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**Submitted Via E-Mail**

Our File: 3BM-HAL0308

Your File: \_\_\_\_\_

CIDM # 189438

December 17, 2007

Jayko Simonie  
Senior Administrative Officer  
Municipality of Hall Beach  
Box 3  
Hall Beach, Nunavut  
XOA OKO

**RE: July 16<sup>th</sup>, 2007 Hall beach Municipal Water Licence Inspection 3BM-HAL0308**

The Inspector would like to thank Jack Kammuka , Municipal Foreman for taking the time to meet during the inspection period and for acting as a guide for the Inspector. The input and comments into the ongoing issues with both the waste metal facilities and the Sewage lagoon was invaluable to the inspection.

**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 Hall beach is operating under a current water license which is scheduled to expire on March 31<sup>st</sup> 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 31<sup>st</sup> 2008 for the year ending December 31<sup>st</sup> 2007. This report is to include all items noted in this Part under Section 1 (i through viii). Additionally, the Licensee is strongly encouraged to provide annual reports retroactive to the date of issue of the issuance of the current license.



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.

A review of the Nunavut Water Board FTB site also found documents related to the decommissioning of one unused cell of the sewage lagoon system within the community of Hall beach. No work was noted during the period of Inspection and a further review of the FTP site notes concerns expressed by INAC and a reply from the Contractor.

It is unclear to the Inspector if this work has proceeded ahead and or if it was approved by the board.

The Licensee is again cautioned that the application process for a renewal of the current license may take as long as three to six months. The licensee would be remiss in their efforts to ensure compliance with the Act if they fail to submit their application as soon as possible to avoid the possibility that they will be forced to operate contrary to the legislation.

#### **Part C: Conditions Applying to Water Use**

A visual inspection of the Pipe line and intake facilities was conducted during the period of inspection. No issues were noted.

Water samples were taken near the intake pipe.

The raw water from the Water Supply Lake is allowed to flow into the reservoir via a channel which has a gate installed to cut off the flow when not in use. Water for the Community is allowed into the reservoir annually. Water from the Reservoir is chlorinated on its way into the water truck. The chlorine residual is measured twice daily.

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 the Effluent entering the environment meets the following standards;

<b>Parameter:</b>	<b>Max Concentration</b>
Faecal Coniform :	1X 10(6) CFU/dl
BOD	120 mg/L
TSS	180 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.

The licensee is reminded that prior to a planned decant of the sewage treatment lagoon system there is a requirement for the Municipality to notify the Inspector ten days in advance and to ensure the monitoring program is followed. It appears this section is not applicable as the lagoon appears to drain freely and no liner appears to have been installed.



#### Solid Waste Management Area;

An inspection and samples were collected at the solid waste management area during the period of the inspection.

Large piles of un-segregated materials were evident along the shoreline of the stream running along and adjacent to both the solid waste management area and the community sewage lagoon. Run off and leachate from the waste area was noted obviously entering the stream. The community must address this water management issue by the period of next inspection.

This issue was brought to the attention of the Municipality in 2006.

This report is based on observations carried out on July 16<sup>th</sup>, 2007.

During the inspection the following locations were sampled;

1. Raw Water
2. Leachate from waste area approximately 10 metres downstream between waste metal area and sewage lagoon,
3. Run off stream 200 meters from lagoon.

Results from these samples indicated that treatment from the lagoon is not adequate and that contaminants are leaching from the waste area and possibly migrating into the Ocean.

Location	Sample Parameter	Result	Guideline	Comment
<b>Raw water: -</b>	Within Canadian Council of Ministers of the environment Guidelines (CCME) Guidelines			
<b>Waste Metal Dump:</b>	Iron	1620 µg/L	300µg/L	High
	Manganese	86.4 µg/L	50 µg/L	High
	Selenium	32.5 µg/L	1 µg/L	High
	Hexane Extractable material	2.7 mg/L	None	Presence of oil and grease
<b>Lagoon</b>	Hexane Extractable material	2.7 mg/L	None	Presence of oil and grease

Note: Fecal and Biological Oxygen Demand samples exceeded the time restrictions on testing. Results could not be returned from the lab. The samples collected however had a obvious odour of sewage and were green in color.

#### **Part E: Conditions Applying to Modifications and Construction**

No work was on going during the period of inspection. No mention was made of the decommissioning of the old lagoon system during the period of inspection. It is unclear if this work has taken place or not.



#### **Part F: Conditions Applying to Maintenance**

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

The Municipality was unable to produce a Sewage and Solid Waste Disposal Operations and Maintenance manual during the period of inspection. During the consolidation of this report a review of the Nunavut Water Board FTP site was not able to locate this document.

If the Municipality has not completed the required document they are required to have the document completed and ready for submission by March 31<sup>st</sup> for inclusion in the annual report.

#### **Part G: Conditions Applying to Abandonment and Restoration**

The Municipality was unable to produce an Abandonment and Restoration Plan during the period of inspection. During the consolidation of this report a review of the Nunavut Water Board FTP site was not able to locate this document.

If the Municipality has not completed the required document they are required to have the document completed and ready for submission by March 31<sup>st</sup> for inclusion in the annual report.

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

The licensee is reminded that they must ensure that adequate signage is in place.

During the inspection it was noted that the Hamlet had not complied with section 2 of this part. The Municipality is reminded that they must collect the required samples at two locations as outlined in the current license.

As the Municipality should be applying now for a new water license it would be beneficial to them to have a monitoring strategy that includes this required sampling as part of their application.

To assist the licensee in the future, the following are the required parameters to be tested for as a requirement of their water license. As well the Licensee is required to sample, during the months of May to August inclusive.

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 this was completed by the Nunavut Water Board even after this was noted to the Board in the 2006 Inspection report.

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:**

Sewage treatment in the community continues to be below an acceptable standard because of problems with the lagoon systems lack of holding time.

The Municipality is also required to complete the following;

- Maintain the appropriate signage, and Surveillance Network Program (SNP)
- Develop a Quality Assurance/ Quality Control Plan,
- Develop a Solid Waste Disposal Operations and Maintenance Manual
- Develop an Abandonment and Restoration Plan – Old lagoon cell.
- Conduct sampling as required and submit the results.

**A. Keim**

**Inspector's Name**

**Inspector's Signature**

Attached under separate cover;  
Photos taken during Inspection of July 16<sup>th</sup>, 2007

Cc:

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