

# NORTHWEST TERRITORIES WATER BOARD

Pursuant to the *Northwest Territories Waters Act* and Regulations the Northwest Territories Water Board, hereinafter referred to as the Board, hereby grants to

INCORPORATED HAMLET OF TUKTOYAKTUK  
(Licensee)  
P.O. Box 120  
of TUKTOYAKTUK, NORTHWEST TERRITORIES X0E 1C0  
(Mailing Address)

hereinafter called the Licensee, the right to alter, divert or otherwise use water subject to the restrictions and conditions contained in the *Northwest Territories Waters Act* and Regulations made thereunder and subject to and in accordance with the conditions specified in this Licence.

Licence Number	<u>N7L3-0714 (RENEWAL)</u>
Licence Type	<u>"B"</u>
Water Management Area	<u>NORTHWEST TERRITORIES 07</u>
Location	<u>INCORPORATED HAMLET OF TUKTOYAKTUK, NORTHWEST TERRITORIES</u>
Purpose	<u>WATER USE AND WASTE DISPOSAL</u>
Description	<u>FOR MUNICIPAL UNDERTAKINGS</u>
Quantity of Water Not to be Exceeded	<u>100,000 CUBIC METRES PER YEAR</u>
Effective Date of Licence	<u>APRIL 30, 2002</u>
Expiry Date of Licence	<u>APRIL 29, 2005</u>

This Licence issued and recorded at Yellowknife includes and is subject to the annexed conditions.

**NORTHWEST TERRITORIES WATER BOARD**

Witness

Chairman

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

### **1. Scope**

- a) This Licence allows for the use of water and disposal of waste for municipal purposes at the Incorporated Hamlet of Tuktoyaktuk, Latitude 69°27' N. and Longitude 133°02' W., Northwest Territories;
- 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 *Northwest Territories Waters 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 automatically amended to conform with such Regulations; 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: **N7L3-0714**

**"Act"** means the *Northwest Territories Waters Act*;

**"Analyst"** means an Analyst designated by the Minister under Section 35(1) of the *Northwest Territories Waters Act*;

**"Average Concentration"** means the arithmetic mean of any four consecutive analytical results submitted to the Board in accordance with the sampling and analysis requirements specified in the "Surveillance Network Program";

**"Average Concentration For Faecal Coliform"** means the geometric mean of any four consecutive analytical results submitted to the Board in accordance with the sampling and analysis requirements specified in the "Surveillance Network Program";



**"Board"** means the Northwest Territories Water Board established under Section 10 of the *Northwest Territories Waters Act*;

**"Bagged Toilet Waste Disposal Facilities"** comprises the area and associated structures designed to contain bagged toilet wastes (honeybags);

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

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

**"Geotechnical Engineer"** means a professional engineer registered with the Association of Professional Engineers, Geologists, and Geophysics of the Northwest Territories and whose principal field of specialization is the design and construction of earthworks in a permafrost environment;

**"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 35(1) of the *Northwest Territories Waters Act*;

**"Licensee"** means the holder of this Licence;

**"Minister"** means the Minister of Indian Affairs and Northern Development;

**"Modification"** means an alteration to a physical work that introduces a new structure or eliminates an existing structure and does not alter the purpose or function of the work, but does not include an expansion.

**"Pumpout Sewage"** means all toilet wastes and/or greywater collected by means of a vacuum truck for disposal at an approved facility;

**"Regulations"** means Regulations proclaimed pursuant to Section 33 of the *Northwest Territories Waters Act*;

**"Sewage"** means all toilet wastes and greywater;

**"Sewage Disposal Facilities"** comprises the area and engineered structures designed to contain and treat sewage;

**"Solid Waste Disposal Facilities"** comprises the area and associated structures designed to contain solid wastes;

**"Solid Waste Lagoon"** means the accumulation of Water at the Solid Waste Disposal Facilities as described in Map 11-2 titled "Hamlet of Tuktoyaktuk" and Map 111-5 titled "Sample Locations: Lagoon", contained in "An Environmental Assessment of the Tuktoyaktuk Solid Waste Site" dated March 1997.

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

**"Waste"** means waste as defined by Section 2 of the *Northwest Territories Waters Act*;

**"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 Wastes Disposal Facilities; and

**"Water Supply Facilities"** comprises the area and associated infrastructure designed to collect, treat and supply water.

## **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:
  - a) the monthly and annual quantities in cubic metres of fresh water obtained from all sources;
  - b) the annual quantities of Sewage solids removed from the Sewage Disposal Facilities for disposal;
  - c) a summary of modifications and/or major maintenance work carried out on the Water Supply and Waste Disposal Facilities, including all associated structures;
  - d) tabular summaries of all data generated under the "Surveillance Network Program";
  - e) a summary of any abandonment and restoration work completed during the year and an outline of any work anticipated for the next year;



- f) a summary of any studies requested by the Board that relate to Waste disposal, water use or reclamation, and a brief description of any future studies planned;
  - g) a list of unauthorized discharges;
  - h) updates or revisions to the approved Sewage and Solid Waste Operation and Maintenance Plans; and
  - i) any other details on water use or Waste disposal requested by the Board by November 1st of the year being reported.
2. The Licensee shall comply with the "Surveillance Network Program" annexed to this Licence, and any amendment to the said "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 shall be installed, operated and maintained by the Licensee to the satisfaction of an Inspector.
  5. The Licensee shall, within sixty (60) days of the issuance of this Licence, post the necessary signs, where possible, to identify the stations of the "Surveillance Network Program". All postings shall be located and maintained to the satisfaction of an Inspector.
  6. The Licensee shall, within sixty (60) days of issuance of this Licence, post signs in the appropriate areas to inform the public of the Water Supply and Waste Disposal Facilities. All postings shall be located and maintained to the satisfaction of an Inspector.
  7. 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.

8. The Licensee shall ensure a copy of this Licence is maintained at the municipal office at all times.

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

1. The Licensee shall obtain all fresh water from Kudlak 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 100,000 cubic metres.
3. 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 approved Sewage Disposal Facilities or as otherwise approved by the Board.
2. All Sewage effluent discharged from the Sewage Disposal Facilities at "Surveillance Network Program" Station Number 0714-2 shall meet the following effluent quality standards:

Parameter	Maximum Average Concentration
BOD <sub>5</sub>	120 mg/L
Suspended Solids	180 mg/L

The Waste discharged shall have a pH between 6 and 9, and no visible sheen of oil and grease.

3. A freeboard limit of 0.5 metres shall be maintained at all times at all dykes and earthfill structures or as recommended by a Geotechnical Engineer, and as approved by the Board.
4. The Licensee shall advise an Inspector at least ten (10) days prior to initiating the 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. All bagged toilet Wastes (honey bags) shall be disposed of at the Bagged Toilet Waste Disposal Facilities to the satisfaction of an Inspector.
8. The Licensee shall dispose of all solid Wastes at the Solid Waste Disposal Facilities or as otherwise approved by the Board.
9. The Licensee shall, by June 1, 2002, submit to the Board for approval, the outstanding terms of reference for an assessment of the effects of sewage discharge on the waters of Kugmallit Bay specifically those waters immediately adjacent to the Sewage Disposal Facilities. The terms of reference shall include, but not be limited to:
  - a) sampling and analysis of water before, during and after decanting the Sewage Disposal Facilities;
  - b) sampling and analysis of sediments before and after decanting the Sewage Disposal Facilities;
  - c) sampling and analysis of fish and benthic organisms (including shellfish); and
  - d) an assessment of the impacts of sewage discharge on fish and shellfish harvesting activities.



10. The Licensee shall, by December 1, 2003, submit a report of the assessment defined by the approved terms of reference described in Part D, Item 9.
11. The Licensee must notify an Inspector at least thirty (30) days prior to any discharge of water from the Solid Waste Lagoon.
12. The Licensee may commence the discharge of water from the Solid Waste Lagoon upon receipt of an Inspector's approval.
13. Any discharge of water from the Solid Waste Lagoon shall be conducted between September 15 and October 31. No discharge shall occur at any other time unless approved by the Board.
14. Any discharge of water from the Solid Waste Lagoon shall not be conducted at the same time as the discharge of sewage effluent from the Sewage Disposal Facilities.
15. Water shall be discharged from the Solid Waste Lagoon at a rate not exceeding 350 cubic metres per hour.
16. Water from the Solid Waste Lagoon shall be discharged to the mouth of the small bay adjacent to the Solid Waste Lagoon. The discharge outlet shall be located not less than ten (10) metres from the shoreline anchored to minimize drifting and fitted with a diffuser.
17. Water shall be removed from the Solid Waste Lagoon using a floating intake.
18. The Licensee shall cease discharge of Water immediately upon observing the discharge of turbid or cloudy water.



19. All Water discharged from the Solid Waste Lagoon at "Surveillance Network Program" Station Number 0714-3 shall meet the following effluent quality standards:

Parameter	Maximum Average Concentration
BOD <sub>5</sub>	120 mg/L
Suspended Solids	180 mg/L
Polychlorinated Biphenyls (PCBs)	25 µg/L

The water discharged shall have a pH between 6 and 9.

**PART E: CONDITIONS APPLYING TO MODIFICATIONS**

1. 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) such Modifications do not place the Licensee in contravention of either 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.
2. Modifications for which all of the conditions referred to in Part E, Item 1, have not been met, can be carried out only with written approval from the Board.
3. The Licensee shall provide to the Board as-built plans and drawings of the Modifications referred to in Part E, Item 1 within ninety (90) days of completion of the Modifications.

**PART F:      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 Water Supply or Waste Disposal Facilities. The Plan shall include, but not be limited to:
  - a)      contaminated site remediation;
  - b)      leachate prevention;
  - c)      an implementation schedule;
  - d)      maps delineating all disturbed areas, borrow material locations, and site facilities;
  - e)      consideration of altered drainage patterns;
  - f)      type and source of cover materials;
  - g)      future area use; and
  - h)      hazardous Wastes.
2.    The Licensee shall implement the plan specified in Part F, Item 1 as and when approved by the Board.

**PART G:      CONDITIONS APPLYING TO CONSTRUCTION**

1.    Prior to construction of any dams, dykes or structures intended to contain, withhold, divert or retain water or Wastes, the Licensee shall submit to the Board for approval design drawings stamped by a qualified engineer registered in the Northwest Territories.
2.    Construction of designed structures shall be carried out as approved by the Board.



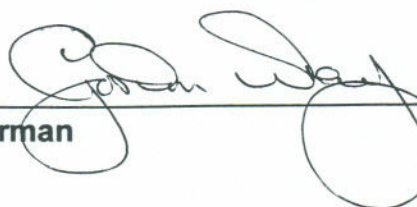
**PART H:      CONDITIONS APPLYING TO OPERATION AND MAINTENANCE**

1.     The Licensee shall submit to the Board for approval by July 1, 2002 the outstanding Plan for the Operation and Maintenance of the Waste Disposal Facilities. The Plan shall include but not be limited to the following:
  - a)     frequency of inspection of dams, dykes and drainage courses;
  - b)     removal of floating materials from the Sewage Disposal Facilities;
  - c)     controlling effluent discharge quality;
  - d)     runoff and drainage control within and around the facility, and restoration of erosion;
  - e)     treatment of contaminated drainage;
  - f)     prevention of windblown debris;
  - g)     managing hazardous Waste;
  - h)     segregation of domestic, metal and recyclable waste materials;
  - i)     method and frequency of site maintenance, including burning where permitted; and
  - j)     alternatives designed to reduce burning.
2.     The Licensee shall implement the Plan specified in Part H, Item 1 as and when approved by the Board.
3.     Notwithstanding Part H, Item 1, the Licensee shall, within six (6) months of the issuance of this Licence, submit to the Board for approval, a supplement to the Plan for the Operation and Maintenance of the Waste Disposal Facilities to address the long term management of the Solid Waste Lagoon. This Plan shall include, but not be limited to the following:
  - a)     a report of a geotechnical inspection of the berm; and
  - b)     a long term plan to address the prevention of further accumulation of surface water in the Solid Waste Lagoon.

4. The Licensee shall implement the Plan specified in Part H, Item 3 as and when approved by the Board.

**NORTHWEST TERRITORIES WATER BOARD**

  
Witness

  
Chairman



# NORTHWEST TERRITORIES WATER BOARD

**LICENSEE:** Incorporated Hamlet of Tuktoyaktuk

**LICENCE NUMBER:** N7L3-0714

**EFFECTIVE DATE OF LICENCE  
ISSUANCE:** APRIL 30, 2002

**EFFECTIVE DATE OF  
SURVEILLANCE NETWORK PROGRAM:** APRIL 30, 2002

## SURVEILLANCE NETWORK PROGRAM

### A. Location of Surveillance Stations

<u>Station Number</u>	<u>Description</u>
0714 -1	Supply line to reservoir
0714 -2	Effluent discharge structure at the Sewage Disposal Facilities
0714 -3	Water contained within the Solid Waste Lagoon

### B. Sampling and Analysis Requirements

1. Water at Station Number 0714-2 shall be sampled at least four times during each decant and analysed for the following parameters:

pH	Suspended Solids
Faecal Coliform	BOD <sub>5</sub>
Ammonia-Nitrogen	

2. Water at Station Number 0714-3 shall be sampled annually during periods of open water and analysed for the following parameters:

pH	Suspended Solids
Total Mercury	Total Cadmium
Total Chromium	Total Cobalt
Total Copper	Total Manganese
Total Nickel	Total Lead
Total Iron	Total Zinc

3. Water at Station Numbers 0714-2 and 0714-3 shall be inspected monthly during periods of flow for the presence of an oily sheen. If a sheen is detected, then a sample shall be collected and analysed for the presence of Oil and Grease.

4. Water at Station Number 0714-3 shall be sampled before discharge and at least three times during discharge; at the beginning of the discharge, approximately half way through the discharge and at the end of the discharge and analysed for the following parameters:

pH	Suspended Solids
Total Mercury	Total Cadmium
Total Chromium	Total Cobalt
Total Copper	Total Manganese
Total Nickel	Total Lead
Total Iron	Total Zinc
BOD <sub>5</sub>	Faecal Coliform
Polychlorinated Biphenyls (PCBs)	

5. 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 an Analyst.
6. All analyses shall be performed in a laboratory approved by an Analyst.




**C. Flow and Volume Measurement Requirements**

1. The monthly and annual quantities of water pumped from Surveillance Network Program Station Number 0714-1 for municipal purposes shall be measured and recorded in cubic metres.

**NORTHWEST TERRITORIES WATER BOARD**

  
\_\_\_\_\_  
**Witness**

  
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**Chairman**

April 26, 2002

Mr. Eddie Dillon  
Mayor  
Hamlet of Tuktoyaktuk  
P.O. Box 120  
TUKTOYAKTUK, NT X0E 1C0

Dear Mr. Dillon:

## ISSUANCE OF A "B" TYPE LICENCE


Attached is a duplicate of Licence No. N7L3-0714 granted to the Hamlet of Tuktoyaktuk by the Northwest Territories Water Board in accordance with the *Northwest Territories Waters Act*. The other original of this Licence has been filed with the Department of Indian Affairs and Northern Development in Yellowknife, Northwest Territories.

Also attached are general procedures for the administration of licences in the Northwest Territories. I request that you review these and address any questions to the Board's office.

In conclusion, please be advised that this letter with attached procedures, all inspection reports, and correspondence related thereto are part of the public Water Register, and are intended to keep all interested parties informed of the manner in which the Licence requirements are being met. All Water Register material will be considered when the Licence comes up for renewal or amendment.

The full cooperation of the Hamlet of Tuktoyaktuk is anticipated.

Sincerely,

  
Gordon Wray  
Chairman  
N.W.T. Water Board

Attach.



**GENERAL PROCEDURES FOR THE ADMINISTRATION OF LICENCES  
ISSUED UNDER THE NORTHWEST TERRITORIES WATERS ACT  
IN THE NORTHWEST TERRITORIES**

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1. At the time of issuance, a copy of the Licence is placed on the Water Register in the Office of the Northwest Territories Water Board in Yellowknife, and is then available to the public.
2. To enforce the terms and conditions of the Licence, the Minister of Indian Affairs and Northern Development has appointed Inspectors in accordance with Section 35(1) of the *Northwest Territories Waters Act*. The Inspectors coordinate their activities with officials of the Water Resources Division of the Department of Indian Affairs and Northern Development. The Inspector responsible for Licence No. N7L3-0714 is located in the North Mackenzie -Inuvik District Office.
3. To keep the Water Board and members of the public informed of the Licensee's conformity to Licence conditions, the Inspectors prepare reports which detail observations on how each item in the Licence has been met. These reports are forwarded to the Licensee with a covering letter indicating what action, if any, should be taken. The inspection reports and covering letters are placed on the public Water Register, as are any responses received from the Licensee pertaining to the inspection reports. It is therefore of prime importance that you react in all areas of concern regarding all inspection reports so that these concerns may be clarified.
4. If the renewal of Licence No. N7L3-0714 is contemplated it is the responsibility of the Licensee to apply to the Water Board for renewal of the Licence. The past performance of the Licensee, new documentation and information, and points raised during a public hearing, if required, will be used to determine the terms and conditions of any Licence renewal. Please note that if the Licence expires and another has not been issued, then water and waste disposal must cease, or you, the Licensee, would be in contravention of the *Northwest Territories Waters Act*. It is suggested that an application for renewal of Licence No. N7L3-0714 be made at least eight months in advance of the Licence expiry date.
5. If, for some reason, Licence No. N7L3-0714 requires amendment, then a public hearing may be required. You are reminded that applications for amendments should be submitted as soon as possible to provide the Water Board with ample time to go through the amendment process. The process may take up to six (6) months or more depending on the scope of the amendment requested.



6. Specific clauses of your Licence make reference to the Board, Analyst or Inspector. The contact person, address, phone and fax number of each is:

BOARD: Executive Assistant  
Northwest Territories Water Board  
Box 1500  
YELLOWKNIFE, NT X1A 2R3  
Phone No: (867) 669-2772  
Fax No: (867) 669-2719

ANALYST: Analyst  
Water Laboratory  
Northern Affairs Program  
Department of Indian Affairs  
and Northern Development  
Box 1500, 4601 - 52nd Avenue  
YELLOWKNIFE, NT X1A 2R3  
Phone No: (867) 669-2780  
Fax No: (867) 669-2718

INSPECTOR: Inspector  
North Mackenzie-Inuvik District Office  
Northern Affairs Program  
Department of Indian Affairs  
and Northern Development  
P.O. Box 2100  
INUUVIK, NT X0E 0T0  
Phone No: (867) 777-3361  
Fax No: (867) 777-2090