



Yellowknives Dene First Nation

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March 12, 2012

Alan Ehrlich
Mackenzie Valley Environmental Impact Review Board
Yellowknife, Northwest Territories
X1A 2N7
Fax: 867-766-7074

Dear Mr. Ehrlich:

Re: Request for Board Consideration of Alternative Tailings Remediation

The EA process for the Giant Mine Remediation project scoped out of the EA alternatives to the frozen block, the historical dispersion of arsenic affecting areas outside of the Giant Mine lease, legacy issues and historical impacts to the Yellowknives Dene First Nation (YKDFN). The current narrow scope of development has seriously constrained effective and comprehensive discussion, negates serious consideration of socio-economic concerns, and remains a major issue for the YKDFN. The full determination of impacts for any project absolutely cannot be assessed without including historical effects because past effects directly contribute to present conditions. This applies to any type of development project, remediation or otherwise.

That being said, within this limited scope of EA, the Giant Mine Advisory Committee (GMAC) of the YKDFN are in the process of assessing concerns and potential solutions to address these concerns. The alternatives to the frozen block have been scoped out, but alternatives to tailings remediation have not. The Giant Mine currently has approximately 13.5 million tonnes of tailings on site stored in four different tailings ponds areas. This amount is enough to fill roughly 427 Precambrian buildings. In addition to the tailings stored in tailings ponds, there is an additional 300,000 tonnes of tailings that were dumped directly into the foreshore area of Back Bay from 1948-1951. This amount is enough to fill 9.5 Precambrian buildings. To highlight the magnitude of tailings present, as a comparison, the 237,000 tonnes of arsenic trioxide dust stored underground would fill approximately 7.5 Precambrian buildings.

Multiple options for tailings remediation were not assessed by Aboriginal Affairs and Northern Development Canada (AANDC) nor adequate rationale communicated to the community on why the proposed method for tailings remediation was chosen. The proposed solution to deal with the enormous amount of tailings is capping with geotextile membrane, re-grading and the installation of groundwater monitoring wells.

Capping of contaminated areas as a remediation method functions primarily to inhibit erosion and migration of contaminants, however it is the least effective method available as it serves to cover-up the problem without removing the direct cause. The tailings can be expected to continue to leach contamination to the surrounding environment with maintenance of negative environmental impacts, and monitoring and treatment of groundwater would have to remain in perpetuity.

The GMAC is of the view that the tailings should be remediated to remove the problem entirely and permanently so that negative impacts are not borne by future generations. The YKDFN will continue to be affected from future impacts of the Giant Mine, and if there is an option to remediate an area permanently so that the land and waters can be restored back to a completely healthy state, we advocate for that option.

For these reasons, the GMAC would like to present to the Mackenzie Valley Environmental Impact Review Board for further consideration bioleaching technology to remediate all Giant Mine tailings areas.

Bioleaching technology is a worldwide proven technology to deal with arsenic contamination in toxic mine tailings. The process utilizes naturally occurring bacteria to neutralize arsenic and acid generated from acid mine drainage. During this process, metals are liberated and concentrated as a by-product, and as a result precious metals such as gold can be removed for sale to market. Bioleaching permanently remediates toxic tailings, is safe, environmentally friendly and provides a revenue stream through the recovery of precious metals.

Specifically, the GMAC is investigating the company BacTech. This company owns proprietary bacterial oxidation technology, and has 22 plants established worldwide. In 2010, this company signed an agreement with the Province of Manitoba to establish the first bioleaching plant in North America to remediate the Snow Lake mine tailings at "no cost" to the taxpayer. The company employs this financing model to establish bioleaching plants in new markets, at no cost to governments or taxpayers, the caveat being that they obtain profits from recovered precious metals. As such, this method may also present a potential economic business opportunity to the YKDFN and represents a win-win situation on multiple fronts.

Attached for further consideration, are supporting documents on BacTech and the bioleaching process. The YKDFN hope that the Board will be in agreement with our request, and we look forward to your response. If you have any further questions please contact Terri Bugg, Community Liaison and Technical Advisor at (867) 766-7654 or tbugg@ykdene.com.

Sincerely,



Chief Edward Sangris
Yellowknives Dene First Nation (Dettah)



Chief Ted Tsetta
Yellowknives Dene First Nation (N'Dilo)

Attachments