



Indian and Northern  
Affairs Canada

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et du Nord Canada

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NUNAVUT WATER BOARD

NUNAVUT IMALIRIYIN KATIMAYINGI

File: NWB1POL0311/Part B/Item 3

*By email and regular mail*

June 2, 2004

Bruce Donald  
Reclamation Manager  
TeckCominco Limited  
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Subject: NWB and INAC response to issues identified in TeckCominco Limited's 3<sup>rd</sup> and 4<sup>th</sup> Quarter Reports for the decommissioning and reclamation of the Polaris Mine.

Dear Mr. Donald,

The Nunavut Water Board ("NWB") and Indian and Northern Affairs Canada ("INAC") have reviewed Teck Cominco Limited's (the "Licensee") 3<sup>rd</sup> and 4<sup>th</sup> Quarter Reports. As part of the review process, the two reports were distributed for external review. One submission, from Holger Hartmaier of BGC Engineering (consultant for INAC), was received prior to the May 10<sup>th</sup> deadline for comments. The NWB and INAC also considered your letter, dated May 7<sup>th</sup>, 2004, which was submitted in response to BGC Engineering's review.

The NWB and INAC request that the following issues be clarified:

1. The Licensee shall provide a more comprehensive reason for its decision to cover the footprint of the former Concentrate Storage Shed with only 50 cm of quarried material. As the NWB and INAC understand it, the rationale for establishing this cover thickness has been based primarily on a calculation regarding plant rooting depth, as well as cost and scheduling concerns. While the NWB and INAC appreciate these concerns, we would like to see a more rigorous defense provided which is based upon the risk to the environment. The 50 cm treatment varies considerably from the covers that have been designed for other mine components, such as the Little Red Dog Quarry or the Operational Landfill, where cover thicknesses have been designed to promote contaminant immobilization through permafrost formation. The recommended risk assessment should, among other

things, incorporate the estimated quantity of concentrate remaining in the footprint, its potential mobility, proximity to the ocean and toxicity concerns. The Licensee should also provide its approach to monitoring the site post-closure. The proposed risk assessment will provide the NWB and INAC with greater confidence to make a decision on the adequacy of the current reclamation measures employed at the former Concentrate Storage Shed footprint.

2. The final decommissioning and reclamation plan indicated that subsidence was no longer an issue. As it appears subsidence is still occurring, the Licensee shall forward to INAC and NWB the report being prepared by Teck Cominco consultants concerning the Subsidence Zone, it is expected that this report will include detailed information on the failure mechanism, potential and predicted movement of the Subsidence Zone, monitoring requirements and plans, if any, for mitigation or to prevent further subsidence. The Licensee will be required to implement an appropriate risk management strategy consistent with the findings of the report, which outlines the steps required to reasonably prevent harm at the site to persons and the environment over the predicted period of subsidence. We also request the licensee establish survey control monuments to monitor the long term subsidence over the monitoring period and beyond if necessary.
3. The Licensee shall provide a more realistic and comprehensive cost estimate for the re-establishment of Garrow Dam in the event that water quality from Garrow Lake degrades to unacceptable levels. The estimate should reflect the higher costs associated with mobilizing from off-site, a third party contractor to reconstruct the dam. The estimate must also include the cost to eventually decommission the dam, borrow areas, roads and any other infrastructure associated with dam construction.
4. The Licensee shall review the waste disposal methods and cover placement at the Reclamation Landfill. The NWB and INAC do not know the depth of the cover that was placed over backfilled debris at the landfill, nor is it known if the cover thickness is adequate enough to protect against long-term impacts from subsidence and collapse of void spaces. The licensee must provide a report detailing the depth of cover over the reclamation landfill and outline plans for long term monitoring of the site.
5. The Licensee shall submit its close out reports on completed components of the abandonment and closure plan for review by NWB and INAC as soon as they are completed, rather than submitting them with the quarterly reports.

The Licensee should provide a letter to the NWB and INAC, which outlines how it intends to address these issues by no later than June 30, 2004.

Should you have any questions with regard to this approval, please contact the undersigned at your convenience.

Sincerely,

***Original signed by:***

Dionne Filiatrault  
Senior Technical Advisor  
Nunavut Water Board

c.c. Polaris Distribution List

***Original signed by:***

Carl McLean  
Manager, Land Administration  
Indian and Northern Affairs Canada