

WATER LICENCE INSPECTION FORM

☒ Original

☐ Follow-Up Report

Licensee		Licensee Representative	
Mike Hayward Senior Administrative Officer Hamlet of Cape Dorset, Baffin Region, P.O. Box 30 Cape Dorset, Nunavut X0A 0C0 E-mail: muncdsao@capedorset.ca		Steve Weedmark	
Licence No. / Expiry		Representative's Title	
3BM-CAP0810		Director – Public Works	
Land / Other Authorizations		Land / Other Authorizations	
Date of Inspection		Inspector	
10/08/2014		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</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	Condition	Comment	Site Conditions	Condition	Comment	Haz/Mat Management	Condition	Comment
Intake/Screen	NI		Water Management Structures			Storage	A	
Flow Measure. Device	NI		Culverts / Bridges	NA		Spills	A	
Source: Tee Lake	A		Drainage	C	1	Spill Plan	NI	
Water Use:			Erosion / Sediment	A				
Recirculation (y /n)	N		Mitigation Measures	A		Administrative		
			Reclamation Activities	NA		Records	NI	
			Materials Storage	A		Reports	C	1
Waste Disposal			Signage	A		Plans	C	1
Waste Water	U	1,2,3				Notifications	C	1
Solid Waste	A		Monitoring			Other		
Hazardous Waste	A		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:

☒ Yes ☐ No

Location(s): Raw water Source –Tee Lake, Leachate below the metal dump, Effluent below Cell 3 of the three tier lagoon system

SECTION 1	<input checked="" type="checkbox"/> Comments (s.__)	<input type="checkbox"/> Non-Compliance with Act or Licence (s.__)	<input type="checkbox"/> Action Required (s.__)
<p>The Municipality of Cape Dorset was issued on March 7, 2008 a Water License for Municipal undertakings. That license 3BM-CAP0810 expired on March 1, 2010.</p> <p>A renewal application was submitted to the Nunavut Water Board (NWB) by the Department of Community and Government Services (GN-CGS) initially on February 4th, 2010. That application was found by the NWB to be incomplete. A second application with supplementary information was resubmitted on July 22nd, 2011.</p> <p>On September 14th, 2011 a letter from the NWB outlining the specific deficiencies in the latest application for renewal was sent to the Government of Nunavut. That letter made specific requests for information necessary to complete the file.</p> <p>Between September of 2011 and August 2013 a series of correspondence outlining the various document, plans and reports that the Municipality and the GN-CGS were required to provide to the Nunavut Board were sent between the parties.</p> <p>In March of 2012 AANDC developed a table identifying continual and on-going Non-compliance within all communities in Nunavut. This multi-year summary was provided to each of the communities, the Nunavut Water Board and the Government of Nunavut. The Multi year summary was submitted by AANDC with the intention of assisting each Municipality and the Government to of Nunavut in developing compliance plans to focus their attentions on areas of deficiency and address common on-going issues in each community.</p> <p>Following another year with little to no progress within the community of Cape Dorset, an Inspector’s Direction requiring the submission of Compliance Plans from the Municipality as one of 5 targeted Nunavut Communities was subsequently issued. Plans for the five communities were finally submitted by the Government of Nunavut in early spring of 2013.</p> <p>During the Months of July and August 2013 the Inspector conducted inspections to determine if the activities and commitments made in the submitted Compliance Plans had been fulfilled by the GN_CGS and the respective 5 municipalities.</p> <p>In the Case of Cape Dorset, it was noted that the required signage was on order and that sampling training had been undertaken in the community with consultants hired by the Government of Nunavut. Other requirements however remained unfulfilled.</p> <p>On November 6th, 2013 the Government of Nunavut submitted on behalf of the Municipality a number of documents including a letter stating that all of the requirements as outlined in the NWB’s correspondence have been met and requested that the NWB precede with the application for renewal as submitted.</p>			



A review conducted by AANDC in April of 2014 identified a number of issues which remained outstanding. These were communicated to the Nunavut Water Board, the Government of Nunavut and the Community of Cape Dorset.

A final review during the development of this report found that in May of 2014 the Government of Nunavut submitted an Operations and Maintenance Manual that indicated the existing three tier lagoon was built in 1900. This is not likely accurate. There does not appear to be an O&M manual for the 2007 lagoon as yet on file the Plans and As-Built's for the facility are noted in the file.

As of the date of the Inspection, no further movement by the Municipality, the Government of Nunavut or the Nunavut Water Board on the renewal application has occurred. The Municipality remains in Non-compliance with an expired Water license.

Inspection

Water Use:

The Raw water usage for the community on the date of the Inspection was not available. The Inspection was conducted on a Sunday and the Municipal administrative offices were closed.

Tee Take water intake was found free of litter and in operation. The pipeline system that transfers water to the water point holding tank was again experiencing issues. As detailed by Municipal staff, at some point over the recent weeks during routine maintenance by Northwestel, the phone lines that send the signals between the automatic fill pump and the water point tank was disconnected. This has resulted in the municipality having to send someone to the pumping station on a daily basis to transfer water between the lake and the holding Tanks at Water point.

It was suggested by Municipal staff, during the period of Inspection, that having the truck fill station moved to Tee Lake would avoid these issues with the pipeline and the freezing of the pipeline in winter. The Municipality may move forward on this in the future but this will require that the road between the community and T-lake is up-graded to ensure the safety of drivers.

Chlorination records were not inspected during the period of this inspection.

No signage or warnings were noted at the water Intake location.

Waste Disposal:

Waste Water Treatment Facilities:

2007 Lagoon:

The 2007 lagoon system was found with water within the containment. Again, this year water was noted flowing out through a washout below the berm wall. It is unclear what GN-CGS plans to do to address this and no new information was provided during the Inspection. It is clear that the community will remain in non-compliance with the effluent discharge criteria until a new system for waste water treatment becomes available within the community.

Three Tier Lagoon:

The three tier lagoon system was found to be at capacity and all three cells were spilling off into the next with little to no accumulated holding time. There is very little, if any, treatment with this constant flow. The Lagoon is operating at above it's intended capacity and is a risk annually of a catastrophic failure.

The berm wall of the third and final cell was found to have recently been built up and properly compacted. This is a huge improvement over previous years' inspections where effluent levels were found to be above the required 1 meter freeboard limit. The installed overflow pipe was found to be clear and operating as intended to prevent a structural failure of the cell wall.

Emergency Lagoon:

The Emergency lagoon had recently had a 1 meter lift of material placed on the roadway side of the facility to prevent the overflow of effluent onto the roadway. The effluent level however has risen to become equal to the grade of the roadway and has leached through the new un-compacted materials and was found to have pooled on the roadside. It is recommended that the Municipality immediately decant the Emergency lagoon down to a level below that of the roadway. The Municipality should collect samples as required to ensure compliance with the issued license.

This lagoon is currently used by the licensee when it is not possible to deposit effluent at the three tier lagoon drop off point and is not currently scheduled for abandonment or remediation at the present time.

Municipal Waste Management Area

The Municipal burn and bury was found to have a 8 meter fence erected around two sides of the facility to prevent the ejection of materials.

The facility was found to have recently been burned with materials moved to the adjacent side where they are placed and then covered by 1 meter of cover material that is then compacted. The facility appears to be well managed and while some metals and other items were noted within the materials on site it appears that the domestic waste is being efficiently managed. This is a great improvement over previous inspections. It was noted that the community did this without any outside funding or support.

Bulk Metals Waste Management Area.

A berm has been installed around the perimeter of the facility to retard the flow of contact water and reduce leaching off the site. During the Inspection the lowest area at the bottom of the facility had flooded with nearly 1 meter of water that accumulated as a result of run-off through the facility during two days of heavy rain. This was an unusual rain event.

The facility requires a diversion of water imposed on the up gradient side of the facility. It was noted that a culvert under the roadway has channeled water into the facility. It was recommended during the inspection that the culvert be redirected across/ under the roadway to channel water westward and along the outside perimeter of the facility.

Samples were collected from the pond below the facility.

Hazardous Materials Storage and Segregation

During the period of Inspection the Inspector and GN representative were very happy to note that all of the Batteries and a large percentage of other hazardous wastes that had been accumulating in the Sea-cans at the Bulk metals waste area had been crated and prepared for seal lift out of the community. While it was not expected that they would make sea-lift this year it was a great

improvement to have these items sealed away in crates.

This effort was undertaken by the municipality without any outside support or assistance.

SECTION 2

☐ Comments (s. __)

☒ Non-Compliance with Act or Licence (s. __)

☐ Action Required (s. __)

Non-compliance related to the now expired license;

Part B (1) Failure to submit complete Annual Reports

Part F (2) Failure to develop and submit an Operation and Maintenance Manual for the Water Supply Facilities and the Solid Waste Disposal Facilities.

Part F (5) Failure to submit a geotechnical Inspection report to be completed annually in July.

Part G Failure to submit all Abandonment and Restoration Plans.

Part H – Failure to fully implement the requirements listed under the Monitoring Program.

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.

Compliance Plan

B-1. The Government of Nunavut committed to providing a report prepared by their consultants following the community visit that was to be held in Cape Dorset prior to the end of February 2013. This report was to have been submitted to the NWB prior to March 31st 2013. The report has not been submitted

D-8. The Government of Nunavut committed to providing a Plan of Action based on issues reported by EXP concerning the commissioning of the 2007 lagoon. This Plan of Action was to have been submitted by July 1st, 2013. As of August 10, 2014 this report had not been submitted to the Nunavut Water Board, the Licensee or the Inspector.

G-1. The Government of Nunavut committed to providing a copy of the Community Visit Report to be completed by March 31st, 2013. The report was to have included the A&R plans for specific infrastructure including the 2001 three tier lagoon and the Emergency lagoon.

G-2. The Licensee and the Government of Nunavut have failed to provide a conceptual Abandonment and Restoration Plan as committed to and required.

SECTION 3

☐ Comments (s. __)

☐ Non-Compliance with Act or Licence, (s. __)

☒ Action Required (s. __)

Following a review of the documents related to this file found on the Nunavut Water Board’s FTP site submitted by 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 Cape Dorset remain in contravention of the terms of the now expired water License and the Nunavut Waters and Nunavut Surface Rights Tribunal Act and the Direction issued to the Government of Nunavut in 2012.

It was however noted during the Inspection that the Municipality has moved ahead on its own over the last year and installed a fence on two sides of the Municipal Waste Management Area. It is hoped that over the next year the remaining sides will also be fenced as required.

Signage has been installed in the community to denote the monitoring locations as outlined in the now expired Water license.

An Annual Report was submitted by the GN in cooperation with the Municipality. The sampling program however was found to be incomplete.

The Municipality continues to work with infrastructure that is outdated and undersized. Capacity issues continue to plague the community.

Proactive work by the Municipality to crate the Hazardous materials for shipment off site was a definite improvement in the community. Work to contain runoff within the facility did backfire this year because of a number of days of torrential rain. However work to divert water around the solid waste management area has been identified and initiated by the municipality to prevent this kind of thing from occurring again.

It is clear that the Government of Nunavut and the Municipality have undertaken some effort toward achieving compliance with this License. This is an encouraging sign and while a great deal of work remains to be done there are signs of obvious improvement within the community.

Photo Log			
Date	Authorization	Camera	Inspector
August 10 2014	3BM-CAP0810	Sony Cyber shot	A. Keim



Figure 1 Tee Lake Raw Water Intake



Figure 2 Raw water - Tee Lake - B. Roy



Figure 3 2007 Lagoon - Leakage from under berm wall



Figure 4 2007 Lagoon - inside the holding cell



Figure 5 Solid Waste Management Area



Figure 6 Hazardous materials storage location in the SWMA



Figure 7 Wood crates with Haz Mat to be shipped off site



Figure 8 Leachate from the Solid Waste Management Area



Figure 9 Berm slowing the flow of water off the Solid Waste Management Area



Figure 10 Water built up from run off (rain) within the Solid Waste Managment Area



Figure 11 Fencing installed on two sides of the Municipal Waste Management Area



Figure 12 Municipal wastes under cover materials



Figure 13 View from top of the Municipal Waste Management Area



Figure 14 Lagoon Cell 1 of three tier lagoon system



Figure 15 Cell 3 of three tier Lagoon system



Figure 16 View from shoreline blow cell three of the three tier lagoon system



Figure 17 Outfall to ocean from three tier lagoon system

Licensee or Representative	Inspector's Name
	Andrew Keim
Signature	Signature
	Sent by E-mail- Original on File
Date	Date
	1/10/2014

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