



Independent Environmental Monitoring Agency

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Lionel Marcinkoski
Environmental Scientist
Department of Indian Affairs and Northern Development
Box 1500
Yellowknife NT
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Dear Mr. Marcinkoski,

The Agency has had an opportunity to review BHP Billiton's (BHPB's) 2009 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 2009.

The Agency is of the view that the 2009 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 observations, some with a view to improving future Annual Reports:

- Pdf page 53: LLCF water quality. IEMA remains concerned about the adoption of Environment Canada's updated IPS guideline for nitrate in the receiving environment below the LLCF. IEMA is not disputing the statement in the report - it is correct as BHPB has taken this stance. However, the approach of adopting the IPS guideline on a site-wide basis requires further discussion. The Agency wrote to the company on May 17, 2010 regarding our concerns and awaits a response.
- Appendix I (pdf page 92): Many of the spills were related to hose failure. The Agency wonders whether there is a rigorous preventative hose examination program to reduce these spills.
- Pdf page 98: The heading "Reclamation Work and Research Anticipated in 2011" should be 2010.

- Pdf page 98: In telling the reader, in relation to the anticipated 2011 reclamation work on the kimberlite spill aftermath, "Water management controls along the old road bed will be monitored during freshet ... and adjusted as necessary" it would be helpful to inform us what those water management controls are. What will be adjusted and how?
- Pdf page 110: "Results suggest that the wildlife deterrents and mitigation strategies employed in 2009 were effective in promoting both human and wildlife safety." Given that the Ekati airport fencing (supposedly a deterrent strategy promoting both human and wildlife safety) was the cause of four caribou deaths, this may not be a supportable statement. However, we do commend the company for replacing the fence this past summer.
- Wildlife section summary: This is a high-level, quick summary. The 2009 WEMP report shows that BHPB makes conclusions based on very weak data and sample sizes, but this is not evident in the summary report.
- Pdf page 111 states: "Caribou exhibited more active behaviours near roads, yet were found to feed more frequently away from roads. This may be attributed to study design limitations rather than a behavioural response (i.e. vehicles used in the survey could be disturbing caribou near roads or surveyors may be more likely to detect caribou that are closer to the roads)." It is equally likely to the Agency that dust covered vegetation might be unpalatable to caribou, resulting in preferential feeding behaviour farther from roads than near them.
- Pdf page 113: "Of the fox sightings identified to the species level, 146 red fox individuals were observed compared to one Arctic fox and 11 cross fox individuals." As noted to BHPB earlier this year, this implies cross fox are a separate species, not simply a colour variant of red fox (*Vulpes vulpes*). This should be clarified in future WEMPs at the least.
- Pdf page 115: As with the main breeding bird report, it is disappointing there was no "what's next" or future recommendations section as a result of the 13 years of monitoring.
- The list of all environmental programs, including abstracts, is presented as the List of Appendices, although not in the body of the report as requested by the Agency in 2008.
- The Annual Report does not contain a summary of the Cell E fish study.
- The report neglects to mention that the new incinerators meant to improve air quality (and potential dioxin deposition into Kodiak Lake) are not yet operational.
- As with previous Annual Reports, this one does not include:
 - a communication and external outreach section;

- a discussion of petroleum hydrocarbons entering the LLCF from mine operations;
 - an explanation of road decommissioning; and
 - details on how the liability estimate was calculated, stating only that it will be updated following approval of the ICRP.
- Appendix I (Spills & Unauthorized Discharges) is missing from the List Of Appendices (page iv). This has resulted in all the subsequent appendices in the List being out of synch by one letter.

General Comments on the Plain Language Summary

p. 3: BHPB should have summarized its operations that occurred last year rather than insert Figure 2, the Ekati Life of Mine Plan. The company should have highlighted general operations in the text including locations for production and any changes. For example, the main areas for mining (i.e. Fox, Koala underground) and the proportion of total production from each area. BHPB could have also discussed the surface miners in Fox and the environmental and cost-savings gains. It is not clear where PK was deposited in the LLCF during 2009. The completion of mining at Beartooth pit and its use as a minewater sump should also be mentioned.

p. 4: Details on BHPB's use of TK is lacking.

p. 5: In the Air Quality section, there is no mention of the HVAS or Continuous Air monitoring sampling that takes place. Although the two exceedances are mentioned, there is no information on how the air quality was measured or sampled or which guidelines were exceeded.

p. 8, Figure 3: This figure on water and waste streams is confusing. Numbers in and out do not match.

p. 10, Figure 5: Orange dot symbols for water sampling stations are missing from this air photo.

p. 10: In the discussion of the AEMP, it was noted that two chemicals were higher than the guidelines and these exceedances should have been more clearly identified. Additionally increases in parameters in the watersheds should be discussed in the text.

The last line in the following statement in the last paragraph is misleading. "Based on guidelines provided by the Canadian Council of Ministers of the Environment and the guidelines made for the waterbodies, the potential for negative effects is focused on the first two lakes, Leslie and Moose lakes. **There would be no effects in the streams leading away from these lakes.**" [emphasis added] It is not clear how BHPB can make this statement when Figure 6 clearly shows that some parameters have increased over time all the way downstream into Lac de Gras.

p. 13: In the Fish Habitat Monitoring section discussion on the Panda Diversion Channel,

the number of grayling originally tagged is not included. There is no mention of fin clipped fish or future monitoring.

We expect that BHPB will respond to these comments and also use them as a basis to improve future Annual Reports.

Sincerely,

A handwritten signature in black ink, appearing to read "W.A. Ross". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

Bill Ross
Chairperson

cc. Society Members
Mark Cliffe-Phillips, WLWB
Anne Wilson, EC
Bruce Hanna, DFO