INDEPENDENT ENVIRONMENTAL MONITORING AGENCY
P.O. Box 1192, Yellowknife, NT X1A 2N8 ▪ Phone (867) 669-9141 ▪ Fax (867) 669-9145
Website: www.monitoringagency.net ▪ Email: monitor1@yk.com

November 27, 2007

Laura Tyler
Manager—Environment, Community, Communications and Planning
BHP Billiton Diamonds Inc.
#1102 4920-52nd Street
Yellowknife NT X1A 3T1

Re: Comments on the 2006 Wildlife Effects Monitoring Program Report and the 2006 Aquatic Effects Monitoring Program Report

Dear Laura

The Agency has reviewed the 2006 WEMP and AEMP reports received earlier this summer. Overall, the Agency found the two 2006 monitoring reports to be of high quality. Our comments and questions are found below.

We understand that BHPB intends to place a higher priority on a much earlier delivery of future monitoring program reports and we strongly encourage such an effort, as that will enable us to comment on them in our annual reporting to our Society Members. In recent years, we have received only the summary reports of monitoring programs and special studies in enough time to evaluate them for our annual reporting to Society Members.

The 2006 WEMP was generally well done, with thorough accounts of methodology and results for the various programs covered. Findings from 2006 were often combined with results from previous years to examine trends over time or to increase the power of analyses. BHPB has made significant progress on reducing wildlife attractants and enhancing waste management practices, which have likely contributed to the reduction in wolverine incidents at the mine. The expansion of the caribou survey area is also a positive step to monitor potential impacts of the mine on caribou.

We have a number of questions and comments that BHPB may wish to consider:

- The WEMP states (pg 4-1) "What was previously considered to be just the Bathurst herd is now considered to be two herds – Bathurst and Ahiak". The Ahiak herd was formally called the Queen Maud Gulf herd, and although perhaps poorly delineated and surveyed, has never been considered a part of the Bathurst herd. BHPB should correct this error in future reports.

- In analyses of both caribou distribution and abundance in relation to distance from mine infrastructure (pg 4-21) and grizzly bear use habitat relative to distance from mine infrastructure (pg 5-5), it does not appear that the proximity to the Diavik mine was considered. We suggest that because of the adjacency of the Diavik mine to Ekati infrastructure (the Misery pit is 7-8 km from the Diavik mine), any analyses of distance to disturbance must consider both mines to be meaningful.

- Caribou road permeability: In 2006 only 5 groups of caribou were measured for the road permeability assessment. When combined with 2002-2005 data, the results suggest a negative influence of heavy traffic on probability of crossing (pg 4-54). A non-significant result was obtained when the 2002-2005 data were analyzed. Thus the addition of just these 5 samples changed the conclusions. This suggests the power of analysis is weak. We suggest BHPB should conduct a power analysis to assess whether these are meaningful results for the sample sizes obtained to date.

- The number of riparian and wetland plots which showed grizzly bear sign in 2006 differs between what is reported in the text (pg 5-7) and what is shown in Figure 5.2-2 (e.g., 11 wetland plots in the text; 28 in the figure).

- The executive summary states "no birds detected in the upland breeding bird study plots between 1996 and 2006 were listed as species at risk" (pg iv). However, in the text it states that short-eared owls (listed as a 'Special Concern' species by COSEWIC) were observed on transect in 2006 (as well as being observed as incidental sightings in previous years) (pg 8-4). The sentence in the executive summary is, therefore, misleading.

- The introduction to the falcon section states "Gyrfalcon and peregrine falcon breeding activity is monitored as part of the WEMP because falcons and other raptors serve as valuable indicators of environmental change (Furness and Greenwood, 1993; Gunn et al., 1997; Gunn et al., 2002; Holroyd and Banasch, 2003)" (pg 10-1). The two Gunn et al. references refer to caribou surveys, and are not relevant in this statement.

- Pit wall nesting: The occupied peregrine falcon nest in the Beartooth Pit was not discovered until 18 July, when the chicks were roughly 2-3 weeks of age (pg 3-18), despite frequent pit wall monitoring throughout the spring and summer. Once discovered, BHPB made adjustments to its blasting schedule to minimize disturbance to the nest for the remainder of the nesting period. This site was obviously missed for a long time during pit wall monitoring. This is somewhat surprising; peregrine falcons are highly visible at nest sites, and actively defend their nests. That fact that "Peregrine falcons were observed on several occasions in the pit" (pg 3-18) should have alerted staff that an occupied peregrine falcon nest was present. To increase the likelihood of detecting occupied sites in the future and minimize disturbance to nesting raptors, what steps will BHPB take? One suggestion might be to have someone experienced in raptor nesting and surveys conduct a thorough pit wall search in early, mid, and late June.

- A fledgling peregrine falcon was electrocuted at a power line pole on Grizzly Road (pg 3-30). This bird possibly may have fledged from the Beartooth Pit. Has BHPB considered any mitigation measures on these power poles to reduce the chance of similar electrocutions in the future?

- We note that there are some changes in breeding bird species taking place with several new species detected. It may be useful to compare results at Ekati with the trends observed in the North American Breeding Bird survey.

- Several wildlife incidents may have occurred because employees have left doors open to buildings. There may be an opportunity to improve this through employee training and reporting.

Aquatic Effects Monitoring Program (AEMP)

Generally, the AEMP report continues to be of high quality. As well, in the back of the Data Report Appendix we find a welcome addition to the AEMP reporting. Graphs of historical trends in every one of the 48 measured water quality variables in water bodies downstream of the Ekati mine are displayed. This is of particular usefulness in tracking historical trends in any water quality parameter that is not license-limited and/or evaluated. We commend BHPB for this new feature of the AEMP report.

We have a number of questions and comments that BHPB may wish to consider:

- Elevated sulphate levels in Kodiak Lake are attributed by RESCAN to a possible upstream source, that being seepage from the waste rock pile into Bearclaw Lake. This would suggest that adding Bearclaw Lake to the aquatic monitoring program might be in order. Sulphate (Figure 3-3) levels are increasing downstream of the LLCF and should be considered in the forthcoming Adaptive Management Plan.

- Molybdenum is approaching CCME guidelines for the protection of aquatic life in both Leslie and Moose lakes. The historic rate of increase has slowed in Leslie Lake but has not in Moose Lake. At its current and historic rate of increase in Moose Lake, we would expect molybdenum has reached or exceeded the CCME level this past year (2007) both in open-water and ice-covered seasons.

- RESCAN's multivariate analysis for the AEMP re-evaluation has shown that the metals antimony and barium are among the parameters responsible for a significant change in water quality of lakes downstream of the LLCF. We are of the view that BHPB should raise these two metals to the level of 'evaluated parameters' in the AEMP.

- RESCAN's multivariate analysis has provided strong evidence that water quality changes in Moose Lake, attributable to LLCF discharges, are most likely responsible for a decline in the cladocera population in Moose Lake. BHPB finds that "reduction

in the proportion of cladocerans in the zooplankton assemblage was related to discharge from the LLCF" (pg iii of the Executive Summary). Since AEMP work in previous years suggests that cladocera may be an important component of the diet of whitefish in Moose Lake, the Agency is encouraging the company to continue monitoring this situation with the goal of mitigating the impact on zooplankton populations downstream of the LLCF.

- Nitrate levels under ice in the winter in Leslie Lake are marginally above CCME guidelines and BHPB should be concerned about effects on neonate fish.

We would be happy to discuss these comments with you at your convenience.

Sincerely,

-Original Signed By-

Bill Ross
Chairperson

cc. Society Members
Zabey Nevitt, WLWB