



INAC, Nunavut District
P.O. Box 2200
Qimuggjuk Building
Iqaluit, NU, X0A 0H0

Submitted Via E-Mail
Our File: 3BM-CLY0308
Your File: _____
CIDM # 186629

December 4, 2007

Terry Kalluk
Senior Administrative Officer
Box 89
Clyde River, Nunavut
X0A 0E0

RE: July 13th, 2007 Municipal Water Licence 3BM-CLY0308 -

The Inspector would like to thank Jackie Natani (By-law Officer and part time driver for the Municipality of Clyde River) for taking the time to meet during the inspection period and for acting as guide while conducting the inspection of the potable water source, waste treatment system and waste management areas.

Part A: Scope and Definitions

No issues were found with respect to the information contained within the current license.

The license is classed as water use and waste disposal for Municipal Undertakings as indicated on the license form.

Part B: General Conditions

It should be noted that during the period of inspection the Municipality of Clyde River was operating under a current water license. That license was issued the 15th of September 2003 and is scheduled to expire on September 15th, 2008.

A review of the Nunavut Water Board FTP site failed to produce an application or any supporting documents required in the application process for a renewal of the current water license. The Municipality is reminded that any use of water or deposition of waste into any place where it may enter water in Nunavut requires a license issued pursuant to the Nunavut Water and Nunavut Surface Rights Tribunal Act.

The licensee is reminded that the application process may take as long as three to six months. The licensee is strongly encouraged to submit their application as soon as possible to avoid the possibility that they will be forced to operate contrary to the legislation.

Additionally, during the same review of the Nunavut Water Board FTP site the Inspector failed to find the required annual reports which were to have been filed in accordance with the current license. The licensee is reminded that an annual report is required to be filed by March 31st 2008 for the year ending December 31st 2007. This report is to include all items noted in this Part under Section 1 (I through viii).

The Licensee is also reminded that included in the annual reports are the results of the Monitoring Program as outlined in Part H of the current license. As per section 2 of this Part the Licensee is required to comply with the Monitoring program and submit the results of samples collected under the monitoring program.

During the period of Inspection the Inspector also noted that there did not appear to me a meter or volumetric measuring system installed on the intake system contrary to section 4 of this Part. The licensee is required to address this deficiency by the period of the next inspection.



During the inspection it was also noted that the license holder has not installed signage at many of the stations noted under the Surveillance Network Program.

Part C: Conditions Applying to Water Use

The raw water from Water Source Lake is pumped through the pipeline to the pumping station where it is chlorinated before being piped into the water delivery trucks for the community. The chlorine residual is measured twice daily. All appeared to meet the requirements of the license during the inspection.

A visual inspection of the in-take pipe line and intake facilities was conducted during the period of inspection. No issues were noted. Water samples were collected near the intake pipe from Water Source Lake.

Metres and records were observed during the inspection inside the pumping station.

Part D: Conditions Applying to Waste Disposal

Sewage treatment;

The Licensee is responsible for ensuring that effluent entering the environment meets the following standards;

Parameter:	Max Concentration
Faecal Coliform	1X 10 CFU/dl
BOD	120 mg/L
TSS	180 mg/L
Oil & Grease	No visible sheen
PH	

The licensee is reminded that these parameters are set by the Nunavut Water Board and are included in the terms and conditions of the issued water license. Compliance with these terms is an obligation of the Municipality.

Samples collected from the receiving environment approximately 50 m from the lagoon returned one result in excess of the Canadian Council of Ministers of the Environment (CCME) Guidelines on the Protection of Aquatic Life.

<u>Parameter</u>	<u>Result</u>	<u>CCME</u>
(Trace metals -Total)		
Iron	1660 µg/L	300 µg/L

Pursuant to Section 5 of this Part which reads;

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.

The Inspector has concerns that this section of the license is not being followed or can not be followed by the Licensee. During the period of inspection the inspector noted and photographed the following structural issues with the Clyde River sewage lagoon;

1. Stress cracks on top of the walls running parallel to the walls of the Lagoon
2. Obvious erosion to the inside walls of the lagoon
3. Areas of erosion along the outside walls of the lagoon resulting in leakage from both the wall of the lagoon and toe
4. Large stress cracks on the exterior wall with evidence of leakage
5. An obvious flow originating from the lagoon wall and continuing downhill and into the grasslands area below the lagoon.



The walls of the lagoon system appear to consist of nothing more than sand. The walls of the lagoon are in some places eroding and allowing the release of raw untreated sewage from the lagoon.

This was noted during the inspection and brought to the attention of the new SAO Mr. Terry Kalluk. While Mr. Kalluk was very new to the position the Inspector stated that these findings should be reported to the Hamlet council and to the Department of Community Government and Services, Government of Nunavut. Mr. Kalluk stated he would do so. This issue must be addressed before the period of the next inspection.

Solid Waste Management Area;

Within the Solid Waste disposal facilities the Inspector noted the following;

- Segregation of materials into Bulk Metals and Hazardous wastes was being done in the municipality.

The Inspector strongly encourages the community to install some form of liner to contain spills or leaks that may occur during the transportation and storage of these hazardous materials and waste oil.

Part E: Conditions Applying to Modifications and Construction

It is impossible for the Inspector to determine if any of the terms of this section have been complied with.

No notification of any omission has been received by this office from the Nunavut Water Board.

Part F: Conditions Applying to Operation and Maintenance

The Water Intake Facility was well maintained and found to be working and in good order.

The Inspector has no information concerning the Operations and maintenance manual that was to be submitted by March 31st 2004. As it is still a condition of the license and not addressed in any correspondence as being completed, the inspector will look to the Water Board for confirmation of compliance.

Part G: Conditions Applying to Abandonment and Restoration

A search the Nunavut Water Board FTP site was not able to locate any documents related to this file. The Nunavut Water Board will have to determine if this part has been complied with and if not advise this office.

Part H: Conditions Applying to the Surveillance Network Program (Monitoring Program)

The Inspector identified in this inspection and that of 2006 the lack of signage and warnings at all of the SNP stations within the Municipality.



The Licensee, according to the terms of the water license is required to sample, during the months of May to August inclusive the following parameters;

<u>Parameters</u>	
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	

These samples are to be collected and analysed in accordance with a Quality Control / Quality Assurance plan. The outline of which was to be provided to the Community within 60 days of the issuance of this license by the Nunavut Water Board. There is no indication that the required plan was submitted to the Municipality by the Nunavut Water Board nor that the Municipality has collected the required samples.

The Nunavut Water Board is reminded that failure to comply with terms of licenses issued by the Board puts the validity of the issued license in question.

Non-Compliance:

The Municipality is required to complete the following;

- Submit an application for a renewal of the existing water license
- Submit the required Annual reports
- Maintain the appropriate signage, and Surveillance Network Program (SNP)
- Develop a Quality Assurance/ Quality Control Plan (contact the Nunavut Water Board)
- Develop a Solid Waste Disposal Operations and Maintenance Manual
- Address concerns identified by the Inspector concerning the Sewage Lagoon
- Submit the required Abandonment and Restoration plans as required
- Collect and submit for analysis the samples required on the Monitoring Program

A. Keim
Inspector's Name

Inspector's Signature

Attached under separate cover;
Photos taken during Inspection of July 19th, 2007

Cc:

Peter Kusugak – Manager Field Operations section- Indian and Northern Affairs Canada
Phyllis Beaulieu – Manager licensing – Nunavut Water Board