

WATER LICENCE INSPECTION FORM

☐ Original

☐ Follow-Up Report

Licensee		Licensee Representative	
Hamlet of Qikiqtarjuaq		Geela Kunilusie & Phillip Sanguya	
Licence No. / Expiry		Representative's Title	
3BM-QIK1417		Senior Administrative Officer and Hamlet Foreman	
Land / Other Authorizations		Land / Other Authorizations	
Date of Inspection		Inspector	
August 15 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: Municipality	<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	A			Water Management Structures				Storage	C	1	
Flow Measure. Device	A			Culverts / Bridges	NA			Spills	C	1	
Source: Tulugak River				Drainage	NA			Spill Plan	A		
Water Use: 11,978,350 L to date	A			Erosion / Sediment	NA						
Recirculation (y /n)	N			Mitigation Measures	NA			Administrative			
				Reclamation Activities	NA			Records	C	1	
				Materials Storage	NA			Reports	C	1	
Waste Disposal				Signage	C	1		Plans	C	1	
Waste Water	A							Notifications	NA		
Solid Waste	C	1		Monitoring		Other					
Hazardous Waste	C	1		Sample Collection / Analysis	C	1					
*The number in the comments field will correspond with specific comments provided below.											
Samples taken by Inspector:				Location(s): Raw water Source,							
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No											

SECTION 1 ☒ Comments (s.____) ☐ Non-Compliance with Act or Licence (s.____) ☐ Action Required (s.____)

Administration:

On May 31st 2012 the Water License for the community of Qikiqtarjuaq expired (3BM-QIK0712). Twelve months later the Government of Nunavut and the Community of Qikiqtarjuaq submitted an application for the renewal of the expired license to the Nunavut Water Board. This application was subsequently rejected as it was found to be incomplete.

Between September of 2013 and may of 2014 the Government of Nunavut and the Community of Qikiqtarjuaq submitted a number of documents and exchanged communications with the Nunavut Water Board regarding the application for renewal. On May 13th, 2014v the board concluded that the application package as submitted was now complete and forwarded that information out to Regulators for comment.

On August 7th, 2014 following a review of submissions from Regulators and after taking into account all issues with respect to the outstanding Non-compliance within the community, the Board renewed the Water License for the community for a term of five years. The renewal of the license was completed one week prior to the Inspection.

It is acknowledged that the application contained a Plan for Compliance that the Government of Nunavut and the community have committed to following to address the long standing and on-going issues of Non-compliance that must be addressed. Failure to meet short term objectives of the Plan will result in the inability of the community to achieve the long terms goal of overall compliance with the Legislation and the issued License. This will result in further enforcement actions being required to maintain the required level of compliance.

Water Use:

During the period of Inspection the Tulugak River was not flowing high enough to facilitate filling of the Reservoir. It was expected that the rain and final melt would raise water levels in the river sufficiently to fill the community reservoir. It was noted that the intake pipe did not have a mesh or grill over the end of it to prevent rocks and other items from entering the end of the pipe and being transported to the Reservoir.

The reservoir was found to be at less than the 20m m level. On the North west exterior wall an area of saturated ground was identified during the Inspection. The top of the berm wall of the Reservoir also showed signs of settling and subsidence. There appears to be a flow originating from either the holding area within reservoir or under the bed of the reservoir with the flow exiting



from that North west corner at the toe of the berm wall. (see attached Photos)

The transfer station was found in fair condition however it was again noted that the filters are not being used in the last three years. Chlorination and other records were found on site and in order. The chlorination system was functioning and in good repair.

Outside the pump house it was noted that there are two fuel tanks that feed the Pump house.

- Tank 1 is a single walled house hold 250 gallon fuel tank on a 6 foot metal stand. The tank appears to be piped in through the wall of the Transfer station with quarter inch copper tubing.. There is no evidence of secondary containment around this tank.
- Tank 2 is a large 1000 gallon tank that appears to be a double walled tank that is sitting in a depression with a liner under it. There also appears to be a tracked vehicle track/ pathway that has been cut or worn into the side of the berm wall that channels run off or water from within the berm out. This appears to defeat the purpose of the liner. It was also noted that the tank is piped into the building with single walled 1 inch black iron piping.

It is unclear which tank is currently in-use; however it appears that the household, unsecured tank with no secondary containment is actually the one being used at the time of the Inspection. This tank sits less than 50 ft from the community's potable water source. This must be addressed and a report on what was done submitted with the 2014 annual report.

Waste Management

Waste Water Treatment facility

An inspection of the facility was completed on August 15th, 2014. The following issues were noted;

- Staff on site stated that the Old cell of the two cell system has been continued to be filled over the last three years but has not yet been decanted.
- The level of effluent in the new cell (2010) has not risen past the current level however on site municipal staff confirmed that the cell also continues to be filled regularly by the vacuum truck.

These statements have caused some concern for the Inspector. If effluent has continued to be deposited in both cells over the last three years since the last inspection of 2011.. Why have the cells not needed to be decanted?. Where is the effluent going? No answers could be provided by the licensee. However at the end of the Inspection when traveling around to the opposite side (down gradient) there appears to be soils that is saturated and that a flow from the toe of the berm wall has developed. The GN representative, Mr. Bhabesh Roy the Regional Engineer did go out directly to that spot to investigate but did not have an opinion to share upon his return other than to say that the GN would be investigating this in 2015. (see Photos attached)

The Licensee is reminded that a Wetland Treatment Area Assessment Report is to be submitted to the Nunavut Water Board and the Inspector, within ninety (90) days of the completion of the 2014 discharge to the Facility from the Sewage Lagoon system in accordance with Part D Item 7 of the newly issued renewal License. The obligation to comply with the requirements of the license is on to be taken seriously by the Government of Nunavut and the licensee as they move forward to achieve compliance with the License and the Legislation.

Solid Waste Facility

During the period of inspection the following were identified as issues by the Inspector:

- There continues to be a lack of segregation within the facility to remove and isolate hazardous materials. A sea-can was noted as being present however the doors were locked and the contents of the unit could not be inspected. Batteries and other materials were noted within the Municipal burn and bury area adjacent to the location of the sea-can.
- Although fencing around the facility was noted the facility is built upon a substantial slope. This allows for wind to transit the area and eject materials from the facility and over the fence. The lack of cover materials was also identified as contributing to the on-going issues faced by the Licensee.
- Barrels of hazardous wastes identified in every inspection conducted since 2006 have not been moved and in fact more barrels have been transported into and around the site. These barrels of waste oil and other unknown products have been found to be leaking and have been the victim of vandalism at the site. The area has some liner placed within it however the ground is saturated with spilled product and must be remediated.

Land Farm facility

In 2007 the Nunavut Water Board approved an amendment application submitted by the Government of Nunavut on behalf of the Municipality to allow for the construction of a Land Farm Facility designed to treat potential petroleum hydrocarbon impacted soils. During the period when this occurred a number of large spills had been identified within the municipality and a large lined area to treat these contaminated soils was required. Construction of the facility was begun in 2007 and 2008.

During the period of Inspection the following were noted:

No further work on the facility has been undertaken since the period of the last inspection conducted in 2011. The facility remains unfinished and water has build up within the area intended to be used as a sump. The exposed liner remains in place but has been windblown and may be ripped and damaged in places. When questioned the staff on site indicated that the Party Responsible for the contaminated soils has agreed at one point to assist with the construction of the facility but had subsequently reneged on the commitment and had left the municipality without the resources to complete the construction of the facility. The Government of Nunavut had no input at the time of the Inspection.

Contaminated soils were found to have been deposited at the solid waste management area and other areas within the municipality. None of those sites is lined and none are being actively managed by either the party responsible for the spill or the Government of Nunavut or the Municipality.

Also identified by the Inspector during this period were a lack of Operations and maintenance manuals for any facilities within the Municipality. A review of the license indicates that the Licensee and the Government of Nunavut have 90 days from the date of issuance of the License to submit the following plans:

- Operation and Maintenance (O&M) Plan for the Water Reservoir,
- Operation and Maintenance (O&M) Plan for the Sewage Lagoon and
- Operation and Maintenance (O&M) Plan for the Solid Waste Disposal Facilities

These are required to replace the plans submitted in 2010 and again in 2013 that were rejected by the Nunavut Water Board. Additionally, the board also requires the following;

- A Stand-alone Emergency Response Plan
- Operation and Maintenance (O&M) Plan for the Landfarm facilities
- A Quality Assurance/Quality Control (QA/QC) Plan for the Hamlet Sewage Lagoon and Solid Waste Disposal Facility Monitoring Program

SECTION 2

☐ Comments (s. __)

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

☐ Action Required (s. __)

Given that the Licensee has only recently been provided a by the Board a renewal license and that the Inspection was conducted within 7 days of the issuance of the License is it not possible at this time to indicate that the Licensee is not in compliance with the terms of the License.

The Licensee and the Government of Nunavut however have a number of target dates by which Plans and manuals are required to be submitted to the Nunavut Water Board and dates as indicated within the submitted compliance plan that would see the delivery of items that would reflect the Licensee and the Government's commitment to achieving compliance with the legislation and the newly renewed license.

The onus is on the Government of Nunavut and the Licensee to fulfill their own commitments and to work diligently on achieving compliance by delivering on time those items that are required by the Nunavut Water Board and by addressing the deficiencies identified in this Inspection report.

SECTION 3

☐ Comments (s. __)

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

☐ Action Required (s. __)

[Click here to enter text.](#)

Photo Log

Date	Authorization	Camera	Inspector
August 15, 2014	3BM-QIK1419	Sony Cyber shot	A. Keim



Figure 1 Tulugak River



Figure 2 Tulugak River Intake



Figure 3 Tulugak River Sign post but no sign



Figure 4 Reservoir



Figure 5 Reservoir - full length



Figure 6 Reservoir - outside wall showing slumping



Figure 7 Reservoir - flow from toe



Figure 8 Reservoir – water from under toe



Figure 9 Reservoir - Pump/ Transfer Station



Figure 10 Pump Station - Single walled piping from 1000 gal tank



Figure 11 Pumping/ Transfer Station with two fuel tanks and crushed berm wall



Figure 12 Pump Station with household fuel tank - unsecured to building



Figure 13 Fuel leaks inside pumping station



Figure 14 Chlorination system

Name of the Community Water System Qikiqtanguq
Date August 11, 2014 August 15, 2014
Operator Philip Jason

	Monday 8/11/14	Tuesday 8/12/14	Wednesday 8/13/14	Thursday 8/14/14	Friday 8/15/14	Saturday 8/16/14	Sunday 8/17/14
Time 00:00							
Accumulator Water Located at Truck Operator Panel (x 100 L) 0.00-0.00%	31936	32980	8661	25047	9829		
Flow Rate of Water Pump 0.00-0.00%	343.3	344	343.4	343.3	343.3		
Chlorine Tank Level 0.00-0.00%	20	17	16	14	14		
Chlorine Pump Stroke Setting 0.00-0.00%	60	60	60	60	60		
Free Chlorine (mg/L) 0.00-0.00%	31	30	33	31	32		
Between 0.2 and 0.5 0.00-0.00%	9705						
Total Chlorine (mg/L) 0.00-0.00%	35	42	35	35	35		
Greater than Free Chlorine 0.00-0.00%							
Building Temperature (C) 0.00-0.00%							
Pump Room 0.00-0.00%							
Generator Room 0.00-0.00%							
Truck Fill 0.00-0.00%							
Generator Initials 0.00-0.00%	JB	JB	JB	JB	JB		
Comments 0.00-0.00%							

(Identify and make note of any problems) (0.00-0.00%)

Figure 15 Records and daily checks on file inside Station



Figure 16 Land Farm Facility



Figure 17 Land farm facility - Sump



Figure 18 Land Farm facility - Sump 2



Figure 19 Bulk metals waste area



Figure 20 Contaminated soils at Solid Waste Management Area



Figure 21 Contaminated soils at Solid Waste Management Area 2



Figure 22 Contaminated soils at Solid Waste Management Area 3



Figure 23 Contaminated soils and barels at Solid Waste Management Area



Figure 24 Barrel stacked at Solid Waste Managment Area



Figure 25 More barrels at Solid Waste Managment Area



Figure 26 Sea Cans - Haz Mat Storage Area



Figure 27 Consolidated Barrels at Solid Waste Management Area - Some on liner



Figure 28 Bulk Metals



Figure 29 Old Lagoon syatem



Figure 30 Old Lagoon system



Figure 31 Sampling Point with signage down from Lagoon cells



Figure 32 Sampling Point



Figure 33 Municipal Waste Management Area Fencing



Figure 34 Flow from Toe of new lagoon cell



Figure 35 Flow from toe of new lagoon cell



Figure 36 Regional Engineer from the GN investigating the Flow



Figure 37 Flow from under Lagoon



Licensee or Representative	Inspector's Name
	A. Keim
Signature	Signature
	Sent by Email- Original on file
Date	Date
	Nov 25 2014

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