



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

Your file - Votre référence
8BC-BAF1929

Our file - Notre référence
GCDOCS # 100591265

February 14, 2022.

Mr. Robin Ikkutisluk
Licensing Administrator
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU, X0B 1J0
sent via e-mail: licensing@nwb-oen.ca

**Re: Crown-Indigenous Relations and Northern Affairs Canada's review of
Department of Defence Type B Water Licence amendment application – Type B
Water Licence No. 8BC-BAF1929**

Dear Mr. Ikkutisluk,

Thank you for your January 26, 2022 invitation for the technical review 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 Crown-Indigenous Relations and Northern Affairs Act*.

If there are any questions or concerns, please contact me at (867) 975-4738 or by e-mail at Vincent.okonkwo@rcaanc-cirnac.gc.ca or Andrew Keim at (867) 975-4550 or Andrew.keim@rcaanc-cirnac.gc.ca.

Sincerely,


Vincent Okonkwo
Senior Environmental Assessment Specialist



Technical Review Memorandum

Date: February 14, 2022

To: Robin Ikkutisluuk, Licensing Administrator, Nunavut Water Board

From: Vincent Okonkwo, Senior Environmental Assessment Specialist, CIRNAC

**Subject: Crown-Indigenous Relations and Northern Affairs Canada's review of
Department of Defence Type B Water Licence amendment application –
Type B Water Licence No. 8BC-BAF1929**

Region: ☐ Kitikmeot ☐ Kivalliq ☒ Qikiqtani

A. Background

The North Warning System (NWS) consists of a sequence of unmanned radar sites operating across the northern and eastern coasts of Canada from the Yukon in the west to the southern Labrador coast in the east. NWS provides aerospace surveillance, established to detect and allow for an early response to potential threats entering North American air space.

The Long Range Radar (LRR) Station (BAF-3) is located at an elevation of 366 m above sea level on the southern end of Brevoort Island, 40-km long and 10-km wide. It is found off the east coast of Baffin Island, approximately 250 km Northeast of Iqaluit within the Qikiqtani region, Nunavut

On January 26, 2022, the NWB distributed an application for amendment submitted by the Department of National Defence seeking to amend their Water Licence to increase yearly water usage from

The Nunavut Water Board (NWB) on April 2, 2019, distributed the water license renewal for 8BC-BAF1929 to the Department of National Defence (DND), authorizing the use of water and deposit of waste. This license authorizes the DND to withdraw 1750 m³ of water per annum and while remaining under the 300 m³ per day withdraw limit for a type A license .

On January 26, 2022, NWB distributed application for amendment submitted by the Department of National Defence seeking to amend their Water Licence to increase water usage from 1750 m³ to 3000 m³ per annum to address an increase in the staff presence at the BAF-3 station.

CIRNAC provides the following comments and recommendations pertaining to the application package. A summary of the subjects of recommendations can be found in



Table 1. Documents reviewed as part of this submission can be found in Table 2 of Section B. Detailed technical review comments can be found in Section C.

Table 1: Summary of Recommendations

Recommendation Number	Subject
R-01	Water Use Daily Limit in 2019 Annual Report
R-02	Flow Meter Installation
R-03	Water Usage Reporting Discrepancy in 2018 Annual Report

B. DOCUMENTS REVIEWED

The following table (Table 2) provides a summary of the documents reviewed under the submission.

Table 2: Documents Reviewed

Document Title	Author, File No., Rev., Date
210322 8BC-BAF1929 2020 Annual Report	Raytheon Canada Ltd, March 18, 2021
200318 8BC-BAF1929 2019 Annual Report	Raytheon Canada Ltd, March 18, 2020
190205 3BC-BAF0919 2018 Annual NWB Report for BAF-3-IMLE	Raytheon Canada Ltd, February 5, 2019
190402 8BC-BAF1929 Water Licence Renewal Amendment-ODDE	Nunavut Water Board, April 2, 2019
220119 8BC-BAF1929 211129 8BC-BAF1929 2021 Inspection Report-ILAE	CIRNAC, September 7, 2021
220119 8BC-BAF1929 BAF-3 Application for Water Licence Amendment-ILAE	Department of National Defence, January 28, 2022
220119 8BC-BAF1929 BAF-3 Executive Summary-ILAE	Department of National Defence, January 28, 2022



Document Title	Author, File No., Rev., Date
220119 8BC-BAF1929 BAF-3 Exploration Remote Camp Questionnaire-ILAE	Department of National Defence, January 28, 2022
220119 8BC-BAF1929 BAF-3 NTS Map-ILAE	Raytheon Canada Ltd, January 28, 2022
220119 8BC-BAF1929 BAF-3 Site Description and Site Plan-ILAE	Raytheon Canada Ltd, March 31, 2021
220119 8BC-BAF1929 PLN-EHS-2 REV 10 Spill Contingency Plan 16.F.3.b-ILAE	Raytheon Canada Ltd, July 20, 2021
220119 8BC-BAF1929 PLN-EHS-11 Sewage Disposal Plan-ILAE	Raytheon Canada Ltd, July 16, 2021
220119 8BC-BAF1929 PLN-EHS-20 BAF-3 Landfarm Plan-ILAE	Raytheon Canada Ltd, October 19, 2021
190219 3BC-BAF0919 CIRNAC Comments on Application Renewal-ILAE	CIRNAC, February 19, 2019

C. RESULTS OF REVIEW

CIRNAC provides the following comments and recommendations for the Board's consideration:

1. Water Use Daily Limit in 2019 Annual Report

Comment:

In 2020 annual report, the licensee stated that no water was drawn from the lake supply source. In section 2, Table 2-1 of the 2019 annual report, a total of 838.5 m³ of water was reportedly used in August, which also amounts to the grand total used in the year 2019.

The current type B licence authorizes the DND to withdraw 1750 m³ per annum while remaining under the 299 m³ per day withdrawal limit for a Type A licence.

It is not clear if this reported usage in August of 2019 was drawn in one day, two or multiple days.

The licensee is seeking an amendment to increase water usage, and there will be presence of about nine staff members at BAF-3 station all year-round beginning April 1, 2022. This change will result in significant increase in the volume of water used per day.



In Part B, Item 1(b) of the Type B Water Licence 8BC-BAF1929 states:

The Licensee shall file an Annual Report on the Appurtenant Undertaking with the Board no later than March 31st of the year following the calendar year being reported, containing the following information:

- *Quantity of Water (**in cubic meters/day**) obtained for domestic and other purposes from sources on, in or flowing through Crown Lands reporting period.*

CIRNAC recommends that the licensee reports on the daily withdrawal so the reviewers can track daily usage of water and ascertain if it meets the less than 299 m³ per day requirement authorized by the current water licence.

Recommendation:

(R-01) CIRNAC recommends that the Licensee reports daily usage of water in subsequent annual reports to give reviewers an idea of amount of daily water usage.

2. Flow Meter Installation

Comment

In Part B, Item 3 of the Type B Water Licence 8BC-BAF1929, states:

The Licensee shall install flow meters or other such devices, or implement suitable methods required for the measuring of Water volumes as required under Part J, Item 2.

It is not clear if the licensee has installed flow meters at the source where water is drawn to keep the daily track record of the volume of water drawn from the Water Lake.

Recommendation

(R-02) CIRNAC recommends that the Licensee clarify if a flow meter was installed at the source for water volume measurement.

3. Water Usage Reporting Discrepancy in 2018 Annual Report

Comment

In section 2, Table 2-1 of the 2018 annual report, 345.4 m³ of water was reported as the total of raw water usage in the month of July, and the total volume drawn for the year 2018 as 863.1 m³.

The total amount of water used, does not tally with the amount reported on Table 2-1. It is not clear if this is a reporting error.

Recommendation

(R-03) CIRNAC recommends that the licensee clarify the difference in the total volume of water used in year 2018 and the amount reported on Table 2-1.



D. REFERENCES

Department of Crown-Indigenous Relations and Northern Affairs Act. (2019).

Nunavut Waters and Nunavut Surface Rights Tribunal Act. (2019).

Nunavut Water Board, September 1, 2019: Type B Water Licence No: 8BC-BAF1929, P 4, 5.