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**BHP Billiton Diamonds Inc.**  
Operator of the EKATI Diamond Mine

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February 13, 2009

**RE: BHP Billiton's Pit Lake Studies**

Kathy;

The Board's ICRP Working Group has discussed the creation of fish habitat in reclaimed pit lakes and, specifically, the status of task #7 in the Pit Lake Studies. The purpose of this letter is to provide further clarification on the background and the Company's position. We hope you will find the following analysis helpful.

History

The initial direction for the Pit Lake Studies was provided by the Mackenzie Valley Land and Water Board (MVLWB) as a stand alone requirement of the Sable, Pigeon and Beartooth Water Licence (MV2001L2-0008) (SPB WL) issued in 2002. At that time the Studies were focussed only on the Sable, Pigeon and Beartooth pits. Unlike the natural form of flooding proposed for the open pits under the original Water License (NZL2-1616) (Main WL), these three open pits were to be reclaimed by pump flooding from nearby source lakes. The MVLWB described the purpose of the Studies as being "to address the potential of converting the mined-out kimberlite pipes into pit lakes" (Part I, Item 1). Eight specific topics were identified as follows:

- a. Waste materials characterization;
- b. site-specific meteorological data;
- c. physical limnological assessments;
- d. water balance data;
- e. hydrological data;
- f. water quality data;
- g. potential hydrological impacts on lake water sources and their respective downstream waters, with an examination of contingencies to avoid these impacts; and
- h. an outline of proposed dates for deliverables.

BHP Billiton was required to develop a Terms of Reference for the Studies for approval.

The Terms of Reference submitted by BHP Billiton included a research task that was additional to those required: Task #7 related to assessing the likelihood of “fish passage” into the proposed pit lakes on the basis that movement of fish from neighbouring lakes and streams into the reclaimed pit lakes may be relevant. The MVLWB conducted a review and subsequently approved the Terms of Reference.

In 2006 following renewal of the Main WL (now MV2003L2-0013), BHP Billiton initiated work that would lead to the required update of the Closure and Reclamation Plan. The initial tasks for this work included consultation with DFO. During these meetings, DFO advised BHP Billiton that DFO’s position was that the Task #7 “fish passage” study was not an assessment of fish movement, but was in fact to be a study of all aspects of “fish habitat” as the latter term is defined in s. 34(1) of the *Fisheries Act*. This represented a significant departure from the scope of the study described by BHP Billiton. DFO’s position with respect to the scope of Task #7 is also inconsistent with BHP Billiton’s compensation arrangements with DFO (described in more detail below) as BHP Billiton has fully compensated for the habitat loss in all existing and planned open pits and retains no obligation to recreate fish habitat in or to the reclaimed pit lakes.

BHP Billiton advised DFO of BHP Billiton’s position in this regard. Given that DFO’s position with respect to the scope of Task #7 represented a significant departure from the study described by BHP Billiton and was inconsistent with the existing compensation arrangements, BHP Billiton omitted the task from the Draft ICRP of January 2007. The omission appeared to have been ostensibly accepted by DFO until recent events as nothing further was heard from DFO, and on December 10, 2007 DFO even approved the extension of BHP Billiton’s 2003 *Fisheries Act* authorization to Dec 21, 2013 without mention of the deleted task.

It would now seem that DFO once again is attempting to require BHP Billiton to undertake a fish habitat study. BHP Billiton is not required to do that.

### Fisheries Compensation

For ease of reference, we have summarized below the compensation that has been provided by BHP Billiton for the loss of fish habitat in the existing and planned open pits. This may help the Board understand the Company’s reason for deleting task #7 as being inconsistent with the existing compensation arrangements.

During the Environmental Assessment and Review Process for the EKATI Diamond Mine, the issue of destruction of and compensation for fish habitat was canvassed thoroughly before the Environmental Assessment Review Panel with the full involvement of DIAND, DFO, affected aboriginal groups and all other interested parties. In June 1996, the Panel, in its Report to the federal Ministers for the Environment and DIAND, concluded the following and made the following recommendations in section 4.4 of the Report:

“The Panel concludes that the primary impacts of the Project on fish would be the loss of existing populations and habitat in 12 lakes and associated streams....such effects would be localized and would not have an overall effect on fish populations in Lac de Gras or the Coppermine River. Effects on stream habitat would be offset by the creation of habitat enhancement features in the diversion channel between Kodiak and Panda Lakes...

...The Panel recommends that:

- a) cash compensation for the loss of fish habitat should be considered by DFO only when there are no viable options to avoid the loss of habitat or to re-create the lost habitat;
- b) DFO develop a fair, realistic and transparent approach to the calculation of compensation for loss of fish habitat;
- c) DFO settle compensation [sic] with BHP as quickly as feasible, reflecting the principles described in b) above;
- d) if it is decided to proceed with the proposed Habitat Management Fund, an effective public consultation program including Aboriginal peoples be undertaken by DFO as soon as possible to identify projects that would be most appropriate; and
- e) the results of projects paid for by this fund be carefully monitored to ensure that the objective of habitat enhancement is achieved.”

In December 1996, following the issuance by the Minister of an approval for the EKATI Diamond Mine, DFO determined the appropriate cash compensation to be paid by BHP Billiton in relation to the loss of fish habitat for the EKATI main site. DFO entered into a Compensation Agreement with BHP Billiton dated December 17, 1996 covering the 12 lakes and associated streams noted in the Panel’s report (the “Compensation Agreement”). By the Compensation Agreement, DFO and BHP Billiton settled BHP Billiton’s obligations and requirements respecting the anticipated loss of fish habitat. In particular, the Compensation Agreement required the Company to construct the Panda Diversion Channel to compensate for the destruction of fish habitat in streams, as well as to pay DFO the sum of \$1.5 million dollars (the Habitat Management Fund) to be used to support habitat restoration and enhancement projects. The agreed sum was paid by BHP Billiton. The Habitat Management Fund is administered and managed solely by DFO.

On January 7, 1997, DFO issued a section 35 *Fisheries Act* Authorization (FAA) to BHP Billiton permitting the destruction of fish habitat in the lakes to be mined as open pits through the dewatering of those lakes, conditional on BHP Billiton complying with the terms of the Compensation Agreement. Clause 7 in the 1996 Compensation Agreement recognized the potential need for, and accommodated, changes in the mine plan by allowing for the substitution by BHP Billiton of other lakes on the claim block for one or more of the 12 previously identified water bodies without the need for further compensation by BHP Billiton and without the need to alter or amend the 1997 Authorization provided the original identified lake(s) and the one(s) proposed for substitution had similar surface areas and similar fish habitat.

During the Environmental Assessment of the Sable, Pigeon and Beartooth project, BHP Billiton proposed mitigation and compensation for the loss of fish habitat to DFO. BHP Billiton originally proposed fish habitat creation in Sable, Pigeon and Beartooth as outlined in the Environmental

Assessment for Sable, Pigeon and Beartooth, 2000 but DFO was not satisfied with the proposal and continued to reject it throughout the assessment process. As a result, the Mackenzie Valley Environmental Impact Review Board (MVEIRB) recommended that BHP Billiton continue negotiating with DFO to satisfy the Department's "no net loss" objective. BHP Billiton agreed to continue the negotiations in a letter to the Minister of INAC dated March 2, 2001. The Minister formally acknowledged this commitment in his response to the MVEIRB's Report of Environmental Assessment on the Sable, Pigeon, Beartooth project (letter dated April 12, 2001).

In January 2003, with compensation negotiations between the two parties concluded, DFO issued a FAA to BHP Billiton for the harmful alteration, disruption or destruction of fish habitat for, amongst other activities, the dewatering and bottom substrate stripping of Sable Lake, Pigeon Pond and Beartooth Lake and the dewatering, dike creation and use of Two-Rock Lake as a sedimentation pond. In accordance with Clause 7 of the 1996 Compensation Agreement, DFO accepted substitution by BHP Billiton of Leslie Lake (which had been approved for de-watering and habitat destruction in the 1997 FAA but was never pursued for development by BHP Billiton) as compensation for the proposed dewatering and harmful destruction of the lake fish habitat in 6 water bodies (as detailed in Clause 1 of the 2003 FAA) including the destruction of Sable Lake, Pigeon Pond and Beartooth Lake.

### Current Status

The Pit Lake Studies, inclusive of all the open pits and research topics identified in the water licence but exclusive of task #7, is included in the Final Draft ICRP that is nearing completion of its review through the Board's ICRP Working Group. A reference table that links each task of the Pit Lake Studies to its location in the ICRP is attached to this letter for ease of reference.

### Definitive Agreement

Additional to but, of necessity, separate from the Board's ICRP review process and jurisdiction, BHP Billiton and DFO are currently negotiating the terms of an agreement between them that would provide the basis for research and assessments to be conducted by DFO in certain of the reclaimed pit lakes for the purpose of assessing the viability of fish habitat in select pit lakes following closure. Under the agreement, BHP Billiton would – as part of its closure and reclamation tasks – construct shallow zones in selected open pits on closure that DFO could then use, at its option, to develop fish habitat. The negotiation is based on the mutually agreed fact that BHP Billiton has no obligation to create fish habitat in the existing pit lakes beyond the compensation already provided to DFO for just such a purpose.

The Board and all members of the ICRP Working Group have already seen the executed Agreement in Principle between BHP Billiton and DFO on this matter. The next stage of completing a Definitive Agreement is well underway.

We hope that the preceding information is clear and is of assistance to the Board. Please contact Helen Butler at 669-6104 if you have any questions.

Yours sincerely,

**BHP Billiton Diamonds Inc.**



Laura Tyler, Manager - Environment, Community, Communications and Planning  
EKATI Diamond Mine

**Attachment: Linkage of Pit Lake Studies to the Final ICRP Working Draft, December 2008**

<b>Task from Pit Lakes Studies</b>		<b>Location in Final ICRP Working Draft, Dec'08</b>	
<b>Task #</b>	<b>Task Name</b>	<b>ICRP Reference</b>	<b>Study Name</b>
Task 1	Review of the State of Knowledge of Pit Lakes	Appendix 5.1-4A Research Plan # 3, Section 3.5 Task 1.	Review of the State of Knowledge of Pit Lakes
Task 2	Review Data Requirements, Available Data and Data Gaps 3.2.1 Meteorology 3.2.2 Hydrology 3.2.3 Surface Water Quality 3.2.4 Hydrogeology 3.2.5 Acid Rock Drainage 3.2.6 Aquatic Biology 3.2.7 Detailed Ultimate Pit Geometry	Appendix 5.1-4A Research Plan # 3, Section 3.5 Task 2.	Identification of Data Gaps
Task 3	Waste Characterization 3.3.1 Waste Rock 3.3.2 Pit Walls 3.3.3 LLCF	Appendix 5.1-4A Research Plan # 3, Section 3.5 Task 3.	Waste Characterization
Task 4	Water Balance at Closure	Appendix 5.1-4A Research Plan # 3, Section 3.5 Task 4.	Water Balance at Closure
Task 5	Pit Lake Stability Modelling 3.5.1 Preliminary Calculations on Meromixis 3.5.2 Numerical Modelling of Future Lake Stability	Appendix 5.1-4A Research Plan # 3, Section 3.5 Task 5.	Pit Lake Stability Modelling
Task 6	Water Load Balance Model	1. Appendix 5.1-4A Research Plan # 3, Section 3.5 Task 6.  2. Section 7.4.1	1. Water Load Balance Model  2. Pit Lake Load Balance Model Inputs.

Task 7	<p><b>Analysis of Fish Habitat and Fish Communities</b></p> <p>3.7.1 Pit Lake Fish Passage (No Longer Included)</p> <p>3.7.2 Effects on Fish Habitat from Water Extraction for Pit Infilling</p>	<p>1. Appendix 5.1-4A Research Plan # 2, Section 2.5 Tasks 1-7.</p> <p>2. Section 7.4.4 – 7.4.6</p> <p>3. Section 7.4.7</p>	<p>1. Water Withdrawal from Source Lakes</p> <p>2. Predicted Effects of Extraction Rates on Source Lakes</p> <p>3. Fish Habitat in Source Lake Littoral Zones.</p>
Task 8	<p><b>Studies to Develop Contingency Plans for Loss of Pit Lake Physical Water Column Stability</b></p> <p>3.8.1 Review of Potential Need for Water Treatment</p>	<p>1. Section 7.3, Table 7.3-1.</p> <p>2. Section 7.4.3</p>	<p>1. Predicted Post-Closure Residual Effects, and Environmental Assessment Summary Table.</p> <p>2. Pit Lakes Stability Model – discussion on meromixis.</p>
Task 9	<p><b>Review Pit Infilling Scenarios</b></p>	<p>Appendix 5.1-4A Research Plan # 3, Section 3.5 Task 7.</p>	<p>Pit Lakes Study Summary</p>
Task 10	<p><b>Preliminary Risk Assessment of Mine Flooding Closure Options</b></p>	<p>1. Appendix 5.1-3 Risks and Contingencies.</p> <p>2. Appendix 2.1.1 Section 7</p>	<p>1. Table 5.1-3F, Water.</p> <p>2. July 2006 Closure Options Evaluation Workshop, attended by communities, regulatory agencies, and the Independent Environmental Monitoring Agency (IEMA).</p>

