



Water Resources Division
Resource Management Directorate
Nunavut Regional Office
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Your file - Votre référence
1BW-DUV1520

September 16, 2020

Our file - Notre référence
CIDM# 1288108

Richard Dwyer
Manager of Licensing
Nunavut Water Board
Gjoa Haven, NU X0B 1J0

Sent via email: licensing@nwb-oen.ca

**Re: Crown-Indigenous Relations and Northern Affairs Canada Comments on
Hamlet of Pangnirtung Duval River Crossing Water Licence Renewal
Application, Water Licence No. 1BW-DUV1520**

Dear Mr. Dwyer,

Thank you for your August 18, 2020, invitation to interested parties to review Hamlet of Pangnirtung Duval River Crossing Water Licence Renewal Application, for the Type "B" Water Licence No. 1BW-DUV1520.

Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) examined the application and its attachments 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*. The results of our review are provided in the enclosed memo for the Nunavut Water Board's consideration.

If you have any questions or require further information with respect to this matter, please contact me at (867) 975-4282 or email bridget.campbell@canada.ca, or Godwin Okonkwo at (867) 975-4550 or godwin.okonkwo@canada.ca.

Regards,

Bridget Campbell
Water Resources Coordinator, Nunavut Regional Office



Technical Review Memorandum

Date: September 16, 2020

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

From: Bridget Campbell – Water Resources Coordinator, CIRNAC

**Subject: Crown-Indigenous Relations and Northern Affairs Canada Comments
on Hamlet of Pangnirtung Duval River Crossing Water Licence Renewal
Application, Water Licence No. 1BW-DUV1520**

Region: ☐ Kitikmeot ☐ Kivalliq ☒ Qikiqtani

A. BACKGROUND

The Hamlet of Pangnirtung is located on the Eastern shore of Baffin Island, in Nunavut. The Duval River runs through this community and a single lane steel bridge is used by residents to cross the river. In October 2009, Fisheries and Oceans Canada constructed the Duval River Crossing, which consists of metal culverts and rock fill. This structure was intended to facilitate heavy equipment crossing the river for construction related to the Pangnirtung Small Craft Harbour Project. Following the completion of the Small Craft Harbour Project in September 2013, ownership of the Duval River Crossing, and the associated licence, were transferred to the Hamlet of Pangnirtung. This process was completed in April 2014. The licence expired in June 2020.

The Hamlet of Pangnirtung plans to continue use of the Duval River Crossing to access the municipal quarry. This will also have the benefit of reducing traffic and minimizing heavy loading on the steel bridge. Therefore, on behalf of the Hamlet, the Government of Nunavut Department of Community and Government Services (CGS) is seeking to renew this licence (1BW-DUV1520) for a ten (10) year term.

Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) reviewed the application and is providing comments and recommendations for the Nunavut Water Board's (NWB) consideration. A list of documents reviewed as part of this application can be found in Section B of this memo. Table 1 outlines the subjects of recommendations. Complete comments can be found in Section C. Further references can be found in Section D.



Table 1: Summary of Recommendations

Recommendation	Subject
R-01	Clarifications in the Application Form: Impacts and Mitigations
R-02	Abandonment and Restoration Plan Updates
R-03	Monitoring Station PAN-1
R-04, R-05	Clarifications in the Application Form: Compliance Status Report

B. DOCUMENTS REVIEWED

The following table (Table 2) provides a summary of the documents submitted and reviewed.

Table 2: Documents Submitted with the 2019 Annual Report

Document Title	Author, File No., Date
Application Renewal Water Licence	CGS, August 4, 2020
Cover Letter	Bhabesh Roy, CGS, August 7, 2020
Duval River English Summary	CGS, August 7, 2020
Duval River water chemistry Spread sheet	2017 (DUV-1, PAN-1) and 2018 (DUV-2)
Abandonment and Restoration Plan	August, 2020
Certificate of Analysis Preliminary Report	Caduceon Environmental Laboratories, No. B20-22361, Samples for July, 2020, (DUV-1, DUV-2, PAN-1), August 17, 2020
E-mail Re: Duval River WL renewal application	Bhabesh Roy, CGS, Clarification, August 16, 2020
E-mail Re: Duval river water testing results	Bhabesh Roy, CGS, Clarification, August 17, 2020
E-mail Re: Pangnirtung WL for Duval River crossing	Bhabesh Roy, CGS, August 18, 2020
Water Testing Results: Certificate of Analysis and Purchase Order	Caduceon Environmental Laboratories, Sample Number B20-22361 (-1, -2, and -3), submitted July 31, 2020 and reported August 24, 2020



C. RESULTS OF REVIEW

1. Clarifications in the Application Form: Impacts and Mitigations

Comment:

In the Renewal Application Form, under *Number 17: Impacts and Mitigations* CGS notes that predicted environmental impacts of the undertaking and proposed mitigation measures are the same as those considered in the original licence. The Department of Fisheries and Oceans (DFO) in 2014 (Fisheries and Oceans Canada, 2014) recommended a number of mitigation measures to be included in management plans when the Hamlet took over the licence. CIRNAC is specifically interested in the following, as they relate to wastewater impact on water resources:

1. Measures relating to general mitigation:

1.1. Effective sediment and erosion control measures should be in place prior to disturbance, during and after construction to prevent sediment from entering any watercourse or water body. All sediment and erosion control measures should be inspected regularly to ensure that they are functioning properly and are maintained, cleaned and/or upgraded as required until complete re-vegetation of all disturbed areas is achieved.

1.2. Construction should be halted during periods of heavy precipitation.

1.3. Machinery should be operated in a manner that minimizes disturbance to the banks of the river. Banks should be restored to original condition if any disturbance occurs.

1.4. Machinery should arrive on site in a clean condition and is to be maintained free of fluid leaks. Wash, refuel and service machinery and store fuel and other materials for machinery away from the water to prevent any deleterious substance from entering the water. An emergency spill kit should be kept on site in case of fluid leaks or spills from machinery.

1.5. Only clean rock, appropriately sized and free of deleterious substances should be used for riprap. These materials should be obtained off site and should not be taken from below the average high water level of any watercourse.

1.6. All spoil materials and debris from construction should be removed from the site and properly disposed of above the high water mark such that they do not enter any waterbody.

CIRNAC is seeking clarification from CGS regarding what impacts and mitigations were considered for this project, and how the recommendations stated above have been, or will be, implemented and written into the project's management plans.

The proponent notes in two emails (Re: Duval River WL renewal application, August 16, 2020, and Re: Pangnirtung WL for Duval River crossing, August 18, 2020) that the updated Spill Contingency Plan is pending submission. CIRNAC suggests that if these mitigations have not already been implemented, they should be integrated into the updated Spill Contingency Plan.



Recommendation:

(R-01) CIRNAC recommends that CGS clarify what impacts and mitigations were considered for this project, and implement the general mitigation recommendations, in the project's updated Spill Contingency Plan.

2. Abandonment and Restoration Plan Updates

Comment:

In December, 2013, the Abandonment and Restoration (A&R) Plan was approved by the Nunavut Water Board (Nunavut Water Board, 2013). The letter noted that:

The Licensee should note, however, that the next iteration of the plan ... should address the following comments and/or recommendations articulated by intervening parties during their review of the ... Plan:

1. Inclusion of details pertaining to restoring disturbed areas to pre-disturbed state;
2. Inclusion of details related to sediment and erosion control and mitigation measured that will be implement during abandonment and restoration of the site(s) associated with the project; and
3. Identification of the actual location of Monitoring Program Station, DUV-1 and DUV-2.

The A&R Plan submitted as part of the 2020 renewal application did not contain these details. Further, site conditions are indicated by means of site photographs. The most recent site photos taken in 2012 are now 8 years old, and may not accurately reflect current site conditions. Changes in site conditions could affect the type and amount of efforts required for remediation. Updates to the A&R plan will aid the Hamlet in preparation and implementation of remediation works.

Recommendation:

(R-02) CIRNAC recommends that CGS revise the A&R Plan to include recent photos indicating the current conditions of the structure, and the following details which were previously requested in 2013:

- i. Inclusion of details pertaining to restoring disturbed areas to pre-disturbed state;
- ii. Inclusion of details related to sediment and erosion control and mitigation measured that will be implement during abandonment and restoration of the site(s) associated with the project; and
- iii. Identification of the actual location of Monitoring Program Station, DUV-1 and DUV-2.



3. Monitoring Station PAN-1

Comment:

In the water licence No. 1BW-DUV1520, monitoring stations DUV-1 and DUV-2 are described as upstream and downstream of the Duval River Crossing, respectively. Map locations of these monitoring stations have been requested to indicate their exact locations. Water monitoring results (Certificate of Analysis Preliminary Report, August 17, 2020, and Duval River water chemistry Spread sheet, 2020) indicate that samples were also taken at station PAN-1. It is unclear where this station is located, and it is difficult to interpret water monitoring results without this information.

Recommendation:

(R-03) CIRNAC recommends that CGS clarify where monitoring station PAN-1 is located, and include this station on a map in the revised A&R Plan.

4. Clarifications in the Application Form: Compliance Status Report

Comment:

In the Renewal Application Form, under *Number 23: Studies Undertaken to Date*, a compliance assessment and a status report, including a response to any inspector's reports, is requested. These compliance submissions have not been provided by CGS as part of the licence renewal application. Further, the proponent noted in an email (Re: Duval River WL renewal application, August 16, 2020) that water test results for 2019 and 2020 are pending submission.

The applicant later provided water testing results from July, 2020 for both active sample sites DUV-1 and DUV-2 for pH, conductivity, and a number of other parameters. It is unclear whether tests have been conducted for Oil and Grease, temperature, and total suspended solids (TSS), as required by Part H, Item 5 of the licence.

The compliance status assessment and report should be submitted and include the missing monitoring results from 2019, and the missing parameters from the 2020 monitoring results.

Recommendation:

(R-04) CIRNAC recommends that a compliance assessment and status report, which includes the results of all parameters analyzed as part of the 2019 and 2020 monitoring reports, be provided as part of this licence renewal application.

(R-05) CIRNAC recommends that the licensee clarify whether Oil and Grease, temperature and TSS have been examined in the July 2020 sample events, and if so, where these results are located.



D. REFERENCES

Nunavut Water Board Water Licence No. 3AM-IQA1626. City of Iqaluit. Signed by Norman Mike, Hearing Chair, Nunavut Water Board. June 17, 2016.

Letter from Thomas Kabloona, Nunavut Water Board, to Adele Butcher, Fisheries and Oceans Canada. *Subject: Proposal for the abandonment and restoration of the crossing at the Durval River in Pangnirtung is not likely to result in impacts to fish and fish habitat provided that additional mitigation measures are applied.* August 26, 2013.

Letter from Tracy Allison, Fisheries and Oceans Canada, to Alan Kathan, Fisheries and Oceans Canada. *Subject: Licence No. 1BW-DUV1214: Approval of Spill Contingency Plan and Abandonment and Restoration Plan by Fisheries and Oceans Canada for the Duval River Crossing Project.* December 18, 2013.