



NRCan Presentation on Proposed Access Road

**Fortune NICO Mine
Mackenzie Valley Environmental Impact Review Board
Public Hearing**

Behchoko, NWT, August 31, 2012



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Impacts to water quality, terrain and soils associated with the construction and operation of the proposed access road

Why is it Important?

- Proposed access road traverses terrain with variable material, drainage and permafrost conditions. Disturbance on the ground surface from vegetation clearing associated with road construction activities can lead to warming and thawing of frozen ground, ground settlement, terrain instability, changes to drainage and erosion that could impact terrestrial and aquatic ecosystems and road performance.

Impacts to water quality, terrain and soils associated with the construction and operation of the proposed access road

NRCan Views:

- Impact of access road on the terrain, and environment on the road can be minimized with appropriate design and mitigation techniques.
- NRCan recommended that Fortune:
 - conduct further detailed terrain analysis and geotechnical investigations;
 - conduct thermal analysis and determine potential ground settlement for representative terrain types; and
 - consider longer term effects associated with vegetation removal and changes in permafrost and drainage conditions.
- Fortune agreed to NRCan recommendations (July 5 response, July 26 meeting) once final road route has been agreed to with Tlicho Government.
- NRCan is satisfied with Fortune's response that our recommendations will be addressed in final road design.

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NRCan Views:

- For monitoring, mitigation/management plans that Fortune has already committed to, NRCan recommended:
 - installation of instrumentation in addition to visual inspections to monitor changes to ground thermal regime and ground movements.
 - Develop criteria that define the need for mitigation and selection of appropriate mitigation techniques.
- Fortune agreed to consider these recommendations in development of monitoring and management plans during our July 26 meeting and have confirmed this in their Aug. 15 memo.
- NRCan is satisfied with Fortune's response.



Closing

- Natural Resources Canada appreciates the opportunity to participate in this review.

