



Water Resources
Nunavut Regional Office
P.O. Box 100
Iqaluit, NU, X0A 0H0

May 8, 2011

Phyllis Beaulieu
Licensing Administrator
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU, X0A 1J0

Your file - Votre référence
8BW-REP
Our file - Notre référence
CIDMS #460437

**Re: New Licence Application (8BW-REP) – Construction and Operation of
an Access Road and Borrow Sources at Repulse Bay, NU**

Indian and Northern Affairs Canada (INAC) has performed a review of the application submitted to the Nunavut Water Board (NWB) from Nunami Stantec on behalf of the Hamlet of Repulse Bay, please find enclosed an application for a new water license for the Construction and Operation of an Access Road and Borrow Sources at Repulse Bay, NU. The following advice has been provided pursuant to INAC's mandated responsibilities for the enforcement of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (NW&NSRT) and the *Department of Indian Affairs and Northern Development Act* (DIAND Act). In conducting our review, INAC referred to the documents on the NWB's FTP-site under 8BW-REP, including information from a cancelled amendment application in 2009. INAC recommends that the NWB take into consideration the following comments when reviewing this New Licence Application for the Construction and Operation of an Access Road and Borrow Sources at Repulse Bay, NU (8BW-REP).

Should you have any questions or comments, please do not hesitate to contact me at (867) 975-4550 or by email at Jim.Rogers@inac.gc.ca

Sincerely,

Original Signed By

Jim Rogers
Manager,

cc. Peter Kusugak, Manager of Field Operations
Indian and Northern Affairs Canada, Nunavut Regional Office



Technical Review Memorandum

To: Phyllis Beaulieu – Manager of Licensing, Nunavut Water Board

From: Jim Rogers, Manager, Water Resources, Indian & Northern Affairs Canada.

Re: New Licence – 8BW-REP Construction and Operation of an Access Road and Borrow Sources at Repulse Bay, NU

Background

Nunami Stantec, on behalf of the Hamlet of Repulse Bay, submitted an application to the Nunavut Water Board (NWB) for a new water license to permit construction and operation of an access road and borrow sources. The Hamlet of Repulse Bay is located at the south-western end of the Melville Peninsula at the Rae Isthmus (66° 31' N, 86° 14' W) in the Kivalliq Region of Nunavut. The hamlet requires a licence for an all season road to the six identified granular deposits northwest of the hamlet plus to operate the granular pits. The Hamlet water licence has expired and this application states that this licence application is separate and distinct.

The proposed road will follow a well-used ATV trail towards the North Pole River. The access road will be about 9 km long, wide enough to allow passing vehicles and will cross six streams (Streams #1 to #6) and the tip of a sand and boulder tidal flat of the Tariugaq Inlet. Three of the six streams are ephemeral and the other three flow throughout the ice-free season but freeze to bottom in the winter. Three ponds and three small lakes are also located adjacent to or near the proposed access road. The original application in 2009

The road will follow the cut and fill method, utilizing granular materials from road cuts, the Hamlet's existing granular source and two of the identified granular deposits. The Hamlet began construction of the road in 2007 which continued through in 2009 and 2010 so approximately 4.4 km of the access road are currently constructed. The Hamlet has also began digging borrow areas at several locations along the constructed road to find suitable material for the road construction; no other infrastructure exists within the Project area.

All streams will be crossed using culverts of either 800 or 1600 mm diameter with varying lengths. The culverts on streams #1 and #2 on the constructed portion of the access road will be replaced and a culvert will be added to the existing Tariugaq Inlet large riprap rock drain.

Nunami Stantec and the Hamlet of Repulse Bay plan to follow Fisheries and Oceans Canada Nunavut Operational Statements to mitigate for fish habitat and migration.



Recommendations/Comments

Although the Hamlet has applied for this water licence for the road and quarries only, the Board should note that the existing portions of the road were constructed outside the Hamlet's expired water licence NWB3REP0409. When the Hamlet, with support from GN-CGS, renews or obtains a new water licence for the Hamlet, the Board should encourage them to add this potential licence to the one covering the rest of the Hamlet.

Similar to the 2009 licence application, this application does not include a stand-alone project/site specific Spill Contingency Plan (SCP) for the construction and operation of the road and quarries.

The application provides few flow estimates and drainage areas to explain how the culverts were/will be sized for the crossings other than a 1:100 reference for flow backwater of 0.4 metres above the top of culvert. Barring better peak flow estimates, the application should include contingencies for upstream ponding by the road, with potential for deeper melting of the frost line, and washouts of the culverts and road including siltation in downstream bodies of water.

The application also does not indicate if the road will cross all streams at right angles, if culverts will follow the natural stream or if the streams will be modified so the culverts will be perpendicular to the road bed. The applicant should provide the Board with additional information on culvert alignment and stream bed changes.

Little information is included about the four general drainage culverts.

Although the application does note that progressive reclamation will be established for depleted sources (smaller pits) or depleted areas of larger borrow pits, the applicant gives little detail on what is considered progressive reclamation and the timing of the reclamation.

Although INAC Water Resources does not oppose to the NWB issuing a water licence for the construction and operation of the road and borrow pits, INAC remains concerned that Repulse Bay and the GN-CGS has not renewed the water licence for the remainder of the Hamlet, especially for the water supply, waste water disposal and water issues related to solid waste storage. The INAC inspectors are aware of this problem.

cc. Peter Kusugak, District Manager, INAC, Nunavut Regional Office
Wayne Thistle, Kivalliq Projects Manager, GN-CGS
(WThistle@GOV.NU.CA)