



Inspection Report

License #: 3BM-GJO0409 (**EXPIRED**)

Inspector: A. Keim

CIDMS # 619562

Client	Municipality of Gjoa Haven		
Mailing Address	Box 200		
Inspection site location	Gjoa Haven , Nunavut		
Contact name	Mr. Eruk Pauloosie - SAO	Mr. Jacob Keniak - Foreman	
Previous Inspection Dates	August 4/5 th 2009, July 12 2010, July 13 2011		
Inspection Date	August 24, 2012		
Region	Qikiqtani		



Nunavut Regional Office
P.O. Box 100
Building 918
Iqaluit, NU, X0A 0H0

Submitted Via E-Mail

Our File: 3BM-GJO0409 Expired

Your File: _____

CIDM # 619562

January 4, 2013

Mr. Eruk Pauloosie
Senior Administrative Officer
Hamlet of Gjoa Haven
P.O. Box 200
Hamlet of Gjoa Haven, NU
X0B 1J0

Please find attached the report on the Water License Inspection conducted in the Municipality of Gjoa Haven on August 24 2012. Included at the end of the report is a record of observations made during the inspection with respect to issues of non-compliance or non-conformity with the issued Water License or the Nunavut Water and Nunavut Surface Rights Tribunals Act (NWNSRTA)

The role of Aboriginal Affairs and Northern Development Canada (AANDC) in issues related to the use of water or the deposit of waste in Nunavut is one of compliance monitoring and enforcement. Our preferred option is to work with clients to identify and address instances of non-compliance, risks to the environment and/ or people.

Should you require more information or clarification please contact the undersigned at the coordinates listed below.

I look forward to working with you and your staff. If you have any questions please do not hesitate to contact our offices here in Iqaluit.

Sincerely,

Sent by E-mail

Andrew Keim
Water Resources Officer
Aboriginal Affairs Northern Development Canada
Box 100 Building 918
Iqaluit, Nunavut X0A 0H0
Ph: 1-867-975-4289
Fx: 1-867-979-6445
Andrew.Keim@aandc.gc.ca



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RE: August 24, 2012 Municipal Water Licence Inspection – Gjoa Haven 3BM-GJO0409

The following inspection report was generated on an inspection conducted to determine compliance with the terms and conditions of the renewal Water License issued to the Hamlet of Gjoa Haven by the Nunavut Water Board (NWB). The report references the applicable parts of the current Water License (3BM-GJO0409- **Expired**) and the findings observed under each of those parts. During the writing of this report a review of documents located on the NWB's FTP site was completed by the Inspector.

The Inspector would like to thank Mr. Shah Alam, Municipal Technical Officer and Mr. Jacob Keniak, Hamlet Foreman, for taking the time to meet after the inspection period and for acting as guides during the inspection.

Previous findings:

The community of Gjoa Haven has an expired Water License (3BM-GJO0409) issued on January 9, 2009. The term of the Water License was five years.

It should be noted that during the period of inspection the Municipality of Gjoa Haven was operating under an **Expired** Water License (3BM-GJO0409). In 2008 the community applied for and was approved for an amendment of the then current license for the installation of a culvert and realignment of a creek to facilitate the development of a new subdivision within the community.

On March 30, 2009 a letter from the Municipality of Gjoa Haven requesting a renewal of the then current license was received by the Nunavut Water Board. The letter indicated that no changes were required. This was subsequently rejected by the Nunavut Water Board and in December of that year Dillon Consulting Ltd was identified by the Municipality as acting on their behalf for the submission of a renewal application for the now expired water license.

Following this a number of documents including a compliance plan were submitted to the NWB by Dillon Consulting however the following remain outstanding and have not been submitted to date;

- Operation and Maintenance Manual for the Sewage Lagoon and Solid Waste Sites
- Spill Contingency Plan
- Abandonment and Restoration Plan



Documents reviewed in the development of this report found an executive summary submitted by the municipality that stated that the documents required for the completion of the application were not available due to a need for repairs and up-grades to existing facilities.¹

Additionally, it is also noted that a report provided by the consulting firm is in Draft form and thus not suitable for review during the renewal process. To date a number of requests for information have been sent by the NWB to the Department of Community and Government Services and the Municipality requesting information and a completed application for review however nothing to date have been submitted by the Licensee or their representatives.

Between 2002 and 2011 the following reoccurring issues of Non-compliance within the Municipality have been recorded;

- Part B Item (1) Failure to submit annual reports for 2006,2007, 2009, 2010. It is noted that a report for 2011 was submitted by CGS on behalf of the Licensee however it was rejected as incomplete.
- Part B (2) Failure to implement the Monitoring Program (this includes those requirements as listed in Part H – Monitoring Program)
- Part B (9) Failure to provide copies of reports and Plans in the specified number and format
- Part C (1) The Government of Nunavut Dept of Community and Government Services is conducting this appurtenant undertaking without the authority of a license.
- Part D (2) Failure of Effluent discharged from the SDF to meet listed criteria
- Part D (5) Failure to provide 10 day notification to the Inspector.
- Part D (7) Failure to implement measures to ensure hazardous materials and/or leachate from the Solid Waste Disposal Facility does not enter water
- Part D (8) Failure to submit to the Board for review within six (6) months of the issuance of this license a report identifying each Final Discharge Point
- Part E (4) Failure to provide signed and stamped drawings to the NWB within 90 days.
- Part F (1) Failure to submit to the Board for approval, a Plan for the Operation and maintenance of the Sewage and Solid Waste Disposal Facilities
- Part G (1) Failure to submit to the Board for approval, an Abandonment and Restoration Plan
- Submitted Compliance Plan: Rejected for lack of an initiation date, completion date or any milestones or timelines for the completion of major activities.

It is noted that this information has been provided to the Licensee on numerous occasions. Most recently on March 7, 2012 the NWB and AANDC provided a compliance summary to the Licensee and the Government of Nunavut Department of Community and Government Services (CGS).

Part C: Conditions Applying to Water Use

A visual inspection of the water intake line and pumping station was conducted during the period of inspection. No issues were noted.

Water samples were collected from the water supply (Swan Lake) near the intake pipe as required.

¹ 101027 3BMGJO0409 Executive Summary-IMLE... "Due to the need for repairs and upgrades to the sewage lagoon and solid waste sites, these documents cannot be completed until an appropriate course of action with regards to these facilities has been determined. We recognize that the repairs and modifications are subject to capital funding by the Government of Nunavut."



Water is disinfected inside the Treatment Plant with chlorine. The chlorine residual is measured daily. The chlorine mixing tank and injection pump seemed to be in good working order and it was approximately $\frac{3}{4}$ full at the time of inspection.

Chlorination records were observed during the inspection inside the Water Treatment Plant.

It is noted that the Treatment facility is operated by GN staff working for CGS.

Part D: Conditions Applying to Waste Disposal

Sewage treatment;

The Licensee is reminded that while the current authorization has expired, the responsibility of the licensee to continue to meet the listed Effluent discharge criteria from the sewage treatment system is a mandatory requirement for discharge.

They are listed as follows;

Parameter:	Max Concentration
Fecal Coli forms:	1×10^4 CFU/100mL
BOD	80 mg/L
TSS	100 mg/L
Oil & Grease	No visible sheen
PH	Between 6 and 9

Samples of effluent were collected from a Ditch located approximately 450 meters from the Lagoon and immediately adjacent to the communities' Solid Waste Management Area at the time of the inspection. Duplicate samples were also collected by Municipal staff at the same time.

The following exceedances were noted in the sampling results received by AANDC from the lab on September 10 2012.

<u>Parameter</u>	<u>Location</u>	<u>Sample Result</u>	<u>Guideline/ License criteria</u>
Iron	Ditch	16 200 $\mu\text{g/L}$	300 $\mu\text{g/L}$ ²
Manganese	Ditch	284 $\mu\text{g/L}$	50 $\mu\text{g/L}$ ³

During the Inspection of the Lagoon both the Municipal Technical Officer and the Inspector identified areas of erosion and slumping of the berm wall in a number of locations around the circumference of the facility. A number of seepages were also noted, one into a secondary cell directly below an installed overflow pipe allowing direct discharge of effluent into the secondary cell south of the lagoon and another on the West side flowing into an adjacent natural water body.

Solid Waste Management Area;

An inspection was conducted at the Municipal/Solid Waste Management facility. Samples were collected at the time of the inspection from the same creek approximately 100 meters south west of the 1st location and down gradient of the Waste Management Facility.

² NWT Limits for effluent parameters for specific discharges

³ NWT Limits for effluent parameters for specific discharges



The Licensee has designated an area for hazardous materials storage (drums of unknown substances) adjacent to the solid waste management facility. This area remains unlined and without any form of Secondary Containment.

Some segregation of white metal (appliances) and vehicles has been undertaken by the licensee. It was also identified that within the facility, batteries and other hazardous substances were found in a number of locations throughout. During the inspection, a pickup truck containing construction materials entered the facility and off loaded construction wastes including insulation and Styrofoam. These materials were left in the municipal burn and bury area. Included were 8 aerosol cans of expanding spray foam that the inspector pulled out of the pile and set aside.

Part F: Conditions Applying to Operations and Maintenance

The Water Intake Facility (pumping station) was again, well maintained and found to be working and in good order.

The Licensee was unable to produce an Operations and Maintenance (O&M) Manual for the Hamlet of Gjoa Haven's Wastewater Facilities during the period of inspection. During the consolidation of this report a review of the Nunavut Water Board FTP site notes that CGS submitted, on behalf of the licensee, on May 7th 2012 the following documents;

- Government of Nunavut; Operations & Maintenance Manual; Volume I; Gjoa Haven Waste Water Facility; Project Number OTCD00018881A; Prepared by: exp Services Inc., 04/10/2011; and
- Government of Nunavut; Operations & Maintenance Manual; Volume II; Gjoa Haven Waste Water Facility; Project Number OTCD00018881A; Prepared by: exp Services Inc., 04/10/2011.

These two documents were reviewed by the NWB and were eventually rejected as being incomplete.

CGS has to date failed to address the deficiencies identified by the NWB in the submitted documents and as such, not submitted a complete application for the renewal of the required Water license. CGS and the Licensee are reminded that the Hamlet of Gjoa Haven's water licence expired on January 29, 2011.

Expiry of the Licence does not relieve the holder from any obligations imposed by the Licence nor on the requirement to comply with the authorizing legislation.

It is also unclear if the Licensee or CGS have complied with Item 4, the requirement to provide a to the Nunavut Water Board within 60 days of an inspection by a Geotechnical Engineer, a report on all engineered facilities related to the management of water within the Municipality. A review of the documents available on the NWB's Public Registry was not able to locate the required report.

Part G: Conditions Applying to Abandonment and Restoration

The Licensee was unable to produce an Abandonment and Restoration Plan during the period of inspection. During the consolidation of this report a review of the documents available on the NWB's Public Registry was not able to locate this Plan.

A complete Abandonment and Restoration Plan is required by the Board to conduct a review of the application for renewal.

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



During the period of Inspection the Inspector did find adequate signage at the Water Treatment Facility and signs were posted at the solid waste management facility as well. .

The Licensee is reminded that as detailed in the current authorization the licensee shall maintain Monitoring Program Stations (and signage) at the following locations:

- GJO-1 Raw water supply at the Swan Lake Water Supply prior to treatment
- GJO-2 Effluent discharge from the Final Discharge Point of the Solid Waste Disposal Facilities
- GJO-3 Raw Sewage at truck offload point
- GJO-4 Effluent discharge from the Final Discharge Point of the Sewage Disposal Facilities

Solid Waste and Effluent Management Monitoring:

The Licensee is reminded that they must collect during the months of May through August inclusive, the required samples at the identified locations as outlined in the license.

To assist the licensee in the future, the following are the required parameters to be sampled and tested for as a requirement of their water license.

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	

Non-Compliance: Issues identified during the August 24 2012 inspection and/or review of relevant material include as follows;

- An application for renewal has been submitted but has been found to be incomplete. The Nunavut water Board is waiting for further information to be submitted prior to processing the application.
- Part B Item (1) Failure to submit complete annual reports (2006, 2007, 2009, and 2010) it is noted that a report for 2011 was submitted by CGS on behalf of the Licensee however it was rejected as incomplete.
- Part B (2) Failure to implement the Monitoring Program (this includes those requirements as listed in Part H – Monitoring Program)
- Part B (9) Failure to provide copies of reports and Plans in the specified number and format
- Part D (5) Failure to provide 10 day notification to the Inspector.
- Part D (7) Failure to implement measures to ensure hazardous materials and/or leachate from the Solid Waste Disposal Facility does not enter water



- Part D (8) Failure to submit to the Board for review within six (6) months of the issuance of this license a report identifying each Final Discharge Point
- Part E (4) Failure to provide signed and stamped drawings to the NWB within 90 days.
- Part F (1) Failure to submit to the Board for approval, a Plan for the Operation and maintenance of the Sewage and Solid Waste Disposal Facilities
- Part G (1) Failure to submit to the Board for approval, an Abandonment and Restoration

The Municipality of Gjoa Haven continues to operate in Non-conformity with the issued license.

Andrew Keim
Inspector's Name

Sent by E-mail
Inspector's Signature

Cc:
Phyllis Beaulieu – Manager Licensing – Nunavut Water Board

Contact:

Andrew Keim
Water Resources Officer
Aboriginal Affairs Northern Development Canada
Box 100 Building 918
Iqaluit, Nunavut XOA OHO
Ph: 1-867-975-4289
Fx: 1-867-979-6445
Andrew.Keim@aandc.gc.ca