



Our reference
File # IQA-N 9545-2-3.1BW.DUVA UNC
CIDMS #361474

Oct. 16/09

Your reference
1BW-DUV----

Phyllis Beaulieu
Manager of Licensing
Nunavut Water Board
Gjoa Haven, Nunavut
X0E 1J0

Sent Via Email

Dear Phyllis,

**Subject NEW WATER LICENSE APPLICATION #1BW-DUV, FISHERIES
AND OCEANS CANADA, PANGNIRTUNG HARBOUR
PROJECT, QIKIQTANI REGION**

Please be advised that on behalf of Indian and Northern Affairs Canada, I have completed a review of the above referenced Fisheries and Oceans Canada submission to the Nunavut Water Board.

A Technical Review Memorandum (attached) is provided to the Board for consideration.

Should you have any questions regarding this submission, feel free to contact me at 867-975-4555 or David.Abernethy@inac-ainc.gc.ca.

Regards,

David W. Abernethy
Water Resources Regional Coordinator
Operations Directorate, Nunavut Regional Office
Indian and Northern Affairs Canada
Iqaluit, Nunavut
X0A 0H0

Attached.

Cc: Ian Rumbolt, Manager of Water Resources (Acting) – INAC, Iqaluit
Andrew Keim, Water Resource Officer – INAC, Iqaluit

TECHNICAL REVIEW MEMORANDUM

Date: Oct. 16/09

To: Richard Dwyer, Nunavut Water Board

From: David Abernethy, Indian and Northern Affairs Canada

Re: **NEW WATER LICENSE APPLICATION #1BW-DUV, FISHERIES AND OCEANS CANADA, PANGNIRTUNG HARBOUR PROJECT, QIKIQTANI REGION**

A. PROJECT DESCRIPTION

On Sept. 18/09 and Sept. 24/09 the Nunavut Water Board (NWB or Board) distributed the Fisheries and Oceans Canada new Type B Water License Application and associated documentation that pertain to the Pangnirtung Harbour Project. This project has two (2) components that will be addressed through a water license, (a) the construction of a temporary crossing on the Duval River and (b) the redirection of a watercourse the currently outlets into the existing harbour.

Fisheries and Ocean's Canada intends to construct a temporary crossing where the Duval River outlets into tidal flats in an area to the east of the Hamlet of Pangnirtung. It will comprise of three corrugated steel culverts placed on the river bed with backfill graded to join an existing roadway. This is required for the transportation of aggregate material from an existing quarry to the Pangnirtung Harbour that is scheduled for renovation.

An intermittent drainage feature that outlets into the existing harbour will be temporarily redirected along an existing road where it will flow into an existing culvert located next to the Hamlet Office. This action is required to allow for dredging activities at the drainage feature's current outlet. Once the marshalling area has been constructed this drainage feature will be redirected through a new culvert positioned under the gravel road followed by an open channel through the marshalling area to the northeast of the existing breakwater.

The following documents have been reviewed,

1. Sept. 18/09 NWB Distribution,

- Water License Application received Sept. 18/09;
- Culvert Bridge Questionnaire received Sept. 18/09;
- Inuktitut and English Summary received Sept. 18/09;

- Transport Canada Determination Navigable Waters Project Act received Sept. 18/09;
- Google Photo Image received Sept. 18/09;
- NIRB Screening Decision on file dated Aug. 20/09; and,
- NPC Conformity Review on file dated Sept. 3/09.

2. *Sept. 24/09 NWB Distribution,*

- Conceptual Drainage Diversion Plan received Sept. 1/09;
- Culvert Bridge Questionnaire (diversion) received Sept. 14/09;
- Inuktitut and English Summary (diversion) received Sept. 14/09;
- Google Photo Image received Sept. 14/09; and,
- Photo of Drainage Outlet received Sept. 14/09.

B. RESULTS OF REVIEW

The following comments / recommendations are provided for review,

1. *General*

- All standard terms and conditions applicable to culvert / bridge construction activities should be applied; and,
- Terms and conditions applicable to the protection of water that were recommended in the Nunavut Impact Review Board's (NIRB) Aug. 20/09 Screening Decision should be applied.

2. *Aggregate Material / Backfill Source*

- Fisheries and Oceans Canada must only use clean material free of contaminants (including fine particulates) for construction, operation, and maintenance activities. This material must be obtained from an approved source that is non-potentially acid generating and non-metal leaching.

3. *Construction Drawings*

- Fisheries and Oceans Canada should be required to submit all construction drawings and final as-built construction drawings, signed and sealed by a qualified engineer for both the Duval River temporary crossing and the redirected drainage channel. Construction drawings should be submitted prior to any construction activity and final as-built construction drawings should be submitted along with a Construction Summary Report within sixty (60) days of completing construction activities that includes

documentation of field decisions that deviate from original plans and any data used to support these decisions.

4. Erosion and Sediment Suppression Measures

- Fisheries and Oceans Canada must implement sediment and erosion control measures prior to and during construction activities to prevent the release of sediment into any water body. This was also recommended by the NIRB in their Aug. 20/09 Screening Decision (Recommendation #17).

Section 7, Item #xiv of the Sept. 18/09 Culvert Bridge Questionnaire (crossing) and Section 7 of the Sept. 14/09 Culvert Bridge Questionnaire (diversion) state that, “contingency plans will be in place to implement mitigation measures related to silt/sediment control in the event flows occur during the culvert placements. These will be field-fitted to meet the specific conditions that may occur.” INAC recommends that Fisheries and Oceans Canada be required to submit a site-specific Sediment and Erosion Control Plan. This Plan should be approved by the Board prior to any license issuance.

5. Spill Contingency Planning

- Fisheries and Oceans Canada must submit a comprehensive Spill Contingency Plan that addresses as a minimum, recommendation #s 10-15 in the NIRB’s Aug. 20/09 Screening Decision. This Plan should include spill prevention methods and be approved by the Board prior to any license issuance.

6. Closure and Decommissioning Planning

- Fisheries and Oceans Canada must submit a Closure and Decommissioning Plan specific to the Duval River crossing to the Board for approval prior to any license issuance.

7. Approval of Plans and Submitted Revisions to Plans

- All Plans required by the Board should be approved prior to any license issuance. When any of these Plans require revisions, Fisheries and Oceans Canada must submit them to the Board for approval along with Annual Report submissions.

Prepared by David W. Abernethy