



***Independent Environmental Monitoring Agency***

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March 31, 2006

Sarah Baines  
Regulatory Officer  
Wek'eezhii Land and Water Board  
P.O Box 2130  
Yellowknife NT X1A 3P6

Dear Ms. Baines

**Re: Review of March 2006 *Wastewater and Processed Kimberlite Management Plan (WWPKMP)* for the Ekati Mine – small diamond recovery process and chloride use in the process plant for the settling of fox fine clays.**

Please accept this letter as the Agency's comments on two sections of the BHPB *WWPKMP* – small diamond recovery process and chloride use in the process plant for the settling of fox fine clays. The Agency intends to submit comments on the remainder of the *WWPKMP* following the information session to be held in Yellowknife on April 13<sup>th</sup>, 2006.

*Use of chloride to enhance settling of fox fine clays*

A consideration in approving the use of calcium chloride to enhance settling of fox fine clays is that it may lead to the decrease in coagulant use by 50 to 78%, and flocculent use by 20 to 33% per tonne of processed kimberlite. As we don't yet fully comprehend the risks to aquatic life (particularly zooplankton and benthos) of these two chemicals, the addition of chloride may offer some benefit to aquatic life downstream of Ekati when the decrease in other settling agents is considered.

The Agency was surprised that no reference to the Tier-1 chloride risk assessment distributed by BHPB in April 2004 was made in the 2006 *WWPKMP*. It appears to the Agency that overlooking the need to include references to such important information is an inappropriate management decision. The evidence and research supporting the use of chloride should be mentioned explicitly in a proposed management plan, even if the technical content is not included. We understand the recent change in expectations of the Board (more management, less technical content) but we encourage the Board to indicate this expectation of referencing the technical substance for future plans.

BHPB has assured us (in its Tier-1 chloride risk assessment) that chloride inputs into the receiving environment are modest and this level will remain acceptable. BHPB's Tier-II risk assessment should address the issue of if additional use of chloride in the processing of settling fine clays may increase chloride in LLCF effluent over that of earlier estimates.

When compared to the risk posed to the environment from the resistance to settling of extra fine processed kimberlite, the risk due to addition of chloride seems very modest. The addition of chloride should help settling and should be approved by the WLWB. Careful monitoring of the results should be encouraged and this appears adequately addressed in the *WWPKMP*.

*Small diamond recovery process*

The Agency is of the view that the small diamond recovery process poses little risk to the receiving environment. The Agency suggests that BHPB's reluctance to refer to documents of substance related to important issues in the management plan could be overcome. For example the volumes of conditioner, surfactant and collector material added to the fine kimberlite ore are slight. Some detail related to the chemical composition or toxicity of these substances should be contained in an appendix or at least referenced.

Thank you for the opportunity to provide comments on these preliminary aspects of the *WWPKPM*. The Agency looks forward to continued dialogue with the company and other parties on this key management plan,

Sincerely,

William A. Ross,  
Chairperson

cc. Society Members