ANNUAL REPORT

YEAR BEING REPORTED: 2017

The following information is compiled pursuant to the requirements of Part B, Item 1 of Water Licence 3BM-GJO-1318 issued to the Hamlet of Gjoa Haven
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i) - iii) tabular summaries of all data generated under the "Monitoring Program"; monthly and annual quantities in cubic metres of freshwater obtained from all sources; monthly and annual quantities in cubic metres of each and all wastes discharged;

Attached are quantities of water used as reported in our On Tap Water Delivery System and the estimated discharge of sewage waste based on quantities used.

Month Reported	Quantity of Water Obtained from all sources (litres)	Quantity of Sewage Waste Discharged
January	3,873,733.60	Same
February	3,582,631.00	Same
March	3,940,795.40	Same
April	3,762,316.00	Same
May	3,947,774.58	Same
June	3,510,738.60	Same
July	3,552,010.76	Same
August	4,065,644.30	Same
September	3,732,935.80	Same
October	3,825,366.30	Same
November	3,865,149.70	Same
December	4,259,915.68	Same
ANNUAL TOTAL	45,919,011.72	Same

iv. a summary of modifications and/or major maintenance work carried out on the Water Supply and Waste Disposal Facilities, including all associated structures and facilities;

PLC control system and SCADA upgrading activities for water treatment plant has completed in March 2017 and Chlorine injection system and Free Chlorine measuring devices upgrading completed in Oct 2017 by Stantec consulting Ltd.

v. a list of unauthorized discharges and summary of follow-up action taken;

No reportable unauthorized discharge but only the water from the storage tank clean-up carried on July 05 as part of the Annual operation. Water delivery was suspended for about 8 hours from the treatment plant, but alternative truckfill from intake pumphouse was available. Water delivery resumed from the treatment plant at 9:00 pm on the same day.

Effluent overflows on the wide area of wetland instead of the defined trench-line along GJO-4 when summer freshen and snow melts, but it helps also contaminants parameters polishing in the presence of sunlight, wind and oxygen ingress.

vi. a summary of any abandonment and restoration work completed during the year and an outline of any work anticipated for the next year;

Restoration activities carried for Free Chlorine measuring system, PLC communication to HMI units and auto-control on pump selection at the intake pumphouse. Upgrading to reheat station pumps and heating control devices were completed as part of previous year works. Free chlorine reading sensor, temperature reader and tank water level sensor- all re-installed outside the tank and synchronized to the PLC control Board.

Fallen fence components and open area at the north side of solid waste were fixed by hamlet resource during the summer, but no fence or gate at the entrance. Lack of proper equipment, materials and budget are constraints for the Licensee, unless a GN project in coming year.

vii. a summary of any studies requested by the Board that relate to waste disposal, water use or reclamation, and a brief description of any future studies planned;

Annual inspection revealed the necessity for solid waste facility improvement as it has been issues of capacity, unauthorized access through open areas along the perimeter, leaching effluent water overflown outside when summer freshen due to lack of protection berm, and mixing of wastes inside due to lack of identified cells by type. The Board is aware of these issues and limitations from previous years but a GN initiative is expecting under the Capital Fund with standardize improvement activities. A study and assessment project is expecting in coming summer 2018.

viii. any other details on water use or waste disposal requested by the Board by November 1st of the year being reported; and

No specific issues on water uses or waste disposal requested by the Board or the inspector. The inspector has received information water, sewage and waste volume and measurement system.

ix. updates or revisions to the approved Operation and Maintenance Plans.

Updated O&M manuals for Model FCL (Free Chlorine measuring system) and PLC control system are ready and will be submitted to the Board separately.
New water and sewage trucks were added with existing fleet and had replaced the older truck.
Water delivery and sewage disposal operations were carried on regular hours and as needed:

- 3-trucks on road and 1-truck standby, for water delivery 7 days a week
- 3-trucks on road and 2 trucks standby for sewage delivery 7 days a week

One out of two truckfill outside of the water treatment plant is currently active, and the other one has some electrical connection seized up. A plan for repair or improvement works for this truckfill will be taken in coming summer 2018; the GN O&M department is acknowledged the issue.
The solid waste facility is running to capacity issues and waste bulks heaping on sides. The licensee has a plan for bulk reduction with the help of GN funding in coming year(s), a project is expecting for waste reduction and improvement in the coming summer by GN CGS.

No changes to Operation plan for water and sewage, and no major maintenance required for water delivery system or sewage disposal operation.

ADDITIONAL INFORMATION THAT THE LICENSEE DEEMS USEFUL:

No additional fire storage water tank in the community and therefore all 3-water trucks are kept full overnight for fire emergency. Free Chlorine level sometimes reduced in overnight storage water and the operator add the difference Chlorine solution to cover the demand before the water delivery to household tank. Regular daily fill also test at least one time per truck; Chlorine Log sheet maintains at the operator office and forward to CGS office weekly.
The treatment plant operator carries Chlorine test on a regular weekly/monthly basis for E. coli and Total Coliform, and water samples also sent to EHO office in Cambridge Bay.

Water chemical tests and sewage water/ effluent tests were carried at Taiga Lab in Yellowknife.

FOLLOW-UP REGARDING INSPECTION/COMPLIANCE CONCERNS:

Some follow up update were carried in regards to concerns by AANDC inspector on July 11, 2017:

- The truckfill turn around area has been kept clean and free of snow accumulation and ponding water cleared through drainage for easy access/exit of water truck. A limitation of space for

two trucks filling at a time keeps one diver waiting until the front truck leaves the spot. The Licensee is working with GN department to facilitate both truckfill to delivery water when a rush hour needs more supply.

- Ponding snow piles outside the building made ingress of water inside the building and caused flooding under the tank. The licensee used temporary measures to overcome the situation of snow pile, but no permanent scope as the WTP building plinth is almost same level of truckfill driveway.
- The fuel tank outside the intake pumphouse is double shelled and the inner layer hold the fuel, any potential leaked fuel still will be within the containment by the outer shell. The bank of intake pumphouse and fuel tank is covered and protected by gravels. No other permanent berm along the shore line or outside of the intake pumphouse is in plan.
- The chipped door panel at the intake pumphouse entry has been repaired, which alarmed the proper closing and thus loosing heat energy from inside.
- Monitoring stations re-arranged with GPS system:
  - GJO-2 moves down to sewage lagoon from previous location down of solid waste facility with GPS address: N 68^0 37′ 13.7″ and W 95^0 50′ 23.2″
  - GJO-4 (Final Discharge point) at: N 68^0 36′ 59.6″ and W 95^0 49′ 48.0″