JIVKO ENGINEERING
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November 8, 2001

Mr. Jordan DeGroot,
Area Habitat Biologist
Fish Habitat Management
Department of Fisheries and Oceans, Canada
P. O. Box 358
Iqaluit, Nunavut X0A 0H0
Tel: (867) 979-8007

Dear Mr. DeGroot,

Application for Authorisation – Kugluktuk Resupply Facility

Further to your correspondence of October 17, 2001 on the above-specified matter we have considered the various perspectives you provide and the request for additional information to complete the review of this project. With regard to some of the perspectives you provide on the project we offer the following comments:

1. This project is intended to improve the safety and capacity of the annual marine re-supply of dry cargo and fuel to the hamlet of Kugluktuk.
2. The design/size and positioning of the breakwater and causeway/dock structure are related to the current tug and barge configurations used by NTCL and recorded site wind and wave actions. A reduction in the footprint of the proposed facilities would compromise the safety enhancement we are seeking to provide.
3. From Hamlet Council minutes, it is noted that community residents have voiced their concerns over the existing re-supply site near the mouth of the Coppermine River, since May 23, 1991. These concerns have included that:
   - A potential oil spill would spread quickly into an open sea due to the river-current at this location,
   - Marine traffic in the mouth of the river interferes with fish habitat and movements,
   - The existing marine re-supply site is not sufficiently deep for the safe operation of the tug/barges configurations. The site is subject to continuous sediment build-up resulting from suspended solid fractions carried in the river. In order to improve the site and maintain acceptable safety standards, periodic dredging of the sea bottom would be required with two to five year frequency.

   The proposed location of the new dock and breakwater approximately 2000 meters west of the current river mouth site largely mitigates these concerns.
4. A review of community/council meeting files on the proposed project indicates no significant concerns relative to the environmental acceptability of the project. This lack of concern is probably a result of Local/Traditional Knowledge that points to limited fishing opportunities in the proposed development area/footprint.
5. In the winter months the sea in the area of the proposed dock and breakwater is usually frozen down to the seabed. During break-up and other stress regimes (i.e. significant littoral drift) the seabed and related habitat are usually being scoured clean and re-deposited elsewhere.

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6. The proposed construction of the breakwater through the sea ice considers an end goal of minimising any environmental impacts versus an open water scenario that requires placing and excavation of additional material and possible impact on littoral drift.
7. Observations of existing dock/breakwater structures in the North and a review of literature in Fisheries and Oceans own libraries indicate that rubble mound/rip rap breakwaters appear to have no net impact on fish habitat and in many cases improve same. Occasional consultation with municipal officials indicate that rubble mound breakwaters constructed in Nunavut attract fish and create fishing opportunities for local residents rather than destroy fish habitat, i.e. Igloolik, Gjoa Haven, Rankin Inlet, Whale Cove, Arviat, Sanikiluaq, Broughton Island.
8. Nunavut has a unique Arctic transportation environment. Many regulations and policy standards deemed appropriate in Southern Canada need to be applied/considered in the context of an appropriate risk analysis and management plan. The point here being, what is the greater risk? A marine re-supply accident involving an oil spill or, possible fish habitat damage due to placing clean blasted rock in the shallows along the coast line. From a simple perspective, oil spills appear to be the greater risk versus a localised development project that manages this risk and offers improvements to the current site deemed sensitive by local residents.

On the matter of additional information we offer the following:

1. A copy of the Marine Resupply Relocation Study done by UMA Engineering has been forwarded to you by Mr. Alan Johnson of CG&T. This study should address the issue of examining alternative options.
2. The need for a comprehensive fish habitat assessment has to be questioned. Per DFO's "Policy for the Management of Fish Habitat" we note the following:
   - Wharves and breakwaters are listed as minor projects;
   - These works (per the policy) would not normally have, or be perceived to have serious irreversible biological effects that could not be mitigated;
   - Under proponent responsibilities 37(1) of the Fisheries Act a statement of information can be asked for which includes habitat and baseline fisheries information. Within the above noted policy it states "usually such requests would apply to major projects, as defined in the policy";
   - Local residents have provided some information on the species that could use this area for feeding and migration;
   - Local residents, Hamlet Council and the HTO have indicated that fish do not use the proposed breakwater/dock area. Considering that local people are likely the greatest user of these resources this opinion should be treated as a valued input.
3. We note that under the policy referenced in item 2, a "No Net Loss" plan <u>is a principle intended to guide departmental officials and should not be interpreted as a statutory requirement to be met at all costs and circumstances</u>. It also indicates professional judgement and common sense applied in an informed, co-operative manner will achieve this principle. We suggest that the proposed cleanup of the existing re-supply site and removal of associated marine traffic away from the mouth of the Coppermine River meet this principle. The CG&T is willing to undertake additional compensatory actions if deemed necessary.

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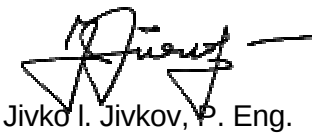
4. Included with the application is considerable information on the dock design, materials to be used and method of construction. In addition, the dock design is produced and certified by a Professional Engineer who has been involved in the design and construction of every single marine facility built in the North for the last 15 years. The proposed design has been used successfully for re-supply and local subsistence fishing facilities in many other locations in Nunavut including:

   - Paulatuk,
   - Gjoa Haven,
   - Taloyoak,
   - Rankin Inlet,
   - Whale Cove,
   - Arviat,
   - Chesterfield Inlet,
   - Iqaluit,
   - Pangnirtung, etc.

   The proposed dock is installed on a sufficiently large blasted rock platform and will be adequately protected with armour rock. The proposed breakwater will offer additional protection to the dock and for the most part will mitigate any concerns over the effect of currents, wave action etc.

We trust this additional information will assist you in furthering a decision on the requested authorisation. We look forward to further discussions and working with you on this matter. If you have any further questions or wish additional information, please contact the undersigned at Tel (867) 920-4455, Fax (867) 873-6090, or email: jivko@TheEdge.ca.

Sincerely,



Jivko I. Jivkov, P. Eng.
Principal
Jivko Engineering

cc

Ms. Gladys Joudrey, Nunavut Impact Review Board
Ms. Rita Becker, Nunavut Water Board
Mr. Baljinder Brar, GN Department of Public Works & Services, Cambridge Bay
Mr. David Crockatt, GN CG&T, Cambridge Bay
Mr. Jim Stevens, GN CG&T, Gjoa Haven
Mr. Mike Hecimovich, Canadian Coast Guard
Mr. John Holland, Hamlet of Kugluktuk, Kugluktuk, NU
Mr. Doug Sitland, GN CG&T, Iqaluit