



Nunavut Regional Office
P.O. Box 2200
Iqaluit, NU, X0A 0H0

Your file - Votre référence
NWB1JER0410/TR/D4
Our file - Notre référence
9545-1-1-JER-R

October 21, 2005

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

Dear Ms. Beaulieu,

Re: Jericho Project, Long Lake Divider Dyke A Construction Specifications.

Thank you for providing INAC with the opportunity to review the above-mentioned plan, dated June 2005, and prepared by EBA Engineering Consultants Ltd.

These documents were submitted to the NWB by Benachee Resources Inc. (Benachee) on July 14, 2005 as a requirement of Part D, Item 2 of water license NWB1JER0410 which states:

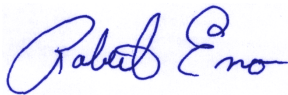
The Licensee shall submit to the Board for approval, design plans and drawings stamped by a Geotechnical Engineer, at least 60 days prior to the construction of any dams, dykes or structures intended to contain, withhold, divert or retain Water or Waste. The Licencee shall ensure that such facilities are designed and constructed to engineering standards such that at a minimum, they comply with the Dam Safety Guidelines.

INAC's comments for this plan, which are based on a thorough review by our expert technical and scientific advisors, are provided with respect to the above licence conditions.

1. The documents submitted by Benachee indicate that construction of this dyke would take place in the summer and fall of 2005 (Section 2.3). Considering that the review request has a deadline of October 21, 2005, the dyke work should have started during the summer. At the time of writing this review, INAC Water Resources has been unable to determine the current status of this aspect of the project and therefore would appreciate an update by Benachee.
2. Benachee intends to construct two divider dykes. Divider dyke A will be constructed first. Divider dyke B, located west of A, will be constructed some time in the future. The two-dyke concept differs from the project plans presented during the permitting phase, which only showed one dyke. Can Benachee explain this?
3. In Section 2.1 it is suggested that lake bathymetry along the footprint of Divider dyke A indicated a maximum water depth of about 2 metres., however in Table 1, the probe results show a difference in elevation of 2.8 metres to 4.1 metres between the ice elevation and the lake bed elevation, as measured on March 7, 2005. This discrepancy should be resolved, as it is conceivable that the lake may freeze to the bottom in the winter; in areas where the water depth is less than 2 metres. Was the thickness of lake sediment checked during the summer of 2005, as recommended in Section 2.2?

4. The slope stability analyses presented in Section 4.1 were carried out on the deepest dyke cross section without tailings upstream of the dyke and with no tailings at the downstream toe. It would be appropriate to also demonstrate the global stability of the divider dyke with the full supply level of tailings on the upstream side.
5. With regard to the seismicity and selection of the design earthquake described in Section 4.2, is it possible to obtain a copy of the two NRCAN studies referred to by EBA? INAC has been advised by our technical reviewer that while the design earthquake appears to be conservative, in comparison to the 1000 year event developed by NRCAN, the NBCC criterion, it appears that it only applies to buildings and not to dams. Can Benachee provide additional information which would allow us to understand the basis for the 2,475 year return period design earthquake?
6. At this time, INAC does not have any comments to provide with respect to the construction specifications.

This concludes INAC's comments. Should the NWB or Benachee Resources Inc. have any questions or require clarification on any of the comments in this review, do not hesitate to contact the undersigned.



Robert Eno
Water Resources Coordinator

- c. Greg Missal - Tahera Diamond Corporation