



***Independent Environmental Monitoring Agency***

P.O. Box 1192, Yellowknife, NT X1A 2R2 ▪ Phone (867) 669 9141 ▪ Fax (867) 669 9145

Website: [www.monitoringagency.net](http://www.monitoringagency.net) ▪ Email: [monitor1@yk.com](mailto:monitor1@yk.com)

Claudine Lee  
Superintendent - Environment Operations  
EKATI Diamond Mine  
BHP Billiton, 1102 4920 52 Street  
Yellowknife NT X1A 3T1

17 May 2012

**Re: IEMA comments on Joint Regional Grizzly Bear DNA proposal, 2012**

Dear Ms. Lee

Thank you for the opportunity to review and comment on the joint grizzly bear DNA proposal. The Agency commends BHPB for its leadership at developing this regional grizzly bear DNA program. We have several comments and concerns you may wish to consider as you finalize preparation for this project.

**Cell size**

To our knowledge the 12 x 12 km cell size (144 km<sup>2</sup>) has not been tested for bears in NWT/Nunavut, or elsewhere for that matter. Results from 10 x 10 km (100 km<sup>2</sup>) cell size should be available from several sources (Kugluktuk, Doris North), at least in draft form, which could inform whether the 12 x 12 km design will likely provide robust results. The justification that this cell size is “based on an approximation of a 2-week home range of female barren ground grizzly bears” is a bit thin and requires citation. Our concern is whether an increase in cell size by >40% will affect capture probabilities (the proportion of bears captured each session) to the extent that adequate estimates of density will be obtained. While the greater number of sessions proposed (6, as opposed to the more standard 4) may offset reduced capture probabilities, these designs come down to trade-offs among greater coverage, higher capture probabilities, and helicopter time/effort. Greater presentation of data from 10 x 10 km cell studies (especially capture probabilities) could provide assurances that the 12 x 12 km design will likely provide robust data. At a minimum, we suggest that this fall you carefully compare results (capture probabilities) from your 12 x 12 km design with other 10 x 10 km studies that may be available (Doris North, Izok).

## **Study area**

While the study area is impressive in extent, the northern edge of the study area is just over 36 km from Ekati (3 cell widths). We suggest that greater buffer – at least one more row of cells – would be ideal. Unless there is some justification for this design we are not aware of, we would prefer dropping some of the eastern columns of cells (6.5 cells buffer Diavik to the east) and adding more to the north. And exclusion of the area north of Snap Lake near Mackay Lake is perplexing – why is this not filled in?

## **Selection of cells**

The proposal states the study will “omit those cells that .... otherwise contain inherently poor grizzly bear habitat (e.g., > 80% boulder field)”. We caution against not sampling cells that may appear to be poor grizzly habitat. Given the large movements and limited data on habitat selection by these bears, systematic avoidance of sampling cells may bias results – especially in light of the 12 x 12 km design proposed.

## **Future monitoring**

This can be dealt with down the road, but the justification for resampling every 4<sup>th</sup> year should best be left to a power analysis after the initial 2 years of data, rather than the average time between litters.

Although we look forward to clarity on these points, we urge you to get on with the study as proposed. We are willing to discuss with you any of our comments. Best of luck with your study and we look forward to the results.

Sincerely



Bill Ross  
Chairperson

cc. Society Members

Brian Milakovic, Rescan  
Robert Mulders, GNWT-Environment and Natural Resources  
Mark Fenwick, Environmental Monitoring Advisory Board  
David White, Snap Lake Environmental Monitoring Agency  
Alexandra Hood, De Beers Canada Inc.  
David Wells, Diavik Diamond Mines Inc.