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November 18, 2003

John Holland
Senior Administrative Officer
Hamlet of Kugluktuk
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N7L4-1526

Nunavut Water
Board

28 2004

Public Registry

RE: August 3, 2003 Municipal Water Use Inspection Report

The Water Resources Officer (WRO) appreciate the assistance provided during the tour of the Hamlet's Water use and Waste Disposal Facilities. Enclosed for your records is a copy of the Municipal Water Use Inspection Report performed on August 3, 2003. During the inspection the following observations were noted.

Part A: General Conditions

Kugluktuk has not submitted a Annual Water Licence Report, or any Surveillance Network Program results for the years 1997 to 2001 inclusive.

As a condition of the Water Licence the municipality of Kugluktuk is required to submit a Annual Report detailing a summary of all Water Supply and Waste Disposal Facility modifications, a summary of all data generated under the Monitoring Program and any other information as described in Part A: General Conditions of the Licence. Although there was no evidence of disposal of industrial waste (waste oil, solvent and fuel). The Inspector informed the SAO that Kugluktuk is currently not authorized under it's Water Licence to store hazardous waste from any commercial sources, to do so would be in direct violation of the Water Licence and *Nunavut Water and Nunavut Surface Rights Tribunal Act*.

The Licencee has been notified to file a Spill Report by the WRO with respect to the excessive seepage from the sewage lagoon on May 29, 2003. No follow up report has been submitted to the WRO with respect to the Spill Report 03-391 (unauthorized discharge of sewage effluent. The Licencee has not posted SNP signs identifying the Water Intake Facility, Sewage Lagoon Effluent, Runoff from Abandon Solid Waste Disposal Facility and Runoff from New Solid Waste Disposal Facility.

Canada

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Part B: Conditions Applying to Water use

The Licencee does obtain all fresh water from the Coppermine River (photo 3). No annual quantities of withdrawn water have been submitted to verify the 70,000 cubic metre maximum allowable limit. The municipality was in the process of relocating the conveyance line from the New Coppermine River Water Intake Facility to the Water Treatment Plant (photo 1-6). The auxiliary intake pump and conveyance line were in use during the Inspection. The Water Treatment Facility was in good operational condition (photo 7-9). The gas powered water pump was not equipped with secondary containment or a spill kit (photo 10 & 11).

Part C: Conditions Applying to Waste Disposal

All pumped out sewage is deposited to the Sewage Disposal System (photo 19). The Licencee has not provided any plans with respect to the construction on the Sewage Lagoon in 2002 (photo 17 & 18)). The Sewage Lagoon had sufficient freeboard to accommodate the 2003 season. Seepage of the Sewage Lagoon was in excess of designed specifications. Due to the extensive wetlands the sewage effluent is exposed to considerable treatment is obtained prior to discharge to Ocean (photo 18 & 20). The disposal of graywater to overburden adjacent to dwellings was not noted. No bagged sewage was observed being used at this time. All solid waste is deposited in the Solid Waste Disposal Facilities. The metal dump is presently undergoing segregation of preexisting refuse (photo 15). The Solid Waste Disposal Facility is a fully fenced burn and burial operation (photo 13). The tipping face is well managed with the aid of a Truck Dumping Structure (photo 12). Minimal wind blown garbage was noted around the Solid Waste Disposal Facilities. Waste oil is stored adjacent to the land farm, this area is fairly well maintained with little visible oil staining and a geotextile impermeable line (photo 14). Waste batteries are stored in an open top box adjacent to the land farm (photo 16). All batteries are drained of acid prior to storage. Batteries acid is stored in plastic and metal drums. Metal drums will become fatigued with prolonged exposure to Batteries acid, resulting in leakage.

Part D: Conditions Applying to Modifications

The Licencee has not notified the NWB prior the commencement of construction to the Sewage Lagoon, or the New Water Supply conveyance line and Water Intake Facility. As-built plans / drawings are required to be submitted to the NWB within 90 days of the completion of modifications to Water Supply and Solid Waste Disposal Facilities.

Surveillance Network Program

A: Location of Surveillance Stations

Coppermine River Water Intake Facility 1526-1
Sewage Lagoon Effluent at outflow to bay 1526-2
Runoff from Abandon Solid Waste Disposal Facility 1526-3
Runoff from New Solid Waste Disposal Facility 1526-4

B: Flow Measurement Requirements

The Licencee has not provided monthly or annual quantities of pumped water or discharged sewage as required in Part A: General Conditions of this Licence for the years 1996 to 2001 inclusive.

C: Reports

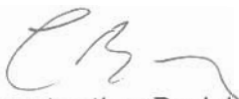
The Licencee has failed to submit Surveillance Network Program information as required under Part A: General Conditions of this Licence for the years 1996 to 2001 inclusive.

Non-Compliance of Act or Licence

No Annual Reports have been submitted for 1996 to 2001. No authorization was given by the Nunavut Water Board for the construction at the Sewage Lagoon, and the relocation of the conveyance line from the Coppermine River Intake Facility to the Water Treatment Facility. The municipality of Kugluktuk has contravened Subsection 12 (1) Nunavut Waters and Nunavut Surface Rights Tribunal Act, except in accordance with the conditions of a Licence, no person shall deposit or permit the deposit of waste into waters in Nunavut.

If there are any concerns or questions in regards to this inspection please contact me at (867) 975 4298 or bodykevichc@inac.gc.ca

Sincerely,



Constantine Bodykevich
Water Resources Officer (WRO)
INAC, Nunavut District

cc. -Nunavut Water Board, Gjoa Haven (Jim Wall)
 -CG&T, Iqaluit (Doug Sitland)
 - Baffin Health & Social Services, Iqaluit (Bruce Trotter)
 - EC Environmental Protection, Yellowknife (Anne Wilson)
 - INAC Water Management, Iqaluit (Michelle Mc Christie)

Kugluktuk Inspection 2003



Photo 1. New water conveyance line under construction.



Photo 2. Temporary water intake line.



Photo 3. Auxiliary water intake, in use while construction is under way to permanent conveyance line, water sample 67.4911.8 W 115.0458.2.



Photo 4. New water intake facility, not yet in use.

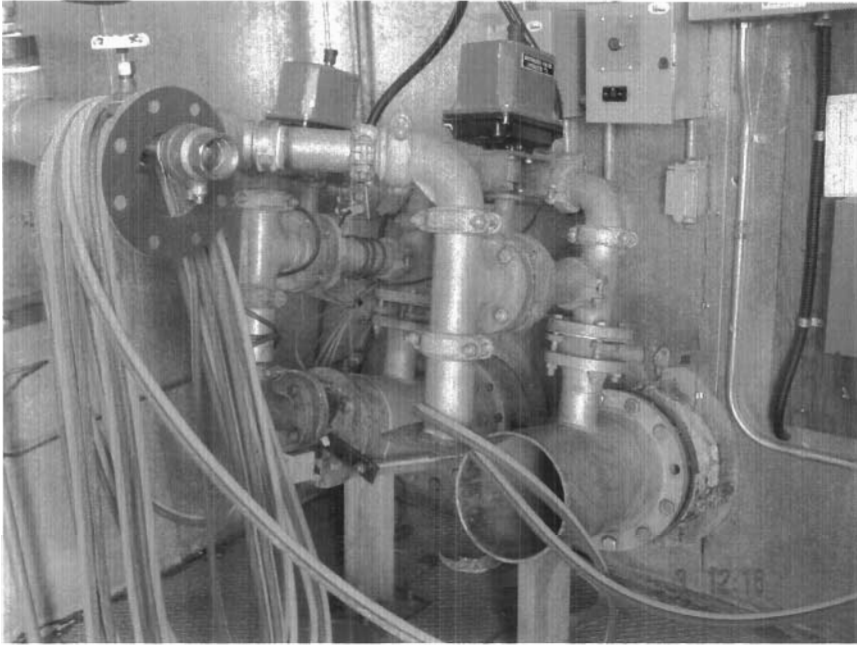


Photo 5. Interior of new water intake facility, piping for intake pump shown.

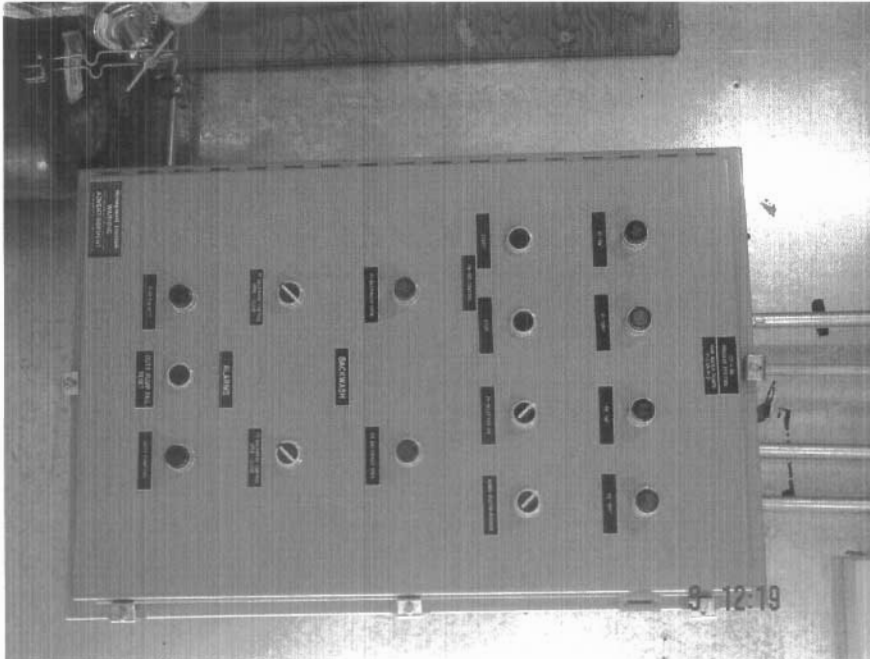


Photo 6. Control panel of new water intake facility.



Photo 7. Saline detector programmed to stop salt water from entering reservoir.

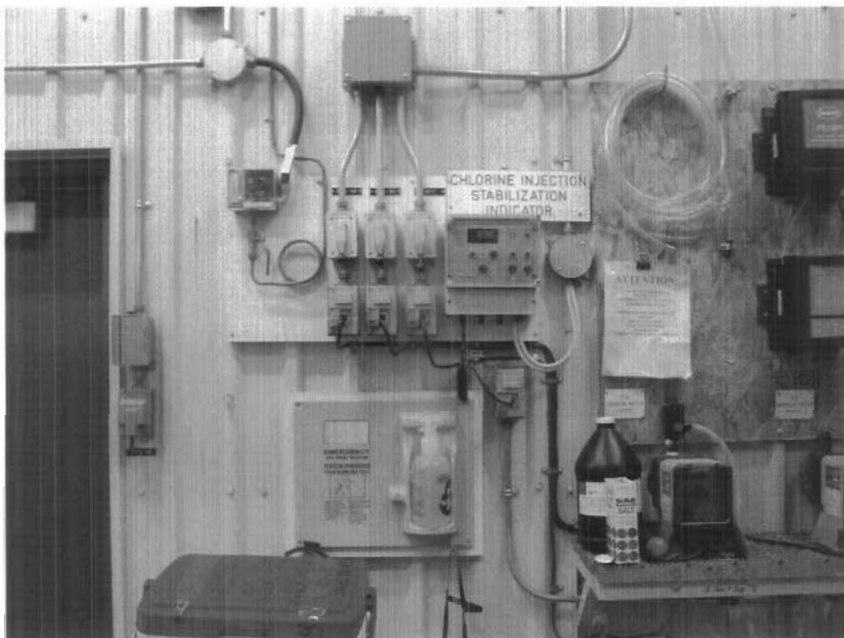


Photo 8. Chlorination system at water treatment plant.

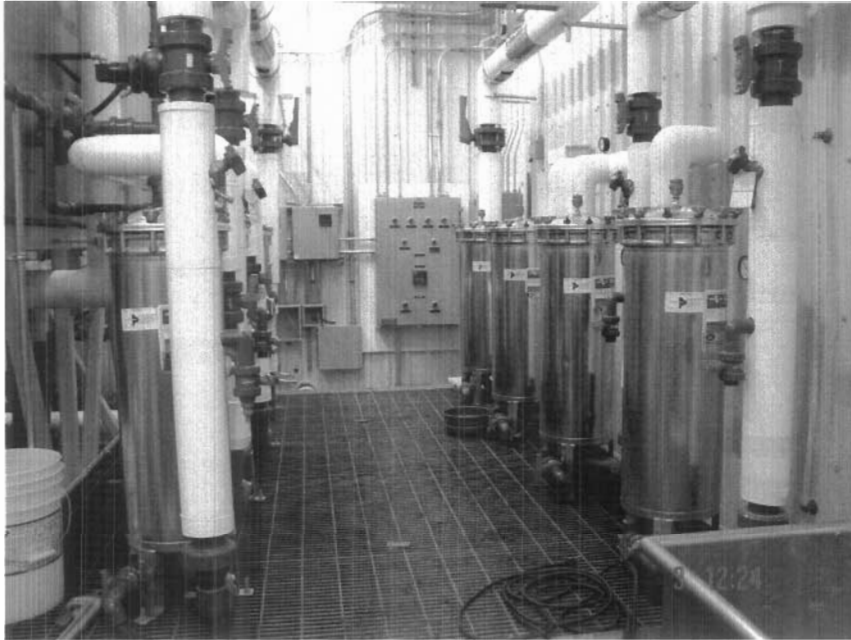


Photo 9. Filtration system at water treatment plant.



Photo 10. Water reservoir gas powered water supply pump within berm.

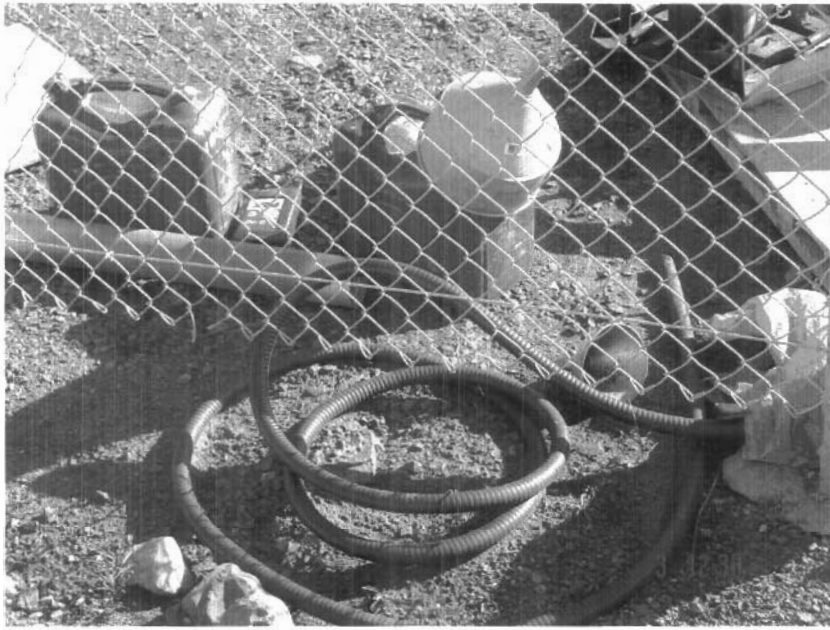


Photo 11. Gas supply for water supply pump with no spill protection or spill kit..

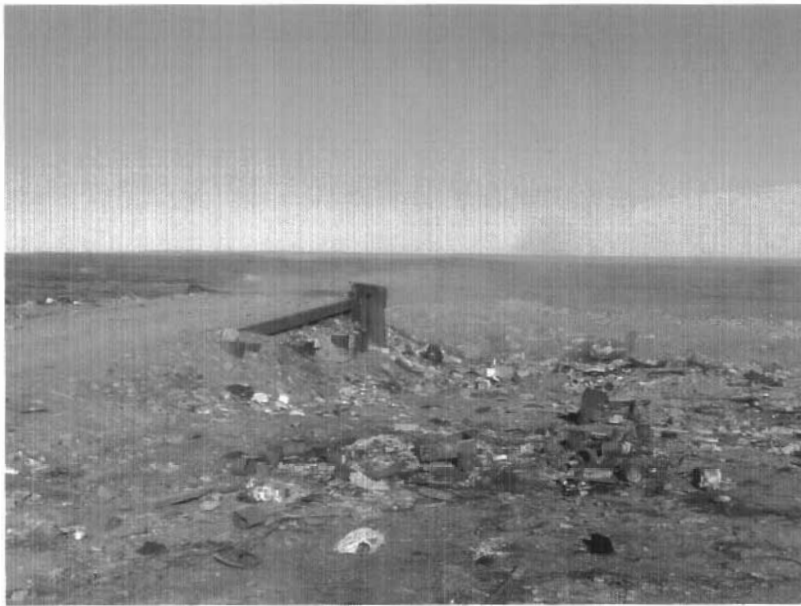


Photo 12. Garbage truck dumping structure at Solid Waste Disposal Facility.

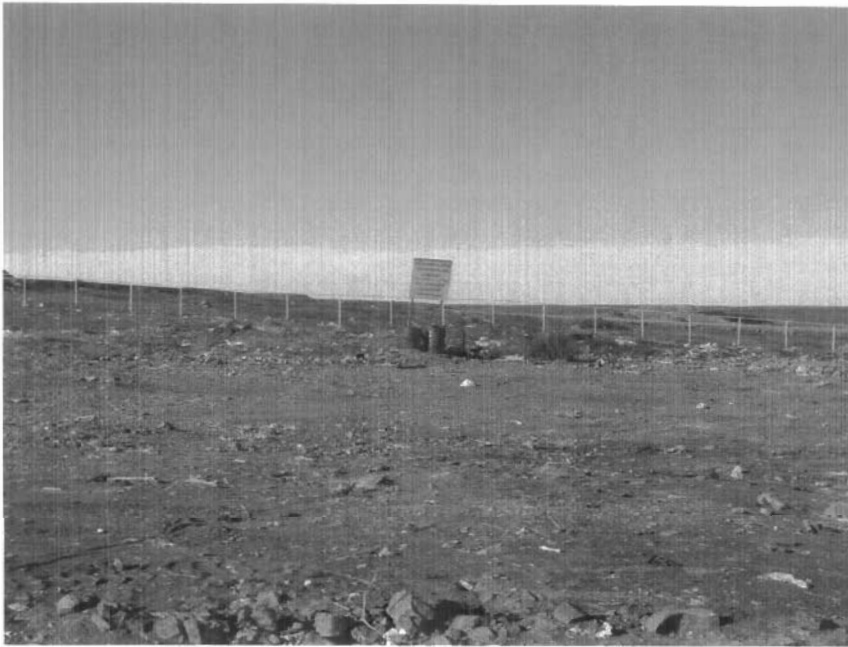


Photo 13. Sign at Solid Waste Disposal Facility.

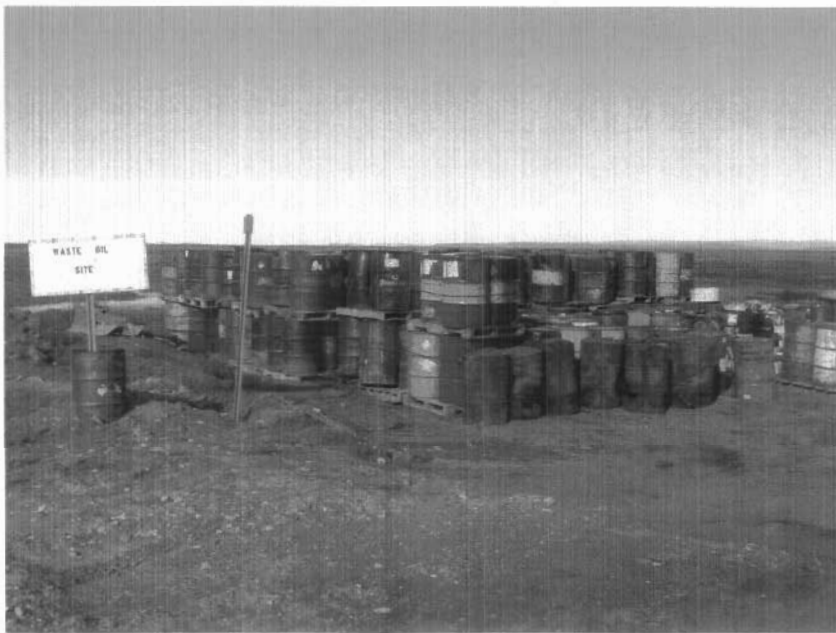


Photo 14. Waste oil and battery storage area.



Photo 15. Metal dump. segregation of some waste shown.



Phot 16. Land farm shown adjacent to waste battery and waste oil storage area.



Photo 17. Sewage truck discharge structure at Sewage lagoon.



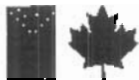
Photo 18. Construction shown to Sewage Lagoon berm to the right of photo.



Photo 19. Sewage truck shown at sewage truck discharge structure.



Photo 20. Location of sewage effluent sample N 67.4851.8 115.1138.6.



MUNICIPAL WATER USE INSPECTION REPORT

Date: August 3, 2003 Licensee Rep. (Name/Title): Cal Shaw / SAO
Licensee: Hamlet of Kugluktuk Licence No.: N7L4-1526

WATER SUPPLY

Source(s): Coppermine River / Reservoir Quantity used: not metered
Owner:/Operator: Hamlet of Kugluktuk / Government of Nunavut

Indicate: A - Acceptable U - Unacceptable NA - Not Applicable NI - Not Inspected
Intake Facilities: A Storage Structure: A Treatment Systems: A Chemical Storage: A
Flow Meas. Device: NA Conveyance Lines: NA Pumping Stations: A

Comments: The conveyance line from the Coppermine River Water Intake Facility to the Water Treatment Plant was in the process of being relocated. The Water Intake Facility and pump have also been replaced but were not yet in service during the inspection. The Water Treatment Facility was clean and operational. The fenced Water Resivour berm and liner are in good condition. There was a gas powered pump located within the Reservoir berm. There is no fuel spill equipment located in the vicinity of the gas pump, this should be provided.

WASTE DISPOSAL

Sewage: Sewage Treatment System (Prim./Sec/Ter.): Secondary: in stream to ocean
Natural Water Body: Continuous Discharge (land or water): land
Seasonal Discharge: Wetlands Treatment: X Trench:
Solid Waste: Owner/Operator: Hamlet of Kugluktuk
Landfill: Burn & Landfill: X Other:

Indicate: A - Acceptable U - Unacceptable NA - Not Applicable NI - Not Inspected
Discharge Quality: Sampled Decant Structure: NA Erosion: A
Discharge Meas. Device: NIL Dyke Inspection: NA Seepages: A
Dams, Dykes: U Freeboard: A Spills: 03-391
Construction: NA O&M Plan: NA A&R Plan: NA
Periods of Discharge: A Effluent Discharge Rate: Not Measured

Comments: The expansion of the sewage lagoon in 2002 appears to be insufficient for the community. Excessive seepage was noted at the sewage lagoon. The sewage lagoon effluent flows through a wetland prior to discharge to ocean. The Solid Waste Disposal Facility is totally fenced with little wind blown refuge noted. Regular burning of refuge was noted. Segregation of most batteries and waste oil was observed. Batteries should be stored in sea lift or similar container to minimize contamination during storage. Waste batteries are drained. Waste battery acid is stored in metal drums. Given time waste battery acid will corrode metal drums. Bulky metal dump has partially undergone waste segregation, further segregation planned for next year.

FUEL STORAGE

Owner/Operator:
Indicate: A - Acceptable U - Unacceptable NA - Not Applicable NI - Not Inspected
Berms & Liners: A Water within Berms: A Evidence of Leaks: A
Drainage Pipes: A Pump Station & Catchment Berm: NIL
Pipeline Condition: NA Not Applicable: Condition of Tanks: NI

SURVEILLANCE NETWORK PROGRAM (SNP)

Samples Collected Hamlet: NIL
INAC: potable water, sewage effluent
Signs Posted SNP: NIL Warning: Not Observed
Records & Reporting: No Annual Reports for 1997,1998,1999, 2000 & 2001
Geotechnical Inspection: Not Applicable

Non-Compliance of Act or Licence: No Annual Reports have been submitted for 1997, 1998, 1999, 2000 & 2001. No authorization was given by the Nunavut Water Board for the construction at the Sewage Lagoon, and the relocation of the conveyance line from the Coppermine River Water Intake Facility. The Municipality of Kugluktuk has contravened subsection 12 (1) *Nunavut Waters and Nunavut Surface Rights Tribunal Act* except in accordance with the conditions of a licence, no person shall deposit or permit the deposit of waste into waters in Nunavut.

Constantine Bodykevich

Inspector's Name



Inspector's Signature

Peter Kusugak

Field Operations Manager Name



Manager's Signature