



☒ Original

☐ Follow-Up Report

INSPECTION FORM

Undertaking	Representative				
City of Iqaluit	Matthew Hamp				
Spill Report #:	Representative's Title				
19-138	Director of Public Works and Engineering				
Land / Other Authorizations	Land / Other Authorizations				
NA					
Date of Inspection	Inspector				
April 1, 2019	Jonathan Mesher				
Activities Inspected					
<input type="checkbox"/> Camp	<input type="checkbox"/> Drilling	<input type="checkbox"/> Mining	<input type="checkbox"/> Construction	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Fuel Storage
<input type="checkbox"/> Roads/Hauling	<input checked="" type="checkbox"/> Other: Sewage Spill		<input type="checkbox"/> Other:		

SECTION 1	<input checked="" type="checkbox"/> Comments (s. __)	<input type="checkbox"/> Non-Compliance with Act or Licence (s. __)	<input type="checkbox"/> Action Required (s. __)
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**Background**

On Thursday March 28, 2019, the City of Iqaluit became aware of an unauthorized discharge from manhole #1 adjacent to Lift Station #1 flowing into Koojessee Inlet. The City of Iqaluit reported this spill to the NWT/NU 24-Hour Spill Reporting Line as required in the *Arctic Water Pollution Prevention Act (AWPPA)* on March 29, 2019 under Report #19-138. In this report the lead agency was identified as the Government Of Nunavut (GN) Department of Environment (DOE).

On Monday March 28, 2019 the Inspector was called by a GN DOE Environmental Protection Officer (EPO). The EPO informed the Inspector that there was an unauthorized release of effluent at Manhole #1 (MH-1) adjacent to List Station #1 (LS-1).

**Inspection**

On March 28, 2019 at approximately 15:00hrs, the Inspector and the Department of Health Officer Azeer GILL visited the location of Spill 19-138 at manhole #1.

The inspector notified the appropriate GN, Department of Health Officer because this release could have impacts to human health which would be a contravention of the AWPPA section 4(1), and the Department of Health's responsibility under section 5 of the AWPPA Regulations.

During the site visit, it was observed that:

- The licensee was using sewage trucks to pump effluent from Lift Station #1 to the Sewage Lagoon, no other pollution prevention measures were put in place at the time of the inspection.
- There was some pooling of the effluent on top of the sea ice before the effluent carved a path through the ice to the sea water.
- The flow path cuts across a popular snowmobile trail that follows the beach; Azeer Gill has since contacted the City of Iqaluit to ensure the public is aware of this and that City has installed barricades to prevent human contact with the effluent prior to it entering Arctic Waters.
- The current unauthorized discharge of effluent runs over approximately 26 meters of Inuit Owned Land (IOL) prior to entering the tidal zone.

It should be noted that this current uncontrolled discharge is occurring approximately 790 meters East of a location where the City of Iqaluit is currently discharging primarily treated effluent directly into Koojessee Inlet until the completion of the new Waste Water Treatment Plant (WWTP) in 2020. This activity is currently being managed and monitored by ECCC under a direction issued in 2013.

**Summary of Actions Taken by the City related to Spill 19-138**

- A report was filed on March 28th to the Spill Report Hotline.
- Immediately, the City set about to investigate the cause of the overflow at MH-1, which required pumping down MH-1 and the wet well in LS-1 in order to observe each end of that section of the sewer main.
- On March 29th, the City also mobilized heavy equipment to expose the overflow pipe from MH-1, which had been blocked with snow and soil.
- Upon inspection, it was determined that the section of sewer main between MH-1 and LS-1 was blocked with rags and debris.
- During the weekend of March 30-31 2019, the City attempted to dislodge the obstruction from the sewer main inlet into the wet well of LS-1, as the blockage was observable from that location; this effort was not successful.
- The City, coordinating efforts with the Fire Department and local contractors, then developed a plan to clear out the blockage from the MH-1 side of the blockage (as well as clearing the sewer main between AV437 to LS-1 as a preventive



measure).

- At approximately 11:30pm on April 2<sup>nd</sup> 2019, air pigs were installed in both sections of main at MH-1 and AV437 to push out any debris in these sections into the wet well of LS-1. This effort involved:
  - Shutting off all bleeds contributing to overall sewage flow to LS-1
  - Shutting off LS-2 and rerouting flow
  - Vacuuming out MH-1
  - Installing an air-pig into the sewer line downstream of MH-1 and feeding into LS-1
  - Installing an air-pig into the sewer line downstream of AV 437 and feeding into LS-1
  - Re-starting LS-2
  - Re-establishing overflow to the bay to allow full clean-out of from MH-1, AV-437 and the well in LS-1.
- The second phase (clean-out) employed a high pressure spray to scour down the walls of MH-1, AV-437 and the LS-1 well and the attempted vacuuming of the resultant slurry, rags and debris from the well in LS-1.
- After three unsuccessful attempts to remove the debris (attempted between April 5th and April 12th), working with all equipment and resources available in the community, the City sought an alternate solution.
- Additionally, through the week of April 5th and April 12th, a high level estimate of the overflow volume was calculated, based on pump flow records measured by the control system at LS-1 when the pumps were operating. The high level estimate is 950 cubic metres per day.
- Through the weekend of April 13-14, the City arranged for the procurement of an industrial vacuum system with proven capabilities in the mining sector for transferring heavy fluids and materials.
- On April 15th, work began on thawing the force main upstream of LS-1 (a distance about approximately 330m).
- On April 16th, the purchase of the vacuum equipment was finalized.
- On April 17th, arrangements were made to ship the system to Iqaluit for arrival on Friday, April 19th, accompanied by a manufacturer's technician to direct and guide staff on its use during the planned work at LS-1

Planned Actions Moving Forward

The City has provided the Inspector with plans moving forward on April 17<sup>th</sup>, 2019 in an email from Matthew Hamp, Director of Public Works and Engineering with the City. The actions are summarized below:

- The City of Iqaluit intends to complete the thawing of the force main upstream of LS-1.
- The City is procuring a compressor for the operation of the vacuum system and expects it to be received by April 19, 2019.
- They are arranging tanker trucks to haul the slurry to the sewage lagoon and have identified an out of service vacuum truck for this purpose that will be inspected and verified as fit for this use. The City intends to begin vacuum operations on April 20<sup>th</sup>, 2019.
- The City of Iqaluit anticipates that the problem will be resolved within 10 days of the date of this update.
- The City will provide a post-issue Follow-up Report by the end of the month.

☐ Comments

☒ Non-Compliance with Act or Licence

☒ Action Required

The City of Iqaluit is out of compliance with the following section of the Arctic Water Pollution Prevention Act:

Section 4, the Deposit of Waste, which states that,

- 4 (1) Except as authorized by regulations made under this section, no person or ship shall deposit or permit the deposit of waste of any type in the arctic waters or in any place on the mainland or islands of the Canadian arctic under any conditions where the waste or any other waste that results from the deposit of the waste may enter the arctic waters.

The Inspector will review the Follow-up Report provided by the City and will continue to monitor the situation on the ground to ensure that reasonable measures are taken to address this unauthorized discharge otherwise; further enforcement actions may be taken.

	Inspector's Name
	Jonathan Mesher
	Signature
	Date
	April 18, 2019

Office Use Only: Follow-up report to be issued by Inspector

☐ Yes ☐ No



	Camera	Inspector	Authorization
	Sony Cyber-shot	J.Mesher	3AM-IQA1626
Photo Log	Location City of Iqaluit		
Photo 1			
			
Description: March 28, 2019 spill site			

Photo Log #	Location City of Iqaluit		
Photo 2			
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