



- **Government of Nunavut**

Community Visit Report – Gjoa Haven

Type of Document

Final

Project Name

Assistance with Water Licence Compliance Issues

Project Number

OTT-00209248-A0

Prepared By:

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Ottawa, ON K2B 7H6
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Date Submitted

March 2013

Government of Nunavut

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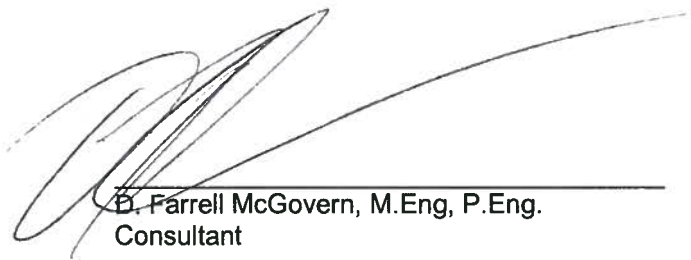
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March 2013

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1 Introduction

1.1 General

The Hamlet of Gjoa Haven currently holds water licence number 3BM-GJO0409, issued by the Nunavut Water Board (NWB) on January 8, 2004. An amendment, which appears to relate to some drainage works, was issued on September 4, 2008. This existing licence expired on January 31, 2009. Responsibility for enforcement of this licence lies with Aboriginal Affairs and Northern Development Canada (AANDC). AANDC has expressed concerns regarding conformity with the existing licence. Community and Government Services (CGS) of the Government of Nunavut (GN) has embarked upon a program of assistance to Gjoa Haven on matters relating to compliance with the Water Licence. In this regard, CGS has retained **exp** Services Inc (**exp**) to assist with the compliance issues and have prepared and submitted a Plan for Compliance. This plan includes a Community visit by **exp**. The following provides a summary of activities during the site visit conducted by D. Farrell McGovern and John Smith from **exp** accompanied by Shah Alam and Peter Evalik of CGS, on February 21 and 22, 2013.

The site visit included inspections water supply, wastewater treatment and solid waste disposal facilities.. The opportunity to conduct a comprehensive inspection was limited, to some degree, as the site visit was conducted during winter conditions.

1.2 Current Water Licence

The current water licence was issued on January 8, 2004 and expired on January 31, 2009. The scope of this licence includes water supply, sewage disposal and solid waste disposal. The licence permits that taking of 60,000 m³ annually from Swan Lake or Water Lake. The licence directs that all sewage be directed to the Sewage Disposal Facility and that all solid waste be disposed at the Solid Water Disposal Facility. The licence includes provisions for the monitoring of raw water quality, raw sewage and effluents from both the solid waste and sewage disposal facilities. Annual water consumption, together with the monitoring findings, forms a part of the information that should be provided in the annual report.

An application for renewal of the Water Licence was filed on March 19, 2010. A new water licence has not been issued, and it is reported that there are some outstanding issues in this regard, including operation and maintenance manuals for the sewage and solid waste disposal facilities.

1.3 Meeting with the Hamlet

A meeting was held with Gord Dinny, the Hamlet SAO, during the morning of February 22, 2013, during which various observations were discussed and additional information and clarifications were sought.

During the meeting with the Hamlet a copy of the current Water Licence, together with a copy of the draft compliance plan, was provided to the Hamlet.

It was reported that CGS, Cambridge had filed, on behalf of the Hamlet, the annual report for 2011 and 2012. Both of these annual reports can be found on the Water Board ftp site.

Following the meeting a review was conducted of various documents in the Hamlet offices.

2 Existing Facilities

2.1 Water Supply

The water supply is currently taken from Swan Lake. The former source, Water Lake, is no longer in service, and the berm that retained water within Water Lake has been breached.

Water is drawn into the pump house at Swan Lake via a pair of inclined shaft intakes. The pump house contains heating equipment, provided to avoid freeze of the transmission watermain linking the pump house and water treatment plant. There is also a truck loading arm at the pump house, which can provide for continuing service should there be operating issues with the transmission watermain. Photograph 1 depicts the exterior of the Swan Lake pump house.

Water is conveyed to the treatment plant via a transmission watermain that is approximately 3 kilometres in length. There have been reports of past operating challenges due to freeze of this watermain. Attentive operation by on-site CGS personnel appears to have improved the reliability of this watermain.

The water treatment plant is located adjacent to the developed area of the Hamlet, and south of the airport. This facility contains pressure filters, chlorination equipment, a treated water storage tank and equipment for truck loading. The facility appeared to be in good order. Treated water chlorine is measured and recorded on an on-going basis. Backwash water from the pressure filters is disposed of into a bermed area to the rear of the water treatment plant. This backwash stream is treated with a dechlorination chemical prior to discharge.

An abandoned truck-fill station is located 40 metres to the south of the water treatment plant. This facility appears to have been out of service for an extended period. A return to service is not possible due the breach in the Water Lake berm. Photograph 2 depicts this abandoned facility.

The various elements of the water supply system are depicted on Figure 1.

The water supply and treatment works were found to be in generally good condition. It has been reported that these facilities are currently operating reliably, which is the outcome of the diligence in this regard on the part of operating staff. Backwash from the filters is managed in a fashion that is likely reasonable, but this waste water discharge is not approved within the current licence. There do not appear to be Abandonment or Restoration Plans for the old truck-fill station or Water Lake.

The monitoring program requirements of the licence delineate a monitoring point (GJO-1) for raw water at Swan Lake. No sign was identified at this location, but observations in this regard were challenging due the winter conditions. Geo-referenced coordinates were captured at the intake point.

2.2 Wastewater Treatment

Waste water generated in the community is hauled to a site that is approximately 1.5 kilometres southeast from the centre of the Hamlet. This facility is a constructed lagoon that is approximately 180 metres in diameter. Sewage is discharged at the north side of the lagoon, and the discharge point is opposite the sewage receiving point. A semi-circular secondary cell that is approximately 40 metres in diameter has been provided adjacent to the primary cell and directly below the discharge from the primary cell. The discharge arrangement between the cells appears to be a pipe. The precise details of this discharge method were challenging to observe due to snow cover. Photograph 3, which was taken near the discharge point from the primary cell, illustrates the lagoon berms and the sewage discharge point. Photograph 4 illustrates the discharge pipe between the cells and the berms for the secondary cell. Effluent from the lagoon system is conveyed through an undefined wetland area prior to discharge into the sea. The wetlands provide a flow path approximately 1,000 metres prior to entering the marine environment. Figure 2 illustrates various features of the waste water management and disposal system.

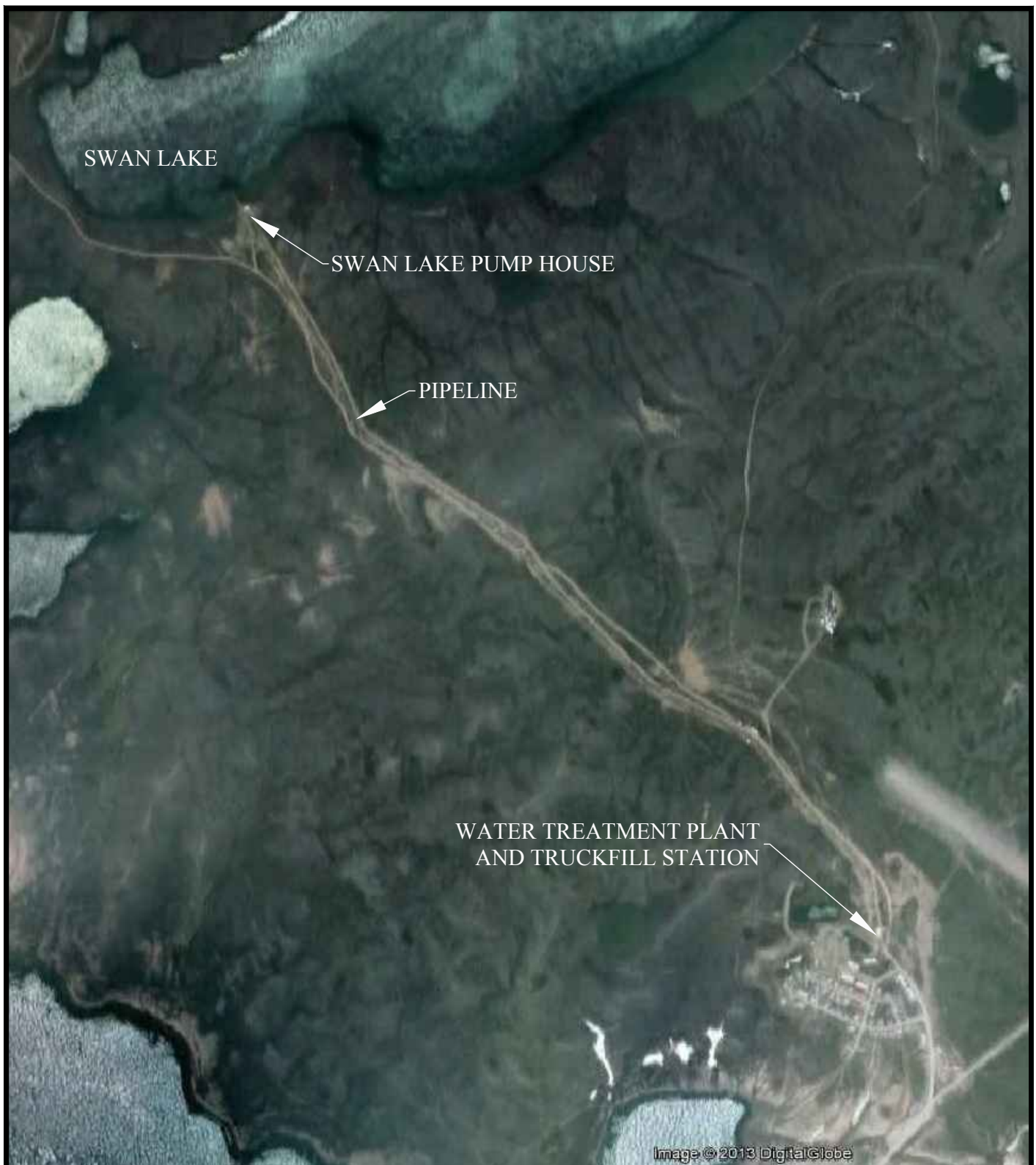


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scale	NTS	CLIENT:	GJOA HAVEN	project no.
date				OTCD000209248
drawn by				FIG 01
M.KELLEY		TITLE:	WATER SYSTEM	



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scale NTS	CLIENT: GJOA HAVEN	project no. OTCD000209248
date 22/03/13	TITLE: WASTE DISPOSAL FACILITIES	FIG 02
drawn by M.KELLEY		

There have been reports of instability for portions of the lagoon berms, and the matter of freeboard has been raised by the AANDC inspector. It has been reported that localized repairs have been conducted on the lagoon berms.

The monitoring program portion of the Water Licence stipulates two monitoring points for the sewage disposal system:

- GJO-3 raw sewage offload point, and
- GJO-4 Effluent discharge point from Final Discharge Point of the Sewage Disposal Facility.

The Licence contains a definition of the term Final Discharge Point, but the location of this point is not precisely defined in the Licence. During the site visit, no signage was noted at the monitoring points. Geo-referenced coordinates were obtained for the sewage off load point.

The Licence stipulates discharge limits (at GJO-4) for faecal coliform, BOD₅, total suspended solids, oil and grease, and pH. The 2012 annual report provides the results for samples taken in July, August and September, 2012. These values for all of these parameters are substantially lower than the criteria in the Water Licence, with the exception of faecal coliform measured in August. No data is provided for this parameter for this sampling date.

There is currently no approved operations and maintenance manual for the sewage disposal facility. The absence of this manual has been noted during the review of the application for renewal of the Water Licence.

It is reported that the Government of Nunavut is currently in the process of advancing a capital project for the development of new sewage lagoon system in Gjoa Haven. From a review of the Water Board ftp site it was determined that a development permit for the construction of a new lagoon was issued to Kudlik Construction in September 2012. A review of the Water Board ftp site has not identified drawings for this proposed facility.

2.3 Solid Waste

The current solid waste disposal site is located approximately 1.8 kilometres southeast from the centre of the Hamlet and approximately 700 metres south of the sewage off-loading point at the lagoon. Figure 2 illustrates the location and some features of this facility. A former solid waste disposal area, which is reported to have been cleaned-up was noted along the road to the existing solid waste facility. Photograph 5 depicts this former disposal area.

Approximately half of the perimeter of the solid waste disposal site is delineated by a fence. The west, south and east sides of this area appear to have been bermed. The fencing is in fair to poor condition with several openings, no gates and portions that have fallen over. Photograph 6 depicts a portion of the berm and fence. Photograph 7 depicts that area within the fenced perimeter where municipal solid waste is deposited. There was no indication of segregation of solid waste or management of hazardous wastes.

Beyond the fenced perimeter this is a substantial area where scrap metal has been disposed of in a generally un-managed fashion. Photograph 8 illustrates a portion of this area.

The monitoring station GJO-2 is defined in the Water Licence as the effluent discharge from the Final Discharge Point of the Solid Waste Disposal Facilities. A list of parameters for samples captured at this location is provided in the Licence, but no discharge criteria for these parameters are provided. The Annual Report for 2012 includes data for station GJO-2. Analytical results are provided for all of the stipulated parameters. The location of this monitoring station could not be identified during the site visit. This may be due, in part, to the winter conditions that prevailed during the visit. No signage at this monitoring station was identified.

There is currently no operations and maintenance manual for the solid waste disposal facility.

3 Water Licence Issues

3.1 Part B: General

3.1.1 B-1: Annual Report

It was reported that CGS, Cambridge had filed, on behalf of the Hamlet, the annual report for 2011 and 2012. A review of the NWB Public Registry confirmed that both of these annual reports can be found on the NWB Public Registry. The registry also includes several earlier annual reports, including 2005 and 2008. Data is unavailable for 2009 and 2010.

3.1.2 B-2: Licensee Shall Comply with the Monitoring Program

The monitoring program as listed in Part H of the water licence requires the Hamlet to undertake monthly sampling at sample points GJO-2 (Effluent discharge point from Final Discharge Point of the Solid Waste Disposal Facility) and GJO-4 (Effluent discharge point from Final Discharge Point of the Sewage Disposal Facility) during the months of May and August annually for 2012 as reported on the Hamlet's annual report. Water samples were taken for the months of July, August and September.

The monitoring program also requires that the quantity of water taken for all uses at sampling locations GJO-1 (Raw water supply at Swan Lake Water Supply prior to Treatment) be recorded on a monthly and annual basis. This information has been presented in the annual report.

The water licence requires that all waste disposed of at sampling point GJO-3 (Raw sewage at truck off load point) be reported on a monthly and annual basis. As per the agreement between CGS and the Nunavut Water Board this quantity is taken to be similar to the quantities of water pumped at monitoring station GJO-1 and has been reported in the water licence as such.

The requirements of the water licence will be further clarified under the QA/QC program to be prepared by **exp** prior to June 1st, 2013. This information will be incorporated into the training program as outlined Section 4 below.

3.1.3 B-5: Post Signs to Identify Monitoring Stations

As part of the community site visit, the monitoring stations GJO-1 and GJO-3 were visited and geo-referenced locations obtained. There was no signage indicating the location of these monitoring stations. Monitoring Stations GJO-2 and GJO-4 could not be located due to snow cover and the absence of signage indicating the location of the monitoring stations. Procurement of the appropriate signs required to mark the location of the monitoring stations as required by the Gjoa Haven water licence will be part of the tender for procurement of monitoring station signage to be prepared by **exp**. Procurement and installation for the signage will occur during the summer of 2013. The geo-referenced locations of the monitoring stations located during the community site visit are as follows:

Monitoring Station	Latitude	Longitude
GJO-1	N 68° 39' 22.9"	W 95 55' 06.5"
GJO-2	Not located	Not located
GJO-3	N 68° 37' 28.8"	W 95° 50' 21.9"
GJO-4	Not located	Not located

3.2 Part C – Conditions Applying to Water Use

3.2.1 C-2: Quantity of Water Usage

The quantity of water used reported in the 2012 Annual Report submitted by the Hamlet of Gjoa Haven reports a total of 35,950 m³ of water, which is less than the maximum 62,000 m³ of water specified in the water licence.

3.3 Part D – Conditions Applying to Waste Disposal

3.3.1 D-3: Maintain a 1 Metre Freeboard

As reported in 2012 Annual Report, an overflow pipe has been installed with a freeboard of 1.3 m with respect to the lowest crest of the berm. This overflow pipe is intended to maintain a minimum freeboard of greater than 1 m as per the requirements of the water licence. It was possible to confirm the presence of this pipe, but due to snow cover at the time of community site visit, it was impossible to verify compliance with the freeboard concern.

3.3.2 D-7: Ensure Leachate from Solid Waste Site does not enter the Water

The 2009 inspector's report identified the occurrence of sewage and landfill effluent mixing at the solid waste disposal site. Currently there is no segregation or proper containment of hazardous waste at the site. Furthermore, the solid waste disposal site is not designed to contain leachate onsite. The berm located at the down gradient corner of the site does not contain an impervious liner and therefore, leachate passes through the berm into the environment.

To mitigate negative environmental effects of leachate the Hamlet should segregate and contain hazardous waste. This can be accomplished by storing hazardous waste in a shipping container, then transfer it south to a licensed hazardous waste disposal facility once the container is full. The leachate from the waste disposal site should also be contained and properly managed. This can be accomplished by lining down gradient corner of the landfill berm. The water from the landfill will collect in this area and can be tested and based on the results, discharged either into the sewage lagoon for treatment or to the natural environment.

3.3.3 D-8: Report Identifying Final Discharge Points

As reported in Section 3.1.3 above, the final discharge point for the Sewage Disposal Facility and the Solid Waste Disposal Facility could not be identified during the community site visit due to the presence of snow cover and the absence of signage. It is proposed that the GN shall coordinate locating the final discharge points as part of the installation of the monitoring station signage during the summer of 2013. It is also proposed that the final discharge point report will be issued prior to October 31st, 2013.

3.4 Part F - Conditions Applying to Operations and Maintenance

3.4.1 F-1: Operation and Maintenance Manuals

The Hamlet maintains a hard copy of the Operation and Maintenance Manual (O&M manual) for the water supply facility. A review of the Nunavut Water Board public registry has not found a copy indicating that an electronic copy is not available to the Nunavut Water Board. CGS through the Hamlet will arrange to have the hard copy of their O&M manual for this facility converted to an electronic version and provide it to the Nunavut Water Board.

An O&M manual for the wastewater facility is not available. As the existing wastewater facility is to be decommissioned and replaced with a new facility, due for construction in 2013, an O&M manual will be developed for the new facility prior to the commissioning of the facility.

An O&M manual for the solid waste management facility is not available. An O&M manual will be prepared according to the criteria outlined in the water licence and submitted to the Nunavut Water Board prior to July 1st, 2014.

3.5 Part G - Conditions Applying to Abandonment and Restoration

3.5.1 G-1: Abandonment and Restoration Plans

The existing wastewater treatment facility is to be abandoned upon commissioning of the new facility. An abandonment and restoration plan (A&R Plan) shall be provided by CGS, in conjunction with the project associated with the construction of the new wastewater treatment facility, six months prior to commissioning new facility, as required by the water licence.

As reported above in Section 2.1, there is an abandoned truck fill station located approximately 40 m south of the new water treatment facility. An abandonment and restoration plan (AR plan) shall have to be prepared for this facility by CGS.

3.6 Part H - Conditions Applying to the Monitoring Program

3.6.1 H-1: Maintain Monitoring Stations

The monitoring stations were identified as part of the community site visit and it was noted that no signage was present at any of the four monitoring stations. Signs to properly identify the monitoring stations, as per the requirements of the water licence, will be procured as part of the tender documents to be prepared by **exp** for procurement and installation of the required signs prior to August 31st, 2013.

3.6.2 H-2: Monthly Sampling at GJO-2 and GJO-4

The water licence requires that monthly samples be taken at monitoring stations GJO-2 and GJO-4 for the months of May through to August.. Samples were obtained between July and September 2012. Sample results have been submitted with the Hamlet's Annual Report. The monitoring requirements of the water licence will be part of the QA/QC plan to be prepared and submitted to the Hamlet by **exp** prior to June 1st, 2013.

3.6.3 H-3: Monthly and Annual Quantity of Water Pumped at GJO-1

Monthly and annual totals of water quantity pumped at GJO-1 have been reported as per the water licence with a total annual consumption of 35,950 m³ of water which less than the maximum 62,000 m³ of water allowed under the water licence.

3.7 Other Documentation

The following information was obtained from the Hamlet during the Community visit.

- The Hamlet has a copy of the current Water Licence, The current Water Licence expired January 31, 2009.
- The Hamlet has a copy of the draft Plan for Compliance. A copy of the Final Plan for Compliance will be provided to the Hamlet upon its approval.

3.8 Unlicensed Activities

The Hamlet's current Water Licence regulates those activities that require licencing, including water supply, sewage disposal and solid waste disposal. It was noted that there is a discharge of backwash water from the water treatment plant that is not permitted in the current licence.

4 New Training Program

As per the Plan of Compliance, and upon review of the monitoring requirements of the water licence, **exp** recommends the Environmental Monitoring Training Program for Hamlet Staff should include the following topics:

1. Types of Environmental Monitoring Program Samples such as surface water, groundwater, sewage effluent, and sewage sludge.
2. Pre-Sampling Activities such as placing a timely sample bottle order for the required parameters to be sampled as per the schedule provided in the water licence, procuring the necessary personal protective equipment (PPE), bottle order verification (ensuring the integrity of the sample bottles), inspection of sampling equipment, and inspection of sampling locations for any site damage or dangerous conditions that may prevent the collection of environmental monitoring program samples.
3. Sampling Safety Concerns such as the proper use of PPE, potential sampling location hazard identification, the proper use of sampling equipment, adverse weather issues, etc.
4. Sample Collection Procedures such as the correct usage of container/sample bottle for parameter being tested, the correct labelling of sample bottles and filling out record/field sheet, the prevention of cross-contamination, the correct field sampling technique for the type of sample being collected, and the collection of QA/QC samples.
5. Sample Care Procedures such as sample bottle cleaning, sample preservation and packaging, sample documentation (properly completing the Chain of Custody), and the use of custody seals.
6. Sample Shipping and Tracking Procedures such as ensuring timely shipment of samples to the analytical laboratory to ensure sample hold times are met, following up with the analytical laboratory to ensure samples were received in a timely manner, following up with the analytical laboratory to ensure that the results were provided within the specified turn-around time.
7. Avoiding Common Errors Associated with Environmental Monitoring Sample Collection such as incorrect bottle/preservative use, incomplete or incorrect sample documentation, etc.

Appendix A – 2012 Annual Report



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NUNAVUT IMALIRIYIN KATIMAYINGI
NUNAVUT WATER BOARD
OFFICE DES EAUX DU NUNAVUT

February 08, 2013

File No. 3BM-GJO0409/B1

Shah Alam, P.Eng.
Municipal Planning Engineer
Community and Government Services
Bag 200
Cambridge Bay, NU X0B 0C0
Email : salam@gov.nu.ca
saogjoa@qiniq.com

Subject: Submission of 2012 Annual Report – 3BM-GJO0409

Dear Shah Alam,

The Nunavut Water Board (“NWB”) acknowledges receipt, on January 31, 2013, of the 2012 Annual Report, as a requirement of Part B, Item 1 of the current licence.

The submission has been placed on the NWB public registry and is available from the NWB ftp site username: **public**, password: **registry**. This report is forwarded to the distribution list for information only. Anyone wishing to provide comments may do so by return e-mail to licensing@nunavutwaterboard.org

Sincerely,

Original signed by:

Megan Porter
Licensing Administrator Assistant

cc. Kitikmeot Distribution List

January 31, 2013

Nunavut Water Board

PO Box 119

Gjoa Haven, Nunavut

X0B 1J0

Attention: Phyllis Beaulieu, Manager of Licensing

RE: "Annual Report 2012"- Hamlet of Gjoa Haven, NU (Licence No. NWB3-GKO0409)


Dear Ms. Beaulieu,

The Hamlet of Gjoa Haven is pleased to submit to Nunavut Water Board the attached file of "Annual Report" of water uses and sewage solid waste disposal as required and directed under the compliance of use in Water Licence No. NWB3-GJO-0409 as stated above. Copies of required tests reports are attached herewith the report as requested for your review and requirements.

With the help of Government of Nunavut through Community and Government Services, we have undertaken a comprehensive waste management monitoring program which has led to improvement of sewage and solid waste site facilities, wetland and effluent discharge. Our annual monitoring program for water, sewage and solid waste has been in effect since summer 2012. Sample test result has shown excellent control on contamination parameters within allowable limits including BOD, TSS, E-coli and Toxicity

We hope that Nunavut Water Board will find our supporting documents valuable to Annual Report in operating the Water Licence for water, sewage and solid waste facility.

Sincerely,


 Jan 31, 2013
Shah Alam, P. Eng.

Municipal Planning Engineer

Community & Government Services

Bag 200

Cambridge Bay, NU X0B 0C0

 867-983-4156

Email: salam@gov.nu.ca

(On behalf of Senior Administrative Officer),

Hamlet of Gjoa Haven, Nunavut

ANNUAL REPORT

YEAR BEING REPORTED: 2012

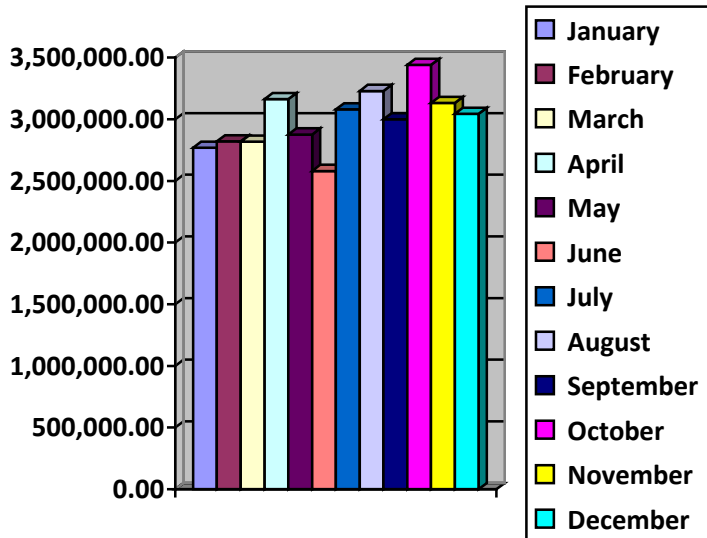
The following information is compiled pursuant to the requirements of **Part B, Item 1** of Water Licence Number **NWB3GJO-0409** issued to the **Gjoa Haven**

- 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	2,768,576.71	Same
February	2,820,136.28	Same
March	2,817,191.70	Same
April	3,162,235.60	Same
May	2,876,048.00	Same
June	2,580,736.90	Same
July	3,080,420.20	Same
August	3,229,565.40	Same
September	2,999,727.50	Same
October	3,440,088.00	Same
November	3,132,082.40	Same
December	3,043,711.90	Same
ANNUAL TOTAL	35,950,520.59	Same

ANNUAL REPORT



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:

- No modification or major maintenance carried out for water intake and transmission- existing water supply system, transmission line, re-heating stations and treatment system remains in operation with water intake from same water source Swan Lake.
- New sewage lagoon facility contract including wet land extension for discharge from new Lagoon has been awarded and scheduled for construction starts early in summer 2013. Construction of new Lagoon will facilitate effluent stream on wet land and onto ocean with sufficient retention time for natural treatment.

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

- No unauthorized discharge listed by the Board to follow up. But INAC Report 2011 indicated sign of untreated effluent outside the cell berm suspecting overflow or leakage underneath the berm. Overflow pipe has been installed inclined inward with freeboard more than 1.3 m with respect to lowest crest of berm. No overflow on berm or leak noticed since the repair of the berm. Sign of wetness outside the cell is from snowmelt water from surrounding due to the depression outside of berm in some localized area. Sample tests result also shows parameters of contamination within allowable lower limit in effluent.

ANNUAL REPORT

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

- No abandonment or restoration work completed during the year 2012.
- Construction for new sewage lagoon scheduled to start with targeted completion by end 2013 and will be ready for operation by early 2014. Once completed and approved for operation, abandonment and restoration of existing lagoon will be taken for study. Expecting abandonment of existing lagoon and adjacent wetland sometime in 2014-15

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;

- NWB has advised to propose for a 'Short Term Plan and undertaking with regard to the part G, item 1 for Abandonment & Restoration plan, O & M manual for Sewage Lagoon, Solid Waste Sites and Spill contingency Plan completed six (6) months prior to decommissioning of existing lagoon. Construction of new sewage lagoon project expected completion in late 2013 which included preparation of updated O & M manual, spill contingency plan (new sewage lagoon & wetland), and decommissioning of existing lagoon.

Once finally determined the completion date, Abandonment and Restoration plan of existing Sewage lagoon will be carried and submitted to NWB for review and action. A "short Term Plan for compliance" has submitted the Board for review and approval.

- Capital program was not included the Solid Waste facility improvement, unless a separate project undertaken which were already in proposal and waiting for Federal Funding or Donor assistance. However, annual monitoring and maintenance were continued as per direction and instruction which included waste dump separation, segregation of metals and toxic materials, retention of effluent, sampling/decanting, safe storage of dump and protection of illegal dumping. Short Term Plan also covered such activities and operation until a new facility in place.
- GN has engaged EXP consultant to survey, study, review and preparation of operational document of solid waste site facility including intensive training program for hamlet operators. EXP will resume the field survey by the 3rd Week of February 2013. As outlined in the Short Term Plan, the hamlet will continue the operation and monitoring program with the direction of the Board, EXP and existing manuals until an updated manual in hand. The Board will be updated with the study and plan.

ANNUAL REPORT

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

Water Licence remains expired with NWB since February 01, 2009 as reported without amendment and extension for non-Compliances.

Report from AANDC 2012 requested for submission of Annual Reports 2006 through 2010, updated O & M manual for sewage and solid waste sites, compliance plan and abandonment & Restoration plan of sewage lagoon.

Hamlet has already submitted the updated Annual Reports 2011 and 2012 now in place, it is too late to locate those Annual Reports 2006 and they will not match with current facilities using for water or sewage system. Hamlet has also submitted a short term and long term plan for compliances after the Inspector's visit of site facilities.

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- ix updates or revisions to the approved Operation and Maintenance Plans.
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EXP consultant is expecting working with hamlet in regards to monitoring program, operator training, sewage and solid waste site facilities improving and updating O and M manuals.

New sewage lagoon construction contract integrated in providing O & M manual for sewage waste site and abandonment & restoration of existing sewage facility. Such documents will be available once the facility comes in operation and the Board will be updated accordingly.

ADDITIONAL INFORMATION THAT THE LICENSEE DEEMS USEFUL:

AANDC inspection report 2012, indicated unauthorised decanting of sewage waste to secondary lagoon, practically the lagoon is a single cell and an overflow pipe with more than 1.2 m free board for self-flow out of sewage once it fills up to the pipe flow level. This can happen during summer time when sewage melts and comes to its capacity. No manual and pump decanting requires. Lagoon berm has already been repaired since reported before and so as free board. Moreover, this lagoon will be no longer in use once new lagoon in place-expecting end of 2013. Hamlet has comprehensive plan for solid waste site management with the help of EXP consultant

FOLLOW-UP REGARDING INSPECTION/COMPLIANCE CONCERNS:

Appendix B – Photographs



Photo 1: Swan Lake Pump House



Photo 2: Abandoned Truck-fill Station



Photo 3: Near the Discharge Point from the Sewage Lagoon Primary Cell



Photo 4: Discharge pipe between the Cells and the Secondary Cell



Photo 5: Former Solid Waste Disposal Area



Photo 6: Berm and Fence at Solid Waste Disposal Site



Photo 7: Active Solid Waste Disposal Area



Photo 8: Bulky Metal Disposal Area