



Crown-Indigenous Relations
and Northern Affairs Canada

Relations Couronne-Autochtones
et Affaires du Nord Canada

Water Resources Division
Resource Management Directorate
Nunavut Regional Office
P.O. Box 100
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Your file - Votre référence
3AM-RUT----

March 26, 2020

Our file - Notre référence
CIDM#1284405

Richard Dwyer
Manager of Licensing
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU, X0B 1J0
sent via email: licensing@nwb-oen.ca

Re: Crown-Indigenous Relations and Northern Affairs Canada's completeness check on the Government of Nunavut – Community and Government Services' renewal application for municipal undertakings – Hamlet of Resolute Bay – old licence 3BM-RUT1520 and new application 3AM-RUT----

Dear Mr. Dwyer,

Thank you for your February 28, 2020 invitation for completeness check 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) 975-3876 or by e-mail at sarah.forte@canada.ca.

Sincerely,

Sarah Forté
Water Management Specialist

Canada

Completeness Review Memorandum

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

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

Date: March 26, 2020

Re: Crown-Indigenous Relations and Northern Affairs Canada's completeness check on the Government of Nunavut – Community and Government Services' renewal application for municipal undertakings – Hamlet of Resolute Bay – old licence 3BM-RUT1520 and new application 3AM-RUT----

Region: ☐ Kitikmeot ☐ Kivalliq ☒ Qikiqtani

A. BACKGROUND

On February 28, 2020, the Nunavut Water Board provided notification of the Government of Nunavut Community and Government Services' (GN-CS) submission of a renewal application for their Type B water licence 3BM-RUT1520 for the use of water and deposit of waste by utilidor in the Hamlet of Resolute Bay. The increase in water quantity means a Type A water licence would be required, identified as 3AM-RUT---- by the Nunavut Water Board.

The Hamlet of Resolute Bay is also renewing their type B water licence 3BM-RES1520 for the deposit of waste in the hamlet. Crown-Indigenous and Relations Northern Affairs Canada (CIRNAC) submitted comments on March 12, 2020, and our first recommendation was to broaden the scope of proposed licence 3AM-RUT---- to include waste disposal to transfer the landfills so that water licence 3BM-RES1520 might be closed.

The utilidor system in Resolute Bay includes a pump station at Char Lake, intake pipes, water treatment plant at Signal Hill, water distribution and sewer lines, fire hydrants, access vaults and a macerator unit. The entire system is undergoing renovation: in 2016 the buried utilities were replaced, a new pump station and water treatment plant are scheduled for construction in 2020, and a wastewater treatment plant is planned for 2024.

The renewal application requests authorization to withdraw 200 750m³ of water from Char Lake and continued use of the utilidor system. A new pump station was approved with an amendment to the previous licence. Construction of a wastewater treatment

plant is being considered in the current application, and a ten-year licence term is requested.

B. INFORMATION REQUESTS

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

1. Quantity of water requested

Comment:

The amendment application requests authorization to withdraw 550 m³/day or 200 750m³ annually. The table below compiles water use reported in the annual reports for the last 5 years, as well as the difference between years.

Year	Quantity of water used (m ³ /year)	Difference from previous year (m ³ /year)
2019	191 355	+ 39 293
2018	152 062	+ 24 392
2017	127 670	- 198 799
2016	326 469	- 97 794
2015	424 263	---

There is a large drop in 2017, when the annual report includes the comment: *"The entire Utilidor system including buried pipes and valves has been rehabilitated and it is now functioning well. No leakage is observed. No loss of water due to leaking or flooding is observed at present. The water extraction volume from the Char Lake and the associated cost has significantly been reduced."*

The two years since 2017 have had 19-21% increases. At a similar rate, the quantity extracted for 2020 would be greater than the requested quantity of 200 750m³.

Information request:

CIRNAC recommends the proponent clarify why the water abstraction rates are increasing since 2017 and how the quantity requested will meet the community's needs for the proposed duration of the licence.

2. Plans for pump house

Comment:

The proponent has provided a schedule for the construction of the pump house. It is scheduled in June-August 2020. Plans for a pump house were submitted in 2018 and the water licence was amended to insert Item 8:

The Licensee shall submit to the Board for approval sixty (60) days in advance of construction or decommissioning activities, an Environmental Management Plan that addresses intervenor comments and includes the following:

- (a) environmental impacts that may occur due to construction and decommissioning of the new pump house and installation of a new intake pipe in Char Lake;
- (b) measures to mitigate environmental impacts including total suspended solids; and
- (c) spill contingency plan

CIRNAC was unable to find the required Environmental Management Plan.

From the pump house drawings and specifications provided, it is not clear if the water intakes in Char Lake will also be replaced.

Information request:

CIRNAC recommends the proponent confirm whether they will be providing an Environmental Management Plan by April 1, 2020. If the work involves replacing the intake pipes, specifications of the intake screen should be included to verify if they meet DFO requirements.

3. Status of water treatment plant

Comment:

The Executive Summary states: *"In 2020, the construction of the pump station at Char Lake and the existing water treatment plant at Signal Hill is scheduled to be completed."* From this statement CIRNAC understands that the pump station will be rebuilt, but are not clear if the water treatment plant will also be modified.

CIRNAC was unable to find an Operations and Maintenance (O&M) Plan for the water treatment plant or design drawings.

Information request:

CIRNAC recommends the proponent clarify the status of the water treatment plant. If the plant has already been upgraded, a O&M plan should be provided. If the work is yet to occur, design drawings should be provided.

4. Plans for wastewater treatment plant

Comment:

Information has been provided on the location of the future wastewater treatment plant; a Waste Water Facility Memo as well as a Phase I Environmental Site Assessment. Other details on the future wastewater treatment plant are limited, though CIRNAC is aware that the intention is for its capacity to be sufficient to treat sewage that is currently

sent to the lagoon located north of the airport. This sewage lagoon is authorized under water licence 3BM-YRB1621 issued to the Government of Nunavut – Economic Development and Transport.

Correspondence between the Nunavut Water Board and the applicant mention *“Conceptual drawings for the WWTP are required for the facility to be included into the Type “A” Water Licence.”*

Information request:

CIRNAC agrees with the comment by the Nunavut Water Board, and recommends that the proponent provide a conceptual plan for the wastewater treatment plant.

5. Reclamation plans

Comment:

Amendment #1 of the current water licence added Item 7, requiring the licensee to provide a Decommissioning and Remediation Plan for the pump house that addressed comments made by intervenors. CIRNAC was unable to locate this plan.

With the construction of a new wastewater treatment plant, it will be necessary to reclaim the old facilities including the macerator building and the un-commissioned wastewater treatment plant (blue building). Reclamation of the sewage lagoon will also be necessary if the new plant is treating sewage from the airport facilities.

Information request:

CIRNAC recommends the proponent provide reclamation plans for the facilities to be de-commissioned and already abandoned.

6. Leaks in utilidor

Comment:

Leaks in the utilidor are mentioned in the Resolute Bay Wastewater Treatment Facility Memorandum: *“However it was noted that the laterals are not the Contractors responsibility and there are reported leaks in some of these connections from the buildings to the lateral then to the Utilidor. It was identified that the laterals and associated connection to the buildings are not part of the service contract for the Utilidor. Individual building occupants don’t know how to address leaks or whom to contact to get these leaks fixed. This would lead untreated wastewater from the buildings which have problematic lateral connections to pool in low spots and eventually drain by the surface into adjacent ditches and eventually to the existing wetland located between the Hamlet and the proposed WWTP site (near the existing Macerator building).”*

Information request:

CIRNAC recommends the proponent clarify plans to address leaks in the utilidor from laterals.

7. Spill Contingency Plan

Comment:

The Spill Contingency Plan provided only has a schematic drawing of the community. The Guidelines for Spill Contingency Planning requires a topographic map to help determine flow directions in event of a spill and relative location of critical infrastructure. Such a map can also serve to indicate spill kit locations. The Land Use Map provided in 2012 might be a good starting point since it includes topographic contours and municipal infrastructure.

Information request:

CIRNAC recommends the proponent provide a topographical map that identifies important infrastructure and spill kit locations for inclusion in the Spill Contingency Plan.

8. Quality Assurance and Quality Control Plan

Comment:

CIRNAC was unable to locate the Quality Assurance and Quality Control (QA/QC) Plan associated with this licence on the ftp registry. Sometimes proponents provide information on sampling locations and procedures in sections of O&M manuals, but CIRNAC had no success locating these either.

Information request:

CIRNAC recommends the proponent provide a QA/QC Plan.

C. COMPLETENESS OF APPLICATION

CIRNAC notes that some of the information requests could be for items which may already exist but we were unable to locate on the ftp registry.

CIRNAC recommends that the following documents be provided for review during the technical review period:

- QA/QC Plan;
- Environmental Management Plan for pump house construction work; and
- Decommissioning and Remediation Plan for pump house.

D. TECHNICAL MEETING – PRE-HEARING CONFERENCE

The Nunavut Water Board invited comments on the type of Technical meeting–pre-hearing conference to be held. CIRNAC is of the opinion that an in-person meeting should be held if there is public interest (depending on measures in place against the COVID-19 pandemic), otherwise a teleconference is acceptable.

CIRNAC looks forward to participating in any form of meetings determined by the Nunavut Water Board as most appropriate.

E. REFERENCES

3BM-RUT1520 Amendment No. 1: Decommissioning and Remediation of Char Lake Pump House and Construction of New Pump Station at Char Lake, Nunavut Water Board, April 26, 2018.

Annual Report for the Hamlet of Resolute Utilidor System 2015-2019, Government of Nunavut – Community and Government Services, March 2016-2020.

Application for Municipality of Resolute Bay UTILIDOR SYSTEM Water Licence Amendment and Renewal, Government of Nunavut – Community and Government Services, January 20, 2020.

Char Lake Pump House and Upgrade to Signal Hill Water Treatment Plant (Pump House), EXP Services Inc., January 2018

Executive Summary English, Government of Nunavut – Community and Government Services, January 22, 2020.

Freshwater Intake End-of-Pipe Fish Screen Guideline, Department of Fisheries and Oceans, 1995.

Guidelines for Spill Contingency Planning, Indian and Northern Affairs Canada, 2007.

Hamlet of Resolute Bay Land Use Maps Schedule 2, Hamlet of Resolute Bay, 1997.

Phase I Environmental Site Assessment – Resolute Bay Wastewater Treatment Facility Site Selection, Resolute Bay, Nunavut, EXP Services Inc., February 7, 2020.

Resolute Bay New Char Lake Pump House Specifications, Project No.CGSHQ-12012-01, Government of Nunavut, no date.

Resolute Bay Wastewater Treatment Facility Site Selection Memorandum, EXP Services Inc., January 20, 2020.

Resolute Bay Water System Phase 2 Preliminary Schedule, Government of Nunavut – Community and Government Services, January 20, 2020.