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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI

DECISION

LICENCE NUMBER: NWB3IGL0308

This is the decision of the Nunavut Water Board (NWB) with respect to an application for a Licence dated February 5, 2003, made by:

Hamlet of Igloolik

to allow for the use of water and disposal of waste for the Hamlet at Igloolik, 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 proceed 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* (NWNSRTA), 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 NWNSRTA and determined that:

Licence Number NWB3IGL0308 be issued subject to the terms and conditions contained therein. (Motion #: 2003-08-09)

SIGNED this 27th day of August 2003 at Gjoa Haven, NU.

Original signed by:

Philippe di Pizzo
Chief Administrative Officer

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I. BACKGROUND

The Hamlet of Igloolik is located on Igloolik Island, in the Foxe Basin lowlands, at 69°23" N latitude and 81°46"W longitude. It is bounded on the north by the Fury and Hecla Straits and separated from the Melville Peninsula to the south by Hooper Inlet. Igloolik is 362 air km northeast of Repulse Bay and 1641 air km northeast of Yellowknife.

The Island is composed of a dolomitic conglomerate, with sandstone, dolostone and siltstone interspersed throughout. Predominant features on the Island are the east and west ridges called "buttes". Igloolik is very low, heavily-ponded and has extensive tidal foreshore flats. Permafrost is present throughout the active layer, averaging 0.7 m in depth. Mosses, lichens, and grasses are the predominant vegetation species found. Igloolik's Arctic summer rarely lasts longer than three months. A true arctic desert location, precipitation in snowfall averages 19.1 cm per year. July mean high and low temperatures are 7.8° C and 3.3° C. January mean high and low temperatures are -23.3° C and -32.8° C. The winds are generally north and annually average 21 km/h.

II. PROCEDURAL HISTORY

On February 5, 2003, an application for the renewal of water licence NWB3IGL9803 was filed by Ferguson Simek Clark Environmental Consultants (Yellowknife) on behalf of the Hamlet of Igloolik.

The original licence NWB3IGL9803 was issued by the Board on October 21st, 1998 following a public hearing in Igloolik, and is valid until September 1, 2003. The Nunavut Water Board publicly posted notice of this application, in accordance with the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* S. 55.1 and Article 13 of the *Nunavut Land Claims Agreement*, on February 20, 2003. An assessment of the Hamlet's request for a municipal water licence for water use and waste disposal activities within the Hamlet was then undertaken, so that the Board could make a fully informed decision on the merits of application. This assessment process included the referral of the application to a variety of Federal, Territorial and local organizations for their review and comment. As no public concern was expressed, the NWB waived the requirement to hold a public hearing for the application.

Based upon the results of the detailed assessment, which was completed, including consideration of any potential accidents, malfunctions, or cumulative environmental effects that the overall project might have in the area, the Board delegated to the Chief Administrative Officer authority to approve the application was pursuant to S. 13.7.5 of the *Agreement*.

III. ISSUES

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. In determining an appropriate term of a water licence, the Board considers a number of factors, including the results of the Department of Indian Affairs and Northern Development (DIAND) site inspection and the compliance record of the Applicant. In review of the previous water licence NWB3IGL9803, it was noted that there were several issues of non-compliance with the terms and conditions contained therein. Specifically, the July 12, 2001 DIAND Inspection Report indicates:

1. The Licensee failed to produce Annual Reports, as required by Part B, Item 1 of NWB3IGL9803, for the years 1998, 1999 and 2000.
2. The Hamlet has failed to produce an Operations and Maintenance Plan, as required by Part G, Item 1 of NWB3IGL9803.
3. The Hamlet has failed to comply with the Part D, Item 6 of the water licence, by failing to maintain the sewage lagoon in such a manner as to prevent structural failure.

Additionally, the NWB brings to the attention of the Licensee their failure to provide the Board with the information required by Part F, Item 1 prior to the construction of an additional cell at Sewage Disposal Facility, after being provided written notice of their requirements to do so by the Board on September 6, 2001.

The NWB has imposed the requirement to produce an Annual Report. These Reports 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. The Licensee's attention is drawn to the attached standard form for completing the Annual Report (see Attachment I).

The NWB has also imposed on the Licensee the requirement to produce an Operations and Maintenance Manual for their sewage and solid waste operations. 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).

In review of the application DIAND, has recommended that a licence term of five (5) years. The NWB concurs that a term of five (5) years is appropriate, and will allow enough time for the Hamlet

to establish a consistent compliance record with the terms and conditions of its licence. It will also ensure that sufficient time is given to permit the Licensee to develop, submit, and implement the plans required under its licence to the satisfaction of the NWB.

Water Use

The Municipality currently receives water from its reservoir, located approximately 3.5 km south of town. The reservoir is filled with water pumped from South Lake, located 2 km south of the reservoir. This is supplemented during the summer months with water pumped from the nearby Airport Lake, situated next to the reservoir. A truck fill station is located at the reservoir. The water receives a chlorine treatment and is then distributed to the community by truck. Water consumption is projected to reach 57,756 m³ *per annum* in 2003 and 66,142 m³ *per annum* by 2008.

No serious concerns were raised by the parties in their written submissions as to the amount of water required by the Applicant or the manner in which this water will be used. DIAND has provided specific recommendations regarding volume usage limits, as well as recommending that the Applicant to be required to maintain the existing monitoring station at the water intake area IGL-1 in order to monitor the volume of water used. The Department of Fisheries and Oceans provided specific recommendations relative to the intake screens at the water treatment facility, so as to prevent the entrainment of fish by the facility. The Board concurs with these recommendations, and has set the terms and conditions in the water licence, which govern, water usage accordingly.

Deposit of Waste

Sewage

The Hamlet of Igloolik utilizes a lagoon-based Sewage Disposal system approximately 1.6 km north of the Municipality. The lagoon is a three-cell exfiltration lagoon with a capacity of 17,000 m³. A fourth cell, which has apparently been constructed without the approval of the NWB, will reportedly increase the capacity of the lagoon by up to another 2000 m³. The effluent that exfiltrates from the lagoons proceeds downstream through an undefined natural wetland where it receives additional treatment prior to reaching the marine environment. A few houses of the Municipality are still using honeybags. The honeybags are disposed of in the honeybag pit, which is situated in a bermed area adjacent to the north end of the lagoon.

Specific comments relevant to sewage disposal operations in the Hamlet were provided by DIAND, and Environment Canada. DIAND and Environment Canada recommended that the Hamlet develop appropriate Operations and Maintenance and Spill Contingency Plans. Environment Canada further recommended that the Hamlet take steps to mitigate the seepage and erosion issues currently evidenced at the Sewage Disposal Facility.

DIAND provided recommendations concerning effluent discharge criteria, which are consistent with

the *Guidelines for the Discharge of Treated Municipal Wastewater in the Northwest Territories* (Northwest Territories Water Board; 1992), as well as specific recommendations concerning the Monitoring Program. This Program is 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. The Board concurs with these recommendations, which are reflected in the terms and conditions of the Water Licence. The Board also draws the attention of the Licensee to their requirements to implement the Quality Assurance/Quality Control (QA/QC) Plan to be provided by the NWB. The purpose of the QA/QC Plan is to ensure that samples taken in the field as part of the Monitoring Program will maintain a high quality, so as to accurately represent the physical and chemical nature of the samples being taken. It should also be noted that while minimum sampling requirements have been imposed, additional sampling may be requested by an Inspector.

Solid Waste

The Hamlet's solid waste management site is located adjacent to the Sewage Disposal system, roughly 1.6 km from the community. Waste is segregated, with a generic landfill area, a bulky wastes area, and a sealift container for hazardous wastes. Combustible wastes are burned on a daily basis, and the landfill is compacted and covered on a yearly basis.

Recommendations relevant to solid waste disposal operations in the Hamlet was provided by DIAND, Environment Canada and DFO. DIAND and Environment Canada recommended that the Hamlet develop appropriate Operations and Maintenance and Spill Contingency Plans. DIAND further recommended that the Hamlet segregate hazardous materials such as waste oils and batteries from municipal solid waste, and that these materials be disposed of off-site in an approved facility.

DFO recommended the installation of appropriate fencing at the solid waste site, so as to prevent the deposition of airborne litter into waste in contravention of the *Fisheries Act*. The Board concurs with these recommendations, which are reflected in the terms and conditions of the Water Licence.

LICENCE NWB3IGL0308

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 IGLOOLIK

(Licensee)

of

IGLOOLIK, NUNAVUT, X0A 0L0

(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:

NWB3IGL0308

Licence Number

NUNAVUT 05

Water Management Area

IGLOOLIK, 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, 2003

Date of Licence

AUGUST 31, 2008

Expiry Date of Licence

Dated this 27th of August 2003 at Gjoa Haven, NU.

Original signed by:

Philippe di Pizzo

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 Igloolik, Nunavut (69°23' N; 81°46'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: **NWB3IGL0308**

“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 Disposal 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 Disposal Facility’s final discharge point;

“Bagged Toilet Waste Disposal Facilities” means the facility for the disposal of bagged toilet waste, as described in the Application for Water Licence filed by the Applicant on February 5, 2003;

“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;

“Composite Sample” means a water or wastewater sample made up of a number of samples taken at regular periods over a 24 hour period;

“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;

“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 Facilities” comprises the area and engineered lagoon and decant structures designed to contain and treat sewage as described in the Application for Water Licence filed by the Applicant on February 5, 2003;

“Solid Waste Disposal Facilities” comprises the area and associated structures designed to contain solid waste as described in the Application for Water Licence filed by the Applicant on February 5, 2003;

“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 5, 2003; and

“Water Supply Facilities” comprises the area and associated intake infrastructure at South Lake and Airport Lake, as described in the Application for Water Licence filed by the Applicant on February 5, 2003.

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 “Monitoring 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 “Monitoring Program” described in this Licence, and any amendments to the “Monitoring Program” as may be made from time to time, pursuant to the conditions of this Licence.
 3. The “Monitoring Program” and compliance dates specified in the Licence may be modified at the discretion of the Board.
 4. Meters, devices or other such methods used for measuring the volumes of water used and waste discharged shall be installed, operated and maintained by the Licensee 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 “Monitoring 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 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 to be stored in the Hamlet reservoir from South Lake and Airport 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 Sewage to the Sewage Disposal Facilities or as otherwise approved by the Board.
2. All Effluent discharged from the Sewage Disposal Facilities at Monitoring Program Station IGL-4 shall meet the following effluent quality standards:

Parameter	Maximum Average Concentration
Faecal Coliforms	1 x 10 ⁶ CFU/dl
BOD ₅	120 mg/L
Total Suspended Solids	180 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 dams, dykes or structures intended to contain, withhold, divert or retain water or wastes.
4. The Licensee shall advise an Inspector at least ten (10) days prior to initiating any decant of the sewage lagoon.
5. The Sewage Disposal Facility shall be maintained and operated, to the satisfaction of an Inspector in such a manner as to prevent structural failure.
6. The Licensee shall dispose of and contain all solid wastes at the Solid Waste Disposal Facilities or as otherwise approved by the Board.
7. 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 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 May 31, 2004 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 MONITORING PROGRAM

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

<u>Monitoring Program Station</u>	<u>Description</u>
IGL-1	Raw water supply at South Lake and Airport Lake prior to treatment
IGL-2	Runoff from the Solid Waste Disposal Facilities
IGL-3	Raw Sewage at truck offload point
IGL-4	Effluent discharge from the Sewage Disposal Facilities

2. The Licensee shall sample monthly at Monitoring Program Station IGL-2 and IGL-4 during the months of May to August, inclusive. Samples shall be analyzed 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	

3. The Licensee shall measure and record in cubic metres the monthly and annual quantities of water pumped from Monitoring Program Station IGL-1 for all purposes.
4. The Licensee shall measure and record in cubic metres the monthly and annual quantities of raw sewage offloaded from trucks at Monitoring Program Station IGL-3 for all purposes.
5. Additional sampling and analysis may be requested by an Inspector.
6. 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.

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 Canadian Association of Environmental Analytical Laboratories (CAEAL) Certified Laboratory, or as otherwise approved by an Analyst.
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 “Monitoring Program” in the Licensee's Annual Report, as required *per* Part B, Item 1.
11. Modifications to the Monitoring Program may be made only upon written approval of the Chief Administrative Officer.