



Water Resources Division  
Resource Management Directorate  
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Your file - Votre référence  
3AM-GRA1624  
Our file - Notre référence  
GCDOCS#97213188

August 20, 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](mailto:licensing@nwb-oen.ca)

**Re: Crown-Indigenous Relations and Northern Affairs Canada's (CIRNAC) Review of the Hamlet of Rankin Inlet Modification Application for the Utilidor System, Type "A" Water Licence No. 3AM-GRA1624**

Dear Mr. Dwyer,

Thank you for the July 29, 2021 invitation to review the utilidor system modification application, submitted by the Hamlet of Rankin Inlet, for Type "A" Water Licence No. 3AM-GRA1624.

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 (867) 975-4689 or [john.onita@canada.ca](mailto:john.onita@canada.ca) or Andrew Keim at (867) 975-4550 or [andrew.keim@canada.ca](mailto:andrew.keim@canada.ca).

Sincerely,  
Andrew Keim

For:

John Onita,  
Regional Water Coordinator



## **Technical Review Memorandum**

**Date:** August 20, 2021

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

**From:** John Onita – Regional Water Coordinator, CIRNAC

**Subject: Crown-Indigenous Relations and Northern Affairs Canada's (CIRNAC)  
Review of the Hamlet of Rankin Inlet Modification Application for the Utilidor  
System, Type "A" Water Licence No. 3AM-GRA1624**

**Region:** ☐ Kitikmeot ☒ Kivalliq ☐ Qikiqtani

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### **A. BACKGROUND**

Part A, Item 1a, of water licence 3AM-GRA1624 states:

*"This Licence allows for the use of Water and operation of the Water Supply Facilities, Utilidor and Sewage Treatment Facility by the Government of Nunavut, Department of Community and Government Services for a municipal undertaking at the Hamlet of Rankin Inlet, Nunavut (Latitude 62°49'24"N and Longitude 92°06'53"W)"*

The Government of Nunavut, Community and Government Services (GN-CGS) is applying (on behalf of the Hamlet of Rankin Inlet), for a modification of the existing utilidor system, to include an addition/extension of the system to service a new Kivalliq Long Term Care Facility in the community of Rankin Inlet.

According to the licensee, construction of the utilidor system extension, has been scheduled to commence tentatively, on September 1, 2021 by the Contractor. The licensee notified the Nunavut Water Board (NWB) of this intended modification project in writing, on July 23, 2021. The licensee states that, this modification is consistent with the terms of the water licence 3AM-GRA1624 as permitted in Part F, section 2 of the licence.

CIRNAC provides the following comments and recommendations pertaining to the review of the Utilidor system modification application. A summary of CIRNAC's recommendations can be found in Table 1. Documents reviewed and referenced 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	Daily quantity of water
R-02	Erosion and Sediment Concerns

## **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
Nunavut Water Board (NWB), Water Licence No. 3AM-GRA1624	NWB, May 2, 2016
3AM-GRA1624 210506 KLTCF IFC Drawings (Extracted Civil Access Vault Drawing)	GN-CGS Rankin Inlet, July 23, 2021
Nunavut Water Board (NWB), Water Licence No. 3AM-GRA1631	NWB, July 8, 2021

## **C. RESULTS OF REVIEW**

### **1. Daily quantity of water**

#### **Comment:**

The daily quantity of water permissible under existing water licence 3AM-GRA1624 is 3,485 m<sup>3</sup> per day. In contrast, the daily quantity of water permissible under amended water licence 3AM-GRA1631 is 10,000 m<sup>3</sup> per day.

CIRNAC notes that the licensee referenced the authorization for the utilidor system modification to the existing water licence 3AM-GRA1624 terms which bears a lesser permissible daily water use (3,485 m<sup>3</sup> per day). Even more, CIRNAC is concerned that when the utilidor extension (which is intended to service a new Long Term Care Facility) is fully in operation, it might cause an increase in daily water use in Rankin Inlet to a consumption capacity that the permissible 10,000 m<sup>3</sup> per day in the amended water licence 3AM-GRA1631, might not sustain the water needs of Rankin Inlet population.

#### **Recommendation:**

(R-01) CIRNAC recommends that the licensee provide within 30 days, the estimated consumption rates for daily and annual quantities of water use during the construction and operational phases of the new Long Term Care Facility in Rankin Inlet as well as an estimate of water consumption for the whole of Rankin Inlet.



## 2. Erosion and sediment concerns

### **Comment:**

Part C, Item 9, of water licence 3AM-GRA1624 requires the licensee to provide measures that will check erosion resulting from any approved project within its control. Hence, Item 9 states, *“The Licensee shall not cause erosion to banks of any body of Water and shall provide necessary controls to prevent such erosion”*.

Part C, Item 10, further states that, *“Sediment and erosion control measures shall be implemented prior to and maintained during the operation to prevent entry of sediment into Water”*.

A review of the *“Site Grading Plan”* included in the *“KLTCF IFC Drawings (Extracted Civil Access Vault Drawing)”* which was provided by the Licensee, shows that the utilidor system extension project will involve the construction of four (4) new Culverts, added to two (2) existing Culverts within the site.

CIRNAC reasons that Culvert construction would cause an alteration in the flow patterns of existing water bodies/pathways within and around the project vicinity (no matter how small the water body might appear to look). More so, CIRNAC has concerns about the effects of erosion and sediment build-up on the banks of these water bodies mapped out in the drawing, for Culvert construction over its courses/pathways.

### **Recommendation:**

(R-02) CIRNAC recommends that the licensee provide within 30 days, erosion and sediment mitigation plans for the Water bodies/pathways that are expected to be impacted by:

- a) New 21.0-400Ø CSP Culvert that will be installed parallel to the existing 400Ø CSP Culvert,
- b) New 15.0-500Ø Culvert,
- c) New 29.0-500Ø Culvert,
- d) New 25.0-500Ø Culvert.

## D. REFERENCES

Department of Crown-Indigenous Relations and Northern Affairs Act (2000)

Government of Nunavut, Community and Government Services, Diagram of Utilidor System Extension; Hamlet of Rankin Inlet, July 23, 2021

Nunavut Water Board Type “A” Water Licence (Amended) 3AM-GRA1631; NWB, July 8, 2021



Nunavut Water Board Type “A” Water Licence 3AM-GRA1624; NWB, May 2, 2016

Nunavut Waters and Nunavut Surface Rights Tribunal Acts (2016); *Nunavut Water Board*