



***Independent Environmental Monitoring Agency***

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September 8, 2011

Therese Joudrie  
Director, Renewable Resources and Environment  
Box 1500  
Yellowknife NT  
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Dear Ms. Joudrie

The Agency has had an opportunity to review BHP Billiton's (BHPB's) 2010 Annual Environmental Report and the plain language summary. While reviewing these documents, we were also mindful of the full Wildlife Effects Monitoring Program (WEMP), Aquatic Effects Monitoring Program (AEMP) and Panda Diversion Channel (PDC) monitoring reports for 2010.

The Agency is of the view that the 2010 Annual Environmental Report is satisfactory and that the information provided is adequate, including the description of remedial actions taken or proposed in respect of impact or compliance problems.

The Agency makes the following general observation with a view to improving future Annual Reports. While there is coverage of all items required, it is fairly superficial with limited trend comparison or context. A number of specific comments follow. It would be helpful to get responses from BHPB.

**2010 Annual Environmental Report**

- Page 6 (2010 Water and Waste Summary Figure) might be expanded to include solid waste and incineration.
- Page 8 describes several internal and external audits and certifications of Ekati. In past reports there has been some description of the findings and improvements made by BHPB and this should be continued. This would go some way towards evaluating BHPB's adaptive management system as required by the Environmental Agreement (s. XX).
- Page 13 (Waste Discharged to Containment Facility), some explanation of the huge variation in mine water pumped to the LLCF and King Pond would be helpful to understand the range and seasonal differences.

- Page 18 references the Life of Mine Plan found in figure 5 but there is no statement regarding any changes or variations to this important planning tool such as the dropping of the Sable development.
- Page 22 mentions the three-year AEMP review but does not outline what changes were agreed to by the Wek'eezhii Land and Water Board (WLWB). A bulleted list of the changes would have been helpful.
- Page 24 describes spills and follow-up actions but there is no mention of the Fay Lake spill monitoring program and report submitted in 2010 by BHPB. The Fay Bay monitoring is briefly described on page 32 and could be referenced here.
- Pages 29-30 contain a Compliance Report for the Ekati regulatory instruments but there are no details other than referring the reader to other inspection reports. There could be a list of inspections provided with a summary of any corrective actions recommended.
- Page 29, the surface leases were issued under the *Territorial Lands Act*. It would be helpful to have some details on the applicability of the *Federal Real Property Act* to these dispositions.
- Page 31 discusses the results of further hydrocarbon sampling studies which are to continue in 2011 but no details for this work are provided.
- Page 31 deals with the nitrate issue in the LLCF but BHPB's adoption of the IPS as a discharge criterion is not discussed, even though this is above the CCME guideline.
- Page 31, the wolverine hair snagging program is mentioned but there is no mention of the completeness of the post placement given that it was a low snow year and how this might affect the results. There is no mention of the grizzly bear hair snagging test program that was conducted Sept 2010.
- Page 32 of the annual report states that "BHPB continued the assessment ... of Traditional Knowledge projects through 2010." The company has not done this assessment of efficacy of the inokhok fences at deflecting caribou around dangerous areas. The Kugluktuk elders even cautioned that inokhok effectiveness needed to be monitored so that modifications could be made if needed as mentioned in the Caribou and Roads report.
- Page 33 on TK mentions the community workshop held in October 2010. The workshop report states that the objectives of the workshop were not achieved but there is no reference to this in the Annual Report.
- Page 34 describes revegetation of the Culvert Camp and other areas but there is no indication of success against targets or objectives.
- Pages 40-41 describe the results of the air quality monitoring but there is no indication whether the results were within CCME or GNWT standards.
- Page 41 mentions that "Design and engineering" are ongoing for the "new" incinerators, but nothing concrete as to projected start-up month or even year. Nor are any reasons given for why upgrading of the incinerators would be ecologically important (i.e. removing dioxins and furans which may be finding their way into Kodiak Lake). This has been an issue of concern for most if not all stakeholders.
- Page 43 mentions waste audits conducted by BHPB Environment staff. The results are found later on page 129 and should be cross referenced.

- Page 44 mentions that some of the mine water was discharged into the bottom of Panda pit rather than Beartooth. An indication of the relative amounts and significance for overall water management would be helpful.
- Page 45 discusses the new airport fencing but does not disclose the death of several caribou as the main driver behind this initiative. This information is referenced on page 129.
- Appendix C graphs that summarize the sampling results for each SNP station are helpful but CCME guideline levels would make them more meaningful, as found in the AEMP reports. A short verbal explanation of any trends or CCME exceedences would be helpful.
- Appendix G (page 104) mentions nitrates and molybdenum being above CCME guidelines under ice in lakes closest to LLCF, but no mention of selenium being in the same state (as can plainly be seen in Fig. 5-40 of the AEMP report).
- Appendix H contains a helpful summary of progressive reclamation and research activities and findings. A short section at the end summarizes activities for the coming year. This approach should be considered for other appendices that report on monitoring and research activities.
- Appendix L contains no information on the permafrost monitoring between Beartooth pit and Upper Panda.

We note that the communication and external outreach section found in previous year's report is absent. This would be a useful addition to show that BHPB communicates the result of its environmental management to all interested parties, particularly communities. Details on issues raised and actions taken arising from community meetings and other communication activities would be helpful to document.

## **Plain Language Summary**

### General Comments

The accuracy of some of the material in the summary is questionable. For example:

- Page 21 states that "An expanded grizzly bear hair-snagging program will be completed in 2011, following the successful 2010 program". The 2010 program was barely "successful", suffering from a very late start (September) and small sample size of posts, and the 2011 program is still a pilot study testing methodology with no apparent objectives.
- Page 23 states "There are four distinct caribou herds in the Arctic Barren Lands" is simply not accurate
- The Plain Language report mentions neither Molybdenum nor Selenium being above CCME guidelines under ice.

A few technical words or concepts have been retained from the full Annual Report which could have been avoided. For example, in reporting on aquatics:

- Page 15 attempts to explain why contaminants are more highly concentrated in lake water in winter, than in open water period. The summary states “metals and other elements are excluded from the ice when the ice forms.” This may be interpreted by a reader to mean that the ice is preventing contaminants from penetrating the water below. In reality, these elements are excreted from surface water as it solidifies in the freezing process, thus resulting in higher concentrations in the water below.
- Page 20 states that spawning beds built in the Nero-Nema stream have not “migrated” simply means gravel had not moved downstream in the current. In this context, using a word normally understood to refer to fish and wildlife movements may be confusing to readers.

### Specific Comments

Some specific comments on the plain language summary are listed below:

- Page 4 shows an overview map of the site that still includes the Sable development but this has now been removed from the Life of Mine Plan.
- Page 11 on air quality monitoring does not describe whether there were any exceedences of air quality standards.
- Page 15 mentions an adaptive management plan for nitrates. It would be more accurate to describe the current work by the company as an “approach” rather than a “plan”, given that the adaptive management plan submitted to the WLWB was not approved, pending further guidance.

We would be pleased to discuss these comments with BHPB and others to ensure improved public reporting and environmental management at Ekati.

Sincerely,



Bill Ross  
Chairperson

cc. Society Members

Mark Cliffe-Phillips, Wek'eezhi Land and Water Board