



Water Resources Division  
Resource Management Directorate  
Nunavut Regional Office  
P.O. Box 100  
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Your file - Votre référence  
3AM-RUT2035  
Our file - Notre référence  
GCDOCS#98664085

November 1, 2021

Richard Dwyer  
Manager of Licensing  
Nunavut Water Board  
P.O. Box 119  
Gjoa Haven, NU, X0B 1J0  
E-mail: [licensing@nwb-oen.ca](mailto:licensing@nwb-oen.ca)

**Re: Crown-Indigenous Relations and Northern Affairs Canada's Review of Government of Nunavut, Department of Community and Government Services' 2020 annual report for Type A water licence 3AM-RUT2035 for the Resolute Bay Utilidor Project**

Dear Mr. Dwyer,

Thank you for your October 6, 2021 invitation to review the above-referenced annual report.

Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) examined the report 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 [david.zhong@rcaanc-cirnac.gc.ca](mailto:david.zhong@rcaanc-cirnac.gc.ca) or Andrew Keim at [andrew.keim@rcaanc-cirnac.gc.ca](mailto:andrew.keim@rcaanc-cirnac.gc.ca).

Sincerely,

David Zhong,  
Regulatory & Science Advisor



## **Technical Review Memorandum**

**Date:** November 1, 2021

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

**From:** David Zhong, Regulatory & Science Advisor, CIRNAC

**Subject:** Crown-Indigenous Relations and Northern Affairs Canada's Review of Government of Nunavut, Department of Community and Government Services' 2020 annual report for Type A water licence 3AM-RUT2035 for the Resolute Bay Utilidor Project

**Region:** Qikiqtani

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### **A. BACKGROUND**

The Hamlet of Resolute Bay (Hamlet or Resolute) is located approximately 1,550 km northwest of Iqaluit on the south coast of Cornwallis Island on the Perry Channel, at the geographical coordinates 74° 43' 01" N and 94° 58' 10" W. The Hamlet operates the Resolute Bay Utilidor system (i.e., a water supply and sewage management system) under the Type A Municipal Water Licence No. 3AM-RUT2035. The system includes the water supply and treatment facilities (i.e., pump station at Char Lake, water intake pipes, water storage tank and water treatment plant at Signal Hill), the utilidor (i.e., buried water distribution and sewer lines), and the sewage disposal facilities (i.e., the macerator unit and the outfall pipe to the shoreline).

On October 6, 2021, the Nunavut Water Board provided notification of the Government of Nunavut, Department of Community and Government Services' (GN-CGS) submission of the 2020 annual report for the Resolute Bay Utilidor Project and invited comments. A summary of the subjects of Crown-Indigenous Relations and Northern Affairs Canada's (CIRNAC) comments and recommendations regarding the Annual Report can be found Table 1. Documents reviewed as part of this submission can be found in Table 2 of Section B. Detailed technical review comments are in Section C.

**Table 1: Summary of Comments and Recommendations**

<b>Recommendation Number</b>	<b>Subject</b>
R-01	Annual report requirements
R-02	Quantity of water obtained from all sources
R-03	Sewage treatment
R-04	Summary report of all data and information generated under the Monitoring Program



## B. DOCUMENTS REVIEWED AND REFERENCED

The following table (Table 2) provides a list of the documents reviewed under the submission and reference during the review.

**Table 2: Documents Reviewed and Referenced**

Document Title	Author, File No., Rev., Date
3AM-RUT2035 Hamlet of Resolute Bay Utilidor Annual Report 2020	Government of Nunavut, Department of Community and Government Services, October 2021
3AM-RUT2035 Hamlet of Resolute Bay_WW_sewer outfall_2020	2378 Holly Lane, Ottawa, Ontario 613-526-0123
3AM-RUT2035 Water Licence	Nunavut Water Board, December 17, 2020
Quality Assurance and Quality Control Plan Hamlet of Resolute Bay Utilidor System, Resolute Bay, Nunavut	Government of Nunavut, Department of Community and Government Services, June 29, 2020



## C. RESULTS OF REVIEW

### 1. Annual report requirements

#### **Comment:**

CIRNAC notes that the 2020 annual report was prepared following the requirements of Part B, Item 1 of Water Licence 3BM-RUT1520, rather than that of Schedule B of Water Licence 3AM-RUT2035.

#### **Recommendation:**

(R-01) CIRNAC recommends that the licensee follow the annual reporting requirements stipulated in Schedule B of Water Licence 3AM-RUT2035 in future annual reporting.

### 2. Quantity of water obtained from all sources

#### **Comment:**

CIRNAC notes that the quantity of water obtained from all sources (i.e., Char Lake) was estimated to be 255,056 cubic meters in 2020. Item 2 of Part D of Water Licence 3AM-RUT2035 stipulates that “*The annual quantity of Water used for all purposes from Char Lake shall not exceed two hundred and seventeen thousand (217,000) cubic metres per annum or as otherwise approved by the Board in writing.*”

#### **Recommendation:**

(R-02) CIRNAC recommends that the licensee take necessary measures to comply with the conditions of Water Licence 3AM-RUT2035, including the quantity of water usage.

### 3. Sewage treatment

#### **Comment:**

The annual report states that “*The Sewage is highly diluted and run into the sea without any further treatment.*” CIRNAC notes that the quantity of sewage waste discharged was estimated to be the same as that of water obtained from all sources. It is not clear how the sewage was diluted, if dilution is applied intentionally as a treatment method for sewage waste, and if the criteria for sewage discharge, stipulated in Water Licence 3AM-RUT2035, were met.

#### **Recommendation:**

(R-03) CIRNAC recommends that the licensee provide details on sewage dilution, clarify if dilution has been applied as a treatment method for sewage, and show that the discharged



sewage in 2020 met the discharge criteria set in Water Licence 3AM-RUT2035 within 45 days of receiving this review.

#### **4. Summary report of all data and information generated under the Monitoring Program**

##### **Comment:**

The annual report included a Microsoft Excel file (i.e. 3AM-RUT2035 Hamlet of Resolute Bay\_WW\_sewer outfall\_2020) that seems to contain raw analytical results. No background information, no identification of the laboratory responsible for the analytical results, and no summary report were provided in the annual report. CIRNAC notes that Item d of Schedule B of Water Licence 3AM-RUT2035 requires the annual reporting to include: “*A summary report which includes all data and information generated under the Monitoring Program, including the QA/QC program, in electronic formats acceptable to the Board*” and that Section 3.1 of the QA/QC plan specifies that “*the Licensee should use an analytical laboratory accredited by the Canadian Association for Laboratory Accreditation.*”

##### **Recommendation:**

(R-04) CIRNAC recommends that the licensee provide a summary report which includes all data and information generated under the Monitoring Program, including the QA/QC program, within 45 days of receiving this review.