



Sincerely,

Thomas Kabloona
Nunavut Water Board
Chair

TK/ce/kk

Enclosure: **Licence No. 3BM-IGL1520 – Amendment No. 1**
Comments – AANDC, DFO

Cc: Qikiqtani Distribution List

LICENCE AMENDMENT No. 1

Licensee:	Hamlet of Igloolik
Licence No:	3BM-IGL1520 – Type “B”
Licence Issued:	March 31, 2015
Expiry Date:	March 30, 2020
Effective Date:	February 16, 2016

DECISION

Licence No. 3BM-IGL1520, issued on March 31, 2015 and set to expire on March 30, 2020, shall be amended to allow for the construction of a new lagoon cell and the rehabilitation of the Modified Sewage Lagoon Facility, as described in the Application received by the Board on April 20, 2015, for use as required in the deposit and management of Sewage Waste, operated by the Hamlet of Igloolik (the Hamlet or the Licensee), which is located within the Qikiqtani Region of Nunavut.

The NWB received from the Government of Nunavut – Community Government Services (GN-CGS), on behalf of the Hamlet of Igloolik, from March 16, 2015 to December 14, 2015, the following application documents (Application) for the amendment of Licence 3BM-IGL1520:

Water Licence Amendment Application, April 20, 2015

- Completed Amendment Application form and Cover Letter, April 20, 2015
- Hamlet Authorization letter by SAO, April 20, 2015
- Technical Summary of the Wastewater Treatment Facility, in English and Inuktitut, April 20, 2015
- Wastewater Treatment Facility, Hamlet of Igloolik (IGL-1 to IGL-8), dated March 27, 2015, April 20, 2015
- Operation and Maintenance Plan, Wastewater Treatment Plant, originally developed in 1979, April 20, 2015
- Operation and Maintenance Plan, additional amendments for the Wastewater Treatment Plant, August 17, 2015
- Preliminary Spill Contingency Plan, August 17, 2015
- Hamlet Annual Report 2014, March 16, 2015
- Design Brief, Optimization of the Wastewater Facility, Igloolik, Nunavut developed by exp Services Inc., dated November 2014, submitted April 20, 2015
- Vegetated Filterstrip Wetland Assessment for the Treatment of Pre-treated Sewage, Hamlet of Igloolik (Final), MTE, October 8, 2014. Prepared for the Government of Nunavut, CGS,
- Specifications Document, Government of Nunavut, Igloolik Sewage Lagoon (OTCD-00019838A); Stamped and Signed by exp Services Inc., November 13, 2015
- Stamped and Signed Tender Drawings, Rev.5, issued for NWB review, drawings IGL1 through IGL8
- Additional Geotechnical Investigation, developed by exp Services Inc., dated September 29, 2014, April 20, 2015

- Additional Geotechnical Investigation Results, developed by exp Services Inc., dated October and November, 2009, April 20, 2015
- Geothermal Analysis of Proposed Sewage Lagoon, developed by Naviq Consulting Inc, dated June 2010, April 20, 2015
- Geotechnical Investigation-attached results, developed by exp Services Inc., dated March 16, 2010, April 20, 2015
- Sewage Lagoon Upgrade Project Schedule, dated November, 2014, April 20, 2015
- Environmental Assessment Screening (Draft), Construction of New Sewage Lagoon and Rehabilitation of Existing Lagoons, developed by Global Tox, dated November, 2009, April 20, 2015
- Geotechnical Investigation, developed by Trow Associates Inc., dated March 16, 2010, July 30, 2015
- Geotechnical Report Letter, by exp Services Inc., dated November 5, 2014, December 14, 2015
- Email Correspondence for Amendment Application, July 20, 2015, August 5, 2015, and December 14, 2015

Following receipt and an internal preliminary review, NWB distributed the Application for a thirty (30)-day comment period on May 26, 2014. On May 28, 2015 a submission was received from Fisheries and Oceans Canada (DFO). On June 26, 2015, a submission was received from Aboriginal Affairs and Northern Development Canada (AANDC).

In their submission, the DFO requested clarification on whether any planned dewatering activities that are required for the new pipe installation, would have any impact on fish or fish habitat. Clarification was provided that areas of dewatering involved surface runoff areas that had no record of fish habitation.

AANDC, in their submission, requested additional information on the handling and storage of sewage sludge and confirmation that the storage of sludge has been considered in the design of the new and rehabilitated sewage lagoons. In addition, a description on how the Licensee planned to store excavated sludge during the rehabilitation of the existing sewage lagoon cells was requested.

Following the receipt of the comments, the applicant confirmed in its email correspondence of December 15, 2015 the use of the older cell for sludge storage and emergency use. It was also confirmed that the new construction would include design for 0.5m depth for sludge accumulation and that there are no plans to dispose of any sludge in a landfill.

Other concerns noted in AANDC's submission were the references to documents not submitted with the Application and the absence during the review. These supporting documents were either located in the NWB files or provided by the Applicant and subsequently placed in the Public Registry for future reference.

With respect to operational plans, AANDC submitted that all outstanding plans should be provided, including those for the Operation and Maintenance of the Solid Waste Management and Sewage Disposal Areas, Abandonment and Restoration and the Spill Contingency Plan.

Although the Licensee, with this amendment application, submitted two additional O&M documents^{5,6} with respect to plans, further updates are required and have been addressed through the amendment of Part F, Item 1 of this amendment.

In addition to the intervenor's comments received, the NWB received pre-licensing requirements in the form of the Nunavut Planning Commission's (NPC) Land Use Conformity Determination for the file, on June 9, 2015 and the Nunavut Impact Review Board's (NIRB) Screening Report on December 8, 2015.

The NWB has placed in its Public Registry copies of the Application documents, including all comments received from interveners. This information is maintained in the NWB's public registry and is available to interested persons upon request. In addition, the NWB maintains reporting information on its FTP site, which can be accessed using the following link: <ftp.nwb-oen.ca>

The NWB, having considered the information provided in support of the Application and the comments received from parties during the review process, and 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* and the *Nunavut Waters and the Nunavut Surface Rights Tribunal Act*, hereby grants Amendment No.1 to Licence No. 3BM-IGL1520. The amendment is subject to the following terms and conditions that are based on the comments received, and standard conditions imposed by the NWB for similar undertakings:

PART A: SCOPE, DEFINITIONS AND ENFORCEMENT

1. Definitions

Insert

“Upgraded Sewage Disposal Facility” consists of the new and rehabilitated Modified Sewage Disposal Facility, used for treating the waste water collected by the Hamlet of Igloolik, as described in the amendment application dated April 20, 2015 and supplementary documents submitted with the Application;

“Vegetative Filter Strip Wetland” means the combination of treatment wetlands and vegetated filter strip areas and process as described in the document ‘*Vegetated Filter Strip Assessment for the Treatment of Pre-treated Sewage, Hamlet of Igloolik*’, prepared for the Government of Nunavut, CGS by MTE, dated October 8, 2014 (through exp Services Inc.);

“Waste Disposal Facilities” consists of the Modified Solid Waste Disposal Facilities and the Modified Sewage Disposal Facilities (or upon completion, the Upgraded

⁵Operation and Maintenance Plan, additional amendments for the Wastewater Treatment Plant, August 17, 2015;

⁶Supplemental Spill Contingency information, August 17, 2015

Sewage Disposal Facility) as described in the renewal application dated March 13, 2014 and the amendment application dated April 20, 2015, as well as the supplementary documents associated with each application.

PART B: GENERAL CONDITIONS

Insert Item 1(k)

Provide an updated/revised Plan for Compliance, taking into account works achieved during the year, noting areas of (new) compliance and the anticipated goals and timelines for the next and future years.

PART D: CONDITIONS APPLYING TO WASTE DISPOSAL

Amend Item 1

The Licensee shall direct all Sewage to the Modified Sewage Disposal Facility, or upon commissioning, to the Upgraded Sewage Disposal Facility, or as otherwise approved by the Board in writing.

Amend Item 2

The Licensee shall provide a minimum of ten (10) days' notice to an Inspector, of the intent to discharge Effluent from the Modified Sewage Disposal Facility, or upon commissioning, the Upgraded Sewage Disposal Facility.

Amend Item 3

All Effluent discharged from the Modified Sewage Disposal Facility, or upon commissioning, the Upgraded Sewage Disposal Facility, at Monitoring Program Stations IGL-4, and IGL-5 shall not exceed the following Effluent quality limits: (See Licence table).

Amend Item 5

The Modified Sewage Disposal Facilities, or upon commissioning, the Upgraded Sewage Disposal Facility, shall be maintained and operated in such a manner as to prevent structural failure.

Insert Item 8

The Licensee shall locate areas designated for waste disposal at a minimum distance of thirty-one (31) metres from the ordinary High Water Mark of any water body such that the quality, quantity or flow of Water is not impaired, unless otherwise approved by the Board in writing.

Insert Item 9

The Licensee shall dispose of and permanently contain all solid wastes at the Waste Disposal Facilities, or as otherwise approved by the Board in writing.

Insert Item 10

The Licensee shall not open burn plastics, wood treated with preservatives, electric wire, Styrofoam, asbestos or painted wood to prevent the deposition of Waste materials of incomplete combustion and/or leachate from contaminated ash residual,

from impacting any surrounding waters, unless otherwise approved by the Board in writing.

Insert Item 11

The Licensee shall segregate and store all hazardous materials and hazardous Waste including waste oil, within the Waste Disposal Facilities in a manner to prevent the deposit of deleterious substances into any Water, until such a time that the materials are to be removed for proper disposal at licensed facility.

Insert Item 12

The Licensee shall implement measures to ensure leachate from the Waste Disposal Facilities do not enter Water.

Insert Item 13

The Licensee shall remove and treat hydrocarbon contaminated soils on site or transport them to an approved disposal site for treatment.

PART F: CONDITIONS APPLYING TO OPERATION AND MAINTENANCE

Amend Item 1(a)(i), (ii) and (iii)

- a. Sewage Disposal Facility Operation and Maintenance (O&M) Plan (including the Sewage Sludge Management Plan), to include the following information:
 - i. a summary of how the sludge management lagoon will be rehabilitated (e.g., re-enforced berms, lining, etc.);
 - ii. how Effluent that accumulates within the sludge management lagoon will be managed;
 - iii. design drawings of the sludge management lagoon including drawings that reference the sludge management cell relative to the planned new sewage lagoon and rehabilitated sewage lagoons;
 - iv. the testing requirements that will be applied to sewage sludge and the criteria required prior to any plans for landfill disposal;
 - v. a description of how sludge will be disposed in the landfill.

Insert Item 6

The Licensee shall conduct any equipment maintenance and servicing in designated areas and shall implement special procedures (such as the use of drip pans and liners) to manage motor fluids and other waste and contain potential spills.

Insert Item 7

The Licensee shall maintain appropriate spill response equipment and clean-up materials (e.g., shovels, pumps, barrels, drip pans, and absorbents) and be readily available during any transfer of fuel or hazardous substances.

PART H: CONDITIONS APPLYING TO MONITORING

Amend Item 1

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

Monitoring Program Station Number	Description	Status
IGL-1	Raw Water supply intake at South Lake	Active (Volume)
IGL-2	Runoff from Modified Solid Waste Disposal Facilities	Active (Water Quality)
IGL-3	Raw Sewage at Discharge point into the Modified Sewage Disposal Facility	Not Active
IGL-4	Final control point from the Modified Sewage Disposal Facility or upon commissioning, the Upgraded Sewage Disposal Facility	Active (Water Quality)
IGL-5	Final Effluent discharge point prior entering Foxe Basin	New (Water Quality)

Amend Item 4

Delete second paragraph “The Licensee shall measure and record...”

All remaining terms and conditions of Licence No. 3BM-IGL1520, Type ‘B’, issued March 31, 2015, are still applicable.

This Licence Amendment issued and recorded at Gjoa Haven, NU on February 16, 2016.

Approved by,

Thomas Kabloona
Nunavut Water Board, Chair