



Water Resources Division
Resource Management Directorate
Nunavut Regional Office
P.O. Box 100
Iqaluit, NU, X0A 0H0

July 9, 2018

Your file - Votre référence
8BC-EUR1621

Our file - Notre référence
CIDM#1222738

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

**Re: Crown-Indigenous Relations and Northern Affairs Canada's comments on
Environment and Climate Change Canada's amendment application for water
licence #8BC-EUR1621 – Eureka High Arctic Weather Station Project**

Dear Mr. Dwyer,

Thank you for your June 15, 2018 invitation for technical review comments on the above referenced application.

The Water Resources Division of Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) 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 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) 975-3876 or by e-mail at sarah.forte@canada.ca.

Sincerely,

Sarah Forté
Water Management Specialist

Technical Review Memorandum

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

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

Date: July 9, 2018

Re: Review of Amendment Application for Type B Water Licence 8BC-EUR1621

Applicant: Environment and Climate Change Canada
Project: Eureka High Arctic Weather Station
Region: Qikiqtani

A. BACKGROUND

On June 15, 2018, the Nunavut Water Board (Board) provided notification of Environment and Climate Change Canada's (licensee) submission of an amendment application for Type B water licence 8BC-EUR1621 for the Eureka High Arctic Weather Station Project.

The High Arctic Weather Station (HAWS – Eureka, Nunavut) is located on the Fosheim Peninsula, Ellesmere Island and has been in continuous operation by Environment and Climate Change Canada (ECCC; the applicant) since 1947. Staff and instrumentation at the Eureka station collect weather data for the production of weather forecasts. The station also supports local scientific activities, and exploration projects. Infrastructure at the Eureka station includes living accommodations, power generation, a runway, and water and sewage services; and generally supports a population of ten inhabitants. The 2016 renewal and amendment of the licence allowed for a runway recapitalization project and the construction of a new multi-purpose building. The completion of these projects involves setting-up a temporary camp for ~50 people as well as quarrying activities at the Black Top Creek Quarry.

The present amendment is for the development of a new quarry site, West Remus Creek, which requires a new 9 kilometer road with a water crossing and a temporary 24 person camp.

The Board requested interested parties review the application and make representations by July 10, 2018.

B. RESULTS OF REVIEW

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

1. Quarry operations at West Remus Creek

Reference:

- Application for Water Licence Amendment – Eureka High Arctic Weather Station, Environment and Climate Change Canada, June 2018, Box 9
- Quarry Operation Plan, Black Top Creek, Eureka, Nunavut, Nuna East Ltd, June 2015

Comment:

The present water licence allows for the operation of the Black Top Creek Quarry. The exploitation method does not require either drilling or blasting, therefor there will be no nitrates generated from this type of operation.

No details have been provided on quarry operations at the West Remus Creek Quarry. If there will be drilling or blasting, additional mitigation measures may be required to protect water.

Recommendation:

The licensee should clarify whether the quarry operation methods will be the same for the West Remus Quarry as the Black Top Creek Quarry. Should the quarrying operations at West Remus include blasting, an amended water licence should require an updated Quarry Operation Plan and include monitoring measures to ensure blast residue are not negatively impacting water.

2. Water use

Reference:

- Application for Water Licence Amendment – Eureka High Arctic Weather Station, Environment and Climate Change Canada, June 2018, Box 13
- Water Licence 8BC-EUR1621, Eureka High Arctic Weather Station Project, Nunavut Water Board, August 2016
- 8BC-EUR1621 2017 Annual Report, Environment and Climate Change Canada, March 2018

Comment:

The amended application specifies that a second water source will be used, West Remus Creek, and approximately 6 m³/day of additional water will be used.

The current water licence authorizes the use of 10 000 m³/year at a maximum daily rate of 299 m³. Information presented in the Annual Report indicates that for the last five years, annual water use is less than 20% of the authorized quantity and monthly use is less than the allowable daily use.

Though the maximum daily water quantity permitted cannot be increased without requiring a Type A water licence, it does not appear necessary to alter the maximum daily water use permitted. An increase of 6 m³/day in water will still be well within the quantity currently authorized.