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Submitted Via E-Mail
Our File: 3BM-ARC0207
Your File: _____
CIDM # 191724

January 14, 2008

Joelie Qamanirq
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RE: August 4th, 2007 Municipal Water Licence 3BM-ARC0207

The Inspector would like to thank SAO Joelie Qamanirq for taking the time to meet after the inspection and provide input into the findings of the inspector.

Part B: General Conditions

It should be noted that during the period of inspection the Municipality of Arctic Bay was operating under a current water license. That license expired on October 31st 2007. A review of the Nunavut Water Board FTP site during the writing of this report found an application and supporting documents on file for the renewal of the 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 months. The licensee is encouraged to ensure their application and supporting documents are complete and that any requests for further information are addressed in a timely manner so to prevent any undue delays in processing and avoid the possibility that they will be operating contrary to the legislation.

During the same review of the Nunavut Water Board FTP site a copy of the 2006 annual report filed by the community was noted. The report was found to be missing the following requirements as outlined in section 1 of this Part.

- Water Quality results for required Municipal sampling under the monitoring program.

The licensee is reminded that an annual report is required to be filed by March 31st 2008 for the year ending December 31st 2007. The annual report **must** include but not be limited to those items listed in Section 1 (i) through (ix) inclusive, of this part as well as any information required by the Inspector.

Failure to file a complete report as outlined in the license is a violation of the Act and will subject the licensee to the enforcement measures and penalties provided for under the Act.

The licensee is reminded that it is the responsibility of the licensee to ensure that any documentation submitted by the licensee to the Nunavut Water Board is acknowledged by the Manager of Licensing.

The Licensee is also reminded that signage continues to be a requirement under the current license and must be addressed by the period of the next inspection.



Part C: Conditions Applying to Water Use

The raw water from the potable source is pumped through the intake line, chlorinated and then pumped into the water truck. All appeared to meet the requirements of the license during the inspection however chlorination records were not noted in the pumping station during the period of 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 taken near the intake pipe from the source lake.

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 ⁶ CFU/dl
BOD	100 mg/L
TSS	120 mg/L
Oil & Grease	No visible sheen
PH	Between 6 and 9

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 500 m from the lagoon returned two results 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	1150 µg/L	300 µg/L
Manganese	326 µg/L	<50 µg/L

Pursuant to Section 3 of this Part which reads;

3. The licensee shall maintain the Sewage Treatment Facilities to the satisfaction of an Inspector.

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 issues with the sewage lagoon;

1. Areas of erosion along the outside walls of the lagoon resulting in leakage from the toe of the lagoon
2. An obvious flow originating from the lagoon which enters an existing stream and continues downhill and into the grasslands area below the lagoon which eventually terminate in the Ocean

Solid Waste Management Area;

Within the Solid Waste disposal facilities the Inspector noted the following areas of concern;

- No segregation of materials within the dump has been undertaken by the Licensee.
- Obvious standing water and run off from the solid waste management area is entering the same stream. (poor water management)



Part E: Conditions Applying to Modifications and Construction

During the period of inspection no work had been undertaken with respect to the expansion of the community sewage lagoon nor had any further construction or modifications taken place to the secondary cell of the existing sewage lagoon.

A review of the Nunavut Water Board FTP site could not locate any drawings, plans or construction reports having been submitted by the licensee.

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 Inspector has no information concerning the Operations and maintenance manual that was to be submitted by November 1st, 2003.

During the review of the Nunavut water Board FTP site a document entitled MACA Operation Maintenance Disposal was located. This is a guidance document used to assist municipalities in the development of operations and Maintenance manuals. This document does not meet the requirements of the license and is in fact outdated.

Part G: Conditions Applying to Abandonment and Restoration

The municipality expects to construct new facilities over the course of the next year. As such, a Plan to address the requirements of the new license should be submitted to the Nunavut Water Board for approval.

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;

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.



Non-Compliance:

Waste Management in the community continues to be below an acceptable standard because of problems at both the solid waste management area and the sewage lagoon.

The Municipality is required to complete the following;

- Submit the required Annual reports
- Conduct required sampling and submit results with annual report
- 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
- Develop and submit an Abandonment and Restoration Plan that includes a sewage sludge management plan.

A. Keim

Inspector's Name

Inspector's Signature

Attached under separate cover;
Photos taken during Inspection of August 4th, 2007

Cc:

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