

**BHP Billiton Diamonds Inc.**  
**Operator of the EKATI Diamond Mine**

BHP Billiton Diamonds Inc.  
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December 15, 2008

Wek'èezhii Land and Water Board  
#1, 4905 – 48<sup>th</sup> Street  
Yellowknife, NT  
X1A 3S3

Attention: Ms. Violet Camsell-Blondin, Chair

Dear Ms. Camsell-Blondin:

**Re: Update to the Wastewater and Processed Kimberlite Management Plan, Water Licences  
MV2003L2-0013 and MV2001L2-0008**

The Wastewater and Processed Kimberlite Management Plan (WPKMP) describes the approach to management of all of the wastewater and all of the fine processed kimberlite that is within the scope of the two Water Licences. The most recent update of the WPKMP was provided to the Wek'èezhii Land and Water Board (the Board) in August 2007.

This letter proposes an update that addresses only one aspect of the WPKMP, that being the management of minewater from sumps and underground workings at the EKATI site. To date, this minewater has been pumped to the Long Lake Containment Facility (LLCF) where it passes through the facility and is ultimately released to the environment (assuming acceptable water quality) at SNP location 1616-30. As you are aware, BHP Billiton is currently working through management options for the LLCF that are specific to nitrate, which originates from residual blasting agents, and chloride, which originates primarily from naturally occurring groundwater encountered in the Underground mine. This proposed update to the WPKMP is an important part of these options.

Open pit mining in the Beartooth pit will be completed in mid 2009, which provides an opportunity to use this pit to increase the level of environmental protection provided to the aquatic receiving environment. BHP Billiton is proposing that the completed Beartooth pit be used, beginning in summer 2009, as an optional retention pond for minewater, particularly minewater from the Underground mine, the Fox pit sump and the sumps located outside of the ammonium-nitrate

storage facility. The approach will be to utilize Beartooth pit to the degree necessary to ensure that water quality objectives in the LLCF are achieved. For example, pumping minewater to Beartooth pit would reduce the amount of nitrate entering into the LLCF and, thereby, assist with the short-term management of this water quality issue. The use of Beartooth pit in this manner is included in the scope of Water Licence MV2001L2-0008 (Part A, Item 1(a)). The work required involves relatively minor changes to existing minewater pipelines, all of which are completely internal to the EKATI minewater management system. Figure 2 of the WPKMP depicts the minewater management system and does not require any modification related to this proposed update.

BHP Billiton has assessed the economic potential of underground mining of the Beartooth kimberlite pipe and has determined that this is not economically viable. It would not be possible to place minewater into the Beartooth pit if underground operations were taking place because of the risks to worker safety. Therefore, and as a result of the economic assessment, BHP Billiton is bringing forward this request to make beneficial use of the Beartooth pit as a minewater retention pond. If economic circumstances were to change in the future such that underground mining became viable, then the kimberlite could be mined by removing the overlying water.

The use of Beartooth pit in this manner does not in any way compromise the closure and reclamation of the EKATI site. The reclamation plan for Beartooth pit is to flood the pit after closure. If the monitoring of water quality indicates that residual minewater cannot safely remain in Beartooth pit after closure, then all or a portion of the residual minewater would be pumped into the much larger (about 10 times) Panda Pit. In this way, the (presumably) chloride-rich minewater would be returned to the underground workings from where it originated as naturally-occurring groundwater. The 2008 Interim Closure and Reclamation Plan which is undergoing final review by the Board's Working Group includes specific details in regards to reclamation of the pit lakes.

As is the case for other minewater retention ponds at EKATI, BHP Billiton will maintain a minimum safety freeboard to allow for management of unforeseen events. For Beartooth Pit, BHP Billiton recommends a safety freeboard that is adequate to retain the 1 in 100 wet year event. This requirement is just less than 2.0 m of vertical height at the top of the pit. However for added safety BHP Billiton will maintain safety freeboard of at least 2.0 m below the overflow elevation of Beartooth pit (457 m above sea level).

Beartooth pit provides ample storage capacity for the proposed use as a retention pond. In 2007, the combined total volume of water pumped from the Underground mine, the Fox pit sump, the Beartooth pit and the ammonium-nitrate storage facility sumps totalled approximately 530,000 m<sup>3</sup>. The storage capacity available in Beartooth pit to the maximum water elevation of 455 m above sea level will be 12.1 Mm<sup>3</sup>. This means that it would take approximately 23 years for Beartooth pit to fill even if all of the water from the Underground mine and the Fox pit sump were pumped into Beartooth pit all of the time. Since the current life of mine extends to 2020 (12 years), there is a safety factor of nearly 100% (double) as regards storage capacity.

The introduction of Beartooth pit into the minewater management system as a minewater retention pond is an opportunity that BHP Billiton believes should be acted upon. BHP Billiton is requesting that this letter be approved as an update to the WPKMP to utilize the completed Beartooth open pit as an optional minewater retention pond.

Thank you for your consideration of this request. If you have any questions please contact Mr. Eric Denholm, Superintendent – Traditional Knowledge and Permitting, at 669-6116.

Sincerely,  
**BHP Billiton Diamonds Inc.**

A handwritten signature in black ink, appearing to read 'Laura Tyler', with a stylized flourish at the end.

Laura Tyler

Manager – Environment, Community, Communications and Planning

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