



Fisheries and Oceans Canada Pêches et Océans Canada

Eastern Arctic Area

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September 10, 2008

Your file *Votre référence*

8BW-CLY

Our file *Notre référence*
07-HCAA-CA7-00004

Phyllis Beaulieu
Manager of Licensing
Nunavut Water Board
P.O. Box 119
Gjoa Haven, Nunavut X0B 1J0

Via email:
licensing@nunavutwaterboard.org

Dear Ms. Beaulieu:

Subject: Clyde River Road and Bridge Project Proposal,

Fisheries and Oceans Canada - Fish Habitat Management Program (DFO) thanks the Nunavut Water Board (NWB) for the opportunity to comment on Qikiqtaaluk Corporation's (the "Proponent") Type "B" water license application for the Clyde River Road Construction, received on August 15, 2008. Please refer to the file number and title below:

DFO File No.:

07-HCAA-CA7-00004

Title:

Contaminated Site, Cape Christian, N. E. Baffin Island, Baffin Bay

Our review consisted of the following documents:

- o Nunavut Water Board Water License Application, signed by Harry Flaherty (Qikiqtaaluk Corporation), dated April 14, 2008.
- o Clyde River Bridge on Cape Christian Road – Preliminary Design Deck and Abutment Detail, designed by Jivko Engineering, dated March 2008.
- o Clyde River Bridge on Cape Christian Road – Preliminary Design Plan and Elevation, designed by Jivko Engineering, dated March 2008.
- o Application for Authorization for Works or Undertakings Affecting Fish Habitat, signed by Philippe Simon (Qikiqtaaluk Logistics), dated July 10, 2008.
- o Erosion, Sediment and Drainage Control Plan – Cape Christian, prepared by Qikiqtaaluk Environmental.
- o Road access to Cape Christian – Fish and fish habitat assessment at stream crossings Report, prepared by Sylvain Fleury (Impact Faune inc.) dated August 2008.
- o Clyde River Bridge Construction - Arctic Char Migration Monitoring Plan, prepared by Sylvain Fleury (Impact Faune inc.) dated August 2008.

We understand that the proponent plans to complete the following works or undertakings:

- The repair of the 16 kilometer abandoned road between Clyde River and Cape Christian
 - The construction of a 29.3 metre long single lane, twin steel girder structure with 4.2 metre wide timber deck spanning over the Clyde River.
 - The removal of the old rubble mound abutments from the riverbed, at the location of the old makeshift bridge crossing which is currently constricting nearly one quarter of the Clyde River.
 - The reclamation of the riverbed where the rubble mound abutments are proposed to be removed.
 - The construction of new bin-wall abutments with rip-rap armour rock placed in front and on both sides of the abutment and at an elevation exceeding the high water level from September to October 2008.
 - The placement of the span bridge will be conducted in April 2009 using an excavator to pull the structure over the span and a loader to push on the back end.
 - The installation of eight corrugated steel pipe culvert crossings, each with a length of 6 metres and diameter of 1.2 metres, over unnamed creeks along the Clyde River Road.

The proposal has been reviewed to determine whether it is likely to result in impacts to fish and fish habitat which are prohibited by the habitat protection provisions of the *Fisheries Act*. Following our review of the above information, DFO provides recommendations and request for information.

Clyde River Bridge

DFO has determined that the bridge spanning the Clyde River is not likely to result in impacts to fish and fish habitat, provided that the additional mitigation measures described in the *Nunavut Operational Statement for Clear Span Bridge* (please see attached) are incorporated into the proposed plans. DFO recommends that the Proponent complete and return the notification form for the clear span bridge operational statement to the undersigned.

Culvert Crossings along Clyde River Road

In the water license application for the Clyde River Road construction, it is noted that corrugated steel pipe (CSP) culverts are proposed to be installed in eight unnamed creeks. Results from the fish and fish habitat assessment (August 2008) has identified watercourses at crossing numbers 2, 3, 5, and 8 as fish habitat with Arctic char parrs being present.

Based on the above information, DFO has concluded that the proposal to install corrugated steel pipe (CSP) culverts at four of the eight watercrossings (crossing Numbers 2, 3, 5, and 8) is likely to result in impacts to fish and fish habitat. Of particular concern is the potential for the Proponent's proposal to result in the harmful alteration, disruption or destruction of fish habitat, which is prohibited under Section 35 of the

Fisheries Act. In order to be in compliance with the above legislation, the Proponent must obtain an authorization from DFO.

In most cases the issuance of a *Fisheries Act* authorization is conditional on developing habitat compensation and monitoring plans to ensure there will be no net loss in the productive capacity of fish habitat. As the proposed installation of the culverts will result in impacting fish and fish habitat, DFO recommends that the Proponent submit a fish habitat compensation and a monitoring plan to ensure that the mitigation measures function properly and that fish passage is maintained.

DFO also recommends that the Proponent provide the final detailed drawings of the culvert installations at crossings 2, 3, 5, and 8, stamped and signed by a professional engineer.

Arctic Char Migration Monitoring

On July 24, 2008, the Nunavut Impact Review Board issued their screening decision report (NIRB file No. 08RN070) for the proposed Clyde River Road Project. In the screening decision, the NIRB recommended that the Proponent establish a monitoring program to ensure the upstream migration of Arctic char in Clyde River was complete prior to any in-stream work as a Monitoring and Reporting Requirement. The Proponent consulted with DFO regarding the methodology and submitted a monitoring plan. As a result of its review, DFO has no objections to the monitoring plan for upstream Arctic char migration in Clyde River.

In summary, it is noted that four culvert crossing installations will result in a harmful alteration, disruption, or destruction of fish habitat and will require a *Fisheries Act* subsection 35(2) authorization prior to implementation of the plan. DFO has also provided several recommendations for the Proponent to fulfill in order for DFO to move forward with the regulatory approval.

I trust that the information provided will be of assistance to the Nunavut Water Board's review of the Clyde River Road construction. If you have any questions please contact me at (905) 639-0122, by fax at (905) 639-3549, or by email at Amy.Liu@dfo-mpo.gc.ca.

Yours sincerely,

Original signed by:

Amy Liu
Habitat Management Biologist
Fisheries and Oceans Canada

Attachment: Nunavut Operational Statement for Clear Span Bridges

Copy: Keith Pelley, Fisheries and Oceans Canada
Harry Flaherty, Qikiqtaaluk Corporation
Philippe Simon, Qikiqtaaluk Logistics
Dele Morakinyo, Indian and Northern Affairs Canada
Leslie Payette, NIRB