



Your file - Votre référence
3BM-HAL1520

June 29, 2015

Our file - Notre référence
IQALUIT-#924422

Phyllis Beaulieu
Manager of Licensing
Nunavut Water Board
GJOA HAVEN, NU X0E 1J0

**Re: Aboriginal Affairs and Northern Development Canada Review of the Hamlet of Hall Beach's
Application to Amend Water Licence No. 3BM-HAL1520**

Dear Ms. Beaulieu:

Thank you for your email of May 28, 2015, concerning the above mentioned water licence amendment application. A memorandum is provided for the Board's consideration. Comments and recommendations have been provided pursuant to Aboriginal Affairs and Northern Development Canada's mandated responsibilities under the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* and the *Department of Indian Affairs and Northern Development Act*.

Please do not hesitate to contact me by telephone at 867-975-4555 or email at David.Abernethy@aandc-aadnc.gc.ca for further information.

Sincerely,

David Abernethy
Regional Coordinator
Water Resources Division
Resource Management Directorate
Aboriginal Affairs and Northern Development Canada
IQALUIT, NU X0A 0H0

Encl.

c.c.: Andrew Keim, A/Manager, Water Resources Division, AANDC Nunavut
Erik Allain, Manager, Field Operations Division, AANDC Nunavut

Memorandum

To: Phyllis Beaulieu, Nunavut Water Board

From: David Abernethy, Aboriginal Affairs and Northern Development Canada

CC: Andrew Keim (AANDC) and Erik Allain (AANDC)

Date: June 29, 2015

Re: Application to Amend Water Licence No. 3BM-HAL1520

Applicant: Hamlet of Hall Beach

Project: Expansion and Rehabilitation of Sewage Lagoon Cell No. 1

Region: Qikiqtani

Comments:

Background

On May 28, 2015, the Nunavut Water Board (NWB) provided notification of the Hamlet of Hall Beach's (the "Hamlet") application to amend their type B water licence, No. 3BM-HAL1520, to allow for the expansion and rehabilitation of an existing sewage lagoon cell, referred to as Cell No. 1. The Hamlet's sewage treatment facility is located one km north of the community on the western shore of Foxe Basin. The existing lagoon system consists of two exfiltration lagoons that share a common berm. The southernmost cell, referred to as Cell No. 1 has a capacity of 15,295 m³, and the northernmost cell, referred to as Cell No. 2, has a capacity of 15,462 m³. Sewage effluent exfiltrates from the lagoon cells into a wetland prior to entering the marine environment. Sewage Lagoon Cell No. 1 has encountered problems with leakage under and through its southern berm.

The Hamlet has determined that a total storage volume of 41,746 m³ is required to meet its municipal wastewater effluent storage requirements up the year 2036. To satisfy this requirement and effluent discharge criteria, the Sewage Lagoon Cell No. 1 storage capacity will be expanded to 26,284 m³ and be fully lined. Treated effluent will be pumped from this cell to the downstream wetland over a one month period in the late summer or early fall each year.

Interested parties were asked to review this application and provide comments by June 29, 2014.

Results of review

On behalf of Aboriginal Affairs and Northern Development Canada, the following comments and recommendations are provided:

1. Site Preparation for Lagoon Cell Expansion

Source: Exp Services Inc. *Hall Beach Sewage Lagoon Design Brief*. Prepared for the Government of Nunavut, Department of Community and Government Services. Project No. OTT-00220382-A0. Ottawa: December 5, 2014.

Government of Nunavut, Department of Community and Government Services. *Technical Summary for the Rehabilitation of the Sewage Lagoon Cell-1 of the Hamlet of Hall Beach*. Prepared for the Hamlet of Hall Beach.

Comment: Section 5 of the submitted design brief recommends that, “the entire zone of influence for the berm expansions and/or liner installations should be stripped of any existing sludge, garbage, surficial organic/peat later and/or any other soft saturated materials encountered to expose a structurally stable subgrade of either unfrozen or frozen well-graded soils.”

Section 5 of the design brief also notes that the lagoon cell will be expanded into an area that was previously used as a local dump that contains a layer of debris that must be excavated (pieces of metal, wood, plastic, glass etc.). This layer of debris may be contaminated from sewage effluent that has exfiltrated from the lagoon cell.

The technical summary document states that, “garbage will be removed from the proposed footprint and disposed of in the solid waste site.” It is not known if garbage includes the layer of debris identified above.

Recom: The Hamlet should confirm how it will manage sludge and debris removed from the site prior to expanding Sewage Lagoon Cell No. 1. Industry standards should be followed for managing all material excavated from the expansion area with particular attention on contamination resulting from municipal waste water effluent.

The Hamlet should receive written Board approval before depositing any waste (including sludge) in the solid waste facility.

2. Sewage Treatment Facility Operation and Maintenance

Source: Nunavut Water Board. *Water Licence No. 3BM-HAL1520*. Issued to the Hamlet of Hall Beach. April 30, 2015.

Dillon Consulting Ltd. *Hamlet of Hall Beach Sewage Treatment Facility Operation and Maintenance Manual*. Prepared for the Hamlet of Hall Beach and the Government of Nunavut, Department of Community and Government Services. June 2011.

Comment: If the submitted water licence amendment application is approved, the Hamlet will be required to update its Sewage Treatment Facility Operation and Maintenance Manual to reflect the expansion and rehabilitation of Sewage Lagoon Cell No. 1.

Recom: If the submitted water licence amendment application is approved, the Hamlet should submit an updated Sewage Treatment Facility Operation and Maintenance Manual to the Board. This should be updated plan should be submitted with an Annual Report pursuant to Part B, Item 1 of the licence.

Prepared by David Abernethy