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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI
OFFICE DES EAUX DU NUNAVUT

File No.: 3BM-RUT1012

November 8, 2010

Bhabesh Roy, P. Eng.
Municipal Planning Engineer, Baffin Region
Government of Nunavut
Department of Community and Government Services
P.O Box 379
Pond Inlet, NU X0A 0S0
E-mail: broy@gov.nu.ca

RE: NWB Licence No. 3BM-RUT1012

Dear Mr. Roy:

Please find attached water licence no. 3BM-RUT1012 (Licence) issued to the Government of Nunavut, Department of Community and Government Services (GN-CGS or Licensee) 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 Land Claims Agreement or NLCA). The terms and conditions of the attached Licence related to water use 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* (NWNSTRA). However, the expiry or cancellation of a licence does not relieve the holder from any obligations imposed by the licence. The NWB recommends that an application for the renewal of this Licence be filed at least three (3) months prior to the Licence expiry date.

If the Licensee contemplates or requires an amendment to this licence, the NWB may decide, in the public 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 acknowledged by the Manager of Licensing.

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

During review of the application the Licensee indicated that once rehabilitation of the Utilidor is completed, the facility could potentially be transferred to the Hamlet of Resolute Bay. If the Licensee chooses to assign the water Licence to the Hamlet, or other entity, an assignment application would be required.

Sincerely,



Thomas Kabloona
Nunavut Water Board
Chair

TK/kt/rqd

Enclosure: Licence No. 3BM-RUT1012
Comments

cc: Qikiqtani Distribution List

¹ Indian and Northern Affairs Canada (INAC), November 19, 2007



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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI
OFFICE DES EAUX DU NUNAVUT

DECISION

LICENCE NUMBER: 3BM-RUT1012

This is the decision of the Nunavut Water Board (NWB) with respect to an application for a new licence received November 15, 2006 made by:

GOVERNMENT OF NUNAVUT, DEPARTMENT OF COMMUNITY AND GOVERNMENT SERVICES

to allow for the use of water and disposal of waste for the Government of Nunavut, Department of Community and Government Services (GN-CGS or Applicant) at Resolute Bay, located within the Qikiqtani region of Nunavut. With respect to this application, the NWB gave notice to the public that the Licensee had filed an application for a new water licence.

DECISION

After having been satisfied that the application was exempt from the requirement for screening by the Nunavut Impact Review Board in accordance with s. 12.3.2 of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada* (Nunavut Land Claims Agreement or NLCA), the NWB decided that the application could proceed through the regulatory process. After reviewing the full submission of the Applicant and written comments expressed by interested parties, 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 *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (NWNSRTA), decided to waive the requirement to hold a public hearing and determined that:

**Licence Number 3BM-RUT1012 be issued subject to the terms and conditions contained therein.
(Motion #: 2010-17-L17)**

SIGNED this 4th day of November, 2010 at Gjoa Haven, NU.

Thomas Kabloona
Nunavut Water Board
Chair

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NWB LICENCE No. 3BM-RUT1012

I. BACKGROUND

The Hamlet of Resolute Bay is located on the south coast of Cornwallis Island on the Perry Channel. Located at 74°43'01"N and 94°58'10"W, the community is approximately 1660 km northeast of Yellowknife and 1550 km northwest of Iqaluit. In the early 1970's, the settlement was relocated from the beach area to the present location. The relocated community was designed to accommodate 1500 people; however, as of 2006 the population was 229.

The average daily minimum and maximum temperatures for July and January are 1.3 °C and 6.8 °C and -35.8 °C and -28.5 °C respectively. An average of 50.4 mm of rainfall and 97.3 cm of snowfall for a total of 139.6 mm of precipitation is received each year.

The community is serviced by Utilidor which is maintained and operated by the Government of Nunavut, Department of Community and Government Services (GN-CGS or Licensee). The system is combined of water supply and sewage systems including Char Lake water source, pumphouse, water supply line from the pumphouse to the water treatment plant, water distribution and sewage collection systems, and sewage outfall. Sewage discharge is untreated except for dilution by system 'bleeders' and comminution prior to discharge into Resolute Bay. The outfall pipe is located on the shore of the Bay at the high tide water edge.

The Utilidor system was built in the 1970's without a water licence. At the time of water licence application, rehabilitation and expansion of the system was scheduled for completion in 2007.

II. PROCEDURAL HISTORY

The Hamlet of Resolute Bay was issued water licence 3BM-RES9699 (formerly referred to as N4L3-1571) dated July 8, 1996 by the Northwest Territories Water Board for the use of water and disposal of waste including sewage and solid waste. This Licence expired on June 30, 1999.

On November 24, 2006, the Nunavut Water Board (NWB or Board) received an application for a new water licence from the Government of Nunavut Community Government Services (GN-CGS) to allow for expansion and rehabilitation of its Utilidor including water use and wastewater systems (Application) for the Hamlet of Resolute Bay. The Application acknowledged that the Hamlet of Resolute Bay would apply separately for a water licence for solid waste disposal. The Application included the following documents received on November 24, 2006 and December 8, 2006:

- Letter from B. Roy, GN-CGS, to P. Beaulieu (NWB), dated November 15, 2006;
- Water licence application for a new water licence, signed by B. Roy, GN-CGS, dated November 15, 2006;
- Executive summary in English;
- Engineer stamped drawings issued for construction entitled "Resolute Bay Utilidor Upgrade and Related Work, Resolute Bay, NU.", drawing no.s G-00, G-01, G-02, G-03, G-04, and E-01. GN project no. 03-4615, prepared by A.D. Williams Engineering Inc., dated August 17, 2005.
- Technical letter report from B. George (A.D. Williams Engineering Inc. to S. Slifa (PW&S Kitikmeot Region) Re: Resolute Bay Utilidor Assessment, dated July 15, 2003;

- Technical letter report from B. George (A.D. Williams Engineering Inc. to S. Slifa (PW&S Kitikmeot Region) Re: Resolute Bay Utilidor Assessment, dated July 23, 2003;
- Technical letter report from B. George (A.D. Williams Engineering Inc. to S. Slifa (PW&S Kitikmeot Region) Re: Resolute Bay Utilidor Assessment, dated July 28, 2003;
- Technical letter report from B. George (A.D. Williams Engineering Inc. to S. Slifa (PW&S Kitikmeot Region) Re: Resolute Bay Utilidor Assessment, dated March 28, 2005;
- Report entitled “Resolute Bay, NWT Water and Sewer Facilities Investigation” prepared by UMA Engineering Ltd. for Government of Northwest Territories Public Works and Services, dated January 1996, 1315-172-00-02;
- Report entitled “draft Environmental Assessment Resolute Bay Utilidor Expansion and Upgrades” prepared by G.A. Packman & Associates for Infrastructure Canada, dated January 2006;
- Report entitled “Utilidor Upgrade – Final Report” prepared by Dillon Consulting Limited, dated February 17, 1999, 98-5748-01-01;
- Report entitled “Volume 1 – Utilidor Upgrade” prepared by Dillon Consulting Limited for Public Works and Services, GNWT, dated May 1999, 98-5748-01-01;
- Report entitled “Volume 2 – Water System Building Assessment Final Report Revision I” prepared by Dillon Consulting Limited for Public Works and Services, GNWT, dated May 1999, 98-5748-01-01; and
- Report entitled “Volume 3 – Sewage Treatment Future System Expansion Final Report Revision I” prepared by Dillon Consulting Limited for Public Works and Services, GNWT, dated May 1999, 98-5748-01-01;

Application and water use fees were received by the NWB on January 5, 2007.

On October 17, 2007, following a preliminary internal review of the Application, the NWB concluded that the Application met the requirements of section 48(1) of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (NWNSTRA or Act) and forwarded notice of the Application to regulators, council of the municipality most affected by the project and other interested parties. Parties were invited to make representations to the NWB within thirty (30) days.

Comments were submitted by Indian and Northern Affairs Canada (INAC) on November 19, 2007. No public concern was expressed during the notice period. Therefore, the NWB waived the requirement to hold a public hearing and proceeded with the application process.

On December 7, 2009, in response to a concern regarding the location of the sewage outfall for the Resolute Bay Utilidor relative to the high water mark of Resolute Bay, the NWB sent a letter to the INAC water resources officer, requesting verification of the sewage outfall location from the INAC Inspector. The Inspector provided a response on December 15, 2009 including photographs to assist in identifying the sewage outfall location. The NWB forwarded the Inspector’s response to the Applicant and the Applicant responded the same day.

On October 14, 2010 the Nunavut Planning Commission (NPC) issued written confirmation that the project conforms to the North Baffin Regional Land Use Plan and forwarded the application to the Nunavut Impact Review Board (NIRB) for screening. On October 20, 2010, the NIRB exempted the project proposal from screening pursuant to item #5 of Schedule 12-1 of the NLCA, *Types of Project Proposals Exempt from Screening*.

Based upon the results of the detailed assessment of the Application, including consideration of any potential accidents, malfunctions, or impacts to water that the overall project might have in the area, the Board has approved the Application and has issued water licence 3BM-RUT1012.

Under this Licence, GN-CGS is the licence holder and is now responsible for complying with its terms and conditions. This Licence replaces the terms and conditions related to water use and sewage disposal contained in expired water licence 3BM-RES9699, a licence previously held by the Hamlet of Resolute Bay. However, the expired water licence also contained terms and conditions applicable to solid waste disposal that have not been replaced by this Licence. Accordingly, under section 46 of the NWNSRTA, the expiry of water licence 3BM-RES9699 and issuance of this Licence do not relieve the Hamlet of Resolute Bay from their continued obligations under the expired licence's terms and conditions related to solid waste. At the time of issuance of this Licence, the NWB is awaiting an application for a new water licence for solid waste disposal from the Hamlet of Resolute Bay. Until such time as a new licence authorizing solid waste disposal is issued to the Hamlet of Resolute Bay, the Hamlet continues to be bound by the obligations relating to solid waste disposal contained in expired water licence 3BM-RES9699.

III. ISSUES

Term of Licence

In accordance with section 45 of the Act, the NWB may issue a licence for a term not exceeding twenty-five years. In determining an appropriate term of a water licence, the Board considers a number of factors, including the results of INAC site inspections and the compliance record of the Applicant.

According to the latest INAC inspection report dated December 1, 2009, inspections were conducted in the municipality each year between 2006 and 2009. In addition, the following recurring issues of non – compliance were identified:

- Annual reports have not been filed as required.
- Failure to submit sampling results.
- A licence is not in place.

In its Application, the Hamlet proposed a multi year schedule with a 2005 start date and a 2007 completion date. Due to the aforementioned compliance issues, the NWB has decided to issue the Licence for a term of two (2) years. The two (2) year Licence term is intended to provide the Licensee time to take immediate action towards implementing plans and achieving full compliance with all Licence requirements for its existing facilities and to carry out the required system up-grades. Upon submission of an application to renew this Licence in approximately 21 months, the Board fully expects the Hamlet to be in compliance with the Licence.

Annual Report

As noted above annual reports have not been submitted as required by Part B Item 1 of water licence 3BM-RES9699. The NWB would like to emphasize the requirement to produce an annual report for submission not later than March 31st of the year following the calendar year being reported. The requirement to produce annual reports is to ensure that the NWB has an accurate and timely annual update of municipal activities during a calendar year. This information is maintained on the NWB's public registry and is available to interested parties upon request. A "*Standardized Form for Annual Reporting*" is available for use from the NWB file transfer protocol (ftp) site under the Public Registry link below, or through the NWB Website at www.nunavutwaterboard.org.

Link = <ftp://nunavutwaterboard.org/ADMINISTRATION/Standardized%20Forms/>

Water Use

Water licence 3BM-RES9699 approved a quantity of water not to exceed 65,000 cubic metres per year. In its Application, the Hamlet of Resolute Bay has requested an increase in its water use to 345.26 cubic metres per day (126,020 cubic metres per year). The large increase in water use is a direct result of bleeder rates in the Utilidor to ensure flow in dead end portions of the system, to ensure adequate flow goes to the sanitary system and to ensure sanitary pipes remain unfrozen. The NWB has authorized the requested increase in water use.

In addition, since no information regarding the potential effects of increased water use on the water level in Char Lake was provided in the Application, the Board requires the Licensee as a condition in Part C

Item 4 of the Licence to submit to the Board for approval in writing within one year of issuance of this Licence, a report that assesses the potential for Char Lake to be drawn down. If the assessment concludes that water may be drawn down, the report shall also include a hydrological overview of Char Lake, an evaluation of impacts on Char Lake, an assessment of sustainability of Char Lake as a long term water source, recommendations to address impacts and long term sustainability, and a schedule to implement the recommendations.

Sewage

The Sewage Disposal Facility is part of the Utilidor system and consists of a macerating facility and outfall pipe to the shoreline of the marine environment in Resolute Bay. In addition, the Utilidor dilutes wastewater via bleeders. The Application involves rehabilitation and expansion of the Utilidor including the reduction of bleeder rates.

In review of the Application, the NWB considered the discharge to the shore of the marine environment. The Board's jurisdiction over Waters is limited to inland, non-marine waters on or below the surface of the land.² The Board's jurisdiction over Waste disposal is triggered where there is either a deposit of Waste into Waters or in any other place in Nunavut under conditions in which the Waste may enter Waters in Nunavut.³ During the technical review the NWB required additional information pertaining to the environment at the outfall of the Sewage Disposal Facility to properly determine its jurisdiction.

Over the course of the review process the NWB received evidence on the discharge location of the Sewage Disposal Facility outfall. Indian and Northern Affairs Canada (INAC) provided photographs showing the outfall discharging to the beach of Resolute Bay prior to entry into the marine environment. In its response to INAC's evidence, the Licensee identified contours on the photographs which denote the outfall at the high water mark. The Licensee also stated in an email that the outfall discharges sewage into deep water during high tide and to the surface during low tide.⁴

In reaching its decision, without absolute evidence confirming the discharge environment and the ultimate fate of effluent discharge, the Board has considered that depending on tidal elevation, the discharge location may be at times onto land that may enter inland waters and at times directly to the marine environment. As such, the NWB recognizes an overlap with the Department of Fisheries and Oceans Canada's (DFO) and Environment Canada's (EC) jurisdiction under the *Fisheries Act*. Reflecting the fact that this outfall has elements that could trigger the mandates of all three agencies, the Board has decided to maintain a precautionary approach to regulation that meets the Board's primary obligation to protect inland water quality but that is also consistent with protection of the marine environment. Therefore, the Board has given considerable focus to the specific terms and conditions of this Licence under which the effluent discharge is authorized to ensure they meet these obligations.

The Board recognizes that in setting effluent discharge criteria limits, the Board must be at least as stringent as the standards prescribed under the applicable *Fisheries Act* regulations.⁵ Currently the *Wastewater Systems Effluent Regulations* under the *Fisheries Act* are not in effect with applicable

² See the definitions of "marine areas" and "waters" under s. 4 of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*, S.C. 2002, c. 10 ("NWNSTRA or Act")

³ Act, s. 12(1).

⁴ Email from B. Roy, GN-CGS (RBhabesh@gov.nu.ca) to D. Carr, NWB, Subject: RE: 3BM-RUT----Discharge Point, dated November 4, 2009.

⁵ Act, s. 73.

standards for the North. Without applicable regulations, the Board has relied upon the Guidelines for the Discharge of Treated Municipal Wastewater in the Northwest Territories, 1992.(Guidelines)⁶ Use of the Guidelines is standard for communities across Nunavut. The Board also notes that section 4.3.4 of the Application document entitled “Resolute Bay, NWT Water and Sewer Facilities Investigation” prepared by UMA Engineering Ltd. 1996 refers to these Guidelines in assessing whether the system will meet expected effluent quality criteria limits.

As detailed in the Application, the Board acknowledges that the existing Utilidor system generates a wastewater flow greater than 600 Liters per Capita per Day (Lcd) and that the rehabilitated system involving reduced bleeder rates may generate a wastewater flow between 150 – 600 Lcd, and that the Guidelines recommend different effluent quality criteria limits for the different wastewater flows. The Board has set effluent quality criteria limits for each wastewater flow accordingly in Part D Items 2 and 3 for Biochemical Oxygen Demand (BOD₅), Total Suspended Solids (TSS), pH and oil and grease.

In setting a discharge limit for fecal coliforms the Board considered note (g) of Table 4.1 of the Guidelines which state that in the case of well flushed marine bays or fjords bacteriological standards will be of concern only where the discharge might affect a fishery or water contact recreation. The Board also considered concerns raised in section 4.3.3 of the Application document entitled “Resolute Bay, NWT Water and Sewer Facilities Investigation” prepared by UMA Engineering Ltd. 1996 regarding the potential environmental effects of the discharge into Resolute Bay as well as the concerns raised by the community as documented in section 5.4 of the Application document entitled “Utilidor Upgrade – Final Report” prepared by Dillon Consulting Limited dated 1999, regarding sewage smells, potential impacts, and traditional activities conducted in the Bay and near shore areas. Given the above information, the Board is concerned that Resolute Bay may not be well flushed and is used by the community for recreational purposes. For that reason the Board is requiring the Licensee, as a condition in Part D Item 4, to conduct a site specific study for the determination of a fecal coliform limit for Sewage Disposal Facility Effluent that maintains the quality of the receiving waters within reasonable and acceptable limits and submit a report of the site specific study to the Board for approval by December 1, 2011. The study shall take into consideration the receiving water quality objectives provided in the Guidelines and the report shall provide recommended fecal coliform limits for inclusion in the Licence.

In reviewing the Application, the Board also noted INAC’s comments dated October 19, 2007 in which INAC recommended that the wastewater treatment facility in Resolute Bay be upgraded during the term of the Licence as the current wastewater treatment facility only relies on dilution from bleed water and a comminutor before discharging to the marine environment. INAC further stated that this system does not constitute wastewater treatment and noted that as the proposed changes to the Utilidor system likely will decrease the bleed-rate, the dilution factor will be decreased as well. INAC comments are supported by information contained in section 4.3.4 of the Application document entitled “Resolute Bay, NWT Water and Sewer Facilities Investigation” prepared by UMA Engineering Ltd. 1996. The Board advises the Licensee that any future upgrades to the wastewater treatment facility will require an Amendment to this Licence.

⁶ Table 4.1 for a Marine Bay or Fjord discharge.

Operational Plans

Part H Item 1 of water licence 3BM-RES9699 required the Licensee to submit to the Board for approval a plan for the Operation and Maintenance of the Waste Disposal Facilities. No such plan is found in the NWB's public registry. For that reason, as well as the time that has passed since the former licence was active, the NWB has imposed a condition in Part F Item 1 of this Licence requiring the Licensee to submit to the Board for approval within ninety (90) days, an Operations & Maintenance Manual for the Water Supply Facilities, Utilidor and Sewage Disposal Facility. The O&M Manual shall also include the Quality Assurance /Quality Control (QA/QC) Plan required under Part H, Item 7 and a Spill Contingency Plan prepared in the format set out by the *Consolidation of Spill Contingency Planning and Reporting Regulations R-068-93*. This requirement is consistent with other municipal water Licenses issued by the Board. The purpose of the O&M Manual is to assist the Licensee and its contractors in carrying out the procedures relating to the on-site facilities. The O&M Manual should demonstrate to the NWB that the Licensee is capable of operating and maintaining the infrastructure related to water use and waste disposal and of meeting the requirements of the Licence.

Abandonment and Restoration

Part F Item 1 of water licence 3BM-RES9699 required the Licensee to submit to the Board for approval an Abandonment and Restoration Plan. To date, no such plan has been filed.

The Board is continuing to require this Plan to ensure that all existing end-of-life facilities are reclaimed in an appropriate manner. The Plan is to be submitted at least six (6) months prior to final closure of any licensed facility or upon the planned construction of new facilities to replace existing ones. The requirements for the Plan are outlined in Part G, Item 1 of this Licence.

Monitoring

As noted above, results of the monitoring program required under water licence 3BM-RES9699 have not been submitted. This is an area of non-compliance that the NWB anticipates will be improved upon over the two (2) year term of the new Licence.

The NWB has included a requirement for a Monitoring Program station at the freshwater intake prior to storage and treatment at RUT-1. The Licensee shall sample for volume to establish monthly and annual water usage. A second Monitoring Program station is required at the final discharge point of the sewage outfall on the shore of Resolute Bay. The Licensee shall sample monthly for parameters detailed under Part H, Item 6.

Part H Item 9 of the License also requires the Licensee to submit to the Board a Quality Assurance/Quality Control (QA/QC) Plan. This Plan is to be included in the Operations and Maintenance Plan required under Part F Item 1. The QA/QC plan shall be accompanied by an approval letter from an accredited laboratory.



NUNAVUT WATER BOARD WATER LICENCE

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

GOVERNMENT OF NUNAVUT, DEPARTMENT OF
COMMUNITY AND GOVERNMENT SERVICES

(Licensee)

P.O BOX 379, POND INLET, NU, X0A 0S0

(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:

Licence Number/Type: 3BM-RUT1012 TYPE "B"

Water Management Area: NUNAVUT 04

Location: RESOLUTE BAY, CORNWALLIS ISLAND
QIKIQTANI REGION, NUNAVUT

Classification: MUNICIPAL UNDERTAKING

Purpose: DIRECT WATER USE AND DEPOSIT OF WASTE

Quantity of Water use not to Exceed: ONE HUNDRED AND TWENTY SIX THOUSAND AND TWENTY (126,020) CUBIC METRES PER ANNUM

Date of Licence Issuance: NOVEMBER 4th, 2010

Expiry of Licence: OCTOBER 31, 2012

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

Thomas Kabloona,
Nunavut Water Board, Chair

PART A: SCOPE, DEFINITIONS AND ENFORCEMENT

1. SCOPE

- a. This Licence allows for the use of Water and disposal of Waste including operation of a Water Supply Facility, Sewage Disposal Facility, and Utilidor by the Hamlet of Resolute Bay, Nunavut for a municipal undertaking (Latitude 74°43'01"N and Longitude 94°58'10"W);
- b. This Licence is issued subject to 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 Act, or other statutes imposing more stringent conditions relating to the quantity, type or manner under which any such Waste may be so deposited, this Licence shall be deemed to be subject to such requirements; and
- c. Compliance with the terms and conditions of this Licence does not absolve the Licensee from responsibility for compliance with all applicable legislation, guidelines and directives.

2. DEFINITIONS

In this Licence: **3BM-RUT1012**

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

“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;

“Applicant” means the Licensee;

“Appurtenant Undertaking” 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;

“Board” means the Nunavut Water Board established under the *Nunavut Land Claims Agreement*;

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

“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;

“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;

“Hazardous Waste” means waste classified as “hazardous” by Nunavut Territorial or Federal legislation, or as “dangerous goods” under the *Transportation of Dangerous Goods Act*;

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

“Licensee” means the holder of this Licence;

“Licensed Facilities” means the Water Supply Facility, Utilidor, and Sewage Disposal Facility;

“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;

“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 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” means the macerating facility and outfall pipe to the shoreline of the marine environment as described in the application for water licence received November 15, 2006.

“Toilet Wastes” means all human excreta and associated products, but does not include greywater;

“Utilidor” means the piped distribution system designed to transport treated water from the Water Supply Facilities to structures and dwellings in Resolute Bay and the piped collection system designed to collect sewage from structures and dwellings and transport to the Sewage Disposal Facility, as described in the application for water licence received November 15, 2006;

“Waste” means, as defined in section 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” means water as defined in section 4 of the Act;

“Water Supply Facilities” comprises the area and associated intake infrastructure at Char Lake, Char Lake Pump House, Supply Line from Char Lake to the treatment plant and the Signal Hill Treatment Plant as described in the application for water licence received November 15, 2006;

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.

PART B: GENERAL CONDITIONS

1. The Licensee shall file an Annual Report with the Board for review, no later than March 31st of the year following the calendar year being reported, which shall contain the following information collected during that period:
 - a. Tabular summaries of all data generated under the Monitoring Program;
 - b. The monthly and annual quantities of freshwater obtained from all sources;
 - c. The monthly and annual quantities of Wastes removed for disposal from Licensed Facilities;
 - d. A summary of modifications and/or major maintenance work carried out on the Water Supply Facility, Utilidor and Sewage Disposal Facility, including all associated structures and facilities;
 - e. Modifications to the “Monitoring Program” in accordance with Part H, Item 12;
 - f. A list of unauthorized discharges and summary of follow-up action taken;
 - g. A summary of any abandonment and restoration work completed during the year and an outline of any work anticipated for the next year;
 - h. Any revisions to approved plans and manuals as required by Part B, Item 10, submitted in the form of an addendum;
 - i. Detailed minutes of any public consultation and participation with local organizations and the residents of the community regarding licence amendments;
 - j. 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
 - k. 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. Metres, 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 to the satisfaction of an Inspector.
 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, 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.
 7. In the event that a Plan is not found acceptable to the Board, the Licensee shall, within thirty (30) days of notification by the Board provide a revised version to the Board for review or approval in writing.
 8. The Licensee shall, for all Plans submitted under this Licence, implement the Plan as approved by the Board in writing.
 9. 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.
 10. The Licensee shall review the Plans referred to in this Licence as required by changes in operation and/or technology and modify the Plans or Manuals accordingly. Revisions to the Plans or Manuals are to be submitted in the form of an addendum to be included with the Annual Report required by Part B, Item 1(h), complete with a revisions list detailing where significant content changes are made.
 11. The Licensee shall post signs in the appropriate areas to inform the public of the location of the Water Supply Facilities, Utilidor, Sewage Disposal Facility, and Final Discharge Point of the Sewage Disposal Facility. All signage postings shall be in the Official Languages of Nunavut.
 12. 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, that may have resulted from the Water Supply Facilities, Utilidor or Sewage Disposal Facility.
 13. The Licensee shall ensure a copy of this Licence is maintained onsite at all times.
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14. 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@nunavutwaterboard.org

(b) Inspector Contact:

Water Resources Officer
Nunavut District, Nunavut Region
P.O. Box 100
Iqaluit, NU X0A 0H0
Telephone: (867) 975-4295
Fax: (867) 979-6445

15. The Licensee shall submit one (1) paper copy and one (1) electronic copy of all reports, studies, and plans to the Board or as otherwise requested by the Board. Reports or studies submitted to the Board by the Licensee shall include an executive summary in English and Inuktitut.
16. The Licensee shall ensure that any document(s) or correspondence submitted by the Licensee to the Board, is received by the Board and maintain on file a copy of the acknowledgment of receipt issued by the Manager of Licensing.
17. This Licence is assignable as provided in Section 44 of the Act.
18. The expiry or cancellation of this Licence does not relieve the Licensee from any obligation imposed by the Licence, or any other regulatory requirement.

PART C: CONDITIONS APPLYING TO WATER USE AND MANAGEMENT

1. The Licensee shall obtain all freshwater from Char Lake at Monitoring Program Station RUT-1 using the Water Supply Facilities or as otherwise approved by the Board in writing.
2. The annual quantity of Water, used for all purposes, shall not exceed one hundred and twenty six thousand and twenty (126,020) cubic metres or as otherwise approved by the Board in writing.
3. 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.
4. The Licensee shall submit to the Board for approval in writing within one year of issuance of this Licence, a report that assesses the potential for Char Lake to be drawn down. If the assessment concludes that Water may be drawn down, the report shall also include a hydrological overview of Char Lake, an evaluation of impacts on Char Lake, an assessment of sustainability of Char

Lake as long a term water source, recommendations to address impacts and long term sustainability, and a schedule to implement the recommendations.

5. 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.
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. The Licensee shall implement and maintain sediment and erosion control measures during the operation to prevent entry of sediment into Water.
8. The Licensee shall maintain the Water Supply Facilities to the satisfaction of the Inspector.

PART D: CONDITIONS APPLYING TO WASTE DISPOSAL AND MANAGEMENT

1. The Licensee shall direct all Sewage to the Sewage Disposal Facility or as otherwise approved by the Board in writing.
2. If wastewater flows are greater than 600 Lcd, all Effluent discharged from the Sewage Disposal Facility at Monitoring Program Station RUT-2, shall not exceed the following Effluent quality limits:

Parameter	Maximum Concentration of any Grab Sample
BOD ₅	80 mg/L
Total Suspended Solids	70 mg/L
Oil and Grease	No visible sheen
pH	Between 6 and 9
Fecal Coliforms	To be determined in accordance with Part D Item 4.

3. If wastewater flows are between 150 and 600 Lcd, all Effluent discharged from the Sewage Disposal Facility at Monitoring Program Station RUT-2, shall not exceed the following Effluent quality limits:

Parameter	Maximum Concentration of any Grab Sample
BOD ₅	120 m/L
Total Suspended Solids	80 mg/L
Oil and Grease	No visible sheen
pH	Between 6 and 9
Fecal Coliforms	To be determined in accordance with Part D Item 4.

4. The Licensee shall conduct a site specific study for the determination of a fecal coliform limit for Sewage Disposal Facility Effluent that maintains the quality of the receiving waters within reasonable and acceptable limits and submit a Report of the site specific study to the Board for

approval by December 1, 2011. The study shall take into considerations the receiving water quality objectives provided in the *Guidelines for the Discharge of Treated Municipal Wastewater in the Northwest Territories*, 1992 and the Report shall provide recommended fecal coliform limits for inclusion in Part D Items 2 and 3.

5. The Licensee shall maintain the Utilidor and Sewage Disposal Facility to the satisfaction of an Inspector.
6. The Licensee shall remove from the site, all Hazardous Wastes, waste oil and noncombustible Waste generated through the course of the operation, for disposal at a licensed Waste disposal facility.
7. The Licensee shall maintain records of all Waste backhauled and records of confirmation of proper disposal of backhauled waste. These records shall be made available to an Inspector upon request.
8. The Utilidor and Sewage Disposal Facility shall be maintained and operated in such a manner as to prevent structural failure.

PART E: CONDITIONS APPLYING TO MODIFICATIONS AND CONSTRUCTION

1. The Licensee shall submit to the Board for approval in writing, construction drawings stamped and signed by an Engineer, 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 Facilities, Utilidor and Sewage Disposal Facility 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 to include:
 - i. A description of the facilities and/or works to be constructed;
 - ii. The proposed location of the structure(s);
 - iii. Identification of any potential impacts to the receiving environment;
 - iv. A description of any monitoring required, including sampling locations, parameters measured and frequencies of sampling;
 - v. Schedule for construction;
 - vi. Drawings of engineered structures signed and stamped by an Engineer; and
 - vii. Proposed sediment and erosion control measures.
 - b. the proposed 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 only be carried out upon approval from the Board in writing.
4. 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.
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.

PART F: CONDITIONS APPLYING TO OPERATION AND MAINTENANCE

1. The Licensee shall submit to the Board for approval in writing, within ninety (90) days of issuance of the Licence, an Operation and Maintenance (O&M) Manual for the Water Supply Facilities, Utilidor, and Sewage Disposal Facility. The Manual shall take into consideration the comments received during the application review process and shall contain the following plans:
 - a. O&M Plan for the Water Supply Facility;
 - b. O&M Plan for the Utilidor;
 - c. O&M Plan for the Sewage Disposal Facility;
 - d. Spill Contingency Plan; and
 - e. Append the Quality Assurance/Quality Control (QA/QC) Plan required by Part H, Item 9 of the Licence.
2. If, during the period of this Licence, an unauthorized discharge of Waste and/or Effluent occurs, or if such a discharge is foreseeable, the Licensee shall:
 - a. Employ the appropriate contingency measures as described in an approved 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. For each spill occurrence, submit a detailed report to the Inspector, no later than thirty (30) days after initially reporting the event, which includes the amount and type of spilled product, the GPS location of the spill, and the measures taken to contain, clean up and restore the spill site.

PART G: CONDITIONS APPLYING TO ABANDONMENT, RESTORATION AND CLOSURE

1. The Licensee shall, at least six (6) months prior to abandoning any facilities or upon submission of final design drawings for the construction of new facilities to replace existing ones, submit to the Board, for approval in writing, an Abandonment and Restoration Plan for the facilities being decommissioned. The Plan shall incorporate, where applicable, information on the following:
 - a. Water intake facilities;
 - b. The waste treatment and sewage treatment 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.
2. The Licensee shall carry out progressive reclamation of any components of the project no longer required for the Licensee's operations.
 3. In order to promote growth of vegetation and the needed microclimate for seed deposition, all disturbed surfaces shall be prepared by ripping, grading, or scarifying the surface to conform to the natural topography.
 4. 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 2009. The use of reclaimed soils for the purpose of back fill or general site grading may be carried out only upon consultation and approval by the Government of Nunavut, Department of Environment and an Inspector.
 5. The Licensee shall complete the restoration work within the time schedule specified in an approved Abandonment and Restoration Plan, or as subsequently revised and approved by the Board.
 6. The Licensee shall complete all restoration work prior to the expiry of this Licence.

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
RUT-1	Raw water supply prior to treatment	Monthly	Active (Volume)
RUT-2	Effluent from the Sewage Disposal Facility	Monthly	Active (Volume & Quality)

2. The Licensee shall provide the GPS coordinates (in degrees, minutes and seconds of latitude and longitude) of all locations where sources of Water are utilized for all purposes and at all Monitoring Program stations.
3. The Licensee shall confirm the locations and GPS coordinates for all Monitoring Program Stations referred to in Part H Item 1 with an Inspector.

4. The Licensee shall measure and record in cubic metres, the monthly and annual quantities of Water extracted for all purposes at Monitoring Program Station RUT-1.
5. The Licensee shall measure and record the monthly and annual volume of all Effluent discharged from the Sewage Disposal Facility at RUT-2.
6. The Licensee shall sample monthly at Monitoring Program Station RUT-2 and analyze for the following parameters:

BOD ₅	Fecal Coliforms
pH	Conductivity
Total Suspended Solids	Ammonia Nitrogen
Nitrate – Nitrite	Oil and Grease (visual)
Total Phenols	Sulphate
Sodium	Potassium
Magnesium	Calcium
Total Arsenic	Total Cadmium
Total Copper	Total Chromium
Total Iron	Total Lead
Total Mercury	Total Nickel
Total Zinc	Total Phosphorous
7. 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.
8. All analyses shall be performed in a laboratory accredited according to ISO/IEC Standard 17025. The accreditation shall be current and in good standing.
9. The Licensee shall within ninety (90) days following issuance of the Licence, submit to the Board a Quality Assurance/Quality Control (QA/QC) Plan. The Plan shall include up to date field sampling methods to all applicable standards, acceptable to an accredited laboratory as required by Part H, Item 7 and Part H, Item 8. The Plan shall include a covering letter from the accredited laboratory confirming acceptance of the Plan for analyses to be performed under this Licence.
10. The Licensee shall annually review the QA/QC plan submitted under Part H, Item 9 and modify it as necessary. Revised plans shall be submitted to the NWB with an approval letter from an accredited lab that meets standards set in Part H, Item 7 and Part H, Item 8.
11. The Licensee shall, include in the Annual Report required under Part B, Item 1, all monitoring data and analysis and information required by this Part.
12. Modifications to the Monitoring Program may be made only upon written request and subsequent approval of the Board in writing.