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NUNAVUT WATER BOARD  
NUNAVUT IMALIRIYIN KATIMAYINGI

## DECISION

### LICENCE NUMBER: NWB3CAM0207

This is the decision of the Nunavut Water Board (NWB) with respect to an application for a Licence dated 20 February, 2001 made by:

#### **Hamlet of Cambridge Bay**

to allow for the use of water and disposal of waste for the Hamlet at Cambridge Bay, Nunavut.

With respect to this application, the NWB gave notice to the public that the Hamlet had filed an application for a 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 *Nunavut Land Claim Agreement* (NLCA), the NWB decided that the application could go through the regulatory process. After reviewing the 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 *Nunavut Land Claims Agreement* and of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (NWNSTRA), decided to waive the requirement to hold a public hearing and furthermore to delegate its authority to approve the application to the Chief Administrative Officer pursuant to S. 49(a) of the NWNSTRA and determined that:

**Licence Number NWB3CAM0207 be issued subject to the terms and conditions contained therein. (Motion #: 2002-13)**

SIGNED this 1st day of September, 2002 at Gjoa Haven, NU.

***Original signed by:***

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Philippe di Pizzo  
Chief Administrative Officer

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## **I. INTRODUCTION**

Following an application filed by the Hamlet of Cambridge Bay on February 20, 2001 to the Nunavut Water Board, the Board conducted an initial assessment of the Hamlet's request for a municipal water licence for water use and waste disposal activities within the Hamlet. The assessment was conducted so that the Nunavut Water Board could make a fully informed decision on the application. The application was referred for review and comments to Federal, Territorial and local organizations. Based upon the results of this initial assessment and the technical review, including consideration of any potential accidents, malfunctions, or cumulative environmental effects that the overall project might have in the area, the Board concluded that this application was complete and could go through the regulatory process.

In accordance with the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* S. 55.1 and Article 13 of the *Nunavut Land Claims Agreement*, public notice of the application was posted. No public concerns were expressed, and the NWB waived the requirement to hold a public hearing for the application. Authority to approve the application was delegated to the Chief Administrative Officer pursuant to S. 13.7.5 of the *Agreement*. After considering and reviewing the comments submitted by interested parties, the NWB has issued licence NWB3CAM0207.

## **II. GENERAL CONSIDERATIONS**

### **Term of the Licence**

In accordance with the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* S. 45, the NWB may issue a licence for a term not exceeding twenty-five years. The NWB believes that a term of five years is appropriate. Because this is the first licence issued to the Hamlet by the Nunavut Water Board, a 5-year licence will allow enough time for the Hamlet to establish a consistent compliance record. The 5-year licence will allow the Licensee to properly carry out the terms and conditions of the licence and to ensure that sufficient time is given to permit the Licensee to develop, submit, and implement the plans required under the licence to the satisfaction of the NWB.

### **Annual Report**

The requirements imposed on the Licensee in this licence are for the purpose of ensuring that the NWB has an accurate annual update of municipal activities during a calendar year. This information is maintained on the public registry and is available to any interested parties upon request. Refer to attached standard form for completing Annual Report (see Attachment I).

## **Regulated Parameters**

Effluent quality criteria imposed in this Licence are consistent with the *Guidelines for the Discharge of Treated Municipal Wastewater in the Northwest Territories* (Northwest Territories Water Board; 1992), and follow advice received from both the Department of Indian and Northern Affairs and Environment Canada.

## **Operation and Maintenance Manual (O&M)**

The purpose of an Operation and Maintenance Manual is to assist Hamlet staff in the proper operation and maintenance of their waste disposal facilities. The manual should demonstrate to the Nunavut Water Board that the Hamlet is capable of operating and maintaining all waste disposal sites adequately. The Plan should be completed using the *Guidelines for the Preparation of an Operations and Maintenance Manual for Sewage and Solid Waste Disposal Facilities in the Northwest Territories* (Duong and Kent, 1996; see Attachment II).

## **Abandonment and Restoration (A&R)**

To ensure that all future abandoned facilities are reclaimed in an appropriate manner, the NWB has imposed the requirement for the submission of Abandonment and Restoration Plans. These plans should be submitted when the Licensee files preliminary design drawings for the construction of new facilities to replace existing ones.

## **Surveillance Network Program**

The Surveillance Network Program (SNP) is a monitoring program established to collect data on water quality to assess the effectiveness of treatment for protection of public health and to assess potential impacts to the environment associated with the municipal facilities. As this is the first Municipal Water Licence issued to the Hamlet by the Board, minimum requirements have been imposed, but additional sampling may be required by an Inspector.

## **Quality Assurance/Quality Control (QA/QC) Plan**

The requirements to develop a QA/QC Plan imposed on the Licensee in this licence are for the purpose of ensuring the NWB that samples taken in the field as part of the SNP will maintain a high quality, so as to accurately represent the physical and chemical nature of the samples being taken.

## LICENCE NWB3CAM0207

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 CAMBRIDGE BAY**

(Licensee)

of

**CAMBRIDGE BAY, NUNAVUT, X0A 0C0**

(Mailing Address)

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

**NWB3CAM0207**

Licence Number

**NUNAVUT 05**

Water Management Area

**CAMBRIDGE BAY, NUNAVUT**

Location

**WATER USE AND WASTE DISPOSAL**

Purpose

**MUNICIPAL UNDERTAKINGS**

Description

**70,000 CUBIC METRES ANNUALLY**

Quantity of Water Not to be Exceeded

**SEPTEMBER 1, 2002**

Date of Licence

**AUGUST 31, 2007**

Expiry Date of Licence

Dated this 1st day of September 2002 at Gjoa Haven, NU.

*Original signed by:*

Philippe di Pizzo

Chief Administrative Officer

## **PART A: SCOPE AND DEFINITIONS**

### **1. Scope**

- a. This Licence allows for the use of water and the disposal of waste for municipal undertakings at the Hamlet of Cambridge Bay, Nunavut (69°07'N, 105°03'W);
- b. This Licence is issued subject to the conditions contained herein with respect to the taking of water and the depositing of waste of any type in any waters or in any place under any conditions where such waste or any other waste that results from the deposits of such waste may enter any waters. Whenever new Regulations are made or existing Regulations are amended by the Governor in Council under the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*, or other statutes imposing more stringent conditions relating to the quantity or type of waste that may be so deposited or under which any such waste may be so deposited, this Licence shall be deemed, upon promulgation of such Regulations, to be subject to such requirements; and
- c. Compliance with the terms and conditions of this Licence does not absolve the Licensee from responsibility for compliance with the requirements of all applicable Federal, Territorial and Municipal legislation.

### **2. Definitions**

In this Licence: **NWB3CAM0207**

“**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*;

“**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;

“**Average Concentration**” means the arithmetic mean of the last four consecutive analytical results for contained in composite or grab samples collected from the Waste Facility’s final discharge point;

**“Average Concentration For Faecal Coliforms”** means the geometric mean of the last four consecutive analytical results for faecal coliforms contained in composite or grab samples collected from the Waste Facility’s final discharge point;

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

**“Chief Administrative Officer”** means the Executive Director of the Nunavut Water Board;

**“Commercial Waste Water”** means water and associated waste generated by the operation of a commercial enterprise, but does not include toilet wastes or greywater;

**“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 plant;

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

**“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;

**“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;

**“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 Facilities”** 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 February 20, 2001;

**“Solid Waste Disposal Facilities”** 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 February 20, 2001;

**“Surveillance Network Program”** means a monitoring program established to collect data on surface water and groundwater quality to assess impacts to the environment of an appurtenant undertaking;

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

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

**“Waste Disposal Facilities”** means all facilities designated for the disposal of waste, and includes the Sewage Disposal Facilities, Solid Waste Disposal Facilities, and Bagged Toilet Waste Disposal Facilities, as described in the Application for Water Licence filed by the Applicant on February 20, 2001; and

**“Water Supply Facilities”** comprises the area and associated intake infrastructure at Water Supply Lake, as described in the Application for Water Licence filed by the Applicant on February 20, 2001.

## **PART B: GENERAL CONDITIONS**

1. The Licensee shall file an Annual Report with the Board not later than March 31st of the year following the calendar year reported which shall contain the following information:
  - i. tabular summaries of all data generated under the “Surveillance Network Program”;
  - ii. the monthly and annual quantities in cubic metres of fresh water obtained from all sources;
  - iii. the monthly and annual quantities in cubic metres of each and all waste discharged;
  - iv. a summary of modifications and/or major maintenance work carried out on the Water Supply and Waste Disposal Facilities, including all associated structures and facilities;



- v. a list of unauthorized discharges and summary of follow-up action taken
  - vi. a summary of any abandonment and restoration work completed during the year and an outline of any work anticipated for the next year;
  - vii. a summary of any studies, reports and plans (e.g., Operation and Maintenance, Abandonment and Restoration, QA/QC) requested by the Board that relate to waste disposal, water use or reclamation, and a brief description of any future studies planned;
  - viii. any other details on water use or waste disposal requested by the Board by November 1st of the year being reported; and
2. The Licensee shall comply with the “Surveillance Network Program” described in this Licence, and any amendments to the “Surveillance Network Program” as may be made from time to time, pursuant to the conditions of this Licence.
  3. The “Surveillance Network 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 to the satisfaction of an Inspector.
  5. The Licensee shall, within ninety (90) days after the first visit of the Inspector, post the necessary signs, where possible, to identify the stations of the “Surveillance Network Program.” All signage postings shall be in the Official Languages of Nunavut, and shall be located and maintained to the satisfaction of an Inspector.
  6. The Licensee shall immediately report to the 24-Hour Spill Report Line (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 and at the site of operation at all times. Any communication with respect to this Licence shall be made in writing to the attention of:

**(i) Chief Administrative Officer:**

Executive Director  
Nunavut Water Board  
P. O. Box 119  
Gjoa Haven, NU X0B 1J0  
Telephone: (867) 360-6338  
Fax: (867) 360-6369

**ii) Inspector Contact:**

Water Resources Officer  
Nunavut District, Nunavut Region  
P.O. Box 100  
Iqaluit, NU X0A 0H0  
Telephone: (867) 975-4298  
Fax: (867) 979-6445

**(iii) Analyst Contact**

Taiga Laboratories  
Department of Indian and Northern Affairs  
4601 - 52 Avenue, P.O. Box 1500  
Yellowknife, NT X1A 2R3  
Telephone: (867) 669-2781  
Fax: (867) 669-2718

8. The Licensee shall submit one paper copy and one electronic copy of all reports, studies, and plans to the Board. Reports or studies submitted to the Board by the Licensee shall include a detailed executive summary in Inuktitut.

**PART C: CONDITIONS APPLYING TO WATER USE**

1. The Licensee shall obtain all fresh water from Water Supply Lake using the Water Supply Facilities or as otherwise approved by the Board.
2. The annual quantity of water used for all purposes shall not exceed 70,000 cubic metres.

3. The Licensee shall maintain the Water Supply Facilities to the satisfaction of the Inspector.
4. The water intake hose used on the water pumps shall be equipped with a screen with a mesh size sufficient to ensure no entrainment of fish.

#### **PART D: CONDITIONS APPLYING TO WASTE DISPOSAL**

1. The Licensee shall direct all piped and pumpout Sewage to the Sewage Disposal Facilities or as otherwise approved by the Board.
2. All Effluent discharged from the Sewage Disposal Facilities at “Surveillance Network Program” Station Number CAM-3 shall meet the following effluent quality standards:

Parameter	Maximum Average Concentration
Faecal Coliforms	1 x 10 <sup>6</sup> CFU/dl
BOD <sub>5</sub>	100 mg/L
Total Suspended Solids	120 mg/L
Oil and grease	No visible sheen
pH	between 6 and 9

3. A Freeboard limit of 1.0 metre, or as recommended by a qualified geotechnical engineer and as approved by the Board, shall be maintained at all dykes and earthfill structures associated with the Sewage Disposal Facilities.
4. The Licensee shall advise an Inspector at least ten (10) days prior to initiating any decant of the sewage lagoon.
5. The sewage lagoon shall be maintained and operated in such a manner as to prevent structural failure.
6. The Licensee shall maintain the Sewage Disposal Facilities to the satisfaction of an Inspector.
7. The Licensee shall dispose of and contain all solid wastes at the Solid Waste Disposal Facilities or as otherwise approved by the Board.

8. The Licensee shall implement measures to ensure hazardous materials and/or leachate from the Solid Waste Disposal Facility does not enter water.

#### **PART E: CONDITIONS APPLYING TO MODIFICATION AND CONSTRUCTION**

1. The Licensee shall submit to the Board for approval design drawings stamped by a qualified engineer registered in the 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:
  - i. the Licensee has notified the Board in writing of such proposed modifications at least sixty (60) days prior to beginning the modifications;
  - ii. said modifications do not place the Licensee in contravention of the Licence or the *Act*;
  - iii. 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
  - iv. the Board has not rejected the proposed modifications.
3. Modifications for which all of the conditions referred to in Part E, Item 1, have not been met may be carried out only with written approval from the Board.
4. The Licensee shall provide as built plans/drawings of the modifications referred to in this Licence within ninety (90) days of completion of the modifications.

#### **PART F: CONDITIONS APPLYING TO OPERATION AND MAINTENANCE**

1. The Licensee shall, before September 1, 2003 submit to the Board for approval, a plan for the Operation and Maintenance of the Sewage and Solid Waste Disposal Facilities in accordance with “*Guidelines for Preparing an Operation and Maintenance Manual for Sewage and Solid Waste Disposal Facilities*” (October 1996).

2. The Licensee shall implement the Plan specified in Part F, Item 1 as and when approved by the Board.
3. The Licensee shall revise the Plan referred to in Part F, Item 1, if not acceptable to the Board. The revised Plan shall be submitted to the Board for approval within thirty (30) days of notification of the Board decision.
4. If, during the period of this Licence, an unauthorized discharge of waste occurs, or if such a discharge is foreseeable, the Licensee shall:
  - i. employ the appropriate contingency plan as provided for in the Operation and Maintenance Plan;
  - ii. report the incident immediately via the 24-Hour Spill Reporting Line at (867) 920-8130 and to an Inspector; and
  - iii. submit to an Inspector a detailed report on each occurrence not later than thirty (30) days after initially reporting the event.

#### **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 and the construction of new facilities to replace existing ones. The Plan shall include, but not be limited to where applicable:
  - i. water intake facilities;
  - ii. the water treatment and waste disposal sites and facilities;
  - iii. petroleum and chemical storage areas;
  - iv. any site affected by waste spills;
  - v. leachate prevention;
  - vi. an implementation schedule;
  - vii. maps delineating all disturbed areas, and site facilities;
  - viii. consideration of altered drainage patterns;

- ix. type and source of cover materials;
  - x. future area use;
  - xi. hazardous wastes; and
  - xii. a proposal identifying measures by which restoration costs will be financed by the Licensee upon abandonment.
2. The Licensee shall implement the plan specified in Part G, Item 1 as and when approved by the Board.
  3. The Licensee shall revise the Plan referred to in Part G, Item 1 if not approved. The revised Plan shall be submitted to the Board for approval within thirty (30) days of receiving notification of the Board's decision.
  4. The Licensee shall complete the restoration work within the time schedule specified in the Plan, or as subsequently revised and approved by the Board.

#### **PART H: CONDITIONS APPLYING TO THE SURVEILLANCE NETWORK PROGRAM**

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

<u>Station Number</u>	<u>Description</u>
CAM-1	Raw Water supply prior to treatment
CAM-2	Runoff from the Solid Waste Disposal Facilities
CAM-3	Effluent discharge from the Sewage Disposal Facilities

2. The Licensee shall sample monthly at Surveillance Stations CAM-2 and CAM-3 during the months of May to August, inclusive.

3. The Licensee shall analyze samples collected at Station Number CAM-2 and CAM-3 for the following parameters:

BOD	Faecal 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	

4. Additional sampling and analysis may be requested by an Inspector;
5. The Licensee shall conform to the Quality Assurance/Quality Control (QA/QC) Plan which shall be provided to the Licensee by the NWB within 60 days of the issuance of this licence;
6. 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;
7. All analyses shall be performed in a Canadian Association of Environmental Analytical Laboratories (CAEAL) Certified Laboratory, or as otherwise approved by an Analyst;
8. The Licensee shall measure and record in cubic metres the monthly and annual quantities of water pumped from Surveillance Network Program Station Number CAM-1 for all purposes;
9. The Licensee shall measure and record the annual quantities of sewage solids removed from the Sewage Disposal Facility;
10. The Licensee shall, unless otherwise requested by an Inspector, include all of the data and information required by the "Surveillance Network Program" in the Licensee's Annual Report, as required *per* Part B, Item 1; and
11. Modifications to the Surveillance Network Program may be made only upon written approval of the Chief Administrative Officer.