

WATER LICENCE INSPECTION FORM

☐ Original

☒ Follow-Up Report

Licensee	Licensee Representative
City of Iqaluit	Joe Brown
Licence No. / Expiry	Representative's Title
3AM-IQA1626	NA
Land / Other Authorizations	Land / Other Authorizations
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Date of Inspection	Inspector
6/10/2021	Jonathan MESHER
Activities Inspected	
☐ Camp	☐ Drilling
☐ Roads/Hauling	☒ Other: Landfill
☐ Mining	☐ Construction
	☐ Other:
☐ Reclamation	☐ 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	NA		Water Management Structures	C		Storage	NA	
Flow Measure. Device	NA		Culverts / Bridges	NA		Spills	NA	
Source:	NA		Drainage	C		Spill Plan	NA	
Water Use:	NA		Erosion / Sediment	NA				
Recirculation (y /n)	NA		Mitigation Measures	NA		Administrative		
			Reclamation Activities	NA		Records	NI	
			Materials Storage	NA		Reports	NI	
Waste Disposal			Signage	NA		Plans	NI	
Waste Water	C					Notifications	NA	
Solid Waste	C		Monitoring			Other		
Hazardous Waste	C		Sample Collection / Analysis	NA		Follow-up from previous inspection	NI	
*The number in the comments field will correspond with specific comments provided below.								
Samples taken by Inspector:			Location(s):					
☐ Yes ☒ No								

SECTION 1 ☒ Comments ☐ Non-Compliance with Act or Licence ☐ Action Required

Observations

1. Concerns related to; 60571501-SHT-01-C-COMPILED IFC SIGNED 2019-07-12.pdf (fence and berm for construction drawings)

A. The Licensee claims the new berm construction “As-constructed” was provided to the NWB and CIRNAC, the only document I am able to find on the NWB FTP site is the Issue for construction, I am unable to located the As-built drawings as required by PART F, Item 6 of the licence which states; “The Licensee shall, submit to the Board for review, within ninety (90) days of completion of any structure authorized under this licence, to contain, withhold, divert or retain Water or Wastes; a construction summary report prepared by an Engineer that includes, among other relevant information, as-built drawings, documentation of field decisions that deviated from original plans, and any data used to support these decisions.”

B. The licensee claims that this berm was constructed to contain leachate, in the document labeled “transmission of project record drawings” provided to the NWB on July 21, 2020 it states the following; “The work conducted was the construction of a fence and berm work along the West side of the Iqaluit West 40 Landfill which will assist with road drainage diversion as well as berm and fence work sound the New Fire Training Grounds as seen in the Overall Site Plan.” There is no mention of leachate and it states that the berm was constructed for Road Drainage.

C. The North side of the berm is missing a section of the berm identified in Photo 1, item, leachate from the Northwest side of the facility is diverted north along the berm to a area with no containment, this leachate appears to be able to flow freely into the receiving environment.

D. In photo 1, item 3, the city has constructed a low lying area where water is pooling, in the 2011

drainage plan it shows onsite drainage to flow from the southwest side of the facility into the containment pond at the south side of the facility. There are no drainage ditches to allow this drainage to occur nor is the facility appropriately graded to promote this flow of leachate to its containment pond. The 2011 Site drainage plan needs to be updated as the municipal refuse is not contain by berms or ditches that promote the flow of leachate to its containment ponds.

- E. At the approximate location N63.7344 W68.5365 there is pooing water inside the landfill, on the outside of the Landfill adjacent to the location there appears to be water seeping through the berm. Please ensure this waste water is removed and the area is properly graded to stop the leachate from leaving the Landfill. See photo 3 below for the seepage.
2. Hazardous Waste; while on site there was leachate flowing from the Hazardous waste storage area to the ditches outside of the facility, this is a failure to comply with PART E, Item 13 which states; “The Licensee shall collect and contain all leachate generated by the West 40 Landfill within the Landfill.” See photo 4 for picture of the leachate flowing from the hazardous waste storage area.
3. In section 8.3 of the City of Iqaluit Landfill Operations and Maintenance Manual The licensee states; “The hazardous waste storage area has sea lift containers for storage of wastes. This area is surrounded by fence and has a separate gated entrance from the main road.” This is information is incorrect and needs to be updates, this area is not surrounded by fence nor does it have a separate gated entrance. See photo 1 item 4 for the location of the leachate flow path and photo 4 for a picture of the uncontained leachate.
4. Behind the Hazardous waste storage there are no ditches to separate contact water and non contact water, at the time of the inspection there was signs of erosion from water flowing into the facility. See photo 5 for a photo of this erosion.
5. While on site it was noted that there is no diversion berms or ditches on the Northeast side of the facility, this is causing surrounding melt water to enter the landfill and mix with waste within the landfill. There does not appear to be a way for this leachate to reach the ponds on the South side of the facility due to the lack of ditches, berms and appropriate slope to promotes water to flow to the north.
6. In the 2011 drainage plan the City indicates that the non contact water/offsite drainage will flow past the shop to the south, the licensee has blocked this flow path and the water is currently creating a pond north of the entrance, this is shown in Photo 1 item 2 and in photo 3.
7. In the licensee’s response to the previous inspection report the licensee noted that only plastic was located inside the containment pond

SECTION 2	☐ Comments	☒ Non-Compliance with Act or Licence	☒ Action Required
Below is a list of non-compliance and actions required by the licensee, please provide a plan by July 20, 2021 to complete the work required in order to come in compliance with the non-compliance noted below.			
1) The Licensee is to recover the waste from the surrounding lands, water management structures and waterbodies outside the West 40 landfill as required in part E, item 11 which states; “The Licensee shall dispose of and contain all municipal solid waste generated by the City at the West 40 Landfill as associated site(s) authorized under this licence or as otherwise approved by the Board in writing.”			
2) The licensee is to update information in the City of Iqaluit Landfill Operations and Maintenance Manual related to drainage, waste storage areas and all other outdated information as required in Part B, item 10 which states; “The Licensee shall review the Plans referred to in this Licence as required by changes in operation and/or technology and modify the Plans accordingly. Revisions to any Plan shall be submitted in the form of an addendum to be included within the Annual Report required under Part B, Item 1, complete with the lists of revisions detailing where significant content changes are made.”			
3) The licensee is to provide a plan to remove the waste within the leachate ponds to prevent damage to the liner and a potential leak.			

- 4) The licensee is to remove the pooling water from within the landfill and ensure the grade of the facility promotes flow to the containment ponds to minimize animal, insect infestation and seepage from the unlined berms.
- 5) To prevent the mixing of paints and other hazardous wastes with water the inspector is recommending that the licensee keep sea cans used for storage of hazardous waste closed when not in use.

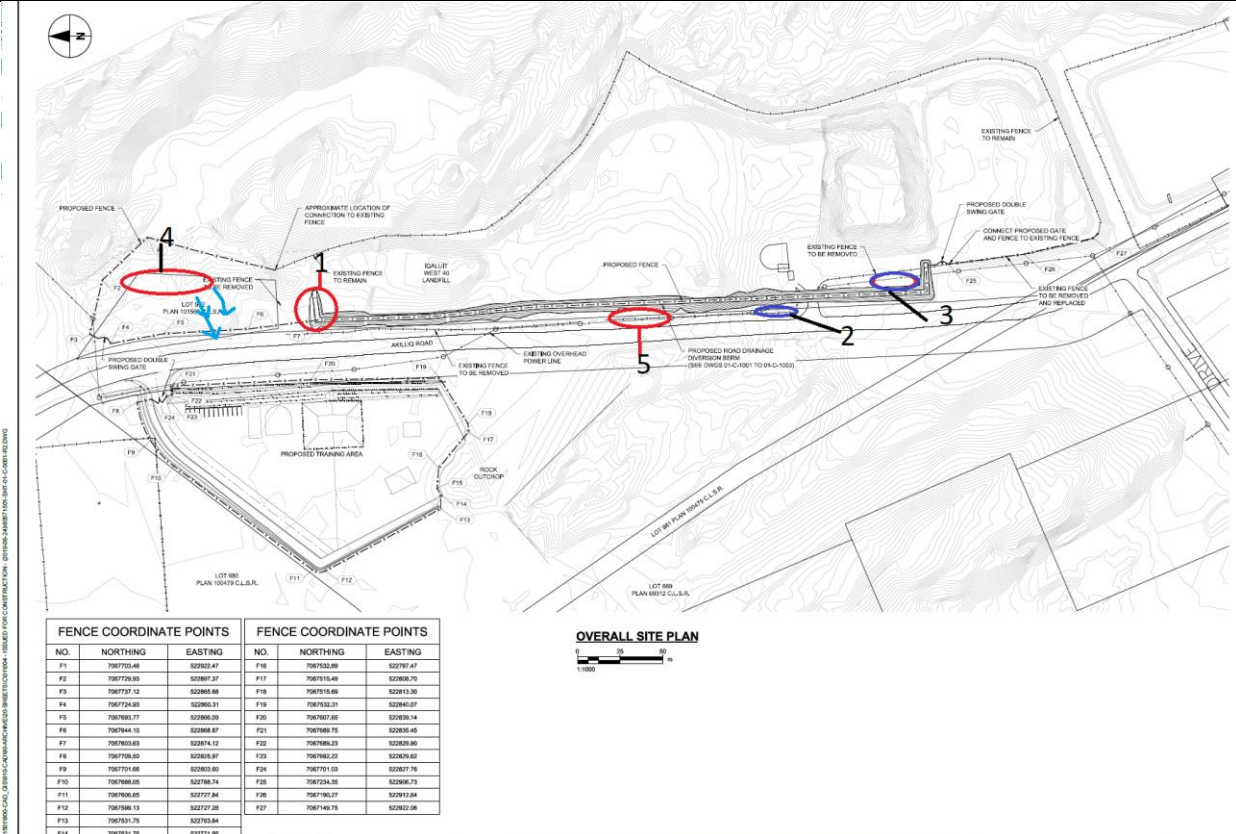
Inspector's Name	
Jonathan MESHER	
Signature	
Date	
June 29, 2021	

Water Resource Officer, Nunavut Region
Crown Indigenous Relations and Northern Affairs Canada – CIRNAC
Jonathan.mesher@canada.ca
Office #: 867-222-0118
Fax: 867 979-6445

Date	Camera	Inspector	Authorization
May 20, 2021	Samsung S8 work cell phone	J.Mesher	3AM-IQA1626

Photo Log

Photo 1



PROPOSED FENCE

4

EXISTING FENCE TO REMAIN

1

PROPOSED FENCE

5

EXISTING FENCE TO BE REMOVED

2

EXISTING FENCE TO BE REMOVED AND REPLACED

3

FENCE COORDINATE POINTS

NO.	NORTHING	EASTING
F1	7987703.48	522952.47
F2	7987703.89	522957.37
F3	7987737.12	522965.86
F4	7987724.83	522960.31
F5	7987695.77	522964.09
F6	7987644.13	522988.87
F7	7987633.83	522971.12
F8	7987709.50	522953.97
F9	7987701.88	522953.80
F10	7987698.05	522968.74
F11	7987606.65	522727.84
F12	7987698.13	522747.20
F13	7987531.76	522703.84
F14	7987531.78	522711.95

FENCE COORDINATE POINTS

NO.	NORTHING	EASTING
F16	7987532.89	522787.47
F17	798715.49	522982.76
F18	7987154.69	522913.30
F19	7987532.31	522940.07
F20	7987607.65	522936.14
F21	7987689.75	522935.45
F22	7987695.23	522935.36
F23	7987692.23	522929.60
F24	7987701.03	522937.78
F25	7987234.35	522906.73
F26	7987195.27	522912.84
F27	7987149.75	522922.98

OVERALL SITE PLAN

0 50 100
1:5000

AECOM

PROJECT

City of Iqaluit
West 40 Landfill
Berm and Fencing

CLIENT

City of Iqaluit
Building #01, City of Iqaluit, Box 480
Iqaluit, Nunavut X5A 0A0
867 979 5500 tel 867 979 5522 fax
www.city.iqaluit.nu.ca

CONSULTANT

AECOM
101-11817 Stony Plain Road NW
Edmonton, Alberta T5S 0C2
788-488-7000 tel 788-488-7070 fax
www.aecom.com

REGISTRATION

PERMIT TO PRACTICE

ASAC/CONSTRUCTION

17.1.12.77

PERMIT NUMBER: 1639

NITMU Association of Professional
Engineers and Geoscientists

ISSUE/REVISION

NO.	DATE	DESCRIPTION
2	2019-06-24	ISSUED FOR CONSTRUCTION
1	2019-04-25	ISSUED FOR TENDER
3	2019-02-10	ISSUED FOR CONSTRUCTION

KEY PLAN

NO.	DATE	DESCRIPTION
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PROJECT NUMBER

60571501

SHEET TITLE

ROAD DRAINAGE DIVERSION BERM
OVERALL SITE PLAN

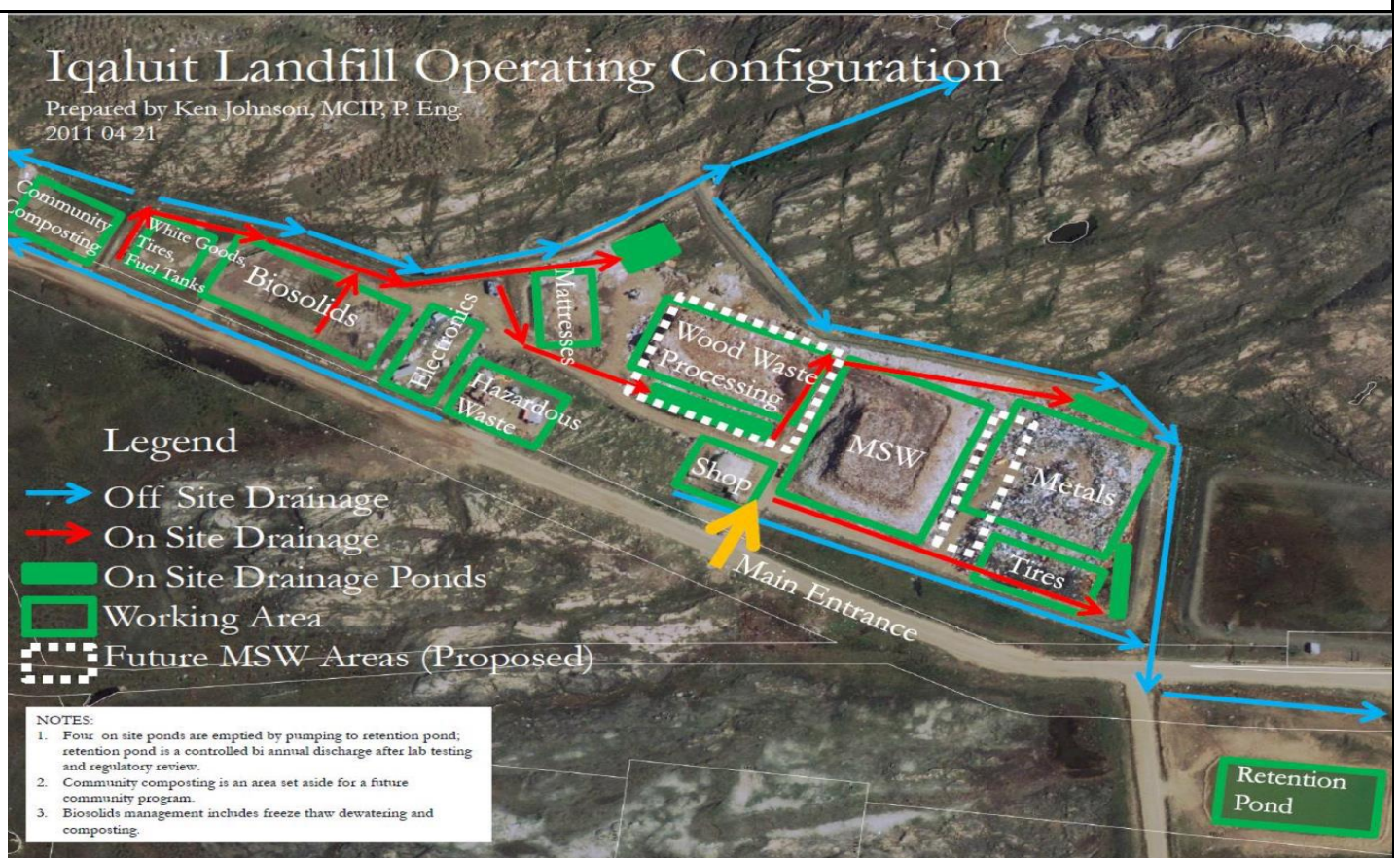
Description: IFC of the recently installed berm and concerns noted while on site



2021-QIK-JM-006

Date	Camera	Inspector	Authorization
May 20, 2021	Samsung S8 work cell phone	J.Mesher	3AM-IQA1626

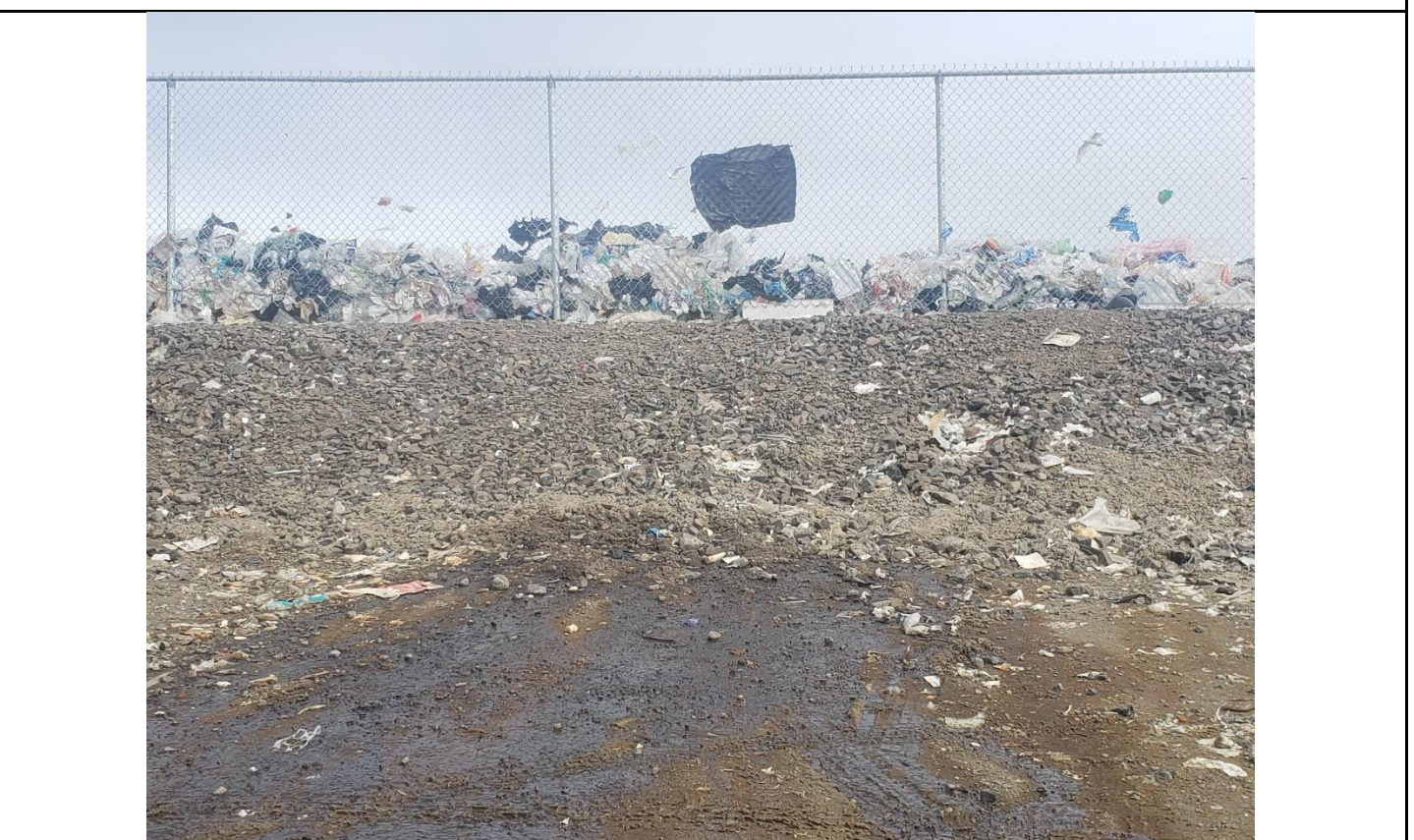
Photo 2



Description: out dated drainage plan.

Date	Camera	Inspector	3am
May 20, 2021	Samsung S8 work cell phone	J.Mesher	3AM-IQA1626

Photo 3



Description: seepage from pooling water within the landfill.

Date	Camera	Inspector	3am
May 20, 2021	Samsung S8 work cell phone	J.Mesher	3AM-IQA1626
Photo Log			
Photo 4			
			
Description:uncontained leachate flowing from the Hazardous waste storage.			

Date	Camera	Inspector	3am
March 31, 2021	Samsung S8 work cell phone	J.Mesher	3AM-IQA1626
Photo Log			
Photo 5			
			
Description: Erosion from water flowing into the Landfill and coming in contact with uncontained paint.			