



Environment and  
Climate Change Canada

Environnement et  
Changement climatique Canada

Environmental Protection Operations Directorate (EPOD)  
Prairie & Northern Region (PNR)  
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July 6, 2017

ECCC File: 6100 000 0031/004  
NIRB File: 16UN058

Keith Morrison  
Technical Advisor II  
Nunavut Impact Review Board  
P.O. Box 1360  
Cambridge Bay, NU X0B 0C0

via email: [info@nirb.com](mailto:info@nirb.com)

**RE: 16UN058 – Indigenous and Northern Affairs Canada – Jericho Site  
Stabilization-Amendment – NIRB Screening**

Attention: Keith Morrison

Environment and Climate Change Canada (ECCC) has reviewed the information submitted to the Nunavut Impact Review Board regarding the above-mentioned screening and is submitting a comment via email. ECCC's specialist advice is provided based on our mandate, in the context of the *Canadian Environmental Protection Act*, the pollution prevention provisions of the *Fisheries Act*, the *Migratory Birds Convention Act*, and the *Species at Risk Act*.

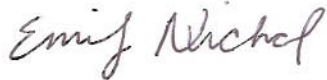
The following comment is provided:

1. The West Dam is downstream of Cell C of the Processed Kimberlite Containment Area (PKCA). It is proposed that the West Dam will be breached near the original lake elevation, and a channel constructed and armoured against erosion. Cell C of the PKCA has not received tailings, but does contain water which will be discharged. Previous years' data indicate acceptable water quality. However, the use of explosives will potentially introduce ammonia and nitrate from blasting residuals. This can be mitigated through the use of best practices to reduce loss rates and should not be a concern. Surface erosion and sedimentation from the West Dam removal and channel construction will need to be managed using standard mitigation measures.

The proposed use of coarse processed kimberlite (PK) as a closure cover would not be considered best practice unless it was capped with non-acid generating waste rock cover and raises concerns for the breakdown of the coarse PK over time. The Ekati Diamond Mine found that over time, weathering of the coarse PK has occurred, and resulted in release of fines and loss of structure of the materials. If coarse PK is to be used as a cover material, it should be fully covered with a sufficient depth of non-acid generating waste rock to prevent weathering. In addition, the coarse PK piles should be stabilized to minimize weathering and erosion. ECCC recommends that the Proponent include sufficient armouring to prevent weathering and/or erosion for coarse kimberlite used in the remediation of the PKCA.

Should you require further information, please do not hesitate to contact me at (867)669-4732 or [Emily.Nichol@canada.ca](mailto:Emily.Nichol@canada.ca)

Sincerely,

A handwritten signature in cursive script that reads "Emily Nichol".

Emily Nichol  
Environmental Assessment Coordinator

cc: Bradley Summerfield, Senior Environmental Assessment Coordinator  
Georgina Williston, Head, Environmental Assessment North (NT and NU),  
PNR-EPOD