee shall:

- a. employ the appropriate contingency measures outlined in the Spill Contingency Plan for the Hamlet of Hall Beach. Take whatever steps are immediately practicable to protect human life, health and the environment;
- b. report the incident immediately to the NWT/NU 24-Hour Spill Line at [\(867\) 920-8130](tel:(867)920-8130) and to the Inspector at [\(867\) 975-4295](tel:(867)975-4295); and
- c. for each spill occurrence, submit to the Inspector, within thirty (30) days after initially reporting the event, a detailed report that provides the necessary information on the location (including the GPS coordinates), initial response action, remediation/clean-up, status of response (ongoing, complete), proposed disposal options for dealing with contaminated materials and any preventative measures to be implemented.

PART G: CONDITIONS APPLYING TO ABANDONMENT AND RESTORATION

1. The Licensee shall submit to the Board for approval, an Abandonment and Restoration Plan at least six (6) months prior to abandoning any facilities or the construction of new facilities to replace existing ones. Where applicable, the Plan shall include information on the following:
 - a. water intake facilities;
 - b. the water treatment and waste disposal sites and;
 - d. petroleum and chemical storage areas;
 - e. any site affected by waste spills;
 - f. leachate prevention;
 - g. an implementation schedule;
 - h. maps delineating all disturbed areas, and site facilities;
 - i. consideration of altered drainage patterns;
 - j. type and source of cover materials;
 - k. future area use;
 - l. hazardous wastes; and
 - m. a proposal identifying measures by which restoration costs will be financed by the Licensee upon abandonment.
2. If the Plan referred to in Part G, Item 1 is not approved the Licensee shall make the necessary revisions and resubmit the Plan within thirty (30) days following notification from the Board.
3. The Licensee shall implement the plan specified in Part G, Item 1 as and when approved by the Board.
4. The Licensee shall complete all restoration work within the time schedule specified in the Plan, or as subsequently revised and approved by the Board.

5. Areas that have been contaminated by hydrocarbons shall be reclaimed to meet objectives as outlined in the Government of Nunavut's Environmental Guideline for Site Remediation, January 2002. 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.

PART H: CONDITIONS APPLYING TO THE MONITORING PROGRAM

1. The Licensee shall maintain Monitoring Program Stations at the following locations:

| Monitoring Program Station Number | Description | Frequency | Status |
|--|---|---|---------------------------|
| HAL-1 | Raw water supply intake at the Water Supply Lake | Monthly and Annually | Active (Volume) |
| HAL-2 | Runoff from Solid Waste Disposal Facility | Once annually during period of runoff/seepage | Active (Quality) |
| HAL-3 | Raw Sewage at discharge point into the Sewage Disposal Facility | Monthly and Annually | Active (Volume) |
| HAL-4 | Effluent discharged from Sewage Disposal Facility | Every four weeks when flow is observed | Active (Volume & Quality) |
| HAL-5 | Final Effluent Discharge Point prior entering Foxe Basin | Every four weeks when flow is observed | Active (Volume & Quality) |

2. The Licensee shall measure and record in cubic metres, the monthly and annual quantities of water pumped at Monitoring Program Station HAL-1.
3. The Licensee shall sample at Monitoring Program Station HAL-2 once annually during periods of discharge, run-off, or seepage. Samples shall be analyzed for the following parameters:

| | |
|---|-----------------|
| TPH (Total Petroleum Hydrocarbons) | |
| PAH (Polycyclic Aromatic Hydrocarbons) | |
| BTEX (Benzene, Toluene, Ethylbenzene, Xylene) | |
| BOD | Fecal Coliforms |
| pH | Conductivity |
| Total Suspended Solids | Oil and Grease |

Nitrate-Nitrite
 Total Phenols
 Total Hardness
 Magnesium
 Sodium
 Total Arsenic
 Total Copper
 Total Iron
 Total Mercury

Ammonia Nitrogen
 Total Alkalinity
 Calcium
 Potassium
 Sulphate
 Total Cadmium
 Total Chromium
 Total Lead
 Total Nickel

4. The Licensee shall measure and record in cubic metres the daily, monthly and annual quantities of raw Sewage offloaded from trucks at Monitoring Program Station HAL-3 for all purposes.
5. The Licensee shall sample at Monitoring Program Stations HAL-4 and HAL-5 upon providing notice to the inspector and every four weeks thereafter when flow is observed. Samples shall be analyzed for the following parameters. Samples shall be analyzed for the following parameters:

Biochemical Oxygen Demand - BOD
 pH
 Total Suspended Solids
 Nitrate-Nitrite
 Chloride
 Sodium
 Magnesium
 Total Hardness
 Total Phenols
 Total Arsenic
 Total Cadmium
 Total Copper
 Total Iron
 Total Mercury
 Total Zinc

Faecal Coliforms
 Conductivity
 Oil and Grease (visual)
 Ammonia Nitrogen
 Sulphate
 Potassium
 Calcium
 Total Alkalinity
 Total Manganese
 Total Aluminum
 Total Cobalt
 Total Chromium
 Total Lead
 Total Nickel
 Total Organic Carbon - TOC

6. The Licensee shall measure and record the annual quantities of sewage solids removed from the Sewage Disposal Facility.
7. Additional monitoring stations, sampling, and analysis may be requested by an Inspector
8. The Board previously accepted the plan entitled *Hamlet of Hall Beach Quality Assurance/Quality Control Plan*, dated August 15, 2013. The Licensee shall submit to the Board for review, within the 2020 Annual Report, an updated Quality Assurance/Quality Control (QA/QC) Plan that conforms to the guidance document *Quality Assurance (QA)*

and Quality Control (QC) Guidelines For Use by Class “B” Licensees in Collecting Representative Water Samples in the Field and for Submission of a QAQC Plan INAC (1996). The Plan shall be acceptable to an accredited laboratory and include a covering letter from the accredited laboratory confirming acceptance of the Plan for analyses to be performed under the Licence.

9. 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.
10. All analyses shall be performed in a laboratory accredited according to ISO/IEC Standard 17025. The accreditation shall be current and in good standing.
11. The Licensee shall include all of the data and information required by the Monitoring Program in the Licensee's Annual Report, as required per Part B, Item 1 or as otherwise requested by an Inspector.
12. Modifications to the Monitoring Program including the Monitoring Program Stations and parameters may be made only upon written approval of the Board.
13. If additional Final Discharge Points are identified during the term of this Licence, the Licensee shall submit a report to include:
 - a. Plans, specifications, geographic coordinates and a general description of each Final Discharge Point; and
 - b. A description of how each Final Discharge Point is designed and maintained, if required.