

Water Licence Renewal Application

Water Licence: 3BM-GJO1318

Submission: June 06, 2018

Water Licence Renewal Application

Hamlet of Gjoa Haven

Submitted to the Nunavut Water Board

June 05, 2018

Submitted by

Shah Alam, P. Eng. E. P.

Municipal Planning Engineer,

CGS, Cambridge Bay, NU X0B 0C0

Ph: (867) 983-4156

Fax: (867)983-4124/23

June 05, 2018

Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU
XOB 1L0

Attention: Richard Dwyer, Manager of Licensing

RE: **Hamlet of Gjoa Haven Water Licence Renewal Application**
Licence Number: 3BM-GJO 1318

Dear Richard

Please find the enclosed Water Licence Renewal Application for the Hamlet of Gjoa Haven. The Hamlet's current licence expired on November 12, 2018.

We are pleased to mention the updated status of a number of documents is required of the Water Licence Renewal Application including the following:

- Operation and Maintenance Manual for Sewage and Solid Waste Operations – upto date
- Quality Assurance/Quality Control plan for sewage and waste – approved and active
- Spill Contingency Plan – approved and active
- A & R plan of facilities decommissioned – approved and completed
- Annual Reports – upto date including 2017 and all previous years
- Modification, addition or alteration of facility or program – approved

We are also requesting that the Nunavut Water Board give consideration to regulating the current solid waste treatment facilities and inclusion of contaminated soil and spill remediation to the Renewal Licence. The GN - CGS is working for the improvement of the solid waste facility and a separate component for contaminated Soil remediation and Sewage sludge drying cells based on feasibility assessment.

The Application fee of \$30.00 is paid to the Board as the requirement of the Renewal Application.

On behalf of the Hamlet of Gjoa Haven, I will provide any documents required by the Board and upon request.

Yours sincerely,

(Shah Alam, P. Eng. E.P.)

Municipal Planning Engineer,
Community and Government Services,
Kitikmeot Region,
Cambridge Bay, NU
PH: (867) 983-4156; Fax: (867)983-4124/23

Water Licence Renewal Application

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Executive Summary

The Hamlet of Gjoa Haven is responsible for the supply of potable water and disposal of sewage waste and solid waste generated from the community. These facilities are currently operating under the current Licence 3BM-GJO 1318 which remains active until Nov 12, 2018.

The buried water line sometime faces frozen issues due to crack in insulation or insufficient coverage which required replacing some of the sections of the pipe line. Water line improvement works also included replacement of two heat exchanger pumps, increase sizes of intake pumps, and SCADA monitoring system- all completed during the year 2015-2017. Raw water drawn from Swan lake by two intake pumps, transport to 3.2 km away treatment plant through buried line where water is treated by gravity pressure filtration and chlorination before truckfill for delivery. Water flow meters are included in the treatment system to address the volume of water drawn and delivery to residents using Hamlet operated water trucks.

Current engineered lagoon constructed in 2014 and in operation for raw sewage deposition and primary treatment. Decanting of effluent carried during July-August by using pump and hose to a designated point on wetland from where the effluent travels 1275 m towards Ocean through the Final Discharge point GJO-4. The old sewage lagoon was decommissioned and the A&R plan was received to the Board on July 25, 2014. Solid waste site facility had some issues over the years in terms of mixing runoff contamination within the solid waste management (SWMA) area and hazardous materials leachate mixing onto water through wetland, poor segregation in waste dumps, illegal dumping outside the facility, broken spots of fence and poor performance of facility operations. The community has fixed majority of those issues over the years with own resources and some assistance through Government initiatives including the reduction in vehicles parts, reinstalling the fallen fences, filling the broken gaps of berms and stopping the leachate runoff from free flow outside. A sampling monitoring point GJO-5 and signage established for leachate sampling. Other monitoring stations GJO-2, GJO-3, GJO-4 are remains active with GPS locations and identity signage. Monitoring of solid waste and sewage facilities continued during May-August and operators training of Environmental Awareness. Annual Reports are upto date to the Board to 2017.

CGS- GN will continue helping the Licensee in monthly monitoring and sampling program of sewage and waste effluent and testing samples at the CALA accredited Taiga lab in Yellowknife. GN- CGS also has a plan to improve or upgrade the solid waste facility and addition of contaminated soil & spill materials remediation. A study project will be starting during the FY 2018-19 to find out the facility status and cost effective upgrade or a new facility.

We confidently determined, the operational procedure and plan of monitoring, Quality Control and compliance to regulatory bodies will be helpful and in compliance with the requirement the Nunavut Water Licence for this northern community.

[illegible][illegible][illegible][illegible][illegible]

**HAMLET OF GJOA HAVEN**

GJOA HAVEN, NUNAVUT X0E 1J0

Telephone: (867) 360-7141 Fax: (867) 360-6309

Canadian Imperial Bank of Commerce
5001 - 50th Avenue Box 430
Yellowknife, NT X1A 2N3

025711

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DATE 06062018
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PAY **Thirty and 00/100 Dollars

CAD \$ **30.00

TO THE
ORDER
OFReceiver General of Canada
Place du Portage Phase III
11A2-11 Laurier Street
Gatineau QC K1A 0S5

HAMLET OF GJOA HAVEN

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HAMLET OF GJOA HAVEN

Receiver General of Canada

Please Detach Before Cashing

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JUNE 4 2017

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HAMLET OF GJOA HAVEN

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Receiver General of Canada

06/06/2018

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Water Licence Renewal Application

Water Licence: 3BM-GJO1318

Date of expiry: Nov 12, 2018



Application for Water Licence Renewal

Document Date: May 2011

Application Submission Date: 06/05/2018
Month/Day/Year

P.O. BOX 119
GJOA HAVEN, NUNAVUT
XOB 1J0
TEL: (867)360-6338
FAX: (867)360-6369

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NUNAVUT IMALIRIYIN KATIMAYIT
NUNAVUT WATER BOARD
OFFICE DES EAUX DU NUNAVUT

DOCUMENT MANAGEMENT

Original Document Date: April 2010

DOCUMENT AMENDMENTS

	Description	Date
(1)	Updated for public distribution as separate document from NWB Guide 7	June 2010
(2)	Updated NWB logos and reformatted table to allow rows to break across page	May 2011
(3)		
(4)		
(5)		
(6)		
(7)		
(8)		
(9)		
(10)		



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GJOA HAVEN, NU X0B 1J0
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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYIT
OFFICE DES EAUX DU NUNAVUT

APPLICATION FOR WATER LICENCE RENEWAL

Your application may be classified as a **renewal** only if all operations remain the same as previously licensed and only the term of the licence requires change. If your application contemplates:

- a change to the volume of water authorized for use;
- a new activity related to water use or waste disposal;
- a new component related to water use or waste disposal;
- a change in predicted environmental impacts(s); and/or
- a change to any term or condition of the original licence

your application is **NOT** classified as a renewal but rather an amendment and will require submission of an Application for Water Licence Amendment. Licensees applying for combined renewal / amendment are also referred to the Application for Water Licence Amendment.

The applicant is referred to the NWB's Guide 7: *Licensee Requirements Following the Issuance of a Water Licence* for more information about this application form.

EXISTING LICENCE NO: 3BM GJO-1318

1. LICENSEE CONTACT INFORMATION

Is the licensee the same as that referred to on the existing licence?

☒ Yes ☐ No

If No, a licence assignment must be completed and approved by the NWB. **A renewal will only be issued in the name of the current licensee in the absence of assignment of the licence.**

If the licensee is the same, but the name of the licensee has changed, attach a certificate of name change.

Name: **Hamlet of Gjoa Haven**

Address: **P.O. Box 200, Gjoa Haven, NU, X0B 1J0**

Phone: **867-360-7141**

Fax: **867-360-6309**

e-mail: **saogjoa@qiniq.com**

2. LICENSEE REPRESENTATIVE CONTACT INFORMATION – If different from Block 1.

Name: **Shah Alam, P. Eng.**

Address: **Municipal Planning Engineer, Cambridge Bay, NU, XOB 0C0**

Phone: **867-983-4156**

Fax: **867-983-4124/ 4123**

e-mail: **salam@gov.nu.ca**

(Attach authorization letter.)

3. NAME OF PROJECT

Is the name of the project the same as that considered in the existing water licence?

☒ Yes ☐ No

Indicate the name of the project including the name of the location: _____

4. LOCATION OF UNDERTAKING

Is the location of the undertaking the same as that considered in the existing water licence?

☒ Yes ☐ No

Project Extents

NW: Latitude: (**68 ° 30 ' 0 " N**)

Longitude: (**95 ° 53' 0 " W**)

NE: Latitude: (° ' " N)

Longitude: (° ' " W)

SE: Latitude: (° ' " N)

Longitude: (° ' " W)

SW: Latitude: (° ' " N)

Longitude: (° ' " W)

Camp Location(s) **N/A**

Latitude: (° ' " N)

Longitude: (° ' " W)

5. MAP

Are the locations of the main components of the undertaking the same as those considered in the existing licence?

☒ Yes ☐ No

Attach a topographical map, indicating the main components of the undertaking.

NTS Map Sheet No.: _____ Map Name: _____ Map Scale: _____

6. NATURE OF INTEREST IN THE LAND

Is the nature of the interest in the land the same as that considered in the existing water licence?

☒ Yes ☐ No

Check any of the following that are applicable to the proposed undertaking (at least one box under the 'Surface' header must be checked).

Sub-surface

☐ Mineral Lease from Nunavut Tunngavik Incorporated (NTI)
Date (expected date) of issuance: _____ Date of expiry: _____

☐ Mineral Lease from Indian and Northern Affairs Canada (INAC)
Date (expected date) of issuance: _____ Date of expiry: _____

Surface

☐ Crown Land Use Authorization from Indian and Northern Affairs Canada (INAC)
Date (expected date) of issuance: _____ Date of expiry: _____

☒ Inuit Owned Land (IOL) Authorization from Kitikmeot Inuit Association (KIA)
Date (expected date) of issuance: _____ Date of expiry: _____

☐ IOL Authorization from Kivalliq Inuit Association (KivIA)
Date (expected date) of issuance: _____ Date of expiry: _____

☐ IOL Authorization from Qikiqtani Inuit Association (QIA)
Date (expected date) of issuance: _____ Date of expiry: _____

☐ Commissioner's Land Use Authorization
Date (expected date) of issuance: _____ Date of expiry: _____

☐ Other _____
Date (expected date) of issuance: _____ Date of expiry: _____

Is the name of the entity(s) holding authorizations the same as that considered in the existing water licence?

☒ Yes ☐ No

If No, a licence assignment must be completed and approved by the NWB.

Name of entity(s) holding authorizations: [Hamlet of Gjoa Haven](#)

7. NUNAVUT PLANNING COMMISSION (NPC) DETERMINATION

Is the undertaking located in the same land use planning area as that considered in the existing licence?

☒ Yes ☐ No

Indicate the land use planning area in which the project is located.

<input type="checkbox"/> North Baffin	<input type="checkbox"/> Keewatin
<input type="checkbox"/> South Baffin	<input type="checkbox"/> Sanikiluaq
<input type="checkbox"/> Akunnig	<input checked="" type="checkbox"/> West Kitikmeot

Was a land use plan conformity determination required from NPC prior to the issuance of the existing water licence?

☐ Yes ☒ No

If Yes, indicate date issued and attach copy. _____

Does the proposed renewal change the original NPC conformity determination or the need to obtain one?

☐ Yes ☒ No

If Yes, indicate date issued (or expected) and attach a copy. _____
If No, provide written confirmation from NPC confirming that a land use plan conformity review is not required.

8. NUNAVUT IMPACT REVIEW BOARD (NIRB) DETERMINATION

Was a screening determination required from NIRB prior to the issuance of the existing water licence?

☐ Yes ☒ No

If Yes, indicate date issued and attach copy. _____

Does the proposed renewal change the original NIRB screening determination or the need to obtain one?

☐ Yes ☒ No

If Yes, indicate date issued (or expected) and attach a copy. _____
If No, provide written confirmation from NIRB confirming that a screening determination is not required.

9. DESCRIPTION OF UNDERTAKING

Is the description of the undertaking the same as that considered in the existing water licence?

☒ Yes ☐ No

List and attach plans and drawings or project proposal.

10. OPTIONS

Are the alternative methods and locations that were considered to carry out the project the same as those considered in the existing water licence?

☒ Yes ☐ No

Provide a brief explanation of the alternative methods or locations that were considered to carry out the project.

N/A

11. CLASSIFICATION OF PRIMARY UNDERTAKING

Is the primary undertaking the same as that considered in the existing water licence?

☒ Yes ☐ No

Indicate the primary classification of undertaking by checking one of the following boxes.

- | | |
|---|--|
| <input type="checkbox"/> Industrial | <input type="checkbox"/> Agricultural |
| <input type="checkbox"/> Mining and Milling (includes exploration/drilling/exploration camps) | |
| <input type="checkbox"/> Conservation | <input type="checkbox"/> Recreational |
| <input checked="" type="checkbox"/> Municipal (includes camps/lodges) | <input type="checkbox"/> Miscellaneous (describe below): |
| <input type="checkbox"/> Power | |

See Schedule II of the *Northwest Territories Waters Regulations* for Description of Undertakings.

12. WATER USE

Is the type(s) of water use(s) the same as that considered in the existing water licence?

☒ Yes ☐ No

Check the appropriate box(s) to indicate the type(s) of water use(s) being applied for.

- | | |
|--|---|
| <input checked="" type="checkbox"/> To obtain water for camp/ municipal purposes | |
| <input type="checkbox"/> To obtain water for industrial purposes | <input type="checkbox"/> To divert a watercourse |
| <input type="checkbox"/> To cross a watercourse | <input type="checkbox"/> To modify the bed or bank of a watercourse |
| <input type="checkbox"/> To alter the flow of, or store water | <input type="checkbox"/> Flood control |
| <input type="checkbox"/> Other: _____ | |

13. QUANTITY OF WATER INVOLVED

Is the source of water the same as that considered in the existing licence?

☒ Yes ☐ No

Name of water source(s): Swan Lake
(show location(s) on map)

Is the quality of the water source and its available capacity the same as that considered in the existing licence?

☒ Yes ☐ No

Describe the quality of the water source(s) and the available capacity(s):__

Turbidity is slightly higher than is required by GCDWQ. Treatment required for turbidity and microbiological components such as E. Coli and Coli Form. Therefore, treatment included filtration and disinfection at the treatment plant before delivery to resident and user tanks.

The source has enough flow of water for the year round and DFO has concluded that source water is not likely to results to fish and fish habitat.

Is the overall estimated quantity of water to be used the same as that considered in the existing licence?

☒ Yes ☐ No

Provide the overall estimated quantity of water to be used: 62,000 m3 annually)

Are the quantity(s) of water to be used from each source the same as those considered in the existing licence?

☒ Yes ☐ No

Provide the estimated quantity(s) of water to be used from each source: Annual quantity not exceeding 62,000 m³

Are the quantity(s) of water to be used for each purpose the same as those considered in the existing licence?

☒ Yes ☐ No

Provide the estimated quantities to be used for each purpose (camp, drilling, etc.): N/A

Are the method(s) of extraction the same as those considered in the existing licence? ☐ Yes ☐ No

Describe the method(s) of extraction:

Are the quantity(s) of water returned to source(s) the same as those considered in the existing licence?

☒ Yes ☐ No

Estimated quantity(s) of water returned to source(s): 155 m³/day

Are the quality(s) of water(s) returned to source(s) the same as those considered in the existing licence?

☒ Yes ☐ No

Describe the quality(s) of water(s) returned to source(s): compliance to source water quality parameters

14. WASTE

Are the type(s) of waste(s) to be generated and/ or deposited the same as those considered in the existing licence?

☒ Yes ☐ No

Check the appropriate box(s) to indicate the types of waste(s) generated and deposited.

- | | |
|---|---|
| <input checked="" type="checkbox"/> Sewage | <input checked="" type="checkbox"/> Waste oil |
| <input checked="" type="checkbox"/> Solid Waste | <input checked="" type="checkbox"/> Greywater |
| <input checked="" type="checkbox"/> Hazardous | <input type="checkbox"/> Sludges |
| <input checked="" type="checkbox"/> Bulky Items/Scrap Metal | <input type="checkbox"/> Contaminated soil and/or water |
| <input type="checkbox"/> Animal Waste | |
| <input type="checkbox"/> Other (describe): _____ | |

15. QUANTITY AND QUALITY OF WASTE INVOLVED

Are the quantity(s) of the types of wastes involved the same as those considered in the existing licence?

☒ Yes ☐ No

Are the composition(s) of the types of wastes involved the same as those considered in the existing licence?

☒ Yes ☐ No

Are the method(s) of treatment for the types of waste involved the same as those considered in the existing licence?

☒ Yes ☐ No

Are the method(s) of disposal for the types of waste involved the same as those considered in the existing licence?

☒ Yes ☐ No

For each type of waste indicated in Block 14, describe its composition, quantity in cubic meters/day, method of treatment and method of disposal.

Type of Waste	Composition	Quantity Generated	Treatment Method	Disposal Method
Sewage	House sewage combined grey and black	Less than 98 m3/day	Engineered lagoon	Natural treatment inside lagoon and through wetland
Solid Waste	Residential, commercial municipal	40 m3/day	Composting & heaping	Composting and segregation
Hazardous	Battery, paint, switch, lights, glycol etc.	Not daily, occasionally	Containment and ship out	Collect in container place inside the cell and make ready for ship out.
Bulky items/ Scrap metal	Wood piece, door, window & house items, vehicle parts, fuel/ water/ sewage tank, plastic, cartons etc.	Not daily, time to time as required	Heaping & composting, burning on site, cover.	break into smaller pieces and on site pile.
Waste oil	Engine oil, trans. Oil, glycol, heating oil etc.	As required time to time	Containment to shipping out.	Collect in container and protect from spill out.

16. OTHER AUTHORIZATIONS

In addition to the sub-surface and surface land use authorizations provided in Block 6, are the same authorizations required as considered in the existing licence?

☐ Yes ☒ No

For each provide the following:

Authorization: _____

Administering Agency: _____

Project Activity: _____

Date (expected date) of issuance: _____ Date of expiry: _____

17. PREDICTED ENVIRONMENTAL IMPACTS OF UNDERTAKING AND PROPOSED MITIGATION MEASURES

Are predicted environmental impacts of the undertaking and proposed mitigation measures the same as those considered in the existing water licence?

☒ Yes ☐ No

Describe direct, indirect, and cumulative impacts related to water and waste.

No harmful impact to environment due to water use or sewage solid waste facility uses. But, benefit to the community in supply potable water, safe sewage disposal and discharge to ocean, proper storage of solid waste, metal dump and management of hazardous materials.

18. WATER RIGHTS OF EXISTING AND OTHER WATER USERS

Are the effects of the undertaking on any known persons or property including those that hold licences for water use in precedence to the application, domestic users, in-stream users, authorized waste depositors, owners of property, occupiers of property, and/or holders of outfitting concessions, registered trapline holders, and holders of other rights of a similar nature, the same as those considered in the existing water licence?

☐ Yes ☒ No

Provide the names, addresses and nature of use for any known persons or properties that may be adversely affected by the proposed undertaking, including those that hold licences for water use in precedent to the application, domestic users, in-stream users, authorized waste depositors, owners of property, occupiers of property, and/or holders of outfitting concessions, registered trapline holders, and holders of other rights of a similar nature.

Advise the Board if compensation has been paid and/or agreement(s) for compensation have been reached with any existing or other users.

N/A

19. INUIT WATER RIGHTS

Are the effects of the undertaking on the quality, quantity or flow of waters flowing through Inuit Owned Land (IOL) the same as those considered in the existing water licence?

☒ Yes ☐ No

Advise the Board of any substantial affect of the quality, quantity or flow of waters flowing through Inuit Owned Land (IOL), and advise the Board if negotiations have commenced or an agreement to pay compensation for any loss or damage has been reached with one or more Designated Inuit Organization (DIO).

There is no known effect of the quality and quantity of flow of water or sewage effluent through Inuit owned land and final discharge into ocean. No effect on water intake from Swan Lake to fish or fish habitat.

20. CONSULTATION - Provide a summary of any consultation meetings including when the meetings were held, where and with whom. Include a list of concerns expressed and measures to address concerns.

The Department of Community and Government Services has been in active consultation, meeting with the Hamlet, NWB and AANDC in taking management, training and operational plan for facilities in regards to ensure in environmental and public safety in the event of an emergency situation.

21. SECURITY INFORMATION

Is the financial security assessment the same as that considered in the existing water licence? N/A

☐ Yes ☐ No

Is the estimate of the total financial security for final reclamation the same as that considered in the existing water licence? **N/A**

☐ Yes ☐ No

Provide an estimate of the total financial security for final reclamation equal to the total outstanding reclamation liability for land and water combined sufficient to cover the highest liability over the life of the undertaking. Estimates of reclamation costs must be based on the cost of having the necessary reclamation work done by a third party contractor if the operator defaults. The estimate must also include contingency factors appropriate to the particular work to be undertaken.

Where applicable, the financial security assessment should be prepared in a manner consistent with the principals respecting mine site reclamation and implementation found in the *Mine Site Reclamation Policy for Nunavut*, Indian and Northern Affairs Canada, 2002.

No financial security involved in development and operation of these facilities. Therefore, this is not applicable.

22. FINANCIAL INFORMATION

Is the statement of financial security the same as that considered in the existing water licence? **N/A**

☐ Yes ☐ No

Provide an updated statement of financial security. **N/A**

If the applicant is a business entity please answer the questions below:

Is the list of the officers of the company the same as those considered in the existing water licence?

☒ Yes ☐ No

Provide a list of the officers of the company.

David Stockley – Senior Administrative Officer (SAO)

Ed Devereaux – Director

Anthony Anguttitauruq – Hamlet Forman

Adam Halluqtalik - Hamlet Operator

Is the Certificate of Incorporation or evidence of registration of the company name the same? **N/A**

☐ Yes ☐ No

Attach a copy of the Certificate of Incorporation or evidence of registration of the company name.

Not applicable for these facilities.

23. STUDIES UNDERTAKEN TO DATE

List and attach updated studies, reports, research etc.

Provide a compliance assessment and status report including a response to any inspector's reports. The licensee must contact the NWB for licence specific direction in completing the assessment and report.

If in non-compliance, a licence may not be issued until compliance is achieved. If in non-compliance, attach plans/reports for consideration. Application will not be processed if significant issues of non-compliance exist.

Hamlet operators are working closely with GN technical team and plant operator to continue the compliance plan, operators training and operation of facilities in regards to issues (if any). Hamlet is working to run the treatment plant with full SCADA system.

24. PROPOSED TIME SCHEDULE

Is the time schedule for all phases of development (construction, operations, closure and post closure) the same as that considered in the existing licence?

New Sewage Lagoon in operation and maintenance in summer. Old sewage lagoon has been closed. Signage of monitoring stations were relocated as directed by AANDC inspector.

☒ Yes ☐ No

Indicate the proposed start and completion dates for each applicable phase of development (construction, operation, closure, and post closure).

Construction of new Cl2 dosing sensor

Proposed Start Date: Aug 2018 Proposed Completion Date: Aug 2018
(month/year) (month/year)

Operation of new Lagoon started

Proposed Start Date: April 2014 Proposed Completion Date: continue
(month/year) (month/year)

Closure of old Lagoon

Proposed Start Date: May 2014 Proposed Completion Date: July , 2014
(month/year) (month/year)

Post - Closure

Proposed Start Date: _____ Proposed Completion Date: _____
(month/year) (month/year)

For each applicable phase of development indicate which season(s) activities occur. **N/A**

Construction

☐ Winter ☐ Spring ☒ Summer ☒ Fall ☐ All season

Operation

☐ Winter ☐ Spring ☐ Summer ☐ Fall ☒ All season

Closure

☐ Winter ☐ Spring ☐ Summer ☐ Fall ☒ All season

Post - Closure

☐ Winter ☐ Spring ☐ Summer ☐ Fall ☐ All season

These are existing facilities and their operation as identified during the first completion of these facilities..

25. PROPOSED TERM OF LICENCE

On what date does the existing licence expire? Nov 12, 2018

Indicate the proposed term of the renewal (maximum of 25 years): 15 (fifteen) years

Requested date of renewal issuance: Nov 13, 2018 Requested Expiry Date: Nov 12, 2033
(month/year) (month/year)

(The requested date of renewal issuance must be at least three (3) months from the date of application for a type B water licence and at least one (1) year from the date of application for a type A water licence, to allow for processing of the water licence application. These timeframes are approximate and do not account for the time to complete any pre-licensing land use planning or development impact requirements, time for the applicant to prepare and submit a water licence application in accordance with any project specific guidelines issued by the NWB, or the time for the applicant to respond to requests for additional information. See the NWB's *Guide 5: Processing Water Licence Applications* for more information)

26. ANNUAL REPORTING

Is the annual report template expected to be the same as that considered in the existing licence?

☒ Yes ☐ No

If not using the NWB's *Standardized Form for Annual Reporting*, provide details regarding the content of annual reports and a proposed outline or template of the annual report. [Use NWB standard Form for Annual Reporting](#)

27. CHECKLIST

The following must be included with the application for renewal for the water licensing process to begin.

Completed Application for Water Licence Renewal form.

☒ Yes ☐ No If no, date expected _____

Updated plans, including designs and reports (see Block 23).

☐ Yes ☒ No If no, date expected N/A

Updated security assessment (see Block 21).

☐ Yes ☒ No If no, date expected N/A

Updated financial statement (see Block 22).

☐ Yes ☒ No If no, date expected N/A

Compliance Assessment / Status Report (see Block 23).

☐ Yes ☒ No If no, date expected N/A

English Summary of Renewal Application.

☒ Yes ☐ No If no, date expected _____

Inuktitut and/or Inuinnaqtun Summary of Renewal Application.

☒ Yes ☐ No If no, date expected _____

Application fee of \$30.00 CDN (Payee Receiver General for Canada).

☒ Yes

☐ No

If no, date expected _____

Water Use Fee Deposit of \$30.00 CDN (Payee Receiver General for Canada). The actual water use fee will be calculated by the NWB based upon the amount of water authorized for use in accordance with the Regulations at the time of issuance of the licence.

☒ Yes

☐ No

If no, date expected _____

28. SIGNATURE

I, David Stockley (print name)

certify that the application requires no changes to water use or waste disposal as previously authorized and that the information given on this form is, to the best of my knowledge, correct and complete.


Signature

May 31/2018
Date

Annual Report- 2017

Water Licence: 3BM-GJO1318

Date of expiry: Nov 12, 2018

EXECUTIVE SUMMARY:

Hamlet of Gjoa Haven has prepared the Annual Report 2017 to be submitted to the Nunavut Water Board to meet requirements of the Nunavut Water Board Licence 3BM-GJO 1318, Part B General Conditions, through part H conditions to the monitoring program. This report covers the period from January 01st, 2017 to December 31st 2017.

The Licensee has drawn water from the big Swan Lake through twin intake pumps, transformed the reheated intake water by 6 inch HDPE buried line to the Treatment Plant building 3.0 km away where this water has been treated using pressure filters followed by chlorination before truck fill outside by the hamlet trucks and delivered to household tanks for community water needs. Quantity of water uses during this period was about **45,919** m³, within allowable limit 62,000 m³ annually.

Sewage waste collected from household sewage tanks using hamlet operated vacuum trucks, hauled to community sewage lagoon and discharge at the designated dropping point. Raw sewage stayed inside the lagoon during the period Oct through June for almost 9 months freezing where these receive primary treatment naturally. Annual decanting carried during October to reduce quantity inside and make room for new candidate sewage waste. Samples collected from defined designated monitoring stations and tested at Taiga Laboratory Yellowknife.

Batteries, waste oil and waste paint drums replaced inside the seacan placed at Solid waste facility – plan for shipping out from site with certified handler. Non-hazardous waste disposed at the Solid waste facility using hamlet operated truck and pushed down with local cover materials.

Water system upgrade and SCADA monitoring repair:

About 1200m length of the buried water line was replaced in 2015 with HDPE insulated pipes of same diameter, but upgrading of reheat stations and re-sizing of pumps and heat exchanger carried during May-Oct 2017. This replacement was required to continue water supply from intake pump house that has suffered winter freeze-up partly during last 2-3 years. Monitoring of water supply, SCADA upgrading, PLC program and Chlorine measuring device replacement were carried during the summer and fall. With this replacement, water intake and supply efficiency increased but no changes to system, structure or program.

Increased amount of Chlorine in treated water were reported in some occurrences but minimized such escalation of chlorine by controlling the dosing and reducing the amount of extra chlorine addition into overnight trucked water. No other concern was reported in treated water or raw water quality. The licensee has maintained of sending water samples for parameters test to Taiga Lab in Yellowknife and bacteriological test samples to EHO lab in Cambridge Bay.

The amended and additional O&M manual for Free Chlorine measuring system, SCADA sensors and PLC upgrade including the as-built drawings were received and ready to send to Nunavut Water Board separately.

Part B: General Conditions:

- Tabular Form of Annual water consumption and sewage disposal are filled in NWB Form
- Quantities were measured on daily basis of water distribution and sewage disposal
- New engineered lagoon is in operation and changes the monitoring point to new drop-off and decanting locations.
- No modification to sewage waste wetland or solid waste site during 2017
- No unauthorized discharge or disposal to effluent or waste during this period.
- O&M manuals for sewage and solid waste facilities remains active, except an addition to Chlorine measuring and SCADA system upgrade for Water treatment and supply.
- Monitoring stations locations marked and updated with sign for the new station GJO-2 and GJO-4. Scope signage in standard Official languages of Nunavut not yet completed.
- No device Meter was used for volume measurement, however, truck-fill measurement uses
- Plan of Compliance remained active and implemented as approved by the Board.

Part C: Water Use:

- All water drawn from the Swan Lake for annual demand which was about **45,919** cubic metres and within the allowable annual limit **62,000** cubic metres.
- No erosion at the intake point or close proximity of pumps sucking point. Intake screen inside the lake intake point with clearance from bed and allowance frozen layer on top by 3m plus. No material removed from lake or intake bed near the screen.

Part D: Waste Disposal

- The municipal sewage waste contains both grey and black water; urinal& toilet flush water mix with bath & kitchen water in the same tank. Combined sewage stay inside the house tank for average 3-4 days before collecting by vacuum truck to discharge into the lagoon.
- Amount of sewage generated during this period 01 Jan - 31 Dec is less than 43,000 m³. Quantity of sewage is calculated considering 90-95 % of water supply by truck.
- All sewage and solid waste disposal done to the designated location of sewage lagoon and waste facility using hamlet operated trucks. Sewage and effluent samples were taken from location Station GJO-3A and Final Discharge Point GJO-4, test result shown contaminants parameters within allowable limits (FC: 10,000 CFU/dl; BOD₅:80; TSS: 100; PH: 6-9; Oil & grease: none for station GJO-4). Results are attached including a summary.
- Freeboard at sewage lagoon remained more than 1.0 m since it was decanted.
- The existing wetland area and facilities used for effluent treatment and remediation. Test results shown the effluent from Final Discharge Point (GJO-4) within limiting values (BOD: 80; TSS:100; 10,000 CFU/dl; PH: 6-9) and not acutely toxic to Rainbow Trout or crustacean fish food.

Non-hazardous domestic Solid Waste:

- Solid wastes were disposed in the waste facility which is fenced in 3-sides and and leachate run-off at the downstream where sampled and tested at Taiga Lab. It requires some works to segregate hazardous waste from regular waste and secure confined or containment.
- Light materials, paper, paper boards and loose materials segregated and reduced by slow burning inside trench and pushed down burn ashes under the cover materials inside.
- Animal carcass supposed to bury inside sand-pit and cover, but lack proper cell inside the facility has limited the activity and therefore could not be secured. The AANDC inspector has raised this concern during the inspection. The Licensee will prepare some measures in coming summer to deal with animal carcass management.

Part E-G: Modification, construction, operation, A&R

- No modifications to sewage or solid waste facilities and operational plan since developed.
- Upgrading to SCADA control, PLCs system and Free Chlorine measuring devices carried during this period. The operational manual and as-built drawing are ready for submission to the Board.
- No spills occurred during this period. No reclamation to facilities and therefore, no activities related to vegetation growth or seed deposition carried.

Part H: Monitoring Program

- Annual monitoring of sewage and solid waste effluent has been carried during the summer and fall by the Licensee and the consultant at the water treatment system. Annual cleanup to water storage tank was carried and water samples were tested before delivery. Effluent samples were taken from monitoring stations where available as indicated in Part H of the licence, tested at Taiga Laboratory, Yellowknife (CALA approved). Test results are included.

Station GJO-4 noted as the Final Discharge point from wetland to ocean; therefore, parameters constraints are mostly applicable for sample taken from this station.

Station GJO-2 has been re-arranged on the wetland where sewage effluent run off merges to solid waste effluent before ending to Final point GJO-4. GPS addresses were established for new location and included in the report.

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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

- 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

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- 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 overflowed 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.

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- 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

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- 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 68⁰ 37' 13.7" and W 95⁰ 50' 23.2"
 - GJO-4 (Final Discharge point) at: N 68⁰ 36' 59.6" and W 95⁰ 49' 48.0"

Community: Gjoa Haven**Water Analysis 2017**

Parameters		GCDWQ			April 18, 2017			July 11, 2017		
	Units	Guideline	MAC	AO	Raw	Truckfill	WTP	Raw	Truckfill	WTP
Colour	TCU	2005		<=15				8	<5	5
pH		2015		7.0-10.5	7.64	7.81	7.64	8.04	8.04	7.94
Turbidity	NTU		1	<=5	0.25	0.39	0.23	0.53	0.49	0.4
TDS	mg/L	1991						219	228	209
TSS	mg/L				<3	3	<3	<3	<3	<3
Alkalinity	mg/L				154	154	153	99.7	98.5	98.8
Conductivity	µS/cm				718	713	716	480	491	487
Dissolve C	mg/L		45		4.9	4.9	4.7	3.8	3.8	3.4
Total C	mg/L				4.9	4.8	4.8	3.8	3.5	3.5
P, Total	mg/L									
Cyanide	mg/L	1991	0.2		<0.001	<0.001	<0.001			
THMs	mg/L	2006	0.1			0.005	0.116			
Phenol, Totl	mg/L				<0.001	0.001	<0.001			
Bromo-CH4	mg/L					0.005	0.05			
Nitrate N	mg/L				0.06	0.06	0.06	0.32	0.17	0.17
Hardness	mg/L				190	196	190	122	123	123
Chloride	mg/L			<=250	129	136	130	82.1	85.7	84.6
Fluoride	mg/L				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Sodium	mg/L	1979		<=200	69.8	73	69.9	44.5	47.8	46.8
Sulphate	mg/L	1994		<=500	15	16	16	11	11	11
Magnesium	mg/L				26.4	27.3	26.4	17.1	17.1	17.2
Calcium	mg/L				32.6	33.6	32.7	20.9	21	21.1
Potassium	mg/L				3.5	3.7	3.5	2.3	2.3	2.3
Total Coli	CFU	2012	none		<1.0	<1.0	<1.0		<1	<1
E. Coli	CFU	2012	none		<1.0	<1.0	<1.0			
Aluminium	µg/L	1998	ND	<100	1.2	2.8	0.6	3.2	9.7	0.8
Arsenic	µg/L	2006	100	5	0.5	0.5	0.5	0.3	0.3	0.3
Barium	µg/L	1990	1000		<0.1	<0.1	<0.1	4.5	4.2	4.3
Cadmium	µg/L	2005	5		<0.05	<0.05	<0.05	<0.04	<0.04	0.04
Chromium	µg/L	1986	50		<0.1	0.1	<0.1	<0.1	<0.1	<0.1
Copper	µg/L	1992	ND	<=1000	71.1	37.9	36.5	<0.2	18.9	72.3
Iron	µg/L	2005	ND	<=300	20	43	20	12	69	47
Lead	µg/L	1992	10		1.1	0.5	0.3	<0.1	0.4	0.4
Manganese	µg/L	1987	ND	<=50	1.3	3	2.4	5.7	4.7	3.2
Selenium	µg/L	2014	50		<0.3	<0.3		<0.3	<0.3	<0.3
Uranium	µg/L	1999	20							
Zinc	µg/L	2005	ND	<=5000	171	154	149	<0.4	99.1	88.7
Mercury	µg/L	1986	1		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Nickel	µg/L				0.4	0.3	0.3	<0.1	0.2	0.3

GCDWQ=Guidelines for Canadian Drinking Water Quality

IMAC=Interim maximum acceptable concentration

MAC=Maximum acceptable concentration, ND=Not defined

AO=Aesthetic Objectives,

Table
Effluent samples results 2017: Hamlet of Gjoa Haven, NU

Parameters	MAC Limit	units	July 11, 2017	July 11, 2017	July 11, 2017			
			GJO-3A	GJO-5	GJO-4			
Alkalinity		mg/L	341	349	189			
Conductivity		µS/cm	1180	2980	657			
p ^H	6-9		7.49	7.54	7.71			
TSS	100	mg/L	48		4			
BOD	80	mg/L	39	51	25			
CBOD	200	mg/L	133					
Organic C, Dissolve	80	mg/L	68.2	74	14.1			
Organic C, Total	100	mg/L	107	105	14.9			
Phosphorus, Total		mg/L	8.15	0.421	0.082			
Nitrate as N2		mg/L	0.35	0.33	3.44			
Nitrite as N2		mg/L	2.42	0.14	0.11			
Calcium		mg/L	20.8	413	35.1			
Chloride	250	mg/L	127	158	62.7			
Hardness (CaCO ₃)	500	mg/L	124	1360	182			
Magnesium		mg/L	17.6	80.1	23			
Potassium		mg/L	22.6	51.9	6.3			
Sodium	200	mg/L	87.7	165	62.2			
Sulphate	500	mg/L	12	1100	33			
Fecal Coliform	10 ⁴	CFU/100mL	124	<1	<1			
Oil and Grease	5000	µg/L	None	None	None			
Aluminium	1000	µg/L	80.5	104	10.8			
Arsenic	1000	µg/L	0.8	7.3	1.4			
Cadmium	100	µg/L	<0.1	1.8	<0.04			
Chromium	100	µg/L	0.6	2.0	0.2			
Cobalt	50	µg/L	0.4	8.9	1.0			
Copper	200	µg/L	73.6	412	5.9			
Iron	1000	µg/L	315	23900	68			
Lead	50	µg/L	0.7	48.3	0.1			
Manganese	50	µg/L	24.5	1500	13.2			
Nickel	200	µg/L	1.8	30.6	4.8			
Zinc	500	µg/L	84.6	954	4.5			
Mercury (Hg)	0.6	µg/L	<0.01	0.28	<0.01			

Parameters MAC value for **sewage effluent** identified in the Water Licence.

- **Red** fonts shows higher parameter values that requires more holding time before decanting/ discharge
- **blue** fonts shows values within allowable limit and ready for discharge the effluent water

Note: GJO-4 is Final Discharge point (end-of-pipe), and GJO-5 inside the Solid waste facility where effluent dries naturally, no decanting or discharge required. GJO-3A is at sewage Lagoon.

Gjoa Haven Water Licence: 3BM-GJO-1318

Monitoring Stations of sewage and solid waste sample collection

Sampling Station	GPS Location		Description	Frequency	Comments
	Latitude	Longitude			
GJO-1	N 68° 39' 22.9 "	W 95° 55' 06.5 "	Raw Water source at Swan Lake	Volume of water (Monthly)	No change
GJO-2	N 68° 37' 05 "	W 95° 50' 42 "	Solid Waste leachate discharge location		
GJO-2 (new)	N 68° 37' 13.7 "	W 95° 50' 23.2 "	Sewage discharge on wetland location	Outside the berm monthly (May-Aug)	Changed
GJO-3	N 68° 37' 28.8 "	W 95° 50' 21.9 "	Sewage truck offload point	From lagoon when decanting	At new Lagoon decanting point
GJO-4	N 68° 37' 23 "	W 95° 50' 39 "	Sewage effluent Final discharge on wetland		
GJO-4 (new)	N 68° 36' 59.6 "	W 95° 49' 48.0 "	Sewage effluent Final discharge point	On wetland Monthly (May-Aug)	Change location
GJO-5	N 68° 37' 05 "	W 95° 50' 44 "	Solid Waste Leachate retention sump pit.	only when decanting requires	No change

Notes:

- Suggested location of GJO-4 (new) is based on the trend of sewage effluent flow on wetland
- Old GJO-3 is moved from previous location to new truck off-load point at the new lagoon.
- Station GJO-5 is inside the Solid waste facility secured by berm. Sampling from GJO-5 is carried when requires decanting of effluent-water, mostly happened in mid-summer.
- changes of GJO-2 location by sequence location

AANDC inspection Report- 2017

Water Licence: 3BM-GJO1318



WATER LICENCE INSPECTION FORM

☒ Original
☐ Follow-Up Report

Licensee		Licensee Representative	
Hamlet of Gjoa Haven		David Stockley	
Licence No. / Expiry		Representative's Title	
3BM-GJO1318		Senior Administrative Officer	
Land / Other Authorizations		Land / Other Authorizations	
Date of Inspection		Inspector	
July 11, 2017		Baba Pedersen	
Activities Inspected			
<input type="checkbox"/> Camp	<input type="checkbox"/> Drilling	<input type="checkbox"/> Mining	<input type="checkbox"/> Construction
<input type="checkbox"/> Roads/Hauling	<input type="checkbox"/> Other:	<input checked="" type="checkbox"/> Other: Municipal Water License	<input type="checkbox"/> Reclamation
<input type="checkbox"/> 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				Water Management Structures		A		Storage			
Flow Measure. Device		A	2	Culverts / Bridges				Spills			
Source:				Drainage		A		Spill Plan			
Water Use:		A	2	Erosion / Sediment							
Recirculation (y /n)				Mitigation Measures				Administrative			
				Reclamation Activities				Records		A	2
				Materials Storage				Reports		C	9
Waste Disposal				Signage		C	1,3,5,6	Plans		A	8
Waste Water		A	5			A	4	Notifications			
Solid Waste		C	7	Monitoring				Other			
Hazardous Waste				Sample Collection / Analysis		A	1,4,5				
*The number in the comments field will correspond with specific comments provided below.											
Samples taken by Inspector:				Location(s):							
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				Samples were taken by Hamlet Staff as per Notes 1, 4 & 5							

SECTION 1	<input checked="" type="checkbox"/> Comments (s. __)	<input type="checkbox"/> Non-Compliance with Act or Licence (s. __)	<input type="checkbox"/> Action Required (s. __)
On July 11, 2017 I Inspected the Hamlet of Gjoa Haven’s Municipal Water License 3BM-GJO1318. I saw the Swan Lake Intake and Pump House, the In-Town Water Treatment Plant and Truck Fill Station, the Solid Waste Dump and Sewage Lagoon and all Associated Sample Stations. I was accompanied by Shah Alam, GN, CG&S and Adam Halluqtaliq and Dominique Qirqqut from the Hamlet of Gjoa Haven.			
SECTION 2	<input checked="" type="checkbox"/> Comments	<input type="checkbox"/> Non-Compliance with Act or Licence	<input type="checkbox"/> Action Required
1. At the Swan Lake Intake and Pump House (Photos 1 & 2) @ N 68°39’24.9” W 95°55’09.8” there was no Signage to indicate where Sample Station GJO-1 was located. Hamlet Staff took Samples here. 2. At the In-Town Treatment Plant and Truck Fill Station (Photo 3) I was shown the consumption amount from January to June 2017 as 22,614 cubic meters of water, well within authorized limits. 3. At the Solid Waste Leachate Discharge Location (Photo 4) with the GJO-2 Signage @ N 68°37’02.3” W 95°50’25.3”, I found this area to be dry and unsuitable for sampling. 4. At the Solid Waste Leachate Retention Sump Pit (Photos 5 & 6) with the GJO-5 Signage @ N 68°37’02.8” W 95°50’26.5” the Hamlet Staff took Samples here. 5. At the Sewage Effluent Final Discharge Point on the Wetland (Photo 7) @ N 68°36’59.6” W 95°49’48.0” I found the Signage marked GJO-7 was wrong. Hamlet Staff took Samples here. 6. The Sample Location marked GJO-4 (Photo 8) @ N 68°37’13.7” W 95°50’23.2” was found to be the wrong number. 7. At the Main Garbage Dump (Photos 9 & 10) I found large volumes of unburnt Garbage piled up very high. 8. The Annual Report has been submitted by CG&S and the Hamlet. 9. There were no records kept of how much volume was put into the Sewage Lagoon.			
SECTION 3	<input type="checkbox"/> Comments	<input type="checkbox"/> Non-Compliance with Act or Licence	<input checked="" type="checkbox"/> Action Required
1. Signage indicating where Sample Station GJO-1 is located at the Swan Lake Intake must be installed. 3. The GJO-2 Sample Location and Signage need to be moved from it’s current location to below the Sewage Lagoon where it is marked GJO-4 @ N 68°37’13.7” W 95°50’23.2”. 5. The Signage marked GJO-7 @ N68°36’59.6” W95°49’48.0” needs to be changed to GJO-4. 6. The Signage marked GJO-4 @ N 68°37’13.7” W 95°50’23.2” needs to be changed to GJO-2. 7. The Hamlet should seriously consider conducting regular controlled burning of the Garbage Dump using a Burn Box system in order to avoid an accidental uncontrolled large scale fire. 9. Daily and Monthly Records of how many Truck Loads are dumped into the Sewage Lagoon need to be kept in order to determine annual volumes.			



Licensee or Representative	Inspector's Name
	Baba Pedersen
Signature	Signature
	Signed Original on File
Date	Date
	6 March 2018

Office Use Only:	Follow-up report to be issued by Inspector	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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CC: licensing@nwb-oen.ca
 Manager of Field Operations, INAC
 Shah Alam, Municipal Engineer, Gov't of Nunavut



PHOTO LOG

Date	Camera	Inspector	Authorization
11 July 2017		Baba Pedersen	3BM-GJO1318
Photo Log # DSC00002		Location (N 68° 39' 24.9" W 95° 55' 09.8")	

Photo 1



Description: Swan Lake Water Intake – Sample Station GJO-1 – NO SIGNAGE

Photo Log # DSC09997

Location – Swan Lake

Photo 2



Description: Swan Lake Pump House and Back-up Truck Fill Station



Photo Log # DSC00007

Location In-Town

Photo 3



Description: Water Treatment Plant and In-Town Truck Fill Station

Photo Log # DSC00016

Location (N 68° 37' 02.3" W 95° 50' 25.3")

Photo 4



Description: Solid Waste Leachate Discharge location – Sample Station GJO-2 needs to be MOVED to where it is marked GJO-4



Photo Log # DSC00019

Location (N 68° 37' 02.8" W 95° 50' 26.5")

Photo 5



Description: Solid Waste Leachate Sump Pit – Sample Station GJO-5 – GOOD SIGNAGE

Photo Log # DSC00024

Location (N 68° 37' 02.8" W 95° 50' 26.5")

Photo 6



Description: Hamlet Staff Sampling at Solid Waste Leachate Sump Pit – Sample Station GJO-5 – GOOD SIGNAGE



Photo Log # DSC00050

Location (N 68° 36' 59.6" W 95° 49' 48.0")

Photo 7



Description: Sewage Effluent Final Discharge Point on Wetland – Sample Station marked GJO-7 needs to be CHANGED to GJO-4

Photo Log # DSC00057

Location (N 68° 37' 13.7" W 95° 50' 23.2")

Photo 8



Description: Sample Station marked GJO-7 needs to be CHANGED to GJO-2



Photo Log # DSC00033

Location – Main Garbage Dump

Photo 9



Description: Large Volume of Un-Burnt Garbage in Main Garbage Dump

Photo Log # DSC00029

Location – Main Garbage Dump

Photo 10



Description: Large Volume of Un-Burnt Garbage in Main Garbage Dump