



**INDEPENDENT ENVIRONMENTAL MONITORING AGENCY**

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June 4, 2008

Violet Camsell-Blondin  
Chairperson  
Wek'eezhi Land and Water Board  
Box 32  
Wekweeti NT  
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**Re: Verification Comments on Section 4 of the  
Interim Closure and Reclamation Plan (ICRP)**

Dear Ms. Camsell-Blondin

Please accept the Agency's verification comments for the Section 4 review of BHPB's draft ICRP. The Section 4 review includes three components of the ICRP draft report—Chapter 8 (Environmental Assessment), Chapter 9 (Progressive Reclamation), and Appendix F (Reclamation Research Summary).

**Chapter 8**

Our principal remaining concern in this chapter is that, at the end of reclamation activities at Ekati, there be an assessment of residual environmental impacts. It is our understanding that BHPB has committed to do this as part of its *Reclamation Completion Report* as specified in the *Mine Site Reclamation Guidelines for the Northwest Territories*. This will allow any monitoring of residual impacts to be incorporated into its *Performance Assessment Report* once the initial follow-up monitoring period has ended. The ICRP should be revised to describe these two milestones in more detail. Subject to the opportunity to review a revision of Chapter 8, this matter should be considered resolved.

**Chapter 9**

BHPB agreed with the Agency at the Section 4 Working Group meeting that there was no material difference between 'progressive reclamation' and 'reclamation'. As we understand it, BHPB has committed to reclaim facilities and areas that are no longer required for active mining operations, as they become available. This chapter should make explicit reference to the relevant tables that identify dates for reclamation activities and the Life of Mine Plan, assuming that these tables are also improved as discussed at the Working Group meeting. With these clarifications and changes, the Agency considers this issue resolved.



## **Appendix F**

In our April 4, 2008 letter to the Board containing our comments on Section 4 of the ICRP, we identified three key problems with the reclamation research plan proposed by the company at that point. These were the need to identify reclamation option and criteria uncertainties that are then linked to specific research objectives and activities; the lack of detail for the research topics identified; and the issue of timing for the proposed research to ensure that it would be completed to allow for progressive reclamation as various mine functions and components are finished.

We were pleased with the discussions at the Working Group meeting last week where BHPB committed to address these issues in a revised final draft of the ICRP. Subject to reviewing the revised ICRP, these major concerns should be resolved.

As we pointed out in our April 4 comments, we remain concerned about the absence of detail about the reclamation research that BHPB has to undertake between now and mine closure. While a substantial list of research activities have been identified, very little detail about how these will be carried out has been provided. In our view, it is critical that *Appendix F* provide detailed information about what each research task will consist of, and how and when it will be undertaken.

Resolution of our concerns with *Appendix F* will depend upon the revisions to this document that BHPB has committed to under tracking item #38 in the response table, in combination with the additional commitments made on individual tracking items during the Section 4 Working Group meeting. Based on the discussions at the Working Group, we understood that BHPB will revise *Appendix F* to better focus on future research, and to account for the following:

1. where information uncertainties exist for proposed reclamation and closure options and criteria, these will be explicitly identified in the relevant part of the ICRP text (i.e. Sections 6.1 to 6.6, as per Part 1 of BHPB response #38);
2. in Tables 43-48, each planned research objective will be linked to one of the defined uncertainties (as per Part 2 of BHPB response);
3. for each research task, sufficient detailed information will be provided so that the Board and others can understand how the research will be conducted (i.e., methodology, data collected, analytic methods, etc.), when the research will be initiated and completed, and how the results will inform the ICRP;
4. the research schedule will be updated to illustrate start and completion dates for each identified research task;
5. past research activities and results (i.e., lessons learned) will be removed from the research plan, and placed elsewhere in the ICRP, either in main report or as a separate appendix;
6. only those activities comprising research yet to be undertaken should be included in *Appendix F*, with planning, engineering, and consultative activities related to closure planning being placed elsewhere in the ICRP, either in main report or as separate appendices.

We believe that with careful thought to exactly what the key information uncertainties pertaining to reclamation planning are, the list of research tasks will be significantly shorter from that presented currently in *Appendix F*.

As we have previously stated, most of the critical uncertainties relate to four general components of the closure plan—water quality in Long Lake, aquatic habitat in pit lakes, long-term stability of extra-fine processed kimberlite, and revegetation sustainability (including cover design for the LLCF). Further research in these areas will, we suspect, form the core investigations yet to be done as part of the reclamation research program.

### **Water Licence**

In revising the ICRP, BHPB needs to also carefully review the requirements set out by the water licence under Part J, Item 1(p), which identifies the information to be presented in relation to research. In our view, the following items require some attention:

- Item (i) requires a discussion of how research results may affect reclamation planning—this does not seem to be provided in the ICRP;
- Item (ii) requires that details of the research be provided (as discussed above);
- Item (iii) requires a process to be identified to confirm that reclamation activities will result in an ecologically viable outcome;
- Item (vi) requires an annual schedule of reclamation research expenditures—not provided in the ICRP;
- Item (vii) requires QA/QC protocols for conducting research, and a description of research monitoring program—neither provided in the ICRP.

### **Research Schedule**

As we have previously noted, there is concern that much of the critical research will not be undertaken by BHPB in time to ensure that results are available for reclamation work. There is, therefore, some urgency in having a revised research schedule which provides for the completion of research prior to commencement of reclamation. We suggested in the Section 4 Working Group meeting that BHPB break out the timing for specific research tasks within Table 1. The Agency is prepared to meet with BHPB and other interested parties to discuss reclamation research schedule and its relationship to the Life of Mine Plan and the research contemplated in Tables 43-48.

### **Other Matters Arising from the Working Group Meeting**

#### **Scope of the ICRP**

In several places in the response table to Section 4 comments, BHPB indicated that new information or reports that have been released since the January 2007 submission of the ICRP would not be considered or incorporated into the final draft. During the Working Group meeting, BHPB committed to incorporate some studies released after January 2007. The Agency is of the view that BHPB should, at a minimum, incorporate the relevant information from the following reports:

- LLCF Water Quality Prediction Models (Version 1.0 and 2.0);
- Ekati Diamond Mine Revegetation Research Projects 2006 and 2007. Final Report. Harvey Martens and Associates Inc. December 2007.;
- Ekati Wildlife and Human Health Risk Assessment. Final Report. Rescan Environmental Services. January 2006.;
- Pit Lakes Studies; and
- The Agreement in Principle between BHP Billiton Diamonds and the Department of Fisheries and Oceans Respecting Construction of Shallow Zones at End Pit Lakes. April 10, 2008.

### **Fish and Fish Habitat in the Pit Lakes and Cell E**

One significant matter that remains unresolved is the issue of reestablishment of a sustainable aquatic ecological system in the pit lakes and Cell E of the LLCF, even with the Agreement-in-Principle (AIP) between BHPB and DFO, and the further clarification at the Working Group meeting. The Agency recommends to the Board that BHPB needs to take steps in the ICRP that are consistent with the overall reclamation goal, in ensuring that the pit lakes are safe for fish passage and that the pit edges and shallow areas are engineered and revegetated for fish habitat.

The Agency has conducted a preliminary review of the AIP and it is a step forward but the details are yet to be worked out. The AIP is related to the proper closure and reclamation of the Ekati mine but is separate from the ICRP and any obligations the company has under its water licences and the Environmental Agreement. The AIP cannot fetter the discretion of the Board in dealing with the ICRP. However the Board resolves this matter, it should be to the benefit of aquatic life at the end of the mining operation.

The Agency does not support BHPB's proposed changes to the Pit Lakes Studies Terms of Reference as presented by the company at a meeting held on March 20, 2008 and confirmed again in the response table (tracking items 107 and 121). BHPB has proposed that some of the tasks be dropped or modified. The Agency is particularly concerned that the first part of Task 7, namely the "refining the design of created littoral habitats within each of the flooded pits, as well as in the connecting streams that may have been altered during pit operation" (Pit Lakes Terms of Reference pg. 3-17) to allow for fish passage and refuge, has been removed. The Agency urges the Board to require BHPB to fulfill the original Terms of Reference as approved on May 17, 2005.

### **Engineering Questions vs. Reclamation Research**

In the interest of better focusing the Reclamation Research Plan, the Agency committed to indicate to BHPB which of the issues covered in various tracking comments might be better addressed as engineering questions in the ICRP. We are of the view that the following Agency comments in the Section 4 response table, would be better dealt with as engineering questions in the ICRP: tracking numbers 68, 90-97, 136, 143-147, 150-151, 156-157, 179-181, 194-198, 238-245, 255-257, and 271.

## **Next Steps**

The Agency supports an additional Working Group meeting to consider and discuss the final working draft of the ICRP. The Agency would like an extension to the three week review period proposed in the Working Group Terms of Reference. A six-week review period would allow for proper checking of the literally hundreds of changes that BHPB has committed to make. The Agency is also of the view that written comments on the final draft should address major concerns and issues and that this approach would be more helpful in focusing discussion at the final Working Group meeting.

We extend our thanks to your staff for ensuring an effective review process while recognizing that several key parties have not been able to meaningfully participate. We look forward to further discussions and opportunities to improve the ICRP.

Sincerely,

Bill Ross  
Chairperson

cc. Society Members  
Helen Butler, BHPB  
Jason Brennan, DIAND Water Inspector  
Bruce Hanna, Fisheries and Oceans  
Anne Wilson, Environment Canada