



Telephone: 867-767-9187 ext. 24193
Fax: 867-873-6230

August 15, 2023

Community Government of Behchoko
Box 68
Behchoko, NT X0E 0Y0

Attention: Pushp Seth

File Number	W2014L3-0002
Type of Operation	CLASS A - MUNICIPAL
Location	Behchoko, NT

Dear Mr. Seth,

An inspection of the above noted operation was conducted by Water Resource Officer, Meaghan MacIntyre-Newell on May 10, 2023.

The Community Government of Behchoko (CGB) is currently not in compliance with multiple conditions of their Water Licence. Issues of non-compliance are listed below with additional details provided in the Inspection Report.

- Freeboard limits have not been met at the Rae sewage containment areas and is causing erosion and overtopping of the berms;
- Fencing at the Solid Waste Facility is damaged or non-existent and does not provide a barrier to wildlife, nor contain windblown garbage from littering the surrounding area; and,
- Honey bag area at the Rae lagoon requires clean-up to remove plastics.

During the Inspection, assistance was provided by Peter Zoe, Tim Zoe, and Gary Wedawin. Additionally, the community organized to have the consulting company who conducts regular maintenance of the Sewage Treatment Facilities and Water Treatment Facilities present. Although these individuals are still relatively new to managing these facilities, they have demonstrated that steps are being taken to address non-compliances and provide long-term solutions dependent on funding being provided to address the issues. The Inspectors look forward to working with these individuals in the upcoming years to move the CGB toward compliance with Water Licence conditions.



MUNICIAPL WATER USE INSPECTION REPORT

If you have any questions, please contact me at 867-767-9187 ex.24193.

Sincerely,

Original Signed

Meaghan MacIntyre-Newell
Water Resource Officer
Environment and Climate Change
North Slave

Cc: Roberta Judas – Regulatory Specialist – WLWB
Scott Stewart – Regional Superintendent – GNWT-ECC
Wendy Bidwell – Senior Water Resource Officer – GNWT – ECC
Rick Walbourne – Manager of Water Regulatory – GNWT – ECC

Date:	May 10, 2023	Licence #:	W2014L3-0002	Page No:	2
-------	--------------	------------	--------------	----------	---



MUNICIPAL WATER USE INSPECTION REPORT

LICENCE #:	W2014L3-0002	EXPIRY DATE:	November 25, 2029
LICENCEE:	Community Government of Behchoko	PREVIOUS INSPECTION:	June 08, 2022
COMPANY REP:	Senior Administrative Officer	INSPECTION DATE:	May 10, 2023

WATER SUPPLY

Source:	West Channel and Marian Lake	Quantity Used:	Unknown
Owner/Operator:	Community Government of Behchoko	Meter Reading:	N/I

Indicate: **A - Acceptable** **U - Unacceptable** **N/A - Not Applicable** **N/I - Not Inspected**

Intake Facilities	A	Storage Structures	N/I	Treatment Systems	A	Recycling	N/I
Flow Meas. Device	A	Conveyance Lines	N/I	Pumping Stations	A	Chem. Storage	A
						Modifications	N/A

Water Supply Comments:

The water intake facilities in both Rae and Edzo were inspected. Both facilities appeared to be maintained appropriately and no issues were noted.

WASTE DISPOSAL - RAE SEWAGE LAGOON

Disposal Method		Two Cell Lagoon					
Mechanical	No	Camp Sump	No	Natural Water Body	No	Wetland Treatment	Yes
Continuous Discharge	No	Intermittent Discharge	No	Seasonal Discharge	No	Land Spread	No
Accelerated Biological	No	Other					

Indicate: **A - Acceptable** **U - Unacceptable** **N/A - Not Applicable** **N/I - Not Inspected**

Discharge Quality	A	Decant Process & Structures	A	Discharge Measurement Device	N/A
Freeboard	U	Sludge Disposal Method	N/I		
Periods Of Discharge	Spring 2023			SNP Samples Collected	Yes
Effluent Discharge Rates	Estimated				



MUNICIPAL WATER USE INSPECTION REPORT

Rae Sewage Comments:

Every year, the berms at the sewage lagoon naturally settle, decreasing the freeboard. As a result of this natural settling, the CGB reported that on April 7, 2023, one of the berms was overtopped (GNWT Spill 2023145). The CGB immediately brought in their engineering consultant and raised the berm to ensure that the contents of the lagoon were contained (Photo 1). There have been on-going discussions between the consultant and the CGB to rectify the situation and prevent further spills from the sewage lagoon.

On May 3, 2023 the CGB contacted the Inspector to seek authorization to decant from the sewage lagoon. During the Inspection on May 10, 2023, samples were collected to determine if the water quality met Licence Effluent Quality Criteria (EQC). Based on the sample results meeting EQC, the decant from the Rae Sewage Lagoon was approved by the Inspector.

At the time of inspection, the Rae sewage lagoon was found to be operational, but out of compliance. Freeboard levels do not meet the Licence requirement of 1 metre. This is an on-going issue for this site; sludge removal is required to increase capacity for Cell 1. Erosion as a result of high water in both ponds is negatively impacting the integrity of the containment area (Photo 2). The Inspector also noted there was refuse, including oil and grease, in the sewage lagoon and three megabags full of an unknown material (Photo 3 and Photo 4). These materials should be removed and disposed of properly.

The honey bag disposal area is out of compliance, unsafe, and unsightly. Plastic containers and other garbage has been dumped on the bank of the pond that honey bags drain into. At the time of the inspection there were numerous plastic containers on the bank and floating in the receiving environment (Photo 5). This area requires extensive clean-up and is a health and safety concern. The Inspector recommends signage to outline how to appropriately dispose of honey bags.

WASTE DISPOSAL - EDZO SEWAGE LAGOON

Disposal Method		Two Cell Lagoon					
Mechanical	No	Camp Sump	No	Natural Water Body	No	Wetland Treatment	Yes
Continuous Discharge	No	Intermittent Discharge	No	Seasonal Discharge	No	Land Spread	No
Accelerated Biological	No	Other					

Indicate: **A - Acceptable** **U - Unacceptable** **N/A - Not Applicable** **N/I - Not Inspected**

Discharge Quality	U	Decant Process & Structures	U	Discharge Measurement Device	N/A
Freeboard	A	Sludge Disposal Method	N/I		
Periods Of Discharge	Spring 2023			SNP Samples Collected	Yes
Effluent Discharge Rates	Estimated				



MUNICIPAL WATER USE INSPECTION REPORT

Edzo Sewage Comments:

At the time of inspection, the Edzo sewage lagoon was operational but out of compliance. The CGB has installed a dump chute to discharge sewage into Cell 1. There was no structure or weir to contain Cell 2 prior to discharging into the receiving environment. This would not allow the CGB to test the water quality prior to discharge. Results from samples collected by the Inspector showed an exceedance for EQC parameter Biochemical Oxygen Demand (BOD) at SNP Station R3. The Inspector also noted some refuse in the Edzo sewage lagoon. Given that there is no need for the public to have access to the Edzo sewage lagoon, the Inspector recommends the installation of a locking gate to prevent the public from dumping refuse.

WASTE DISPOSAL – SOLID WASTE

Disposal Method		Landfill					
Open Dump	No	Landfill	Yes	Burn & Landfill	No	Underground	No
Offsite Removal	No	Other					
Owner / Operator	Community Government of Behchoko						

Indicate: **A - Acceptable** **U - Unacceptable** **N/A - Not Applicable** **N/I - Not Inspected**

Runoff Diversion	N/A	SNP Samples Collected	None
------------------	-----	-----------------------	------

Solid Waste Comments:

Segregation of waste streams appears to be acceptable. Waste appliances, hot water tanks, tires, and electronic devices appeared to be segregated from other household waste. Fencing needs to be repaired, or replaced to prevent wildlife encounters/scavenging and contain windblown garbage from spreading to areas adjacent to the dump site (Photo 6). Hazardous waste appears to be segregated appropriately, but there is a significant volume stockpiled that requires shipment to a proper disposal facility.

SURVEILLANCE NETWORK PROGRAM

Samples Collected Licencee	Yes
Samples Collected ECC	Yes (2014-R3 & 2014-E3)

Signs Posted: SNP	Yes	Warning	No
-------------------	-----	---------	----

Surveillance Network Program Comments:

SNP sites at both locations were present, signed and in good repair. BOD results at SNP Station R3 exceeded licence EQC as noted above. This is a new finding from SNP results and may be related to residence time in the sewage lagoon. The Inspector will work with the CGB to determine why this parameter is elevated and determine a path forward.



MUNICIPAL WATER USE INSPECTION REPORT

GENERAL CONDITIONS/REPORTS/PLANS

Indicate: **A - Acceptable** **U - Unacceptable** **N/A - Not Applicable** **N/I - Not Inspected**

C &R Plan	N/A	Records & Reporting	A	Final Report	N/A
Geotechnical Inspection	N/I	Posting, Signage	U	Contingency Plan	A
Restorations Activities	N/A	Spills	A	O&M Plan	A
Maintenance	U	Modifications	N/A	Annual Report	A

ADDITIONAL COMMENTS/REMARKS

In recent years, there has been a change in management at the Water Treatment Facility and Sewage Disposal Facilities (sewage lagoons). Recent inspections have noted many non-compliances. At the time of this inspection, the CGB organized a meeting with all operators, the consultant, and the Inspectors to discuss a path forward to address long-term issues including containment berms at the sewage lagoons, water treatment facilities, and discharge quality and management from the sewage lagoons. The Inspector notes that many of the issues highlighted in the 2022 Water Licence Inspection Report have been addressed and anticipates that the CGB will continue moving towards compliance with the Water Licence.

NON-COMPLIANCE/VIOLATIONS OF ACT OR LICENCE

Currently, the CGB is non-compliant with the following conditions of the Water Licence:

- Part D, Condition 3:** All Sewage effluent discharged from the Sewage Disposal Facilities serving Edzo at Surveillance Network Program Station 2014-E3 shall meet the following effluent quality criteria:

Parameter	Maximum Average Concentration	May 10, 2023 Results
Suspended Solids	35 mg/L	28 mg/L
Oil and Grease	5 mg/L	<2.0 mg/L
BOD ₅	30 mg/L	42 mg/L
Faecal Coliforms	1 x 10 ³ CFU/100 mL	-

Explanatory Remarks: Samples collected and submitted to Taiga Laboratory by the Inspector on May 10, 2023 indicate that there was an exceedance at SNP Station 2014-E3 for BOD. As discussed during the Inspection, the CGB intends to redirect the flow of discharge to align with the original design plans for the sewage lagoon. It is anticipated that this will assist with improving the water quality at this SNP station as it would increase residence time in the system.

- Part D, Condition 5:** A Freeboard limit of 1.0 metre, or as recommended by a Professional Engineer and as approved by the Board, shall be maintained at all dykes and earthfill structures associated with the Sewage Disposal Facilities, with the exception of the Edzo Sludge Cell

Explanatory Remarks: The freeboard level in the Rae Sewage Lagoon is less than the required 1 metre. There are several locations in the Rae Sewage Lagoon where there has been erosion and settling reducing the freeboard. The Inspector recommends working with the a consultant to conduct geotechnical inspection of the berms, raise berms, and conduct necessary maintenance to ensure it provides proper containment of sewage effluent.



MUNICIPAL WATER USE INSPECTION REPORT

- 3. Part D, Condition 7:** All bagged toilet Wastes (honey bags) shall be disposed of in a manner satisfactory to an Inspector at the Bagged Toilet Waste Disposal Facilities

Explanatory Remarks: This site has become a dumping area for waste other than bagged toilet waste. This area should be cleaned up to remove hard plastics and signage should be installed to ensure the public is aware of what acceptable to dispose of at that location. It is noted that this clean-up poses a significant health risk and should be done in coordination with a Health Inspector and trained personnel.

- 4. Part D, Condition 12:** The Licensee shall dispose of all solid Wastes at the Solid Waste Facilities in accordance with the approved Solid Waste Management Plan.

Explanatory Remarks: There can be improvement in the covering of waste to minimize the amount of windswept waste.

- 5. Part D, Condition 17:** Prior to its operation, the Licensee shall install and maintain, to the satisfaction of an Inspector, fencing around the perimeter of the new Solid Waste Disposal Facility that is capable of capturing winswept Waste, deterring wildlife, and preventing unauthorized persons from entering the site.

Explanatory Remarks: Repair or reinstall the fence that is missing or damaged to comply with this condition.

Inspector's Signature:

Original Signed

Date:	May 10, 2023	Licence #:	W2014L3-0002	Page No:	5
-------	--------------	------------	--------------	----------	---



MUNICIPAL WATER USE INSPECTION REPORT

INSPECTION IMAGES

Figure 1

Photo 1 - Raised berm at Rae Sewage Lagoon



Figure 2

Photo 2 - Crack in berm of Cell 1 at Rae Sewage Lagoon





MUNICIPAL WATER USE INSPECTION REPORT

Figure 3

Photo 3 - Oil and Plastics in Rae Sewage Lagoon



Figure 4

Photo 4 - Megabags with unknown material at Rae Sewage Lagoon





MUNICIPAL WATER USE INSPECTION REPORT

Figure 5

Photo 5 - Honey bucket disposal area



Figure 6

Photo 6 - Solid waste facility fencing requiring repair

