



September 18, 2015



A summary of the issues that the Applicant should address is:

- A. Application general: issues related to the NWB Application Form, and related to the information provided in the Application Form;
- B. reports / studies / plans to be submitted with the Application;
- C. revised edition of the submitted plans taking into consideration reviewers recommendations provided on January 2014 submissions.

**A. Application Form General**

The submitted Application Form corresponds to an old edition of the NWB Form, where some blocks of the Application Form are either missing or incomplete, in addition reviewers have asked about clarification on the scope of the Application, requesting whether the new Waste Solid Disposal Facility and new aggregate deposits are included under the Application scope. Therefore the Board requests the Hamlet:

1. To resubmit the Application using an updated edition of the NWB Application Form for water licence renewal (Application Form for Renewal edition 2013);

**Answer: Please see attached updated Application in the from edited in 2013.**

2. To include the additional information required to address Block 15 of the Application Form (Quantity and Quality of Waste Involved) including composition, quantity in m<sup>3</sup>/day, method of treatment and disposal, for each type of waste identified;

**Answer: Please see the answer in block 15 of the updated application attached.**

3. To include in blocks 23 more current activities related to studies undertaken to date and the proposed time schedule;

**Answer: Please see the reply in block 23 in the attached updated Application.**

4. To clarify whether the new Solid Waste Management Facility is under the scope of the Application for renewal;





**Answer: No.**

5. To clarify whether any new quarry or aggregate deposits are to be considered in the Application.

**Answer: No**

**B. Reports / Studies / Plans to Be Submitted with the Application**

**B1 Enhanced Sewage Treatment Facilities:**

The enhanced sewage disposal facility (constructed in 2001 and upgraded in 2008) comprises of an upper lagoon, a lower lagoon, and wetlands but it has not been commissioned yet due to concerns from the community, regulators, and the NWB.

The Dam Safety Review Report on September 13, 2013 informs of a number of issues which compromises the lower sewage pond operational condition, such as: the lower portion of the berm is leaking at several locations and fines have been washed out from the berm in these areas. Remedial measures have been proposed and are outlined in the Review Report and an implementation Plan has been requested by the Board in order to render the Facility operational. The Implementation Plan has not yet been submitted.

The GN-CGS retained Nunami Stantec Ltd. to conduct a fish and fish habitat assessment of the wetland system upstream of the receiving body. According to the schedule in Appendix F, field sampling was conducted in September 2013 and another sampling program was scheduled in June 2014. A preliminary finding report was scheduled to be available on March 2014 and a final report was expected by November 2014. The Report on fish and fish habitat assessment of the proposed wetland area in Kimmirut has not been submitted yet.

According to Appendix L, GN-CGS is planning a 3 year site-specific study on the wetland downstream from the new sewage lagoons to determine wetland efficiency.



Sampling will be done for 3 years starting the year after commissioning of the enhanced sewage disposal facility (expected in 2015) and evaluation reports will be submitted with annual reports. Following AANDC's recommendation, the NWB requested the plan for this study be submitted to the NWB for review prior to commissioning of the enhanced sewage disposal site to ensure that issues pertaining to eventual compliance architecture are not overlooked. The Plan has not been submitted yet.

Comments provided by Torng, Iqaluit Public Health Unit expressed concern about the likelihood of seepage, overflow or direct discharge of the wastewater from the lagoons into Fundo Lake and recommends that a Risk Management Plan which includes monitoring for seepage or overflow and spill contingency plan should be in place to address that potential concern/scenario. Also it is recommended to identify a second water source as source's reserve in case seepage from the lagoon should impact the water quality of the primary water source (Lake Fundo).

Therefore, the following Plans/ Studies are required in order to complete the submission in relation with Plans and studies to be submitted.

1. Implementation Plan in order to address the remedial measures proposed in the Dam Safety Review Report for the lower sewage lagoon;

**Answer: The lower berm will be stabilized as required prior to Commissioning these lagoons.**

2. The Report on fish and fish habitat assessment of the proposed wetland area;

**Answer: Final report was submitted to NWB (Sonia) and AANDC (Justin)**

3. Plan for the three year site specific study on the wetland to determine wetland efficiency;

**Answer: The site specific study was proposed only to be carried out one year after the date of the commissioning the lagoons. The proposed scope of work is attached. The lagoons were not commissioned yet and this plan is put on hold. The purpose of renewal of the Hamlet Water licence is to allow Hamlet to determine and implement the next degree of optimization of these lagoons treatment system of the Community wastewater annually produced.**

Risk Management Plan and a General Contingency Plan: in order to evaluate the likelihood of seepage, overflow or direct discharge of the sewage effluent into Fundo





Lake it is required a Risk Management Plan (RMP) that includes monitoring for seepage or overflow along with a General Contingency Plan to address those concerns /potential scenarios.

**Answer: Hamlet is conducting Bacteria testing of the Raw water of Fundo Lake on monthly basis and Chemical Analysis twice annually following their standard Risk Management Plan.**

**B2 . Solid Waste Disposal Facility, Sewage Disposal System and Water Supply Facility:**

The O&M Manual/Plan for the Water Treatment Facility and corresponding Spill Contingency Plan (SCP) have not been submitted.

**Answer: Please find attached the O&M plan of Kimmirut Water Truck fill station.**

In addition, according to Part G, Item 1b) the Licensee shall submit to the Board approval and Abandonment and Restoration Plan at least six months prior to the construction of new facilities to replace the existing ones, therefore an A&RP for the Sewage Disposal System is required in order to satisfy this Licence condition.

**Answer: Truck Sewage is being discharged on the top of the slope of the Hill and untreated raw sewage runs from there to the toe of the slope of that Hill and finally merges into the sea water. This raw sewage dumping location is not a facility that A&R plan is required to be presented. Nothing is to be abandonment and Restoration. Only change is the location of Truck dumping raw sewage into the new lagoons which are engineered facilities.**

**A. *Additions/ Modifications Recommended by the Reviewers to the Submitted Operational Plans***

The Board recommends the Licensee to read the comments provided by the reviewers during the review period, a summary of reviewers requirements is provided in this part.



1. Revisions to the Operations and Maintenance Manual for the Enhanced Sewage Disposal Facility to address: (a) the Board's November 28, 2012 correspondence to GN-CGS and the Hamlet of Kimmirut regarding *Water Licence 3BM-KIM0911 – Resubmission of the Final "Operations and Maintenance Manual for Hamlet of Kimmirut Wastewater Facility"* (b) revision to Spill Response Plan taking into consideration the comments submitted by AANDC on January 10, 2014; and (c) revision to section 4.8 (Quality Assurance/ Quality Control Plan) taking into consideration the comments submitted by AANDC on January 10, 2014;

**Answer: QA/QC plan has been supported by the Accredited Lab named Caduceon Lab in Ottawa, ON. And their letter of support is attached in the Final O&M manual.**

2. Revised *Environmental Monitoring Program – Sample Collection Training Program* report taking into considerations AANDC's recommendations provided in January 10, 2014 submission.

**Answer: Hamlet has been following the GN-CGS established training and monitoring program supported by AANDC and NWB to satisfy the Water licence requirements.**

**Hamlet also respects and follows the direction of CGS Report Card recently established.**

Finally, the Board would like to express its concern related to the following issues informed in the AANDC 2104 Inspection Report:

- 1) "A 45 gallon drum, full of fuel and sitting on a wooden stand immediately adjacent to the Potable water source was identified as an issue for the inspector. This formed an unacceptable level of risk to the Inspector and the fuel was found to be within 30 m of the Potable source. As such the Inspector ordered the drum to be removed by licensee";

**Answer: This fuel drum was removed elsewhere long time ago. This is no more an issue.**

- 2) "While sampling was conducted within the community there are concerns that the locations, number of samples and parameters being sampled for are not consistent with the requirements of the License."





**Answer: The new sewage lagoons were not commissioned yet. As a result, the sampling stations were not established. However, Hamlet has been advised to follow the protocol and install these monitoring stations prior to commissioning these lagoons. Currently Hamlet has kept these monitoring signs in their Garage for future use.**

I will be glad to answer any question,

Regards  
Sonia

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The following documents are attached with this application:

1. Kimmirut Fish Habitat Assessment Project, March 2014
2. Kimmirut Wetland Treatment Feasibility Study, January 2015
3. Proposed three(3) years site specific Study on the Wetland
4. Existing O&M manual of Water Truck fill station
5. Renewal Application in the new edition 2013 signed by Senior Administrative Officer of Kimmirut

If you have any question or concern, Please contact me. I will appreciate if you will keep me in the loop for the approval process of this application.

Thanks

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