



WATER LICENCE INSPECTION FORM

☒ Original  
☐ Follow-Up Report

Licensee		Licensee Representative	
City of Iqaluit		Richard Sparham	
Licence No. / Expiry		Representative's Title	
3AM-IQA0712(Expired )		Project Officer	
Land / Other Authorizations		Land / Other Authorizations	
Date of Inspection		Inspector	
October 08, 2014		Robert SAVARD	
Activities Inspected			
<input type="checkbox"/> Camp	<input type="checkbox"/> Drilling	<input type="checkbox"/> Mining	<input type="checkbox"/> Construction
<input type="checkbox"/> Roads/Hauling	<input checked="" type="checkbox"/> Other: Waste Water	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Fuel Storage
<input checked="" type="checkbox"/> Other: Solid Waste/Landfill			

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	C			Water Management Structures	A			Storage	A		
Flow Measure. Device	A			Culverts / Bridges	A			Spills	A		
Source:	A			Drainage	A			Spill Plan	A		
Water Use:	A			Erosion / Sediment	A						
Recirculation ( y /n)	NA			Mitigation Measures	A			Administrative			
				Reclamation Activities	A			Records	A		
				Materials Storage	A			Reports	A		
Waste Disposal				Signage	A			Plans	A		
Waste Water	U							Notifications	A		
Solid Waste	C			Monitoring		Other					
Hazardous Waste	A			Sample Collection / Analysis	NI						
*The number in the comments field will correspond with specific comments provided below.											
Samples taken by Inspector:				Location(s):							
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No											

SECTION 1	<input checked="" type="checkbox"/> Comments	<input type="checkbox"/> Non-Compliance with Act or Licence	<input type="checkbox"/> Action Required
<u>Background</u>			
<p>At the time of the inspection, the City of Iqaluit was in the process of reclaiming activities related to the use of water “for the purpose of extinguishing a fire” as stated in <i>Nunavut Waters and Nunavut Surface Rights Tribunal Act</i> (NWNSTRTA), S.11(2)(b)(ii). These activities are included in the attached “post-landfill fire activities.”</p> <p>The City of Iqaluit is also in the application process to acquire a new water licence for the municipality that will include an upgrade to the waste water treatment system that has been out of compliance with the previous water licence (3AM-IQA0609). It was explained to the Inspector at the ‘kick off’ meeting prior to inspection that the original waste water treatment system had difficulties meeting specifications during initial commissioning and was unable to consistently treat water to meet water licence criteria. Subsequently, portions of the plant were removed leaving only a primary treatment of a screening plant.</p> <p>It was also explained to the Inspector that a ‘Dam Safety Inspection’ was conducted September 22, 2014 of the Lake Geraldine Reservoir, following in the ‘spirit’ of Section D, Item 5 of the expired licence 3AM-IQA0609, the results will be forwarded to the Water Board no later than 60 days after the Dam Safety Inspection, on or before November 19, 2014.</p> <u>Inspector’s Statement</u> <p>On October 08, 2014, a water licence inspection was conducted at the City of Iqaluit. This Inspection included an inspection of the Lake Geraldine Reservoir, the drinking water treatment plant, waste water processing plant, the sewage lagoon, and West 40 landfill and accompanying water storage areas.</p> <p>The Inspector was given a brief summary of activities occurring on sites as well as history of works completed since the 2006 water licence application and subsequent extension and new application currently being processed.</p> <p>Grab samples were not taken at the waste water outflow considering no new equipment has been installed and water samples would be within the range of the previous two water inspection results earlier this summer (2014) which were still not in compliance with the expired water licence.</p> <p>It is also noted that the NWNSTRTA has limited jurisdiction over the deposit of waste from the waste water treatment plant considering the waste is being deposited into the intertidal zone of Frobisher Bay which is not classified as “inland waters</p> <p>In an Inspector’s Direction dated March 5<sup>th</sup>, 2013, issued by Environment Canada pursuant to Section 38(7.1) of the</p>			



*Fisheries Act*, the City of Iqaluit was found to be in contravention of 36(3) of the *Fisheries Act* for “depositing or permitting the deposit of a deleterious substance of any type in water frequented by fish” from the waste water treatment plant. This Inspector is satisfied that the City Of Iqaluit’s actions taken to date are consistent with the conditions of that Inspector’s Direction.

A similar Inspector’s Direction was issued by AANDC Water Inspections unit on the same day (March 5, 2013) that will be revoked and replaced with a Letter of Non-Compliance towards the City of Iqaluit, pursuant to Section 90 of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* for contravening Section 11(1), namely, using waters for a municipal undertaking without a water use licence as prescribed in Schedule 2 of the *Nunavut Waters Regulations*.

It is important to note that City of Iqaluit is in non-compliance with Section 4(1) of *Arctic Pollution Prevention Act* for depositing waste into Arctic Waters. The Inspector’s Direction issued by Environment Canada addresses this non-compliance and the corrective measures required. Please see Section 3 for milestone targets on water licence compliance.

SECTION 2

☒ Comments

☐ Non-Compliance with Act or Licence

☐ Action Required

Lake Geraldine Reservoir

Observations:

1. As mentioned in the ‘Inspector’s Statement,’ a Dam Safety Inspection was completed on September 22, 2014 and will be submitted to AANDC and the Nunavut Water Board.

Drinking Water Treatment Plant

Observations

1. Records of water usage were available to the Inspector
2. Spill kits were noted to be on site.
3. All chemical storage is recommended to be stored according to Occupational Health and Safety Regulations and Workplace Hazardous Materials Information System (WHIMIS) and in accordance with the *Workers’ Compensation Act, Safety Act* and Territorial Public Health legislation.

Concerns

The City of Iqaluit, pursuant to Section 90 of the NWNSRTA is in non-compliance for contravening Section 11(1), namely, using waters for a municipal undertaking without a water use licence as prescribed in Schedule 2 of the *Nunavut Waters Regulations*. This non-compliance is being addressed currently though quarterly progress meetings to determine the the City of Iqaluit water licence application and work progress.

Waste Water Treatment Plant

Observations

The waste water treatment plant continues to operate only as a primary treatment and sludge is collected and placed at the land fill. As mentioned above, the water entering the intertidal zone of Frobisher Bay is in contravention of Section 36(3) of the *Fisheries Act* and is required to meet milestones of compliance activities to prevent further enforcement action.

Concerns

It is important to note that City of Iqaluit is in non-compliance with Section 4(1) of *Arctic Pollution Prevention Act* for depositing waste into Arctic Waters. The Inspector’s Direction issued by Environment Canada addresses this non-compliance and the corrective measures required.

West 40 Landfill Site

Observations

The West 40 Landfill area has undergone significant changes due the recent fire and extinguishment activities pursuant to Section 11(2)(b)(ii) of the NWNSRTA. This included water use, creating a new retention pond, moving a culvert, installing a weir in Carney Creek, relocating solid waste, and contouring and covering the solid waste pile that was on fire to prevent any further fire issues.

During the fire extinguishment it was explained the City of Iqaluit that all major water use measures would be temporary in nature and would require work to restore and reclaim the workings to pre-extinguishment status within a reasonable time. The City of Iqaluit responded post-fire with a work plan outlining the work that would be undertaken to address the restorative work required (See section Actions Required-Schedule 2).

SECTION 3

☐ Comments

☐ Non-Compliance with Act or Licence

☒ Action Required



Expired Water Licence

Background

The requirement for a valid water licence has become an ongoing process and is the subject of a ‘Letter of Non-Compliance.’ This Section outlines the milestones that the City of Iqaluit has set in collaboration with AANDC and Environment Canada to achieve waste water treatment compliance and receive a valid water licence. These milestone targets are also included in the Letter of Non-Compliance.

Milestone Targets	Timeline
Issue RFP for Feasibility Study	November – December 2014
Award Consultant Contract	January 2015
Feasibility Study Complete	April 2015
Preferred Upgrade Option Selected by Council	May 2015
Issue RFP for Design of Upgrades	June – July 2015
Design of Upgrades Complete	January 2016
Tender for Construction	February – March 2016
Award of Construction Contract	April 2016
Mobilization of Materials	July – August 2016
Construction	September 2016 – September 2018
Commissioning of Upgraded Facility	September – December 2018
Upgraded Plant Operational	December 2018
Install screen on water intake pipe at Lake Geraldine Dam	2014-2018, specific timing to be determined in the 5-Year Capital Plan


West 40 Landfill Post Fire Restorative Work

Background

During the fire extinguishment it was explained the City of Iqaluit that all major water use measures would be temporary in nature and would require work to restore and reclaim the workings to pre-extinguishment status within a reasonable time. The City of Iqaluit responded post-fire with this work plan outlining the work that would be undertaken to address the restorative work required.

Plan

1. Run-off water collected from the firefighting operations (i.e. water used on the fire) has been transferred from the catchment area to the retention pond across the road and to the new drafting pond adjacent to the landfill entrance; this water will be held in these areas until next summer, when it will be treated and discharged.
2. The household waste that is currently being temporarily stored next to the retention pond will be removed and placed back into the landfill (note: a temperature monitoring program was initiated by the City upon the recommendation of Hellfire Suppression Services to ensure that the “new” waste pile in the landfill was sufficiently cool to accept new waste; this monitoring program is managed by the Acting Director of Emergency and Protective Services; as soon as the temperatures are low enough, the Acting Director will authorize the opening of the “new” waste pile and the waste from the temporary storage site will be transferred back into the landfill).
3. After the household waste has been removed from the temporary storage site, approximately 6-8” of soil will be removed from across the site and deposited in the landfill and the surface grade will be reinstated.
4. It is expected that there will be some additional run-off water that collects in the catchment area until freeze-up; this run-off water will also be held until next summer when it will be treated and discharged.
5. A sample of the run-off water that was transferred to the retention pond was procured and analyzed for a suite of parameters including metals, F1-F4 hydrocarbons, BTEX/VOCs, PAHs, Dioxins & Furans, and BOD/TOC, TSS, and nutrients; the results of this sample will support the development of a quote for the treatment of the run-off water.
6. The weir that was installed in Carney Creek has been removed and the sediment reinstated at the location where the fire pump was set up to draft fresh water.
7. Additional water sampling will be completed in the spring of 2015 to assess the run-off water quality within the West 40 Landfill containment areas in order to further optimize the treatment process.
8. After the water from the new drafting pond has been treated and discharged, the liner will be removed and the grade reinstated.
9. The plan to address the temporary metals storage site is for the City to issue a tender call in early 2015 for the removal of the material from the site (along with metal waste currently stored at the landfill) and to ship the material to a metals recycling facility in southern Canada. Following the removal of the metal waste, soil samples will be procured and analyzed for a suite of chemical parameters and compared to the analyses that were completed this summer prior to depositing metal waste at the site. If it is determined that any negative impacts occurred to the soil at the site due to the temporary storage of the metal waste, the severity of the impact will be assessed and a remediation program will be initiated if warranted. Water samples will also be procured from the drainage ponds located south of the site that receive run-off from the site. Similarly, these results will be compared to the results of the water analyses that were completed this summer prior to depositing metal waste at the site. If it is determined that any negative impacts occurred to the water in these ponds as a result of the temporary storage of metals at the site, the severity of the impact will be assessed and the water will be diverted to the landfill retention pond for treatment, if warranted.

Inspector's Name	Inspector's Name
Robert Savard	
Signature	Signature
	
Date	Date
November 03, 2014	