



March 25, 2011

Our reference  
IQALUIT-#452560

Sent by email: [licensing@nunavutwaterboard.org](mailto:licensing@nunavutwaterboard.org)

Phyllis Beaulieu  
Manager of Licensing  
Nunavut Water Board  
Gjoa Haven, Nunavut  
X0E 1J0

Your reference  
3BM-SAN0308

**Re: Type 'B' Water Licence No. 3BM-SAN0308 – Hamlet of Sanikiluaq –  
Sanikiluaq, Nunavut – Qikiqtani Region – Renewal Application**

Dear Phyllis,

Thank you for your February 23, 2011 request for written representations on the above referenced submission.

A Technical Review Memorandum is provided for the Board's consideration.

Please do not hesitate to contact me by telephone at 867 975-4555 or email at [David.Abernethy@inac-ainc.gc.ca](mailto:David.Abernethy@inac-ainc.gc.ca) to discuss this submission.

Regards,

David W. Abernethy  
Water Resources Regional Coordinator  
Operations Directorate  
Nunavut Regional Office  
Iqaluit, Nunavut  
X0A 0H0

Encl.

c.c.: J. Rogers, Water Resources Manager  
P. Kusugak, Field Operations Manager  
A. Keim, Water Resource Officer

## Technical Review Memorandum

<b>TO</b>	Phyllis Beaulieu Manager of Licensing Nunavut Water Board	OUR REFERENCE File #9545-2-3.3BM.SANA IQALUIT-#452560
<b>FROM</b>	David Abernethy Water Resources Regional Coordinator Indian and Northern Affairs Canada	YOUR REFERENCE 3BM-SAN0308  DATE March 25, 2011
<b>SUBJECT</b>	<b>Type 'B' Water Licence No. 3BM-SAN0308 – Hamlet of Sanikiluaq – Sanikiluaq, Nunavut – Qikiqtani Region – Renewal Application</b>	

### A. PROJECT DESCRIPTION

On February 23, 2011 the Nunavut Water Board (the Board) distributed notice of the Hamlet of Sanikiluaq's (the Hamlet) Type 'B' Water Licence renewal application. Documentation pertaining to this renewal application are available for review on the Board's online public registry. The Hamlet's Water Licence allows for the use of water and disposal of waste associated with municipal undertakings. The Hamlet is situated on the northern end of Flaherty Island, a large central island of the Belcher Islands located in southern Hudson Bay. Approximately 869 people live in this remote municipality.

The Hamlet, represented by the Government of Nunavut's Department of Community and Government Services (GN-CGS), is requesting a five (5) year renewal to the term of their Water Licence. Applicable municipal infrastructure include a Water Supply Facility, a Sewage Disposal Facility (treatment lagoon), and Solid Waste Disposal Facilities. The Water Supply Facility's water truck fill station was scheduled to be replaced in 2010 and plans are being developed to replace the existing Sewage Disposal Facility and Solid Waste Disposal Facilities.

The Hamlet's Water Licence requires the submission of a series of documentation pertain to water supply and waste management infrastructure. The timely submission and implementation of applicable plans and reports contribute to the Hamlet's overall compliance with the terms and conditions of their Water Licence.

## **B. RESULTS OF REVIEW**

On behalf of the Indian and Northern Affairs Canada (INAC) Water Resources Division I am providing the following comments/ recommendations for the Board's consideration,

### **1. General Observations**

- The INAC Water Resources Division supports the Hamlet of Sanikiluaq's Water Licence renewal application. The Hamlet and the GN-CGS are encouraged to regularly brief the Board and INAC Water Resource Officers on the status of their efforts to comply with Water Licence terms and conditions.
- The Hamlet's expired Water Licence (expired November 15, 2008) had time sensitive terms and conditions, many of which were not fulfilled. These terms and conditions included: the submission of a report that identified Final Discharge Points for the release of effluent; an Operations and Maintenance Manual specific to the Sewage and Solid Waste Disposal Facilities; and the submission of Annual Reports by March 31<sup>st</sup> of the year following the calendar year being reported. The Hamlet should strive to comply with the terms and conditions of their Water Licence or explain in detail why they (the Hamlet and the GN-CGS) cannot meet licence terms and conditions. Compliance with licensed terms and conditions will demonstrate the efforts taken by the Hamlet and the GN-CGS to protect the surrounding aquatic ecosystem for the benefit of the residents.

### **2. Water Use**

- The Hamlet is requesting the daily use of less than or equal to 100 cubic metres of water. The Trow Associates May 2010 Design Brief submitted for the Hamlet's new truck fill station estimates an annual water use of 35,500 cubic metres. The Hamlet's request and Trow estimate are consistent, however, the INAC Water Resources Division suggests that water use growth over the last four (4) years and the next five (5) years has not been adequately considered. INAC recommends that the annual limit specified in a renewed Water Licence should be closer to 40,000 cubic metres per year pending agreement from the Hamlet.
- Considering the location of Sanikiluaq, the INAC Water Resources Division wonders if the microbiological quality of sampled water is

tested by Winnipeg Health Centre as stated in the November 5, 2010 letter from the GN-CGS or if the comment is in error.

### **3. Upgrades to Water Supply Facility**

According to the November 5, 2010 letter submitted by the GN-CGS to the Board titled, "Reply to Water Licensing Issues: Sanikiluaq Water License #3BM-SAN0308," rehabilitation construction works associated with the Water Supply Facility' (construction of a new water truck fill station) was scheduled to be complete in November 2010. However, to date, neither the GN-CGS nor the Hamlet have provided a record of completion of the rehabilitation nor submitted as built plans/ drawings for these modifications pursuant to Part E, Item 4 of the Water Licence. The Hamlet should provide this documentation to the Board.

### **4. Operation and Maintenance Manual**

Part F, Item 1 of the Water Licence requires the submission of an Operations and Maintenance Manual for the Hamlet's Sewage and Solid Waste Disposal Facilities. To date, the required manual has not been submitted to the Board. The status of this manual is addressed in the November 5, 2010 GN-CGS letter to the Board. The GN-CGS stated that, a "draft O&M Manual for the water supply facility was already sent to the Board and that an O&M Manual for the Sewage and Solid Waste Disposal Facility is not available because they are not engineered. Once design works for these facilities are completed applicable Operations and Maintenance Manuals will be submitted."

The INAC Water Resources Division understands that the Part F, Item 1 Water Licence requirement was for the Hamlet to submit an Operations and Maintenance Manuals specific to the licensed Sewage and Solid Waste Disposal Facilities. The purpose of this manual is to assist Hamlet staff in the proper operation and maintenance of these existing facilities, as well as to demonstrate that the Hamlet is capable of operating and maintaining their waste disposal facilities. The INAC Water Resources Division recommends that the Hamlet, perhaps with assistance from the GN-CGS, be required to submit an Operations and Maintenance Manual that includes the following components, as individual plans, as soon as possible or at least within sixty (60) days of any licence renewal,

- An Operation and Maintenance Plan for the Water Supply Facility;
- An Operation and Maintenance Plan for the Sewage Treatment Facility;
- An Operation and Maintenance Plan for the Solids Waste Disposal Facilities;

- A Hazardous Waste Management Plan;
- A Spill Contingency Plan;
- A Monitoring Program Quality Assurance/ Quality Control Plan.

This Operations and Maintenance Manual should be revised and provided to the Board as new facilities are commissioned.

## **5. Hazardous Materials and/ or Leachate Management from the Solid Waste Disposal Facility**

Part D, Item 7 of the Water Licence requires the Hamlet to implement measures to ensure hazardous materials and/ or leachate from the Solid Waste Disposal Facility do not enter water. The Hamlet and the GN-CGS have not addressed hazardous material and leachate management in any Operations and Maintenance Manual.

Based on the August 17, 2010 INAC Inspection Report and the GN-CGS July 24, 2010 Inspection Report, approximately sixty (60) 220 L abandoned barrels containing waste oil, glycol, and unknown substances are positioned near the Hamlet's Solid Waste Disposal Facility, with evidence of leaking from some barrels. The Hamlet should properly dispose of these barrels and remediate contaminated soils. As noted in the GN-CGS Inspection Report, runoff from this area drains through a nearby pile of demolition garbage before subsequently entering the Sewage Disposal Facility.

## **6. Final Discharge Report**

Part D, Item 8 of the Water Licence requires the submission of a report that identifies each Final Discharge Point. As a minimum, this report is to include, (a) Plans, specifications, and a general description of each Final Description Point together with its specific geo-referenced location; and (b) A description of how each Final Discharge Point is designed and maintained.

In their November 5, 2011 letter to the Board, the GN-CGS provided the location coordinates for the "tentatively established" point at the end of the sewage treatment lagoon in a wetland area. A location map referenced in this letter was also submitted with the renewal application. The INAC Water Resources Division recommends greater detail to satisfy the requirements of the licence condition. The Monitoring Program Stations (i.e., SAN-2, SAN-3, and SAN-4) should also be referenced in an appropriately scaled topographic map.

## **7. Monitoring Requirements**

The Hamlet must ensure that all Water Licence monitoring requirements are satisfied. In particular, the Hamlet must provide timely Annual Reports (Part B, Item 1 of the Water Licence) and adhere to the conditions listed in Part H of the Water Licence. The Hamlet has not indicated that the effluent discharged from the Sewage Disposal Facility meets the effluent quality standards specified in Part D, Item 2 of the Water Licence. This information along with all other applicable monitoring information should be included in future Annual Report submissions (i.e., submission of sampling results.).

## **8. Informing the INAC Water Resource Officer (Inspector)**

The INAC Water Resources Division recommends that the Nunavut Water Board remind the Hamlet and the GN-CGS that the INAC Water Resource Officer should be copied on correspondence relating to compliance with the terms and conditions of the water licence,

Prepared by David Abernethy

Attached.

c.c.: J. Rogers, Water Resources Manager  
P. Kusugak, Field Operations Manager  
A. Keim, Water Resource Officer