



Water Resources Division
Resource Management Directorate
Nunavut Regional Office
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March 23, 2018

Ida Porter
Licensing Administrator
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU, X0B 1J0

Your file - Votre référence
2BB-BOS1217

Our file - Notre référence
CIDM#1213265

Re: Indigenous and Northern Affairs Canada's comments on Nunatta Environmental Services Inc.'s renewal application for water licence #1BR-NUN1217 – Nunatta Environmental Landfarm Project

Dear Ms. Porter,

Thank you for your February 19, 2018 invitation for technical review comments on the above referenced application.

The Water Resources Division of Indigenous and Northern Affairs Canada (INAC) examined the application and the results of our review are provided in the enclosed memorandum for the Nunavut Water Board's consideration. Comments have been provided pursuant to INAC's mandated responsibilities under the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* and the *Department of Indian Affairs and Northern Development Act*.

INAC appreciates the opportunity to participate in this review. If there are any questions or concerns, please contact me at (867) 975-3876 or by e-mail at sarah.forte@canada.ca.

Sincerely,

Sarah Forté
Water Management Specialist

Technical Review Memorandum

To: Ida Porter, Licensing Administrator, Nunavut Water Board

From: Sarah Forté, Water Management Specialist, Water Resources Division, INAC

Date: March 23, 2018

Re: Review of Renewal Application for Type B Water Licence 1BR-NUN1217

Applicant: Nunatta Environmental Services Inc.
Project: Nunatta Environmental Landfarm
Region: Qikiqtani

A. BACKGROUND

On February 19, 2018 the Nunavut Water Board (Board) provided notification of Nunatta Environmental Services Inc.'s (Nunatta or the licensee) submission of a renewal application for Type B water licence 1BR-NUN1217 for the Nunatta Environmental Landfarm Project.

The licence for the landfarm project has been amended and renewed since at least 2005. The latest licence, which expired on December 31, 2017, allowed for the deposit of waste. The site is located within the limits of the City of Iqaluit, in its industrial park in the northwest.

As the project title indicates, the undertaking licensed is a landfarm that includes four cells. Hydrocarbon impacted soils are accepted on site where they are treated using bioremediation to degrade contaminants. Remediated soils are shipped out for use as landfill cover or road surfacing.

The Board requested interested parties review the application and make representations by March 23, 2018.

B. RESULTS OF REVIEW

On behalf of Indigenous and Northern Affairs Canada (INAC) Water Resources, the following comments and recommendations are provided for the Board's consideration.

1. Water discharge

Reference:

- Application for Water Licence Renewal – Nunatta Environmental Landfarm Project, Nunatta Environmental Services Inc., December 2017, Boxes 12 and 13
- Site Operations Manual, Nunatta Environmental Services Inc., December 2017, Section 11
- 1BR-NUN1217 Annual Reports for 2012 to 2016, Nunatta Environmental Services Inc., March 2013 to 2017

Comment:

In box 12 of the application, Nunatta indicated that are seeking permission for water use, specifically *“Allow freshet water to be released to the environment if required.”* This would typically be considered a deposit of waste (box 14). Further, in box 13 of the renewed water licence application, the quality of water returned to the source remained the same but its quality was no longer the same as for the existing licence. The licensee also wrote *“in the last 2 years there has been no discharge at all.”*

The Site Operations Manual includes a section entitled “Water Treatment and Discharge to the Environment”, suggesting that discharge of treated water is still an operation that might occur. This fits with the data from the last five annual reports, which indicate that water has been discharged in three of the last five years.

Though water management practises at the landfill may have changed recently, reducing the need to discharge treated water, retaining the possibility of doing so in the event it is necessary is appropriate, as requested by Nunatta.

Recommendation:

A renewed water licence should allow for the discharge of treated water meeting appropriate criteria, even though the application was filled in atypically.

2. Discharge criteria for treated water

Reference:

- Site Operations Manual, Nunatta Environmental Services Inc., December 2017, Section 11
- Nunavut Water Board Licence 1BR-NUN1217, Nunavut Water Board, December 2012

Comment:

The “Water Treatment and Discharge to the Environment” section of the Site Operations Manual describes the methods and equipment to be used to treat site water before it can be discharged. The Manual refers to CCME criteria for determining adequacy of treatment before discharge.

The water licence to be renewed contains criteria for discharge. Part E, Item 16 defines criteria for pH, total suspended solids, oil & grease, total lead, benzene, toluene and ethylbenzene which are not referenced in the Site Operations Manual.

Recommendation:

The licensee should be modify the Site Operations Manual to either include a reference to the licence discharge criteria, or to cite them directly in the manual.

3. Replacing cell no.1 liner

Reference:

- 1BR-NUN1217 Type “B” Water Licence Amendment No.1, Nunavut Water Board, August 2013
- 1BR-NUN1217 – Land Farm Reconstruction and Rehabilitation – James H Wilson, Nunatta Environmental Services Inc. – Qikiqtani Region – Licence Amendment, Aboriginal and Indigenous Affairs Canada, July 24, 2013
- Design Drawings and Cell Construction, Nunatta Environmental Services Inc., December 2017
- 1BR-NUN1217 Annual Reports for 2013 to 2016, Nunatta Environmental Services Inc., March 2014 to 2017

Comment:

In 2013, the licensee applied for and was granted an amendment to increase the size of cell no.2 and replace the liners in both cells no.1 and no.2. The reasoning for the expansion was to make better use of space. Replacement of liners was necessary due to the age and deterioration of the previous liners.

The Design Drawings and Cell Construction document reports on work done to date and future work planned for cell no.2. The information is consistent with what has been presented in the 2015 and 2016 Annual Reports.

No mention is made of work done on or planned for cell no.1 was found in the Design Drawings and Cell Construction or in the 2013 to 2016 Annual Reports.

Recommendation:

The licensee should inform the Board on the status of the liner replacement for cell no.1. If the work has been completed, the issue is closed. It is also satisfactory if the work is still planned after cell no.2 liner has been replaced. If there has been a change in plans, and the aged and deteriorated liner in cell no.1 is to be left in place, the licensee should justify why its replacement is no longer deemed to be necessary.

4. Annual reports

Reference:

- 1BR-NUN1217 Annual Reports for 2012 to 2016, Nunatta Environmental Services Inc., March 2013 to 2017

Comment:

The licensee has provided detailed and complete Annual Reports in the last 5 years. This is appreciated and we encourage Nunatta to continue producing quality annual reports.