



Water Resources Division  
Nunavut Regional Office  
Iqaluit, NU X0A 0H0

Your file - Votre référence  
2AM-WTP1826

April 18, 2019

Our file - Notre référence  
CIDM# 1248273

Richard Dwyer  
Manager of Licensing  
Nunavut Water Board  
Gjoa Haven, NU X0B 1J0

Sent via email: [licensing@nwb-oen.ca](mailto:licensing@nwb-oen.ca)

**Re: Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) response to Agnico Eagle Mines Limited's (AEM's) East diversion Channel Design Report response to CIRNAC's original letter March 27th– Whale Tail Pit Project under AEM's Type "A" Water Licence No. 2AM-WTP1826.**

Dear Mr. Dwyer,

Thank you for the email notice on April 15 to respond to AEM's response, regarding AEM's East Diversion Channel Design Report at the Whale Tail Pit Project.

CIRNAC has reviewed AEM's response and are satisfied with most of responses, except for the response to CIRNAC's number one comment/recommendation Pursuant to CIRNAC's mandated responsibilities under the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* and the *Department of Indian Affairs and Northern Development Act*.

Our original comment and recommendation contained in CIRNAC's March 27, 2019 letter to the NWB stated as follows:

#1: Peak Flow Estimate

**Comment:** In the design report, peak discharge was estimated applying and using MTQ (2014) (i.e., Ministère des transports du Québec, Manuel de conception des ponts, Ouvrages routiers, Guides et manuels, Novembre 2014). Spring freshet is a hydrological event at the mine site. CIRNAC could not find clear information on whether or not consideration was given to the effects of freshet on the estimation of peak flow or discharge.

CIRNAC recommends that the effects of freshet on the estimation of peak flow or discharge should be considered by the licensee and explained or discussed in the





design report.

AEM's Response dated April 8<sup>th</sup>

***Agnico Eagle's Response:***

*Spring freshet generally leads to more important volumes of runoff (due to snowmelt), but heavy summer-fall rainfalls generally lead to the most critical conditions in terms of peak discharges (due to rainfall higher intensities). For the design of channels, peak discharge is the most critical factor. For this reason, peak discharge, generated by a summer-fall storm, computed according to MTQ (2014) methodology, and assuming completely saturated soil conditions, was adopted for the design of the East channel.*

CIRNAC Response April 18th

CIRNAC appreciates AEM's comment and response, however, designing the east diversion channel using heavy rainfall-storm events in summer or fall may not be the best criteria to use when designing the east diversion channel for peak discharge. During these periods the water levels tend to be low or may be at their lowest levels, therefore looking at a heavy-rainfall event during low water level times may lead to the insufficient design capacity of the east diversion channel. It is CIRNAC's opinion that this may be a critical factor to consider. Peak spring freshet coupled with heavy rainfall events would likely give greater peak discharges than just a heavy rainfall event in summer or fall.

CIRNAC recommends AEM consider a heavy rainfall event during spring freshet for the design of the east diversion channel.

If you have any questions or require further information with respect to this matter, contact me at (867) 222-9278 or email [ian.parsons@canada.ca](mailto:ian.parsons@canada.ca), or Godwin Okonkwo at (867) 975-4550 or email [godwin.okonkwo@canada.ca](mailto:godwin.okonkwo@canada.ca).

Regards,

Ian Parsons  
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