



August 6, 2008

Kathleen Racher
Wek'èezhii Land and Water Board
Box 32, Wekweeti, NT X0E 1W0

**RE: BHP Billiton (BHPB) Sable Pigeon Beartooth (SPB) Water Licence
Renewal Application**

Dear Kathy:

Fisheries and Oceans Canada (DFO) has reviewed BHPB's SPB water licence renewal application and is pleased to provide the following comments for the WLWB's consideration.

Effluent Quality Criteria

- BHPB is proposing that the EQC's for the main Ekati water licence be used for the SPB water licence with the exception of ammonia. As per the June 30, 2008 joint federal letter sent to the WLWB, DFO supports amalgamation of the two existing water licences. If amalgamated the current EQC's for both water licences can remain separate. DFO does not agree that the SPB EQC's should be made less stringent by making them the same as those in the main licence. The EQC's have been developed for the SPB water licence more recently than the main licence and are based on more current information. They are also consistent with EQC's developed for the Diavik Diamond Mines Inc. (DDMI) water licence.
- It is the opinion of DFO that parameters currently being reported on should not be removed from the water licence. Instead it would be useful to have parameters such as nitrate and molybdenum added now that they have been identified as increasing significantly in the 2007 AEMP report.
- In the DDMI water licence renewal process, ammonia management was a topic of much interest and discussion. The expert panel retained by the WLWB recommended that the EQC for ammonia (after 2007) be 6 and 12 mg/L (maximum average concentration and grab sample respectively). This

was determined to be achievable with no possibility of exceedence over the life of the mine. The new EQC for ammonia proposed by BHPB is below the maximum average concentration established for DDMI for pH's higher than 7.0 but higher for pH's above 7.0. The grab sample EQC exceeds that set for DDMI in all cases where it is listed in BHPB's ammonia EQC table. For instance, in the case of a pH of 7.1 the limit is 9.9 mg/ L higher.

The proposed EQC for ammonia is based on the *US Environmental Protection Agency 1999 Update of Ambient Water Quality Criteria for Ammonia*. On page 84 of the document there are several points listed by the EPA concerning the criterion. One of those points is that “partly for statistical reasons, the Criterion Continuous Concentration is based on a 20 percent reduction in survival, growth, and/or reproduction. Whether the maximum acceptable percent reduction should be lower or higher than 20 percent under a set of conditions is a risk management decision. ECs corresponding to other percentage reductions can be calculated using the parameter values presented in Appendix 6.”

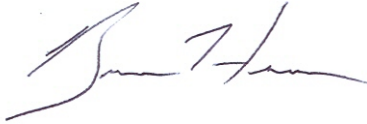
In comparison, the new CCME protocol uses a 5 percent threshold for chronic toxicity. It is the opinion of DFO that any changes to the current EQC for ammonia should only be made if it is not practically feasible for BHPB to meet the criteria after reviewing all possible treatment options. Neither USEPA or CCME guidelines should be used as “pollute up to limits.”

- BHPB is proposing that the ammonia EQC table be updated to be consistent with the Initial Dilution Zone (IDZ), if it is approved by the WLWB, for chloride. It is DFO's recommendation that an IDZ not be approved and that EQC's should be met at the outlet of Two Rock Lake. An IDZ could potentially cause impacts to fish and fish habitat within Horseshoe Lake.
- DDMI has been instructed to look at toxicity testing using a northern fish species (round whitefish). For consistency between operations, DFO recommends that BHPB be encouraged to do the same type of investigation using a northern fish species that is found in Horseshoe Lake. This could provide an opportunity for collaboration between the two operations.

Plan Review Periods

- BHPB has proposed shorter time frames between submission of plans to the WLWB for approval and the scheduled commencement of construction. Depending on the specific item to be reviewed, the reduction in time may be a concern for some parties who want to provide comments but are prevented from doing so based on the shorter review period.

If you have any questions, please contact me at (867) 669-4931.



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Attached: 1999 Update of Ambient Water Quality Criteria for Ammonia, US Environmental Protection Agency