



Water Resources Division
Resource Management Directorate
Nunavut Regional Office
P.O. Box 100
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May 9, 2019

Richard Dwyer
Manager of Licensing
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU, X0B 1J0

Your file - Votre référence
3BM-CAP0810

Our file - Notre référence
CIDM# 1250106

**Re: Crown-Indigenous Relations and Northern Affairs Canada review of the
Water Licence #3BM-CAP0810 – Hamlet of Cape Dorset**

Dear Ms. Porter,

Thank you for your April 18, 2019 invitation for technical review comments on the water licence renewal application for the Hamlet of Cape Dorset.

The Water Resources Division of Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) examined the renewal 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 CIRNAC's mandated responsibilities under the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* and the *Department of Indian Affairs and Northern Development Act*.

CIRNAC appreciates the opportunity to participate in this review. If there are any questions or concerns, please contact me at (867) 975-4568 or by e-mail at Lisa.Bachelier@canada.ca

Sincerely,

Lisa Bachelier
Water Resource Technician

Technical Review Memorandum

To: Richard Dwyer, Manager of Licensing, Nunavut Water Board

From: Lisa Bachellier, Water Resource Technician, Water Resources Division, CIRNAC

Date: May 9, 2019

Re: Review of Renewal Application for Type B Water Licence 3BM-CAP0810

Applicant: Government of Nunavut - Community and Government Services
Project: Hamlet of Cape Dorset
Region: Qikiqtani

A. BACKGROUND

On April 18, 2019, the Nunavut Water Board (NWB) provided notification of Government of Nunavut - Community and Government Services' (GN-CGS) submission of a renewal application for Type B water licence 3BM-CAP0810 for the Hamlet of Cape Dorset.

The Hamlet of Cape Dorset has an expired licence for Municipal Undertakings for the use of 192 cubic meters of water per day and for the deposit of waste.

Water is drawn from Tee Lake and pumped through a pipeline to reservoirs at the truck fill station. The Hamlet uses trucks for both delivering water and collecting sewage. The Three-Tier sewage Lagoon and the Emergency Lagoon are the sewage disposal facilities for the community.

Solid wastes in the Hamlet are segregated with bulky materials and metals disposed of at the metal dump and other waste including household waste brought to the landfill.

The NWB requested interested parties review the application and make representations by May 9, 2019.

B. RESULTS OF REVIEW

Crown-Indigenous and Relations Northern Affairs Canada (CIRNAC) Water Resources has read the documentation provided. On behalf of CIRNAC, the following comments and recommendations are provided for the NWB consideration.

1. Solid waste

Reference

- Solid waste operation and Maintenance Plan for Hamlet of Cape Dorset dated April 2019 section 8.0 Monitoring station sub-section 8.1 Monitoring Requirements - Table Monitoring stations.

CIRNAC comment: Under the Monitoring stations table the applicant has provided a location CAP-2 Runoff from solid waste disposal facilities, but has not provided location coordinates.

Reference

- Operation and Maintenance Manual of existing sewage treatment system Hamlet of Cape Dorset February 2019 Guideline waste water sewage sampling.

Wastewater: During decanting of sewage lagoon, three times samples are collected from designated sample points: at the beginning, at the middle, and at the end of decanting period. Collect monthly treated samples from the first point of discharge of sewage (end of pipe) as long as flow is seen.

CIRNAC comment: It is unclear when the decanting of sewage lagoon and what the coordinates are for samples collection.

2. Annual Report

Reference

- 2018 Annual Report section v.1; *The emergency lagoon is mainly used during the winter and decanting every other week samples are taken during decanting and tested.*

CIRNAC comment: There are no coordinates of where samples are taken or results. Please provide coordinates of where samples were taken and the results.

Reference

- Under section vii. of the 2018 Annual Report; *A summary of any abandonment and restoration work completed during the year and an outline of any work anticipated for future years. No abandonment and restoration work was conducted during this reporting year. Hamlet is expected a new wastewater treatment plant in next 3/4 years. Once this is commissioned, the three cells lagoon will be expected to be*

decommissioned. P lake unused sewage lagoon is expected to be decommissioned at the same time as well.

P Lake sewage lagoon are not engineered facilities. 3 cell sewage lagoons constructed two separation berms, a new sewage lagoon is built in 2007, and it is not yet commissioned until it is operational and commissioned.

CIRNAC comment: CIRNAC recommends that the P lake sewage lagoon is kept in the water licence until it is reclaimed.

3. QA/QC Plan

Reference

- Cape Dorset Sewage Lagoons_Quality Assurance/ Quality Control Plan Dated September 2018 under section 1.5 scope of work

CIRNAC comment: A quality assurance and quality control plan should include a duplicate sample it recognized that a trip blank it added to the plan but to ensure a quality

Reference

- Solid waste operation and maintenance plan Dated April 2019 section 2.2 .1 Monitoring Stations Table.

CIRNAC comment: Please provide Latitude/Longitude for the following monitoring stations; CAP-3 Influent of waste water to waste water facilities, CAP-4 Effluent discharge from the 2001 sewage disposal facility, CAP-5 Effluent discharge from Emergency Sewage Disposal Facility, CAP-19 Monitoring well down gradient of the solid waste disposal facilities, and CAP-20 Monitoring well location down gradient of the solid waste facility.

Reference

- Solid waste operation and Maintenance Plan for the Hamlet of Cape Dorset Dated April 2019 under section 1.0 Introduction

There is no engineered Land farm built to accommodate and treat contaminated soil of this community. The soil conditions and ground water in the active layer during warmer months are not indicated from the two monitoring wells installed to monitor ground water quality.

CIRNAC comment: To ensure during freshet of waters an engineered land farm should be built and stamped by an engineer to understand the soil and ground water conditions.

Sincerely,

Lisa Bachellier

Water Resource Technician