



Water Resources
Nunavut Regional Office
P.O. Box 100
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Your file - Votre référence
3BM-TAL0813

January 13, 2014

Our file - Notre référence
CIDM# 763792

Phyllis Beaulieu
Manager, Licensing
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU, X0A 1J0

Re: #3BM-TAL0813 – Hamlet of Taloyoak licensing of an un-engineered wetland for sewage disposal – Government of Nunavut, Department of Community and Government Services (GN-CGS) – Kitikmeot Region – Renewal/Amendment Application

Dear Phyllis Beaulieu:

Please be advised that Aboriginal Affairs and Northern Development Canada (“AANDC”) have completed a technical review of the water license renewal/amendment application 3BM-TAL0813 submitted by Government of Nunavut’s Department of Community and Government Services (CGS) on behalf of the Hamlet of Taloyoak. The Nunavut Water Board (“NWB”) circulated the renewal/amendment application for technical review on December 6, 2013. All documents related to the request posted on the NWB ftp site under 3BM-TAL0813 were included in my review (see attached Technical Review Memo).

Should you have any questions or comments, please do not hesitate to contact me at (867) 975-4282 or by e-mail at ian.parsons@aadnc-aadnc.gc.ca



Regards,

Sent via Email

Ian Parsons
Regional Coordinator

Cc. Murray Ball, Manager of Water Resources, AANDC
Erik Allain, Manager of Field Operations, AANDC



Technical Review Memorandum

To: Phyllis Beaulieu – Manager of Licensing, Nunavut Water Board

From: Ian Parsons – Regional Coordinator, AANDC

Existing Licence: 3BM-TAL0813

Re: #3BM-TAL0813 – Hamlet of Taloyoak licensing of an un-engineered wetland for sewage disposal – Government of Nunavut, Department of Community and Government Services (GN-CGS) – Kitikmeot Region – Renewal/Amendment Application

1. Project Description

The Government of Nunavut's Department of Community and Government Services ("GN-CGS") has submitted a water license amendment application on behalf of the Hamlet of Taloyoak. The amendment application is for the inclusion of an un-engineered wetland treatment area added, if approved, to the wastewater management system. This amendment, if approved would then be incorporated into the water license renewal. Currently the Hamlet of Taloyoak's has an expired water license (Expired September 30, 2013)

2. Results of Review

Background

AANDC notes that during the Hamlet's last licensing process several concessions were made by the Nunavut Water Board so the Hamlet could come into compliance with their water license 3BM-TAL0813. Some of these concessions/approvals were, but are not limited to:

- 1) The granting of a five (5) year license instead of a two (2) year license being requested by the Hamlet. This was done to allow for sufficient time for the licensee to seek amendments to the water license to allow for wastewater and landfilling activities, as these two activities are not part of the approved water license 3BM-TAL0813.

The NWB stated at the time that "The Licencee is strongly encouraged to seek amendments to this Licence as soon as possible in order to have its wastewater treatment and landfilling activities permitted under a Water Board Licence.

The NWB has also placed a requirement for the Licensee to submit a 'Plan for



Compliance' that will detail how the waste management facilities will be brought under the Licence. This requirement can be found under Part B, Item 10 of the Licence. AANDC notes that although a plan of compliance was submitted in late 2012 several of these commitment dates have passed without anything being done. AANDC also notes that the board in this case has made another concession in allowing the licensee to submit an updated interim compliance plan, dated September 30, 2013.

AANDC also notes that as per Part F Item 1 of Water license 3BM-TAL0813 that the licensee is required to submit operation and maintenance plans for its facilities along with a spill contingency plan. These plans also have yet to be submitted by the licensee.

Current Amendment Undertaking

1. AANDC notes that as a result of discharge from the Hamlet of Taloyoak's wastewater management system that the licensee is in direct non-compliance of their water license which states under **Part D Conditions Applying to Waste Disposal Item 1** that *"This License does not allow for any activities related to sewage disposal, treatment and discharge, solid waste collection, containment or disposal. An application for an amendment to this license will be required to permit these activities"*.
2. AANDC notes in reviewing this amendment application that little evidence is presented regarding the effectiveness or reliability of the proposed wetland treatment. The following clarification requests and recommendations are offered for the Board's consideration:
 1. The area referred to as a "wetland area" which is directly downstream of the sewage retention area is currently undefined with no controls to limit the spread of effluent to the environment. AANDC recognizes that the wetland is un-engineered however AANDC recommends that if this area is to be considered a "wetland area" and as such part of the wastewater treatment system then its area should have to be defined. This would allow and afford protection for people and the environment.
 2. AANDC recommends that the "wetland area" also have a collection area or a receiving pond/lagoon as a last point of control where samples can be collected and analysed before being discharged to the environment. This would allow for confirmation that the wastewater meets discharge criteria before being released to the environment. Currently the system utilizes a natural waterbody as a retention pond upstream of the "wetland area". Evidence suggests a natural outflow (a direct continuous uncontrolled discharge) into the "wetland area" and the receiving environment. AANDC further recommends that before the wetland treatment be included in the water licence, evidence be



provided on the wetland retention time and discharge control required to ensure treatment objectives are met.

3. AANDC also would like further clarification on how the effluent will be discharged to the “wetland area”. As AANDC understands currently there is no control as to how much effluent leaves the wastewater retention area at any given time. Given this scenario and the fact that the retention area is in a frozen state during the winter months while still being filled with wastewater AANDC has concerns that the “wetland area” may be overwhelmed during spring freshet and may not afford any treatment during this crucial time.
4. In a letter, dated July 30, 2013, submitted by the Government of Nunavut to the NWB it states that “Based on sampling results completed in summer of 2012 and 2013, there is evidence to support that treatment of effluent occurs within wetland area”. AANDC notes that the pictures submitted with the amendment application supporting the “wetland area”, looks more like a stream or creek that meanders down to the ocean than an actual wetland area. AANDC recommends that further investigation is warranted as to how much treatment is actually happening or is the treatment essentially dilution.

AANDC would like to mention another important point in regards to the “wetland area”. In reviewing this file it has come to the attention of AANDC that there is also run-off and seepages occurring from the adjacent solid waste facility that is going directly into this so called “wetland area”. AANDC recommends that all run-off and seepages from the solid waste facility be contained and treated before being discharged to the environment.

Based on the points raised above, and considering the evidence provided in the current application, AANDC recommends that the amendment application for an un-engineered wetland to be included as part of the wastewater management system not be approved as a regulated facility.