



Environment Canada Environnement Canada

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Our file: 4517 000 005

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**Re: Comments on Fisheries Act Authorization NIRB#01WA065 and Water License
NWB4PEL- Jivko Engineering for the Community Government and Transportation
- Aliaruhik Second River Crossing Kugaaruk (Pelly Bay), Nunavut.**

On behalf of Environment Canada (EC), I have reviewed the above Fisheries Act authorization and water license. The comments provided for the above proposal have been made under Section 36 of the *Fisheries Act*, the *Canadian Environmental Protection Act* (CEPA) and the *Migratory Birds Convention Act* (MBCA).

Current Undertakings:

Jivko Engineering have since amended the previous applications to include a 32 meter permanent bridge structure. Also made the necessary changes within the applications to reflect the new bridge description, and method of construction. The initial placement of the permanent bridge and its associated infrastructure will occur from July 10 to October 10th, 2000. Environment Canada offers the following comments for your consideration.

Comments and Recommendations

Bridge Construction

Environment Canada as stated within the April 25th, 2001 review letter addressing the construction of temporary bridge is still of the opinion that the proponent has provided **insufficient technical detail**. Environment Canada strongly recommends that the proponent conduct a detailed technical assessment of the **flow regime during low and high water levels**; as well as identify the channel characteristics 100 metres above and below the proposed bridge site prior to construction. Just as an example in other jurisdictions such as Ontario the proponent constructing a similar structure would be required to produce a long term hydrograph or model that would indicate that maximum/minimum levels witnessed within a channel over a five to ten year period. As well as, require a permanent structure such as bridge to be constructed to withstand a 50 or 100 year flood event. These types of assessments and standards significantly reduce the risks associated with structural failures and liabilities since all rivers function differently.



Canada

Environment Canada also recommends that the proponent provide an options analysis of the different types of support structures that could be implemented as opposed to bin walls or galvanised metal bin boxes under the current site conditions. Further options should be investigated to ensure the overall long term safety and stability of the permanent bridge structure.

Please do not hesitate to contact me with any questions at (867) 975-4639 or by email at lawrence.ignace@ec.gc.ca.

Sincerely,



Lawrence Ignace
Environmental Assessment Specialist

cc: Paula Pacholek, (Northern Environmental Assessment Coordinator, EPB)