

File No.: 3BM-HAL1520

April 30, 2015

Linda Allen Senior Administrative Officer (SAO) Hamlet of Hall Beach Box 3, Hall Beach NU X0A 0K0

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Bhabesh Roy, M.A.Sc., P.Eng. Municipal Planning Engineer Baffin Region, GN-CGS Pond Inlet, P. O. Box 379 NU X0A 0S0 broy@gov.nu.ca

RE: NWB Renewal Licence No. 3BM-HAL1520

Dear Ms. Allen and Mr. Bhabesh:

Please find attached Licence No. 3BM-HAL1520 issued to the Hamlet of Hall Beach by the Nunavut Water Board (NWB) pursuant to its authority under Article 13 of the Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada. 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 will be in contravention of the *Nunavut Land Claims Agreement* (NLCA) and the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (NWNSRTA). 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 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 thirty (30) 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 acknowledged by the Manager of Licensing.

The NWB strongly recommends that the Licensee consult the comments received from interested persons on issues identified. EC recommends the use of an incinerator for the disposal of combustible waste as well as indicates that its technical document on batch waste incineration be consulted for information on appropriated incineration technologies and best management and operational practices including monitoring and reporting.

Sincerely,

Thomas Kabloona

Nunavut Water Board, Chair

TK/sj/pb

Enclosure: Licence No. 3BM-HAL1520

Comments – AANDC (INAC), EC

cc: Qikiqtani Distribution List

¹ Indian and Northern Affairs Canada (INAC), October 1, 2010; Aboriginal Affairs and Northern Development Canada, April 4, 2012; Environment Canada (EC) October 1, 2010 and March 1, 2012; Government of Nunavut, Department of Culture, Language, Elders & Youth, April 28, 2010.

DECISION

LICENCE NUMBER: 3BM-HAL1520

This is the decision of the Nunavut Water Board (NWB) with respect to an application for a Licence renewal received under several submissions during the period April 12, 2010 – March 2014, and made by:

HAMLET OF HALL BEACH

to allow for the use of Water and deposit of Waste for a Municipal undertaking within the Hamlet of Hall Beach as outlined in its renewal application (Application). The Hamlet of Hall Beach is located in the Qikiqtani Region of Nunavut at the following general geographical coordinates:

Latitude: 68° 46' N Longitude: 81° 13' W

DECISION

After having been satisfied that the application was for a location that falls outside of an area with an approved Land Use Plan² and is exempt from the requirements for screening as described within Schedule 12-1 by the Nunavut Impact Review Board³ in accordance with Article 12 of the *Nunavut Land Claim Agreement (NLCA)*, 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 *NLCA*, public notice of the application was given and interested persons were invited to make representations to the NWB.

After reviewing the submissions 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 *NLCA* and of the *Act*, waived the requirement to hold a public hearing, and determined that:

Licence No. 3BM-HAL0810 be renewed as Licence No. 3BM-HAL1520 subject to the terms and conditions contained therein (Motion #: 2015-B1-003).

SIGNED this 30th day of April 2015 at Gjoa Haven, NU.

Thomas Kabloona

Nunavut Water Board, Chair

² Nunavut Planning Commission (NPC) Conformity Determination, March 26, 2015.

³ Nunavut Impact Review Board Screening (NIRB) Decision, September 2, 2010.

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I. BACKGROUND

The Hamlet of Hall Beach (Hamlet), with an estimated population of 829 (2010), 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. PROCEDURAL HISTORY

The Nunavut Water Board (NWB or Board) received from the Government of Nunavut – Community and Government Services (GN-CGS), on behalf of the Hamlet of Hall Beach, an application to renew water Licence No. 3BM-HAL0910 under several different submissions listed below:

2010 Submission

- Appendix-A: Water Licence Renewal Application
- Appendix-B: Technical Summary in English and Inuktitut
- Appendix-C: \$30.00 Cheque Payable to Receiver General for Canada
- Appendix-D: Hamlet Annual Report for 2009

- Appendix E: Compliance Plan
- Appendix F: Spill Contingency Plan
- Appendix G: QA/QC Plan for Water Quality Management
- Appendix H: QA/QC Plan for Wastewater Quality Management
- Appendix J: Community Zonal Plan Showing Environmental Facilities
- Revised Compliance Plan received July 19, 2010
- Letter from GN-CGS to NWB Regarding Licence No. 3BM-HAL0810

2011 Submission

- Hamlet of Hall Beach, NU, Sewage Treatment Facility Operation and Maintenance Manual, dated June 2011
- Hamlet of Hall Beach 2010 Annual Report
- Hamlet of Hall Beach Water Licence Renewal Application Executive Summary (English)
- Hamlet of Hall Beach Water Licence Renewal Application Executive Summary (Inuktitut)
- Hamlet if Hall Beach, NU, Solid Waste Facility Operation and Maintenance Manual, dated June 2011
- Hamlet of Hall Beach, NU, Spill Contingency Plan, Sewage Treatment and Solid Waste Sit, dated June 2011
- Plan for Compliance
- Hall Beach 2010 Annual Report

2013 Submission

- Letter from GN-CGS to NWB, Regarding Water License No. 3BM-HAL0810 Renewal Application for Hamlet of Hall Beach, dated August 16, 2013
- Letter from GN-CGS to NWB, Regarding Final Discharge Points, Hamlet of Hall Beach, dated August 16, 2013
- Letter from GN-CGS to NWB, Regarding Hamlet of Hall Beach –Water Licence # 3BM-HAL0810: Type B Renewal Application, dated November 28, 2013
- Plan for Compliance, Licence No. 3BM-HAL0810
- Assessment of Sewage Lagoon Cell #1, Hamlet of Hall Beach, Nunavut, dated June 27, 2012
- Environmental Monitoring Program –Sample Collection Training Program, dated August 2013
- Hamlet of Hall Beach Quality Assurance/Quality Control Plan, dated August 15, 2013
- Guidelines for Water, Wastewater and Leachate Sampling, Baffin Communities
- Analytical Results for July 27 and October 9, 2012; February 12, June 20, July 19, and August 8, 2013; and Chain of Custody Forms for July 27 and October 9, 2012; and February 12, June 20, and August 8, 2013.
- 2012 Annual Report for the Hamlet of Hall Beach
- 2006, 2007 2008, 2009, and 2010 Annual Report for the Hamlet of Hall Beach; and
- Executive Summaries in English, Inuktitut
- Executive Summaries in English, English

March 2014 Submission

- Letter from GN-CGS to NWB, Regarding Amendment of Proposed Renewal Water Licence No. 3BM-HAL0810, Hamlet of Hall Beach, date February 10, 2014
- Letter from GN-CGS to AANDC, Regarding Plan for Compliance-Outstanding Documents for Kimmirut, Cape Dorset and Hall Beach, dated March 26, 2014
- Hazardous Waste Segregation, Storage and Transportation Procedure
- Letter from the Hamlet of Hall Beach to AANDC, Regarding 140822 3BM-HAL0810
 Outstanding Issue with AANDC-OMLE, dated September 12, 2014
- Plan for compliance
- Geotechnical Investigation, proposed Sewage Upgrades, Hamlet of Hall Beach Nunavut, dated January 22, 2014

As indicated above, several submissions in support of the renewal application were received over a prolonged period of time; therefore, to ensure that submissions received were adequately reviewed, two different review periods were allowed for the file during the licensing process. The first review period, which primarily focused on the Application in which many of the management plans were absent, occurred in 2010 following the NWB's receipt of the Application and NWB's internal review that identified deficiencies that had to be addressed before the application could be processed. At the time, the Applicant was informed of the deficiencies, which were addressed to some extent within months after informing the licensee; however, some of the plans required for the licence remained outstanding for Application. The NWB took into consideration the Application's commitment to submit outstanding requirements at a subsequent period, and decided to distribute the Application for a thirty (30) day public review/comment period on September 2, 2010.

Interveners' submissions related to the first review period were received from Environment Canada and Aboriginal Affairs and Northern Development Canada ((AANDC)) or Indian and Northern Affairs Canada (INAC)). In its comments, EC indicated that it would like to review several management plans once they become available. AANDC stated in its comments that the five-year term requested by the proponent was considered reasonable; although the Hamlet did not generally fulfill the terms and conditions in its licence. AANDC also provided comments on the inadequacy of annual reports and the absence of a complete operation and maintenance manual consisting of the required management plans/or sub-manuals, to fulfil the respective licence terms and conditions. Taking into consideration the Licensee's compliance history as well as other extenuating factors, the NWB requested that the Applicant provide the operation and maintenance manual required under the expired licence as well as a plan for compliance in advance of a decision on the file.

The second review period conducted for the file was initiated in January 2012 and it mainly focused on the management plans received by the NWB on December 20, 2011, subsequent to the Application. Following distribution of the plans and prior to the end of the comment deadline period, AANDC requested two separate but successive extensions to the deadline for comments ⁴, which the NWB granted on both occasions. Before the second extended comment

⁴ Email from D. Abernethy, AANDC, Water Resources Division, to P. Beaulieu, NWB, Licensing Department, Re: Water

deadline period elapsed, submissions⁵ aimed at improving the functionality and content of the Applicant's management plans were received from EC and AANDC.

In April 2012, following a comprehensive review of all the information provided in support of the Application, and technical review comments received from intervening parties for the Application, the NWB determined that there was adequate information to likely consider a decision on the Application. However, because an Inspector's Direction⁶ issued by Aboriginal Affairs and Northern Development (AANDC) was still in effect at the time, the Board had to defer its decision on whether or not to issue a licence for the undertaking until confirmation that the items identified in the Direction had accordingly been addressed. On January 8, 2015, the NWB received confirmation⁷ from AANDC that the Inspectors' Direction was revoked. This confirmation was taken into consideration in the NWB's decision to issue the licence.

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/1%20PRUC%20PUBLIC%20REGISTRY/3%20MUNICIPAL/3B/3BM%20-%20Municipality/3BM-HAL0810/

III. File History

The NWB has issued two previous licences to the Hamlet of Hall Beach: Licence No. 3BM-HAL0308 and Licence 3BM-HAL0810 to the Hamlet of Hall Beach.

Licence No. 3BM-HAL0308 was issued on April 23, 2003 and expired March 31, 2008. The licence allowed for the use of 35,000 cubic metres of water per year and the deposit of waste in support of a Municipal undertaking.

Licence No. 3BM-HAL0810 was issued to the Hamlet on May 16, 2008 and expired on May 30, 2010. The Licence allowed for the use of 35, 000 cubic metres of water per year and the deposit of waste in support of a municipal undertaking. No other records of past licences or amendments

Licence No. 3BM-Hal0810, Renewal Application – Request for Extension of Review Period, March 2, 2012; Email from D. Abernethy, AANDC, Water Resources Division, to P. Beaulieu, NWB, Licensing Department, Re: Extension to Hall Beach Water Licence Renewal, March 16, 2012.

⁵ Indian and Northern Affairs Canada (INAC), October 1, 2010 and April 4, 2012; Environment Canada (EC) October 1, 2010 and March 1, 2012; Government of Nunavut, Department of Culture, Language, Elders & Youth, April 28, 2010.

⁶ Letter from A. Keim, A/Manager, Field Operations Unit, AANDC to Honourable Lorne Kusugak, Minister of Community and government Services, Government of Nunavut, Re: Use of Water and the Deposit of Waste in a Manner Inconsistent and Non-compliant with Authorizations Issued by the Nunavut Water Board under the *Nunavut Water and Nunavut Surface Rights Tribunal Act*

⁷ Letter from R. Savard, AANDC, to R. Ruediger, Community Development, Community and Government Services, Government of Nunavut, Re: Inspector's Direction; Re: Revocation of Aboriginal Affairs and Northern Development Canada (AANDC) Inspector's Direction, pursuant to 87(1) of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (NWNSRTA), dated June 28, 2012 for the communities of Hall Beach, Gjoa Haven, Taloyoak, Cape Dorset, and Kimmirut, January 8, 2015

issued to the hamlet were found on the NWB's FTP site for previous or current facilities and/or undertakings being considered under the renewal application.

IV. ISSUES

The following sections provide some background information relevant to the terms and conditions included in this Licence, in the context of submissions received and/or the Board's rationale. It should be noted that where appropriate, the Board has removed or modified terms and conditions associated with the previous licence, which the Board determined are no longer applicable under this renewal licence.

Term of Licence

In accordance with section 45 of the Act, the NWB may issue a licence for a term not exceeding twenty-five (25) years. In determining the appropriate term of a licence, the Board takes into consideration several factors including the Licensee's past performance, compliance record, ability to comply with the terms and conditions of a licence, interveners' comments and more. The Licensee has requested a five-year term for the licence, which the NWB as well as AANDC believe is appropriate for the type of undertaking being considered.

Annual Report

Similar to conditions generally included in licences issued by the Board, the NWB has included under, Part B, Item 1, in the licence, the requirement for the Licensee to submit to the Board for review, prior to the 31 March, annually, a report detailing water use and waste deposit activities. The Board provides public access to the information provided in annual reports submitted by licensees through its ftp site as well upon request from interested parties.

The NWB has included on its website a standardized form for annual reporting that licensees can use to submit reporting information, supplemented by other relevant information. Copies of the NWB's generic annual reporting form can be obtained from the NWB's FTP site using the following Link:

 $\underline{ftp://nunavutwaterboard.org/ADMINISTRATION/Standardized \%\,20 Forms/.}$

Water Use

According the information provided in the Application, the Hamlet of Hall Beach obtains its potable water from a natural lake, called Water Supply Lake, located approximately 3 kilometres 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 reservoir located proximal the water source. Trucks are then used to distribute the water from the storage reservoir to community members and business as on as-needed basis.

As indicated in the Application, the Applicant is requesting the use of 35,000 cubic metres of water annually to be obtained from Water Supply Lake for municipal purposes. The Board has reviewed the water requirement stated in the application and is satisfied that the water quantities requested is consistent with the nature of the undertaking. The Board has therefore granted, under Part C, Item 1 of the Licence, the water quantity requested by the Applicant, thirty-five

thousand (35,000) cubic metres annually and not more than two-hundred and ninety-nine (299) cubic metres per day during the period in which the reservoir is replenished or otherwise.

Sewage Treatment

The Hamlet of Hall Beach currently provides trucked sewage services for the community's residents, businesses and institutions. The sewage generated by the community is collected by trucks and transported to a two-cell sewage lagoon, located one (1) kilometre away from the community centre, for treatment. Information provided in the Application indicates the facility expanded in 2002 and that in recent years the southernmost cell (Cell 1) of the sewage lagoon had developed structural integrity issues partly due to the nature of the soil where the facility is located, and this has resulted in leakage/seepage through the cell berms. The Applicant also states that measures implemented to address the integrity issues in the past have had limited success.

The Applicant is currently considering a variety of options to address the issues associated with the Sewage Treatment Facility. These will be captured under a potential future licence amendment that will be applied for separately, as the scope of this renewal licence does not include potential upgrades to the Sewage Treatment Facility. The Board has included conditions related to the operations of the Sewage Treatment Facility under Part D of the renewal licence.

Solid Waste Management

The Solid Waste Disposal Facility (SWDF) operated by the Hamlet is located adjacent to the Sewage Treatment Facility (sewage 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 facility does not accept pathogenic, radioactive, asbestos, batteries, use oil and special waste. Conditions related to the management of solid waste generated by the undertaking are included under Part D in the renewal licence.

Management Plans/Manuals

The licensee has submitted several stand-alone management plans and/manuals as part of its renewal application for the licence. Part F, Item 1 of the previous licence required the submission of a combined Operation and Maintenance Manual that included several management plans or sub-manuals as subsets of the combined manual. However, rather than submitting one combined manual containing the various plans required as subsets, the Licensee has instead submitted separate or stand-alone management plans/sub-manuals to address relevant requirements for activities or undertakings associated with the licence.

Although it is not customary for the Board to accept submissions that are not necessarily in a form that is outlined in the licence, the Board has decided in this situation to amend the relevant term and condition included in the previous licence, with the issuance of this licence, to allow for separate approvals of stand-alone plans/sub-manuals already submitted or to be submitted. In this way, the Licensee will have the flexibility to submit, for separate approval or acceptance, any outstanding, stand-alone plans that are required under the licence.

The NWB has reviewed the plans submitted as part of the Application and has approved or accepted the ones meeting relevant requirements in the licence in addition to providing recommended changes where applicable:

- 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

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 plan is functional and acceptable. The Board has therefore approved the plan under Part F, Item 4 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.

Sewage Treatment 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 is acceptable and functional. The NWB has therefore approved the plan under Part F, Item 1 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.

Water Treatment Facility Operations and Maintenance Manual

An Operations and Maintenance Manual was not submitted for the Water Treatment Facility, therefore, the NWB has included conditions under Part F, Item 3 requiring the submission of an Operations and Maintenance Manual for the portable Water Treatment Facility within ninety (90) days following issuance of the Licence.

Solid Wates Facility Operation and Maintenance Manual

The review conducted for the plan entitled *Hamlet of Hall Beach*, *NU*, *Solid Wates Facility Operation and Maintenance Manual*, dated June 2011, determined that the Plan is acceptable and functional. The plan has been approved by NWB 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 three Quality Assurance/Quality Control Plans for the Application. Two of the three QA/QC plans were submitted with the Original Application in 2010, one of which addressed water quality issues while the other addressed wastewater quality issues. The third

plan, which was submitted in 2013, addresses both water and wastewater issue jointly. The review of the 2013 plan determined that the document is acceptable. The Board therefore has accepted the Plan under Part H, Item 13 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

Plan for Compliance

The Licensee submitted as part of its Application, on different dates, three different versions of a plan for compliance. The latest version 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 expired licence.

Abandonment and Restoration

To ensure that potential end-of-life issues that may be associated with the infrastructure or facilities included under the scope of the renewal licence are addressed fully in the context of appropriate reclamation, the NWB has included relevant conditions under this licence. The NWB requires the Licensee to submit an abandonment and restoration plan, at least six (6) months prior to final closure of any licensed facility or upon submission of the final design drawings for the construction of new facilities to replace existing ones. The requirements for the Plan are outlined in Part G, Item 1 of this Licence.

Geotechnical Inspection

In formation included as part of the original submission associated with the Application indicates that exp. Services Inc. was retained to conduct geotechnical inspections of all engineered facilities related to the management of Water and Waste, and that the inspections were expected to be carried out on July 24 - 25, 2013. In response to aspects of this requirement, the Licensee submitted a copy the Geotechnical Investigation Report, dated January 22, 2014, in support of proposed upgraded to the sewage lagoon. While the report does not address all relevant facilities associated with the undertaking, the NWB has considered the information contained in the report as part its review.

The Licensee should note that the NWB has made recent changes to the terms and conditions for Municipal undertakings to allow annual inspections of municipal infrastructure to be conducted by municipal Engineers, and the inspections one year prior to expiry of the licences to be undertaken by a Geotechnical Engineer. These have also been incorporated into the terms and conditions under Part F, Item 5 and 6 of the licence.



NUNAVUT WATER BOARD

WATER LICENCE RENEWAL

LICENCE NO. 3BM-HAL1520

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: 3BM-HAL1520 TYPE "B"

Water Management Area: KINGORA WATERSHED (20)

Location: HAMLET OF HALL BEACH

QIKIQTANI REGION, NUNAVUT

Classification: MUNICIPAL UNDERTAKING

Purpose: DIRECT WATER USE AND DEPOSIT OF WASTE

Quantity of Water use not

to Exceed: 35,000 CUBIC METRES PER ANNUM OR (299 CUBIC

METRES PER DAY MAXIMUM)

Date of Licence Issuance: APRIL 30, 2015

Expiry of Licence: APRIL 29, 2020

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

Thomas Kabloona.

Nunavut Water Board, Chair

PART A: SCOPE AND DEFINITIONS

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 within the Hamlet of Hall Beach, located in the Qikiqtani Region of Nunavut, approximately at the following geographical Coordinates: 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**

In this Licence: **3BM-HA1520**

"Act" means the Nunavut Waters and Nunavut Surface Rights Tribunal Act;

- "<u>Addendum</u>" 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;
- "<u>Amendment</u>" 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;
- "<u>Appurtenant undertaking</u>" means an undertaking in relation to which a use of waters 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 Land Claims Agreement*;
- "Composite Sample" means a water or wastewater sample made up of four (4) samples taken at regular periods over a 24 hour period;
- "<u>Effluent</u>" means treated or untreated liquid waste material that is discharged into the environment from a structure such as a settling pond 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;
- "<u>Final Discharge Point</u>" in respect of an effluent means an identifiable discharge point of a facility beyond which the operator of the facility no longer exercises control over the quality of the effluent;
- "Freeboard" means the vertical distance between water line and the designed maximum operating height on the crest of 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 a single water or wastewater sample taken at a time and place representative of the total discharge;
- "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 new structure or eliminates an existing structure and does not alter the purpose or function of the work, but

does not include an expansion, and changes to the operating system that are consistent with the terms of this Licence and do not require amendment;

"<u>Monitoring Program</u>" 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 Land Claims Agreement" (NLCA) 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;

"Sewage" means all toilet wastes and greywater;

"Sewage Disposal Facility" comprises the area and engineered lagoon and decant structures designed to contain sewage as described in the Application for Water Licence filed by the Applicant on January 9, 2003, as modified pursuant to the amendment request granted by the NWB on April 24, 2007, and described in the renewal application originally filed with NWB on April 12, 2010;

"Solid Waste Disposal Facility" comprises the area and associated structures designed to contain solid waste (landfill site) as described in the Application for Water Licence filed by the Applicant on January 9, 2003, and described in the renewal application originally filed with NWB on April 12, 2010;

"<u>Toilet Wastes</u>" 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 Supply Facility" comprises the area and associated intake infrastructure at Water Supply Lake, as described in the Application for Water Licence filed by the Applicant on January 9, 2003, and described in the renewal application originally filed with NWB on April 12, 2010;

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*;
- 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; and

PART B: GENERAL CONDITIONS

- 1. The Licensee shall file an Annual Report with the Board not later than March 31 of the year following the calendar year reported which shall contain the following information:
 - a. tabular summaries of all data generated under the "Monitoring Program";
 - b. the monthly and annual quantities in cubic metres of fresh Water obtained at the Water Supply Facility;
 - c. the monthly and annual quantities in cubic metres of each and all waste discharged;
 - d. a summary of modifications and/or major maintenance work carried out on the Water Supply Facility, Sewage Disposal Facility and Solid Waste Disposal Facility, 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 (including *Operations and Maintenance Manual/Plans*) as required by changes in operation and/or technology;
 - h. a summary of any studies or reports requested by the Board that relate to Water use and Waste disposal or restoration, and a brief description of any future studies planned; and
 - i. any other details on water use or waste disposal requested by the Board by November 1 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. Meters, devices or other such methods used for measuring the volumes of water used and waste discharged shall be installed, operated and maintained by the Licensee.
- 5. The Licensee shall, within ninety (90) days after the first visit by the Inspector following issuance of this Licence, post the necessary signs to identify the stations of the "Monitoring Program". All signage postings shall be in the Official Languages of Nunavut.

- 6. The Licensee shall immediately report to the 24-Hour Spill Report Line (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 or Waste Disposal Facilities.
- 7. The Licensee shall ensure a copy of this Licence is maintained at the Municipal Office at all times. Any communication with respect to this Licence shall be made in writing to the attention of:

(a) **Manager of Licensing:**

Nunavut Water Board P.O. Box 119 Gjoa Haven, NU X0B 1J0 Telephone: (867) 360-6338

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

(b) Inspector Contact:

Manager of Field Operations, AANDC Nunavut District, Nunavut Region P.O. Box 100 Igaluit, NU X0A 0H0

Telephone: (867) 975-4295

Fax: (867) 979-6445

- The Licensee shall submit one paper copy and one electronic copy of all reports, studies, 8. and plans to the Board. Reports or studies submitted to the Board by the Licensee shall include a detailed executive summary in Inuktitut.
- 9. The Licensee shall ensure that all document(s) and correspondence submitted by the Licensee to the Board are received and acknowledged by the Manager of Licensing.
- 10. 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.
- 11. The Licensee shall, for all Plans submitted under this Licence, implement the Plan as approved by the Board in writing.
- 12. 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 condition 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.

13. This Licence is not assignable except as provided in Section 44 of the Act.

PART C: CONDITIONS APPLYING TO WATER USE

- 1. The Licensee shall obtain all fresh water processed by Water Treatment Facility and/or used for purposes under this licence from Water Supply Lake as described in the Application. The total volume of water for all purposes under this licence shall not exceed thirty-five thousand (35,000) cubic metres *per* year and two hundred and ninetynine (299) cubic metres *per* day.
- 2. The Licensee shall equip all water intake hoses with a screen of an 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.
- 3. The Licensee shall not remove any material from below the ordinary High Water Mark of any water body unless otherwise approved by the Board in writing.
- 4. The Licensee shall not cause erosion to the banks of any body of water and shall provide necessary controls to prevent such erosion.
- 5. Sediment and erosion control measures shall be implemented prior to and maintained during the operation to prevent entry of sediment into water.

PART D: CONDITIONS APPLYING TO WASTE DISPOSAL

- 1. The Licensee shall direct all Sewage to the Sewage Disposal 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 Disposal Facility and upon commencing the Monitoring Program at Monitoring Station HAL-4.
- 3. All Effluent discharged from the Sewage Disposal Facility at Monitoring Station HAL-4 shall meet the following Effluent quality standards:

Parameter	Maximum Average	
	Concentration	
BOD ₅	120 mg/L	
Total Suspended Solids	180 mg/L	
Fecal Coliforms	1 x 10 ⁶ CFU/100mL	
Oil and Grease	No visible sheen	
pH	between 6 and 9	

4. The Licensee shall maintain at all times, a freeboard of at least 1.0 metre, or as recommended by a qualified geotechnical engineer and as approved by the Board in

- writing, for all dams, dykes or other structures intended to contain, withhold, divert or retain water or wastes.
- 5. The Sewage Disposal Facility shall be maintained and operated in such a manner as to prevent structural failure.
- 6. All Effluent discharged from the Sewage Disposal Facility, shall be demonstrated to be Not Acutely Toxic at Monitoring Station HAL-5 prior to entering Foxe Basin, under the following tests to be conducted once annually approximately mid-way through discharge:
 - Acute lethality to Rainbow Trout, Oncorhynchus mykiss (as per Environment Canada's Environmental Protection Series Biological Test Method EPS/1/RM/13);
 and
 - b. Acute lethality to the crustacean, Daphnia magna (as per Environment Canada's Environmental Protection Series Biological Test Method EPS/1/RM/14).
- 7. The Licensee shall dispose of and contain all solid wastes at the Solid Waste Disposal Facility or as otherwise approved by the Board in writing.
- 8. 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.
- 9. The Licensee shall implement measures to control wind-blown litter at the Solid Waste Disposal Facility.

PART E: CONDITIONS APPLYING TO MODIFICATION AND CONSTRUCTION

- 1. The Licensee shall submit to the Board for review, construction design drawings stamped by a qualified engineer registered in Nunavut, 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 approval from the Board, carry out modifications to the Water Supply 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. these 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. Modifications for which all of the conditions referred to in Part E, Item 2, have not been met may be carried out only with written approval from the Board. The Licensee shall provide as-built plans and drawings of the Modifications referred to in this Licence within ninety (90) days of completion of the Modification. These plans and drawings shall be stamped by an Engineer.
- 4. 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
- 5. The Licensee shall implement sediment and erosion control measures prior to and during all activities carried out under this Part to prevent the release of sediment and minimize erosion.

PART F: CONDITIONS APPLYING TO OPERATION AND MAINTENANCE

- 1. The Board has approved the manual entitled *Hamlet of Hall Beach, Sewage Treatment Facility Operation and Maintenance Manual*, dated June 2011, which was submitted as additional information in support of the Application.
- 2. The Board has approved the manual entitled *Hamlet of Hall Beach*, *NU*, *Solid Waste Facility Operation and Maintenance Manual*, dated June 2011, submitted as additional information in support of the Application.
- 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 Board has approved the plan entitled *Hamlet of Hall Beach, NU, Spill Contingency Plan, Sewage Treatment and Solid Waste Sites*, dated June 2011, which was submitted as additional information in support of the Application. The Licensee shall review the plans and/or manual, referred to in Part F, Items 1, 2, 3, and 4, as required by changes in operation and/or technology and modify the documents accordingly. Revisions are to be submitted in the form of Addendums to be included with the Annual Report.
- 5. The Licensee shall arrange for inspections to be conducted by an appropriate Engineer, at least once annually, of all engineered structures or facilities designed to contain, withhold, divert or retain Water or Waste, during the summer months (July/August) and/or during periods of flow. An Engineer's report shall be submitted to the Board within sixty (60) days of the date of inspection, including a cover letter from the Licensee outlining an implementation plan to address each of the Engineer's recommendations.

- 6. An inspection of all engineered facilities shall be conducted, during the summer period (July/August) and/or during periods of flow, by a Geotechnical Engineer in accordance with the *Canadian Dam Safety Guidelines*, at least one (1) year prior to expiry of the Licence. The Geotechnical 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 to address 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 as approved under the Spill Contingency Plan;
 - b. report the incident immediately via the 24-Hour Spill Reporting Line at (867) 920-8130 and to the Inspector at (867) 975-4295; and
 - c. submit to the Inspector, a detailed report on each occurrence, not later than thirty (30) days after initially reporting the event, that provides the necessary information on the location (including the GPS coordinates), initial response action, remediation/cleanup, status of response (ongoing, complete), proposed disposal options for dealing with contaminated materials and 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 upon submission of the final design drawings for 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 facilities;
 - c. petroleum and chemical storage areas;
 - d. any site affected by waste spills;
 - e. leachate prevention;
 - f. an implementation schedule;
 - g. maps delineating all disturbed areas, and site facilities;
 - h. consideration of altered drainage patterns;
 - i. type and source of cover materials;
 - j. future area use;
 - k. hazardous wastes: and
 - l. a proposal identifying measures by which restoration costs will be financed by the Licensee upon abandonment.

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	Monthly and	Active
	the Water Supply Lake	Annually	(Volume)
HAL-2	Runoff from Solid Waste	Once annually	Active
	Disposal Facility	during period of runoff/seepage	Quality
HAL-3	Raw Sewage at discharge	Monthly and	Active
	point into the Sewage	Annually	(Volume)
	Disposal Facility	•	
HAL-4	Effluent discharged from	Every four	Active
	Sewage Disposal Facility	weeks when	(Volume)
		flow is observed	Quality
HAL-5	Final Effluent Discharge	Every four	Active
	Point prior entering Foxe	weeks when	(Volume)
	Basin	flow is observed	Quality

2. 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:

Biochemical Oxygen Demand - BOD	Fecal Coliforms	
Total Suspended Solids	pН	
Conductivity	Nitrate-Nitrite	
Oil and Grease (visual)	Total Phenols	
Magnesium	Calcium	
Sodium	Potassium	
Chloride	Sulphate	
Total Hardness	Total Alkalinity	
Ammonia Nitrogen	Total Zinc	
Total Cadmium	Total Iron	
Total Cobalt	Total Manganese	
Total Chromium	Total Nickel	
Total Copper	Total Lead	
Total Aluminum	Total Arsenic	
Total Mercury	Total Organic Carbon (TOC)	

3. The Licensee shall sample at Monitoring Program Station HAL-2 once annually during

periods of runoff 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 Ammonia Nitrogen
Total Phenols Total Alkalinity

Total Hardness
Magnesium
Potassium
Sodium
Sulphate
Total Arsenic
Total Cadmium

Total Copper Total Chromium
Total Iron Total Lead
Total Mercury Total Nickel

- 4. The Licensee shall report all results of acute toxicity testing as required under Part D, Item 6 and the results of monitoring required under Part H, Items 2 and 3 within the Annual Report as per Part B, Item 1.
- 5. The Licensee shall measure and record, in cubic metres, the monthly and annual quantities of Water pumped at Monitoring Program Station HAL-1, for all purposes.
- 6. The Licensee shall measure and record, in cubic metres, the monthly and annual quantities of raw sewage offloaded from trucks at Monitoring Program Station HAL-3, for all purposes.
- 7. The Licensee shall measure and record the annual quantities of any sewage solids removed from the Sewage Disposal Facility, in accordance with detailed protocol for monitoring quantities of sewage sludge removed from the Sewage Disposal Facility included the *Hamlet of Hall Beach*, *NU*, *Sewage Treatment Operations and Maintenance Manual*, dated June 2011.
- 8. 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 requested by an Inspector.
- 9. Modifications to the Monitoring Program may be made only upon written approval from the NWB.
- 10. 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.
- 11. 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.
- 12. All analyses shall be performed by a laboratory certified by the Canadian Association of Environmental Analytical Laboratories (CAEAL), or as otherwise approved by an Analyst.
- 13. The Board has accepted the plan entitled Hamlet of Hall Beach Quality Assurance/Quality Control Plan, dated August 15, 2013, which was submitted as additional information in support of the Application.
- 14. The Licensee shall review the plans, referred to in Part H, Items 13, as required by changes in operation and/or technology and modify accordingly. Revisions including a cover letter indicating that changes are acceptable to an Analyst are to be submitted in the form of an Addendum to be included with the Annual Report.