



Water Resources Division
Resource Management Directorate
Nunavut Regional Office
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Your file - Votre référence
8BC-NNF1920
Our file - Notre référence
GCdocs#94328216

May 10, 2021

Richard Dwyer
Manager of Licensing
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 National Defence's renewal application for the Nanisivik Naval
Facility Construction Project: Type B water licence 8BC-NNF1920**

Dear Mr. Dwyer,

Thank you for your April 19, 2021 invitation to review the above referenced licence renewal application. Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) examined the application pursuant to its mandated responsibilities under the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* and the *Department of Crown-Indigenous Relations and Northern Affairs Act*. Please find CIRNAC comments and recommendations in the attached Technical Memorandum.

If there are any questions or concerns, please contact me at sarah.forte@canada.ca or Bridget Campbell at bridget.campbell@canada.ca.

Sincerely,

Sarah Forté
Water Management Specialist



Technical Review Memorandum

Date: May 10, 2021

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

From: Sarah Forté, Water Management Specialist, CIRNAC

Re: Crown-Indigenous Relations and Northern Affairs Canada's review of
Department of National Defence's renewal application for the Nanisivik Naval
Facility Construction Project: Type B water licence 8BC-NNF1920

Region: Kitikmeot Kivalliq Qikiqtani

A. BACKGROUND

On April 19, 2021, the Nunavut Water Board provided notification of Defence Construction Canada's submission of a water licence renewal application on behalf of Department of National Defense for the construction licence for the Nanisivik Naval Facility. The facility is situated on Strathcona Sound approximately 20 km east of Arctic Bay in the Qikiqtani region of Nunavut.

The most recent licence, 8BC-NNF1920, expired on November 30, 2020 and was to cover until the end of construction activities. The construction activities began in 2014 and include constructing a Bulk-Liquid Storage Facility, upgrading the wharf, installing pipelines, constructing and upgrading roads and buildings and demobilising a 50-60 person camp infrastructure. Water is used for domestic purposes, concrete production, aggregate compaction, tank rinsing and dust control, and is obtained either from Quasaqtoq Lake or the Hamlet of Arctic Bay's water supply. Sewage will either be trucked to Arctic Bay's sewage lagoon or a sewage lagoon will be built on site.

Most of the construction seems to have been completed, and they had stopped drawing water from site. However, the construction schedule was impacted by the COVID-19 pandemic restrictions and work was not completed in 2020. The 2021 construction season may also be affected by restrictions, so the licensee is requesting a licence renewal until September 2024.

The water licence under consideration does not cover operations of the facility, for which a different licence may need to be obtained.

A summary of Crown-Indigenous Relations and Northern Affairs Canada's (CIRNAC) 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
1	Authorization to use Hamlet of Arctic Bay's potable water and wastewater infrastructure
2	Abandonment and Restoration Plan
3	Spill Contingency Plan
4	Plans for camp
5	2019 Annual Report

B. DOCUMENTS REVIEWED

The following table provides a summary of the documents reviewed under the submission.

Table 2: Documents Reviewed

Document Title	Author, File No., Rev., Date
Application for Water Licence Renewal	Defence Construction Canada, February 1, 2021
Camp layout and site location	Worley Parsons, DWG.NO. C-N143-1216/03.02-61-602, June 2, 2012
Overall site plan	Stantec, Fig.2, February 2010
Site plan including water sources	Stantec, Fig.1, February 2010
Site post construction drawings	Worley Parsons, DWG.NO. C-N143-1216/03.02-61-604, June 2, 2012
RE: NPC File # 149449 [Nanisivik Naval Facility, NU. Water Use License renewal]	Goump Djalogue, Senior Planner, Nunavut Planning Commission, February 16, 2021
Re: Screening Decision for Department of National Defence's "Nanisivik Naval Facility" Project Proposal, North Baffin Region, NIRB File No. 09DN018	Phillip Kadlun, Acting Chairperson, Nunavut Impact Review Board, October 24, 2013
Executive Summary The Nanisivik Naval Facility Construction Project - English	April 16, 2021
Executive Summary The Nanisivik Naval Facility Construction Project - Inuktitut	April 16, 2021



Document Title	Author, File No., Rev., Date
Nanisivik Naval Facility Northern Stakeholder Consultations 2007-2012	April 16, 2021
Spill Contingency Plan, Revision 2 (including Emergency Response Plan as Appendix G)	Stantec Consulting Ltd., July 2013
Nanisivik Naval Facility (NNF) Emergency and Spill Response Plan Template	Worley Parsons, 307071-00833-91-PM-REP-0002, March 14, 2021

C. RESULTS OF REVIEW

On behalf of CIRNAC Water Resources, the following comments and recommendations are provided for the Board's consideration:

1. Authorization to use Hamlet of Arctic Bay's potable water and wastewater infrastructure

Comment:

The application states "*During construction, the construction camp will require support from the local community for potable water via daily truck delivery provided by Construction Contractor. However, if it is determined that the volume of water withdrawal would place a burden on the community, water will be withdrawn from East Twin Lake (Quasaqtoq Lake) and a potable water treatment system will be constructed.*" A similar statement is made for the disposal of domestic wastewater.

In 2014, a letter from the Hamlet of Arctic Bay was provided with the original application. It specified the Hamlet was prepared to meter water to a company water truck and accept waste water dumping and solid waste dumping.

This renewal would be the second one for a project that was originally intended to last 4 years and is now planned over 10 years. The Hamlet's capacity to provide the services committed to in 2014 may have changed, in which case proposed alternate sources will have to be actioned. Clarifying the current situation will help the Hamlet, the licensee and the Inspector plan for necessary work.

Recommendation:

(R-01) CIRNAC recommends the licensee confirm to the Nunavut Water Board that the Hamlet of Arctic Bay still has capacity to provide potable and wastewater services committed to in 2014.



2. Abandonment and Restoration Plan

Comment:

Part I, item 1 of the water licence states "*The Licensee shall submit to the Board for approval in writing, at least sixty (60) days prior construction of the temporary camp infrastructure and related facilities in support of the Construction Phase of the Project, a revised Abandonment and Restoration Plan, specifically for the temporary components of the project.*"

The construction camp was already in place when this licence was issued in 2019, so it is not clear if the 2016 Abandonment and Restoration Plan For Temporary Facilities found on the registry meets the requirement or was deemed inadequate. The 2016 plan lacks details typically included in Abandonment & Restoration Plans. Deficiencies include the following:

- i. The removal method for the camp and garage in section 2.1 is not specified. The plan should indicate how they will be taken down, including dismantling of concrete slabs if there are any, as well as where the structures will be disposed, given there is no landfill on site.
- ii. CIRNAC's Inspector has noted a greywater sump on site. Section 2.2 on Roads, states that sumps will be backfilled, and it is not clear if this also applies to the greywater sump.
- iii. Section 2.4 refers to a Quarry Management Plan which CIRNAC was unable to locate on the Nunavut Water Board ftp registry. It is CIRNAC's understanding that two quarries have been reclaimed, but a third remains to be closed. Since we could not find this plan, we cannot evaluate the proposed reclamation strategy.

Recommendation:

(R-02) CIRNAC recommends that the Nunavut Water Board clarify if the 2016 Abandonment & Restoration Plan was deemed adequate. If it was not, we recommend the licensee address the deficiencies noted above in an annex or an updated version of the Plan.

3. Spill Contingency Plan

Comment:

The Spill Contingency Plan included with the application is incomplete. In particular:

- i. The list of potential contaminants in section 3.0 does not include sewage. The camp will generate sewage, which in previous years was trucked to Arctic Bay's sewage lagoon. There are risks of spills with the storage and transport of sewage. This



should be discussed throughout the plan so that workers will be equipped with tools and knowledge to contain such spills should they occur.

- ii. The emergency contact list in section 7.0 is mostly empty. This is a critical table that needs to contain current contact information of those on site responsible for managing spills.
- iii. The plan does not contain a site map, which should include spill kit locations.

Several unreported spills were noted by the Inspector during the 2020 inspection, underlining why it is important to have clear instructions on how to handle spills as well as well defined roles and responsibilities for managing and reporting spills.

Recommendation:

(R-03) CIRNAC recommends that the licensee update their Spill Contingency Plan to address the deficiencies noted above prior to any further work on site.

4. Plans for camp

Comment:

The last page of the application lists documents accompanying the application. CIRNAC was unable to locate two of the documents in this list:

- NNF Plans for operation of the construction camp (SUB-ALM-DCC-004); and
- NNF Camp emergency response plan (SUB-ALM-DCC-410).

The Plans for operation of the construction camp might offer information on how sewage is collected and stored in the camp. This would help us evaluate an updated Spill Contingency Plan.

Recommendation:

(R-04) CIRNAC recommends that all the accompanying documents be included with the application.

5. 2019 Annual Report

Comment:

CIRNAC was unable to locate the 2019 annual report on the Nunavut Water Board registry. Annual reporting is a requirement of the water licence. Given water withdrawals volumes in 2018 were greater than what was authorized, it is important to know withdrawals volumes in 2019 to determine if actions taken addressed the problem, or if further steps need to be taken.



Recommendation:

(R-05) CIRNAC recommends the 2019 annual report be provided and posted on the registry.

D. REFERENCES

2016, 2019 & 2020 Water Licence Inspection Forms, Crown-Indigenous Relations and Northern Affairs Canada, 2016-2021.

2020 Annual Report for Nanisivik Naval Facility Construction Project, Defence Construction Canada, March 2021.

Abandonment and Restoration Plan For Temporary Facilities, Revision 1, Almiq Contracting Ltd., April 4, 2016.

Hamlet authorization letter, Hamlet of Arctic Bay, October 7, 2014.

NWB Replacement Licence No. 8BC-NNF1920, Nunavut Water Board, July 22, 2019.