



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

Your file - Votre référence
2AM-MEL1631
Our file - Notre référence
CIDM#1280204

February 10, 2020

Mr. Richard Dwyer
Manager of Licensing
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU, X0B 1J0
E-mail: licensing@nwb-oen.ca

**Re: Crown-Indigenous Relations and Northern Affairs Canada's comments on
2AM-MEL1631 Design Report for CP6 and CP6 Berm**

Dear Mr. Dwyer,

Thank you for your January 27, 2020 email invitation to review and comment on the above-referenced design report.

Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) reviewed the submitted design report, pursuant to its mandated responsibilities under the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* and the *Department of Crown-Indigenous Relations and Northern Affairs Act*, and would like to provide the following comments to the Nunavut Water Board for consideration.

Tables 1 and 2 in section 3.3 of the design report provided surface runoff parameters for a mean precipitation year and a 1/100 wet precipitation year respectively. The values presented in these two tables were adopted from a previous feasibility study (i.e., Tetra Tech EBA, 2014). CIRNAC is seeking clarification on which modeling/calculation method was used to determine the rainfall and precipitation data, and if the design parameters have been updated to reflect the current precipitations.

Also, current industry practices require that additional contingency factor related to climate change be incorporated in pond design. CIRNAC is seeking clarification on whether the CP6 design has taken this additional contingency factor into consideration in deriving the values presented in Tables 1 and 2.



CIRNAC also seeks clarification on whether the net effect on the storage amount has been verified, should the PMP (probably maximum precipitation) be used as the governing factor for the CP6 design.

It is stated in Section 4.8 Stability Analysis that "*the calculated factors of safety for the pond and berm meet or exceed the minimum factors of safety, as suggested by CDA (2007) and CGS (2006)*". It is not clear what the values of the calculated factors of safety for the pond and berm are and how they compare with the minimum values suggested by CDA and CGS. CIRNAC recommends that the values of the calculated and the minimum factors of safety be presented in a table so that they can be compared directly.

CIRNAC appreciates the opportunity to participate in this review. If there is any question, please contact me at (867) 975-4555 or david.zhong@canada.ca or Mr. Godwin Okonkwo, Manager of Water Resources, at (867) 975-4550 or godwin.okonkwo@canada.ca.

Sincerely,

David Zhong
Regulatory and Science Advisor