



Inspection Report

License #: 3BM-ARV

Inspector: A.Keim

CIDMS # 291490

Client	Municipality of Arviat		
Mailing Address	Box 150		
Inspection site location	Arviat , Nunavut		
Contact name	Dave Quksuk	Title	Hamlet Foreman
Last inspection date	Unknown		
Inspection start date	July 31 st 2008		
Region	Kivalliq		



INAC, Nunavut District
P.O. Box 100
Building 918
Iqaluit, NU, X0A 0H0

Submitted Via E-Mail
Our File: 3BM-ARV0308
Your File: _____
CIDM # 291490

May 26, 2009

Dave Quksuk
Hamlet Foreman
Box 150
Arviat, Nunavut
XOC OEO

RE: July 31st, 2008 Municipal Water Licence Inspection 3BM-ARV0308

The following inspection report was generated on an inspection conducted to determine compliance with the terms and conditions of the water license issued to the Municipality of Arviat by the Nunavut Water Board (NWB). The report references the applicable parts of the current Water License (3BM-ARV0308) and the findings observed under each of those Parts. During the writing of this report a review was undertaken of the documents located on the Nunavut Water Board's FTP site.

The Inspector would like to thank Dave Quksuk, municipal foreman for taking the time to act as a guide and provide input and comments during the Inspection.

Part A: Scope and Definitions

No issues were found with respect to the information contained within the current license issued January 9th, 2004 and scheduled to expire on December 31st 2008.

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 Arviat was operating under a current water license.

A 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 issued license. The licensee is reminded that the NWB has imposed on the Licensee, 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. A "*Standardized Form for Annual Reporting*" is to be used by the Licensee and is available from the NWB file transfer protocol (FTP) site under the Public Registry link at the NWB Website.

An annual report is required to be filed by March 31st every year for the previous year ending December 31st. Annual reports are to include 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.

The Licensee is reminded that any use of water or deposition of waste into any place where it may enter water in Nunavut requires a water license issued pursuant to the Nunavut Water and Nunavut Surface Rights Tribunal Act.



The licensee is reminded that the application process for amendment, modification or renewal 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.

Part C: Conditions Applying to Water Use

A visual inspection of the reservoir and intake facilities was conducted during the period of inspection. No issues were noted. Water samples were taken near the intake pipe into the pumping station.

The raw water from Wolf creek is pumped through the pipeline to the reservoir. It is held there until taken up by the pumping station and chlorinated on its way into the water truck. The chlorine residual appears to be measured once daily during the daily inspection.

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

It was noted by the Inspector that the Municipality of Arviat does not provide the potable water services within the community. Instead there is a Government of Nunavut, Department of Community and Government Services employee who maintains the system within the community.

Part D: Conditions Applying to Waste Disposal

Sewage treatment;

The Licensee is responsible for ensuring that the effluent discharged from the lagoon system and entering the environment meets the following standards;

Parameter:	Max Concentration
Faecal Coniforms:	1X 10(4) CFU/dL
BOD	80 mg/L
TSS	100 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 pursuant to section 4 of this Part, 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.

Solid Waste Management Area;

It was noted during the period of Inspection that the Municipal burn and bury area had not been incinerated in a prolonged period of time and was close to capacity. Mr. Quksuk stated that the wind had been blowing toward town for the last month thus preventing the burning of materials.

The bulk metals area showed signs of segregation activities taking place. No secondary containment was noted however barrels and other hazardous materials were consolidated to one end of the facility.

The Licensee is reminded that pursuant to section 8 and 9 of this part a report on the identification of each and every final discharge point for where effluent or any leachates from the waste management facilities enters the environment or water is managed by the licensee.



Part E: Conditions Applying to Modifications and Construction

Section 1 of this Part reads as follows;

1. The Licensee shall submit to the Board for written approval, construction 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.

Again a review of the Nunavut Water Board FTP site could not find an application or approval for the stream diversion as noted during the period of Inspection.

Part F: Conditions Applying to Operations and Maintenance

The Water Intake pump house and community reservoir were found well maintained and in good working order.

The Licensee was unable to produce a Sewage and Solid Waste Disposal Operations and Maintenance manual during the period of inspection. The Licensee is reminded that pursuant to Section 1 of this Part, the Licensee was required within six months of the issuance of the current license, to submit an Operation and Maintenance Manual for the Sewage the Solid Waste Disposal Facilities prepared in accordance with the "*Guidelines for Preparing an Operation and Maintenance Manual for Sewage and Solid Waste Disposal Facilities*", October 1996. This document was not found during the same review of the Nunavut Water Board FTP site.

The licensee should be aware that in line with the current standards the following plans will be required for submission under the authority of any renewal license;

- a. Water Facility Operation and Maintenance (O&M) Plan;
- b. Sewage Disposal Facility Operation and Maintenance (O&M) Plan;
- c. Sewage Sludge Management Plan;
- d. Solid Waste Disposal Facility Operation and Maintenance (O&M) Plan;
- e. Spill Contingency Plan; and
- f. Monitoring Program Quality Assurance/Quality Control Plan (QA/QC Plan).

The above plans all forming part of the overall Operation and Maintenance manual required under the license.

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 Nunavut Water Board FTP site was not able to locate a plan.

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 Licensee is reminded that they must collect the required samples at two locations (ARV-4 and ARV-2)



during the months of May through August and have these samples analyzed for the following parameters, as outlined in the current license;

Biochemical Oxygen Demand (BOD ₅)	Fecal Coliforms
Total Suspended Solids	pH
Conductivity	Ammonia Nitrogen
Oil and Grease (visual)	Nitrate-Nitrite
Total Phenols	Sulphate
Magnesium	Calcium
Sodium	Potassium
Total Arsenic	Total Cadmium
Total Mercury	Total Chromium
Total Copper	Total Zinc
Total Iron	Total Lead
Total Nickel	

These samples are to be collected and analysed in accordance with a Quality Control / Quality Assurance plan. There is no indication that this was completed by the Licensee at any time over the duration of the current license.

Samples were collected during the period of Inspection at the reservoir, 50 meters downstream of the bulk waste facility and 50 meters from the Lagoon. Results from the samples are as follows;

Location	Sample Parameter	Result	Guideline	Comment
Raw water: -	ph	6.3	6.5 – 8.5	Above CCME ¹
Waste Mgmt area:	HEM (oil & grease)	4.2 mg/L	None	Indicates presence
	Arsenic	6.5 µg/L	5 µg/L	Above CCME ²
	Copper	19.4 µg/L	2-4 µg/L	Above CCME ²
	Iron	4090 µg/L	300 µg/L	Above CCME ²
	Manganese	496 µg/L	50 µg/L	Above CCME ¹ & LEPSD
	Silver	0.2 µg/L	0.1 µg/L	Above CCME ²
Lagoon	HEM (oil & grease)	4.0 mg/L	None	Indicates presence
	Iron	4090 µg/L	300 µg/L	Above LEPSD
	Manganese	426 µg/L	50 µg/L	Above LEPSD

LEPSD : Exceeded the NWT Limits for Effluent Parameters for Specific Discharges criteria

CCME¹ : Canadian Council of Ministers of the Environment criteria for Community Drink Water

CCME² : Canadian Council of Ministers of the Environment criteria for Protection of aquatic life

During the period of Inspection the Inspector noted to the licensee the requirement to maintain adequate signage at all SNP and monitoring stations. The licensee is reminded that they must ensure that adequate signage is in place by the period of next inspection.

Non-Compliance: Issues identified during the inspection and/or review of relevant material

Issues with a known or anticipated human health impacts;

- Sewage treatment in the community continues to be below an acceptable standard.
- Collect and submit for analysis the samples required on the Monitoring Program.



Issues where there is a known or anticipated environmental impairment;

- Undertake such works as required to prevent erosion of the lagoon system into waters downstream of the lagoon system.
- Undertake such water management as is required to control the spread of runoff from the waste management area into the wetlands area below the lagoon system.

Issues where there is a known or suspected violation of a requirement of the Water License;

- Implement the requirements listed under the Monitoring Program.
- Develop and submit an Operation and Maintenance Manual, and associated plans.
- Submit as required all Annual Reports including the results of sampling under the monitoring program.
- Submit the required abandonment and restoration plan.
- Provide clarification on the roles and responsibilities of the licensee and the Government of Nunavut in relation to Potable water treatment and delivery in the community.
- Install and maintain the appropriate signage, and Surveillance Network Program (SNP) markers.
- Develop a Quality Assurance/ Quality Control Plan (contact the Nunavut Water Board).

The Municipality of Arviat continues to operate in Non-conformity with those terms and conditions of the Water License issued in 2004.

A. Keim

Inspector's Name

Inspector's Signature

Attached under separate cover;
Photos taken during Inspection of July 31st, 2008

Cc:

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













