



WATER LICENCE INSPECTION FORM

☒ Original
☐ Follow-Up Report

Licensee		Licensee Representative	
Government of Nunavut		Bhabesh Roy	
Licence No. / Expiry		Representative's Title	
3BM-RUT1012 – Expired Oct 31, 2012		Regional Engineer	
Land / Other Authorizations		Land / Other Authorizations	
Date of Inspection		Inspector	
July 17, 2014		A.Keim	
Activities Inspected			
<input type="checkbox"/> Camp	<input type="checkbox"/> Drilling	<input type="checkbox"/> Mining	<input type="checkbox"/> Construction
<input type="checkbox"/> Roads/Hauling	<input type="checkbox"/> Other: Water Discharge	<input checked="" type="checkbox"/> Other: Municipal	<input type="checkbox"/> Reclamation
<input type="checkbox"/> Fuel Storage			

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		NA		Storage		NA	
Flow Measure. Device	NI			Culverts / Bridges		NA		Spills		NA	
Source: Char Lake				Drainage		NA		Spill Plan		C	
Water Use:	C			Erosion / Sediment		NA					
Recirculation (y /n)	NA			Mitigation Measures		NA		Administrative			
				Reclamation Activities		NA		Records		C	
				Materials Storage		NA		Reports		C	
Waste Disposal				Signage		C		Plans		C	
Waste Water	U							Notifications			
Solid Waste	NA			Monitoring				Other			
Hazardous Waste	NA			Sample Collection / Analysis		U					
*The number in the comments field will correspond with specific comments provided below.											
Samples taken by Inspector:			Location(s): Sample collected End of effluent outfall on shoreline								
<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.____)
<p>The Water License, issued to the Government of Nunavut, Department of Community and Government Services (GN-CGS) for the Resolute Bay Utilidor water and waste system expired on October 31st, 2012. The GN-CGS applied for a renewal License and submitted document related to the rehabilitation of the existing distribution system for waste and waste disposal within the community of Resolute Bay in September of 2012.</p> <p>The application package submitted to the Nunavut Water Board in September of 2012 was largely based on technical evaluations completed by Trow Engineering on the existing utilidor system in 2010.</p> <p>The Utilidor system in Resolute Bay is approximately thirty-five (35) years old and consists of:</p> <ul style="list-style-type: none">• An intake pump house located at Char lake• Approximately 1.5 Kilometers of pipeline to the Water Treatment Plant.• A Water Treatment Plant composed of a 530 cubic meters capacity water storage tank, the pumping distribution system, water heating system, and heat exchangers situated at an elevation of approximately 300 meters above sea level on Signal hill.• A water distribution system that includes fire hydrants.• A parallel sewage collection piping system.• Sewer treatment consisting of a macerator pump. <p>The technical evaluation conducted in 2010 by Trow found the following issues of immediate concern within the community of Resolute bay:</p> <ul style="list-style-type: none">• The fuel system at char lakes posed an immediate threat to the community Raw water source because of code violations and the risk of undetected leaks into the Lake.• There was a significant risk of contamination of the drinking water in the community due to conditions found within the access wells and lack of Back flow prevention on Feeder and bleed lines.• There is concern over the total usage of water being drawn by the community. The usage is known to be well above license limits and may result in the community being required to apply for a class A license. Additionally given the increase in total usage there may be a concern over the Raw water source being drawn down significantly and eventually to a point where it may not be sufficient to service the needs of the community.• There were also comments related to the safety of workers as related to training and work on the infrastructure within the community.			

In October of 2012 the Nunavut Water Board found the application submitted by GN-CGS to be incomplete and requested that the Government resubmit the application and include the following required supplementary information:

- Assessment for the potential for Char Lake to Be Drawn Down
- Determination of fecal Coliform Limit for Sewage Disposal Facility Effluent
- Operation and Maintenance (O&M), including section a to e.
- Abandonment and Restoration Plan shall incorporate section a to I, where applicable.
- Quality Assurance/Quality Control (QA/QC) Plan

Additionally, the board provided an additional option to the Licensee, if in the event it was not possible to provide the required information necessary to complete the application process at this time the Government could submit a Compliance plan detailing how and by what date the Government of Nunavut would be able to provide this information and thus provide some surety to the Nunavut Water Board so to facilitate the review of the submitted application package.

In February of 2013 GN-CGS finally responded to the Nunavut Water Board but again failed to provide any of the requested information and did not provide the optional plan for compliance either.

Since February of 2013 GN-CGS has moved forward with their plan to rehabilitate the utilidor system within the community in contravention of the Nunavut Waters and Nunavut Surface Rights Tribunal Act (Act) and without the authority of a license. Both of these are offences punishable under Summary Conviction and fines not exceeding 15,000.00 per day and or six months imprisonment.

During the period of Inspection the Inspector and Bhabesh Roy, of the Department of Community and Government Services attended the community and noted the following;

Water use :

- At Char Lake it was noted that the old single wall tank had been replaced with a double walled tank. The fuel storage remains within 30 meters of water. The pipe to and from the double walled day tank within the building is also only single walled.
- The Pump house to the main treatment and holding tank was found clean and in good order.
- Signage should be installed at the Raw water source and Pumping station.
- It appears that the Licensee has consistently exceeded the Total Allowable Quantity of water set by the license.

Waste Water:

- Samples were collected at the outfall of the utilidor. The volume of water to effluent reduces the concentration of effluent being discharged.
- There is no treatment of the effluent leaving the system however the waste water does flow through an old trailer building that has a macerator running to remove foreign objects from the line.
- During the Inspection Mr. Roy stated that it was also the intention of the Government of Nunavut Department of Community and Government Services to decommission the unlicensed Sewage Lagoon at the airport and instead truck the raw sewage to the Building containing the Macerator (approximately 75 meters from the outfall) and pump the raw effluent from the airport into the discharge pipe and out into the bay in from of Resolute.
- Mr. Roy was advised that direct discharge may not provide sufficient treatment to meet discharge criteria.
- No operations or maintenance manuals for the facility (macerator building) were available for review.
- Signage and locations for the sampling points were all identified during the period of Inspection.
- The Licensee was required to submit by December 1, 2011 a site specific study for the determination of a fecal coliform limit for Sewage Disposal Facility Effluent that maintains the quality of the receiving waters within reasonable and acceptable limits. The Study was to include a recommendation on Fecal Coliform limits to be included within the body of the License. This report/ study was not found on the Nunavut Water Board FTP site.
- The Licensee requires the Licensee (Government of Nunavut) to back haul out of the Territory all Hazardous wastes generated through the course of the Operations however the Licensee's contractor on site was not able to provide any documentation to show this was being done and was unable to confirm that this practice was being done.
- The required O&M manuals have not been submitted by the Licensee,

The now expired license does not include Solid Waste management Provisions as they are the responsibility of the Municipality.

SECTION 2

☐ Comments (s.__)

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

☐ Action Required (s.__)

Non-compliance related to the now expired license;

- Part B (1a through k) Failure to submit complete and accurate Annual reports
- Part B (2) Failure to fully comply with the Monitoring Program
- Part B (5) (11) Failure to maintain the appropriate signage, Surveillance Network Program (SNP)
- Part C (2) Licensee has exceeded the Annual Quantity of water allowed to be drawn from Char Lake
- Part D (4) Failure conduct and submit the required study
- Part D Item (5) Failure to maintain and operate utilidor and sewage disposal facility to the satisfaction of the Inspector.
- Part D (7) Failure to maintain records of Hazardous waste back hauls
- Part F (1) Failure to submit Operation and Maintenance Manuals as required



Part H Failure to implement the requirements listed under the Monitoring Program

Given the License has expired and the Licensee has continued to operate without the authority of a license the contraventions of the Act are as follows;

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

☐ Comments (s.____)

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

☐ Action Required (s.____)

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Photo Log

Date	Authorization	Camera	Inspector
July 17 2014	3BM-RUT1012	Sony Cyber shot	A. Keim



Figure 1 New double walled tank outside pump station at Char Lake



Figure 2 Day tank inside Pump station



Figure 3 Chlorine mixing tank (empty) at Holding tank on signal hill - Day of Inspection



Figure 4 Chlorine pump



Figure 5 Backup generator at Holding tank on Signal Hill



Figure 6 Boilers to heat water to keep both the distribution lines and recirculation lines open



Figure 7 leaks on floor in pumping station on Signal Hill



Figure 8 Rusted out pump in service in building



Figure 9 Effluent outfall location - note green ice



Figure 10 Outfall location



Figure 11 Outfall location



Licensee or Representative	Inspector's Name
	A. Keim
Signature	Signature
	Original on File – Sent by Email
Date	Date
	December 3 2014

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