



Fisheries and Oceans
Canada

Pêches et Océans
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Your file *Votre référence*

Our file *Notre référence*

March 19, 2007

Sarah Baines
Wek'èzhii Land and Water Board
Box 32, Wekweeti, NT X0E 1W0

RE: BHP Billiton Interim Closure and Reclamation Plan

Dear Sarah:

Thank-you for providing Fisheries and Oceans Canada (DFO) the opportunity to comment on BHP's Interim Closure and Reclamation Plan (ICRP). As specified by the WLWB, DFO's comments focus specifically on Section 1-5 and Appendices A&C.

1. Although DFO recognises this is an interim plan, the eight closure objectives outlined in the ICRP are too vague. Specific closure objectives should be identified for all mine components. In addition, complying with legal and regulatory obligations, and the return of securities to BHP as soon as practicable should not be considered as closure objectives.
2. As defined in the ICRP, "the goal of reclamation is to return the Ekati mine site to viable, and wherever practicable, self –sustaining ecosystems that are compatible with a healthy environment and with human activities." It is DFO's opinion that this should also apply to the aquatic ecosystem. Therefore, as a specific closure objective, end pit lakes should be designed to provide and function as fish habitat (ie, sloping the last bench of the pit to create a littoral zone) if feasible and practical.
3. DFO does not believe that refining the ICRP to focus on end pit lakes as fish habitat rather than just large pits holding water is contrary to the intentions of the plan. As stated on page 31:

This ICRP is an interim plan designed for an operating mine that has a substantial mine life remaining. This interim plan is conceptual in nature and the detail included is appropriate for this stage of closure planning. As the ICRP is updated in the future, further detail will continue to be refined when results of ongoing and planned research studies are known. A final closure plan will be prepared and submitted at least 2 years before final closure of the mine.

DFO believes if research addresses the concerns associated with end pit lakes, it is important that self-sustaining aquatic ecosystems are established after mine closure.

4. DFO recognizes that there are concerns with end pit lakes becoming nutrient sinks; however, DFO advocates conducting end pit lake experiment(s) to determine if these concerns are valid. This is consistent with BHP's statement on page 28 of the Executive Summary that:

Research needs for successful closure of mine components will evolve through the life of the mine and will draw heavily on our existing environmental programs.

DFO recommends that an end pit lake experiment should be included as a high priority for BHP when refining the detailed reclamation research program for the end pit lake component. This is consistent with BHP's statement on page 115, Appendix C that "closure criteria should be based on targeted research which results in more informed decisions."

5. On page 114, Appendix C it is stated that:

Although backfill of the WRSA into the open pits may address aesthetic concerns raised by some stakeholders, it does not achieve the objective of environmental protection. The assessment shows a number of negative environmental effects from this option.

This information may be elsewhere in the document but it is important to identify what negative environmental effects have been demonstrated by the mentioned assessment. As the mine plan changes over time, options such as open pits becoming available for deposit of waste rock should be considered. If waste rock is placed in the open pits and Acid Rock Drainage is not a concern, the end pit lakes will be shallower, reducing the amount of water/ time required to fill them. This will lessen impacts on water source lakes, eliminate the footprint associated with more waste rock piles, and prevent further lakes from being impacted by being used as waste rock storage areas.

6. The LLCF has not been identified as a water source for filling of the pits but is being looked at as a potential alternative. DFO recommends that the LLCF not be used as a water source. If Cells D&E meet water quality criteria upon cessation of mining activity, re-establishment of connectivity with downstream water bodies should be considered as the concerns associated with end pit lakes as fish habitat do not apply. The physical habitat has not been substantially altered and therefore the two cells could provide productive fish habitat without much effort on the part of BHP. DFO recommends that BHP include the return of Cell D&E of the LLCF to fish habitat as another specific closure objective.
7. If Ursula, Upper Exeter, and Lac De Gras are used as water sources for filling the pit lakes, BHP should ensure that the withdrawal rate/ volume will not result in a negative impact to these source lakes. It is important to note that Diavik also proposes to use water from Lac de Gras to fill in open pits created by their operation. The amount of water required from Lac de Gras from both operations should be considered.
8. On page 116, Appendix C BHP states that:

The biological stability of the closed site and potential effects on the surrounding environment are closely related to methods of reclamation, the end land use, and the physical and chemical characteristics of the site. Biological stability at EKATI applies to vegetation, aquatic habitats, and wildlife habitats, and is reached when

these habitats are stable, self-sustaining, and productive, and meet the agreed stakeholder requirements.

To reiterate, DFO believes that the end pit lakes (aquatic habitats) should be designed to be stable, self-sustaining and productive. This would be valuable for both fish and wildlife.

9. Post closure monitoring should include components related to end pit lakes being designed to support fish, especially overwintering populations.

DFO would like to commend BHP for providing a comprehensive list of reclamation and closure definitions with translation in the appropriate languages (Appendix A). DFO would also like to commend BHP for their commitment to progressive reclamation on the mine site.

If you have any questions, please contact me at (867) 669-4931.

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