

Environmental Protection Operations Directorate
Prairie & Northern Region
5019 52nd Street, 4th Floor
P.O. Box 2310
Yellowknife, NT X1A 2P7

ECCC File: 5100 000 036/010
MVEIRB File: EA1819-01



September 27, 2019

via email at: mcliffephillips@reviewboard.ca

Mark Cliffe-Phillips
Executive Director
Mackenzie Valley Environmental Impact Review Board
200 Scotia Centre
Box 938, 5102-50th Ave
Yellowknife, NT X1A 2N7

Dear Mark Cliffe-Phillips:

**RE: EA 1819-01 – Diavik Diamond Mines Inc. – Processed Kimberlite to Mine Workings
Environmental Assessment – Response to Undertaking**

During the Sept 3-6, 2019 Technical Hearings for the Diavik Diamond Mines Inc. (DDMI) – Processed Kimberlite to Mine Workings Environmental Assessment, Environment and Climate Change Canada (ECCC) received the following undertaking from the Mackenzie Valley Environmental Impact Review Board (MVEIRB) legal counsel.

In its intervention, the Tlicho Government indicated that it has concerns over how extra-fine processed kimberlite will behave in the pit lakes. Specifically, there are concerns over:

- how extra fine processed kimberlite will, or will not, consolidate over time,
- if extra fine processed kimberlite (EFPK) has the potential to be mobilized into the overlying freshwater cap, or Lac de Gras in general, and
- the potential for electrostatic mobilization of fine particle clays within the extra-fine processed kimberlite.

The Review Board requires expert advice from the relevant federal agencies with expertise on these matters, in order to understand the validity of these concerns and the potential for harm to the environment related to these concerns.

The Review Board requests that the federal government agencies with relevant mandates and expertise review the technical report written by Tony Pearse, submitted as part of the Tlicho Government's (TG) intervention. Specifically, the review should focus on the aspects of the report related to extra-fine processed kimberlite. We request a written response from the federal government, based on this review that:



1. comments on the validity of the concerns described therein,
2. comments on the likelihood that these concerns, if they materialize, could harm the environment, and
3. indicates whether or not the additional federal review generated by this IR changes the expert opinion provided to the Board by ECCC during the technical hearing.

ECCC Response:

ECCC consulted a CanmetMINING (Natural Resources Canada) specialist on aspects of the Pearse report and the validity of TG concerns over how the EFPK could behave in the flooded pit lakes including the potential for electrostatic mobilization of fine particle clays. It was determined that it was difficult to judge the validity of the concerns without site-specific data that is not yet available.

ECCC notes that the ongoing study at the University of Alberta (U of A) could provide answers to these questions, and that DDMI has committed, throughout the process to providing additional modelling based on that information. If the U of A study shows that there is the potential for adverse affects from extra fine processed kimberlite suspension, further mitigation measures may be required. ECCC will be available to review the results of the study from the U of A study when it is completed.

Please contact Russell Wykes at (867) 669-4743 or Russell.Wykes@Canada.ca should you require more information.

Sincerely,



Russell Wykes
Environmental Assessment Coordinator

Attachment(s):

cc: Georgina Williston, Head, Environmental Assessment North (NT and NU)