



March 28, 2011

Our reference
IQALUIT-#453382

Sent by email: licensing@nunavutwaterboard.org

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

Your reference
3BM-QIK0712/F1

Re: Type 'B' Water Licence No. 3BM-QIK0712 – Hamlet of Qikiqtarjuaq – Qikiqtarjuaq, Nunavut – Qikiqtani Region – Revised Operations and Maintenance Plan for Water Reservoir, Sewage Lagoon, and Solid Waste Disposal Facility

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 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

Technical Review Memo

TO	Phyllis Beaulieu Manager of Licensing Nunavut Water Board	OUR REFERENCE File #9545-2-3.3BM-QIKA IQALUIT-#453382
FROM	David Abernethy Water Resources Regional Coordinator Indian and Northern Affairs Canada	YOUR REFERENCE 3BM-QIK0712/F1 DATE March 28, 2011
SUBJECT	Type 'B' Water Licence No. 3BM-QIK0712 – Hamlet of Qikiqtarjuaq – Qikiqtarjuaq, Nunavut – Qikiqtani Region – Revised Operations and Maintenance Plan for Water Reservoir, Sewage Lagoon, and Solid Waste Disposal Facility	

A. PROJECT DESCRIPTION

On February 23, 2011 the Nunavut Water Board (the Board) distributed notice of the above-referenced Operations and Maintenance (O&M) Plan that was submitted by the Government of Nunavut's Department of Community and Government Services (GN-CGS) on behalf of the Hamlet of Qikiqtarjuaq (the Hamlet). This submission was made pursuant to Part F, Item 1 of the Hamlet's Type B Water Licence, No. 3BM-QIK0712. The O&M Plan can be downloaded from the Board's online public registry.

The sections included in this plan are as follows,

- Section 1.0 – Introduction;
- Section 2.0 – Background Information on Hamlet Operations;
- Section 3.0 – Operation and Maintenance of the Water Storage and Treatment Facility;
- Section 4.0 – Operation and Maintenance of the Sewage Treatment Facility;
- Section 5.0 – Operation and Maintenance of the Solid Waste Disposal Facility;
- Section 6.0 – Emergency Procedures;
- Section 7.0 – Annual Reporting;
- Section 8.0 – Environmental Emergency Response Plan;
- Section 9.0 – Summary of Monitoring Program; and,

- Section 10.0 – Quality Assurance /Quality Control Plan

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 submitted O&M Plan appears to be appropriate for its intended use. The INAC Water Resources Division notes that it was prepared by Nuna Burnside Engineering and Environmental Ltd. in September 2010. The Hamlet (and the GN-CGS) should ensure that they retain both a hard copy of this plan on site for use by community personnel and inspectors and an electronic version that can be easily modified in the future.

2. Hazardous Waste Storage Area

The submitted O&M Plan should be revised to include a description of the Hazardous Waste Storage Area that is referenced in Section 5 (of the plan). As a minimum, the types of hazardous wastes directed to this facility, its capacity of retaining any spills, and procedures for ensuring that hazardous waste materials are delivered to approved treatment facilities should be provided. The Hamlet or the GN-CGS should indicate to the Board whether they have or will budget for the removal of hazardous wastes.

3. Burning Activities in the Solid Waste Landfill

The submitted O&M Plan should be revised to list what materials are considered to be appropriate for open burning at the Hamlet's Solid Waste Landfill. The INAC Water Resources Division does not encourage the burning of combustible waste materials as a form of disposal. Rather, the disposal of non-hazardous waste materials in approved facilities is preferred. In the event that the open burning of waste materials acceptable to the Board is carried out, the following recommendations are provided,

- Only waste materials considered to be acceptable for burning by the Board can be burned;
- Waste materials that the Board considers to be inappropriate for burning should not be burned;

- Waste materials considered to be acceptable for burning should be appropriately sized (cut if necessary) to promote complete burning; and,
- The burn shall remain in a 'hot phase' or 'hot burn' until complete combustion of the product(s) has taken place and no unburned wood debris is left over. Air assistance to the fire should be considered to improve complete burning of combustible waste materials.

4. Wetland Treatment Area

Section 9.3 of the submitted O&M Plan states that Monitoring Program Station (MPS) No. QIK-6 (controlled point of release from the Sewage Treatment Lagoon) is considered to be the final discharge point for treated sewage effluent until MPS No. QIK-12 is established (Wetland Treatment Area is commissioned). The INAC Water Resources Division recommends that the Board confirm with the Hamlet (and GN-CGS) the anticipated timeline for commissioning the Wetland Treatment Area and submitting the assessment report required by Part D, Item 7 of the Water Licence.

5. Inspection of Engineered Facilities

The submitted O&M Plan does not reference the Part E, Item 4 Water Licence requirement that all engineered facilities related to the management of water and waste be inspected by a geotechnical engineer annually in the month of July. The engineer's report and a letter from the Hamlet outlining an implementation plan to address the engineer's recommendations are also required. The INAC Water Resources Division recommends that the O&M Plan be revised to address this Water Licence requirement.

6. Removal of Sludge from the Sewage Treatment Lagoon

The submitted O&M Plan does not reference procedures for the removal of sludge from the Hamlet's sewage treatment lagoon. The INAC Water Resources Division recommends that sludge be removed from this facility on a regular basis as a means of ensuring effective wastewater treatment and sludge removal be added to the Hamlet's O&M Plan. If the Hamlet does not intend to remove sludge they should provide justification.

7. Training

The Hamlet (and GN-CGS) should outline how Hamlet staff will be trained to implement this O&M Plan. As a minimum, training providers by topic (e.g., water sampling, Workplace Hazardous Materials Information Systems, spill response, and facility operation), the frequency of training program delivery, and Hamlet positions that require training should be specified.

8. Spill Kits

Section 8.5.2 of the submitted O&M Plan states that there are three (3) spill kits for responding to spills of sewage, solid waste, and petroleum products that may occur as a result of water supply and distribution, sewage collection and treatment, and solid waste collection and disposal operations. The contents of these kits are described. The INAC Water Resources Division recommends that this plan be revised to reference the kits locations.

9. Treatment of Recovered Contaminated Materials

The methods of treating recovered contaminated materials (including soil and water) are not provided in Section 8 of the submitted O&M Plan. This information should be included in a revised plan. Procedures for on-site treatment and/ or delivery to an approved treatment facility should be described.

10. INAC Contact for Reporting Spills

Inspectors/ Water Resource Officers are the primary INAC contacts for reporting spills. They can be contacted by telephone at 867 975-4295 or fax at 867 979-6445. This information should be included in Section 8.3 of the submitted O&M Plan.

Prepared by David Abernethy

c.c.: J. Rogers, Water Resources Manager
P. Kusugak, Field Operations Manager