

WATER LICENCE INSPECTION FORM

☒ Original

☐ Follow-Up Report

Licensee		Licensee Representative	
Municipality of Arctic Bay P.O. Box 144 Arctic Bay, Nunavut X0A 0A0		Debra Johnson Sam Willy- Hamlet Foreman	
Licence No. / Expiry		Representative's Title	
3BM-ARC0810 EXP. March 31, 2012		Senior Administrative Officer	
Land / Other Authorizations		Land / Other Authorizations	
Date of Inspection		Inspector	
06/08/2014		A.Keim	
Activities Inspected			
<div><input type="checkbox"/> Camp</div> <div><input type="checkbox"/> Roads/Hauling</div> <div><input type="checkbox"/> Drilling</div> <div><input type="checkbox"/> Other: Water Discharge</div> <div><input type="checkbox"/> Mining</div> <div><input type="checkbox"/> Construction</div> <div><input checked="" type="checkbox"/> Other: Municipal License</div> <div><input type="checkbox"/> Reclamation</div> <div><input type="checkbox"/> Fuel Storage</div>			

Conditions:	A - Acceptable	C - Concern	U - Unacceptable	NA – Not Applicable	NI – Not Inspected			
Water Use	Condi on	Comment	Site Conditions	Condition	Comment	Haz/Mat Management	Condition	Comment
Intake/Screen	NI		Water Management Structures			Storage	C	1
Flow Measure. Device	A		Culverts / Bridges	NA		Spills	A	
Source: Marcil Lake			Drainage	NA		Spill Plan		
Water Use: 13, 963, 693 L	A		Erosion / Sediment	C	1			
Recirculation (y /n)	N		Mitigation Measures	C	1	Administrative		
			Reclamation Activities	U	1	Records	C	1
			Materials Storage	A		Reports	C	1
Waste Disposal			Signage	A		Plans	C	1
Waste Water	A					Notifications		
Solid Waste	C	1	Monitoring	Other				
Hazardous Waste	C	1	Sample Collection / Analysis	C	1	Non-compliance	C	2
						Comment	C	3
*The number in the comments field will correspond with specific comments provided below.								
Samples taken by Inspector: 2			Location(s): Raw Water –Lake Marcil , Poned water down from the Solid Waste Management Area					
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No								

SECTION 1	<input checked="" type="checkbox"/> Comments (s.__)	<input type="checkbox"/> Non-Compliance with Act or Licence (s.__)	<input type="checkbox"/> Action Required (s.__)
Administration; <p>In 2008 the Hamlet of Arctic Bay and the Government of Nunavut, Department of Community and Government Services (GN-CGS), submitted an Application for Water Licence Amendment to the Nunavut Water Board (NWB) for their Water License. That application for amendment included the following documents containing descriptions of the following;</p> <ul style="list-style-type: none">Construction and operation of a new Wastewater Treatment FacilityConstruction of a new gravel access road to the new lagoon including stream crossings;Flow and planned pathways for effluent released from the new lagoon Wetland areaDecommissioning request (Abandonment and Restoration) for the existing Sewage Disposal FacilityQuarrying activities associated with the above projects. <p>Following the required period of review and comment, the NWB approved the amendment application for inclusion into the issued water license for the community. Upon approval of the amended license, and based upon the comments and submissions received, the NWB outlined a number of conditions to be met by the licensee and the Government of Nunavut to ensure continued compliance with the Nunavut Water and Nunavut Surface Rights Tribunal Act (ACT) and the issued License. These included;</p> <ul style="list-style-type: none">The submission of an up-to-date Compliance Plan;The submission, within 60 days of completion of the new W.W.T. Facility, of a Construction Summary Report;The submission within 60 days of approval of the amendment, of an Operations and Maintenance Manual for the new W.W.T Facility with the following specific requirements; <div><div>a. Water Supply Facilities Operation and Maintenance Plan;</div><div>b. Solid Waste Operation and Maintenance Plan;</div><div>c. Sewage Operation and Maintenance Plan for the existing Sewage Disposal Facility and the new Wastewater Treatment Facility;</div><div>d. Sewage Sludge Management Plan;</div><div>e. Hazardous Waste Management Plan;</div><div>f. Spill Contingency Plan including a Spill Response Plan for Aggregate deposits;</div><div>g. Monitoring Program Quality Assurance/Quality Control Plan including a diagram that references Monitoring Program Station Numbers; and</div><div>h. Instrumentation Monitoring and Surveillance Plan (See Monitoring section below, as this Plan is due within thirty (30) days of issuance of this Licence Amendment).</div></div>			



Additionally, in the amendment the NWB also included the requirement for the Licensee to provide, within sixty (60) days of completion of decommissioning of the old Sewage Disposal Facility, a Decommissioning Summary Report including stamped as-built plans and record drawings.

Between 2008 and 2011 three Water License Inspections were conducted within the community. These reports highlighted deficiencies and non-compliance found during those periods of Inspection. These reports are available for review on the NWB Public Registry. In 2012 AANDC issued a summary report outlining the compliance history related to the file and itemized the specific issues of non-compliance related to the amended license. The summary report is also available on the NWB public Registry.

On March 22, 2010 the Government of Nunavut submitted an application for renewal of the amended license to the Nunavut Water Board. That application was found to be incomplete and subsequently rejected by the Nunavut Water Board. In correspondence beginning in April of 2010 the NWB outlined the requirements necessary for the application for renewal to be considered complete and processed by the NWB. The amended Water License expired on March 31st 2010.

In March of 2014 the Nunavut Government resubmitted an application for renewal of the amended license to the Nunavut Water Board.

It is noted that between 2012 and 2014 the Government completed construction of and, on their own, commissioned and approved the use of the new W.W.T. Facility and moved ahead and backfilled and capped the Old lagoon cells within the community.

On August 6, 2014 AANDC conducted a Water License Compliance Inspection within the community. A Hamlet staff member Mr. Sam Willie, Hamlet Foreman and a representative from the Government of Nunavut, Mr. Bhabesh Roy both attended the inspection.

Water Usage:

During the period of Inspection and in consultation with the Licensee the following is the total water usage from the year to date: 13, 963,693.08 L.

A site visit to the Water Intake and treatment facility found records on usage and treatment available on site for review. The Raw Water Sampling point as required under the amended license was located and documented. The site was found clean and well organized. The chlorine tank was less than 10% full, this should be addressed by the licensee as soon as possible.

Signage, including a No fishing sign was found on site and on the road leading to the raw water source.

One issue identified during the inspection was the proximity of the backup fuel supply at the Pumping station to the raw water source. The tank is protected by secondary containment however the age of the tank as well as its proximity to the water body are of concern to the Inspector. The tank appears to be within the 31 meter set back from water, although not measured during the period of Inspection; this should be addressed by the Licensee as soon as possible.

Quarry – New

During the period of Inspection it was identified that a new site for the quarrying of materials (shale) in the community had been opened by the Licensee. A large area was found to have had the overburden /surface material, scrapped off and useable material removed for fill within the community.

In doing so the permafrost underneath the material has been disturbed and water is now flowing from inside the quarry. The migration of water and material from the site was identified by the inspector and the installation of silt curtains to slow the migration of fine sediment off the site has been identified as required in a number of locations.

The site was visited to discuss the installation of a sampling point to comply with the expired licenses (ARC-7) however upon review of the license it was found that the license refers to the quarry that was used in the construction of the new lagoon and reclamation of the old lagoon. This site is now not used any further and has been closed by the licensee.

Therefore the location of the new quarry should be properly assessed and included in the renewal application by the licensee.

Waste Disposal:

The Licensee was required, in accordance with Part F (1) of the expired amended License to submit a Hazardous Waste Management Plan. This plan was not found on the NWB Public Registry included with the application for renewal submitted between March and May of 2014.

As required by Part F, Item 1 of the licence, the Licensee was required to prepare a Solid Waste Operations and Management Plan for the current Solid Waste Management area. The submitted Plan for Compliance states that this plan won't be available until March 31, 2015.

The submitted Plan for Compliance also indicates that a new Solid Waste Management Facility is to be constructed. It is unclear when this new construction is scheduled for. A plan for the remediation of the current Solid Waste Management Area was not included within the application submitted to the NWB.

The submitted Plan for Compliance (section B-12) also states that a manual for the segregation of wastes will be available for review by June 30, 2014. This document has not been posted on the Public Registry at the time of the Inspection.

During the period of Inspection the site was found well laid out and organized. Batteries were found to be contained within a sea-can on site and within an old plastic water tank with a fitted wooden lid. It is unclear what plans the Licensee has to remove these items from site. During the Inspection has the Licensee indicated they did not have sufficient funding to ship these items to a licensed facility out of the Territory.

Waste oil is stored by the Hamlet garage and used in a waste oil furnace within the community. The waste oil furnace is currently off line and has been since March of this year as the licensee does not have anyone on staff qualified to conduct the maintenance required to maintain the unit in operation. The Waste oil is also not stored within any form of secondary containment.

Tires, metal and other solid wastes were found to be segregated and located in discrete locations within the facility.

During the August 6th Inspection, Inspectors documented that the old sewage lagoon has been backfilled and capped by the Government of Nunavut. The facility is now not in use and the required geothermal assessment report was located on the Public Registry. It is noted however that the same version of the report appears in the newest application (2014) and the one submitted in 2010. During the site visit the Licensee also requested permission to start placing municipal wastes on the cover material of the Old lagoon and to incorporate the footprint of the old lagoons into the municipal ‘burn and bury’ area. The Inspector cautioned the licensee that this site has not yet been reviewed nor approved by the NWB and not move forward with these plans subject to the issuance of a new Water License by the Board, and to inquire as to whether this would require an amendment to the licence or simply to file a modification for approval.

The Municipal waste area (burn and bury) is not well maintained and burned materials are pushed over but not subsequently covered by material. This issue has been identified many times in the past. Additionally, a fence for the facility has been noted as a requirement repeatedly in previous reports. Most recently, the Inspector noted in the 2011 Inspection Report that a fence is required and must be installed prior to the next Inspection or further enforcement actions would be undertaken.

Samples of leachate from the Solid Waste Management Area were collected by the Inspector during this site visit. As a result of work done on site during the reclamation of the old lagoons the collection of this sample required the relocation of ARC-6. This was done with the Inspector and new GPS coordinates will be forwarded to the NWB by the Licensee.

A site visit to the new lagoon was then conducted. Two areas were identified where water flow from the adjacent hillside is eroding the berm wall. This is to be addressed as soon as possible to protect the integrity of the facility.

No decanting was undertaken so far this year.

The facility is unlicensed and was not properly commissioned. The continued use of the facility constitutes an offence under section 12 of the Act.

SECTION 2	<input type="checkbox"/> Comments (s.__)	<input checked="" type="checkbox"/> Non-Compliance with Act or Licence (s.__)	<input type="checkbox"/> Action Required (s.__)
-----------	--	---	---

Following a review of the Nunavut Water Board’s FTP site and the submission of Documents related to this file by the GN-CGS on behalf of the Municipality and based on observations, documents, photographs and samples collected during the period of the Inspection, The Inspector finds that the GN-CGS and the Municipality of Arctic Bay are in contravention of the terms of the now expired water License and the Nunavut Waters and Nunavut Surface Rights Tribunal Act as follows;

Water License : 3BM-ARC0810

Part B (2) Failure to fully implement all components of the Monitoring program
Part B (11) Failure to submit Plans and Manuals that include a proposed timetable for Implementation
Part D (9) Failure to implement Measures to control wind blown litter at the Solid Waste Management Area
Part E (11) Failure to submit a Construction Summary Report along with stamped as-built plans and record drawings within **60 days** of completion of the new facility
Part F (1) Failure to submit an Operation and Maintenance manual for the Solid Waste Disposal Facility within the specified time frame.
Part G (1) Failure to submit as required the appropriate Abandonment and Restoration Plans prior to undertaking abandonment work.
Part H Failure to fully implement the requirements listed under the Monitoring Program
Part H (15) Failure to submit monitoring results for thermistor, standpipe, and settlement stations at monitoring stations ARC-11, ARC-12, and ARC-13 semi-annually

The Nunavut Waters and Nunavut Surface Rights Tribunal Act;

11. (1) Subject to subsection (2), no person shall use, or permit the use of, waters in Nunavut except in accordance with the conditions of a licence.

(2) Subsection (1) does not apply in respect of

(a) any unlicensed use of waters that is authorized by the regulations;

(b) the use of waters

(i) for a domestic purpose, or

(ii) for the purpose of extinguishing a fire or, on an emergency basis, controlling or preventing a flood; or

(c) the use of waters in a national park.

(3) Where a person diverts waters for a purpose referred to in subparagraph (2)(b)(ii), the person shall, when the need for the diversion has ceased, discontinue the diversion and, in so far as possible, restore the waters to their original channel.

12. (1) Subject to subsection (2) and except in accordance with the conditions of a licence, no person shall deposit or permit the deposit of waste

(a) in waters in Nunavut; or

(b) in any other place in Nunavut under conditions in which the waste, or any other waste that results from the deposit of that waste, may enter waters in Nunavut.

(2) Subsection (1) does not apply in respect of

(a) any unlicensed deposit of waste that is authorized by the regulations; or

(b) the deposit of waste in a national park.

SECTION 3	<input checked="" type="checkbox"/> Comments (s.__)	<input type="checkbox"/> Non-Compliance with Act or Licence, (s.__)	<input type="checkbox"/> Action Required (s.__)
-----------	---	---	---

The Licensee and the Government of Nunavut Department of Community and Government Services continue to operate and conduct activities in contravention of the expired license and the Act. While water use and waste disposal activities within the community continue, such as they must, other works such as the construction and commissioning of a new lagoon system and roadway, the reclamation of the old Lagoon system, the development of a new quarry, all have been undertaken by the GN-CGS without the authority of a Water License and constitute offences under the Act.

The Inspector acknowledged and applauds the efforts of the Municipality to make the efforts required to achieve compliance by working to segregate hazardous wastes and active management of the Solid Waste Management Area.

Photo Log			
Date	Authorization	Camera	Inspector
August 6, 2014	3BM-ARC0810	Sony Cyber shot	A. Keim



Figure 1 Water Intake/ Pumping Station - Arctic Bay



Figure 2 Intake- Double walled back up fuel tank



Figure 3 Intake - Truck fill line



Figure 4 Chlorination system- Tank low (No mixing Tank)



Figure 5 Raw water sampling port in the In-take station



Figure 6. New quarry location (Water from permafrost melt pooling within the quarry)



Figure 7 Pooled water with a high level of sediment and fine particles carried down stream



Figure 8 Slope of new Quarry



Figure 9 Reclaimed old lagoon - Capped



Figure 10 Capped Cells of Old lagoon in Arctic Bay



Figure 11 Wall of Old Lagoon in Arctic Bay



Figure 12 Solid waste - metals



Figure 13 Segregated tires



Figure 14 Segregated hazardous wastes and Sea can with batteries



Figure 15 Arctic Bay new lagoon



Figure 16 New lagoon (2)



Figure 17 Water from hillside entering Lagoon



Figure 18 Arctic Bay Lagoon decant structure



Figure 19 Arctic Bay Lagoon Decant - Pump instalation location



Figure 20 Pooled water from hill side, noted erosion on berm wall

Licensee or Representative	Inspector's Name
	A. Keim
Signature	Signature
	Original On file – Sent by Email
Date	Date
	September 10 2014

Office Use Only:	Follow-up report to be issued by Inspector	<input type="checkbox"/> Yes <input type="checkbox"/> No
------------------	--	--