BHP Billiton Diamonds Inc.

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June 2, 2006

Wek'èezhìi Land and Water Board
c/o Mackenzie Valley Land and Water Board
P.O. Box 2130
Yellowknife, NT
X1A 2P6

Attention: Ms. Violet Camsell-Blondin
Chair

Dear Ms. Camsell-Blondin:

Re: Review of Comments on the 2005 EKATI Waste Rock Storage Area Seepage and Waste Rock Survey Report

BHP Billiton Diamonds Inc. appreciates the opportunity to respond to the Board and would like to thank the Independent Environmental Monitoring Agency (IEMA) and Indian and Northern Affairs Canada (INAC) for comments received regarding the 2005 Waste Rock Storage Area Seepage and Waste Rock Survey Report. BHP Billiton has had an independent expert review comments received pertaining to the seepage programs and we are pleased to provide the Wek'èezhìi Land and Water Board (WLWB) with our response to the reviewers' comments in the following letter. Specific responses to each reviewer's questions are provided in Table 1, which is attached to this letter.

The 'Scope of the Seepage Report', as developed with stakeholders including Mackenzie Valley Land and Water Board representation, prior to the creation of the Wek'èezhìi Land and Water Board, is to provide yearly results of the seepage surveys, a comparison to previous years analytical data and to identify potential problem areas from which adaptive approaches need to be potentially generated. It is a monitoring data report with the analysis described above. It needs to be read along side the *Waste Rock and Ore Storage Management Plan* and *Adaptive Management Plan*, which is due to the Board in November of 2006. These latter reports contain the management alternatives sought by some of the reviewers. Examples of how this approach worked in the 2005 Seepage Report included SEEP-019 associated with the Panda/Koala Waste Rock Pile and SEEP-052 associated with the Misery Waste Rock Pile. Both of these areas have been highlighted based on analytical data received from the 2005 surveys and adaptive management strategies including the collection of additional samples have been discussed and implemented by BHP Billiton.

The Seepage Survey follows a protocol that was established in August 2001 and describes sampling of surface water seeps at EKATI. The protocol is on the public registry contained in the

2001 Seepage Report at the Board and is available to all stakeholders. The 2005 Seepage report contained the third version of the protocol, however, it is not the intent of the Seepage surveys to repeat this protocol every year. Additionally, sampling and analyses are conducted in accordance with our Quality Assurance and Quality Control Plan as part of the SNP program required under the Water Licence.

During the Environmental Impact Report (EIR) session held in February 2006 which was attended by Board staff and copies of which are logged on the Public registry, the following conclusions with regards to the seepage work conducted by BHP Billiton, were provided by an independent expert hired by BHP Billiton for the 2005 Waste Rock Storage Area Seepage and Waste Rock Survey Report:

- The waste rock at EKATI demonstrates uniform characteristics of country rock types.
  - Granitic rock have uniformly low sulphide content and are not potentially sources of Acid Rock Drainage (ARD) and are therefore not considered Potentially Acid Generating (PAG).
  - Biotite schist which is present at the Misery and minor amounts within the Beartooth Pit is PAG but not shown any signs to date under field conditions of producing a depression in pH of seepage, one of the first potential signs of ARD.
- The seepage survey shows similar effects documented since 1999.
  - The vast majority of seepage draining to receiving environment is compliant with the Water Licence. The notable exception is:
  - SEEP-019 is currently non-compliant but produces extremely small volumes of water. It is not causing an adverse effect to Bearclaw Lake into which it drains at this time.

Some background geology for EKATI is as follows: (i). Kimberlite: the ore host which intrudes the country rocks consisting mainly of granite but also some schist and diabase. Kimberlite is mainly composed of magnesian silicates (olivine, serpentine) and contains carbonate minerals and weak (<1%) sulphide mineralization. Kimberlite intrusions have negligible chemical effect on country rocks and only minor physical effect. (ii). Granite (all pipes): granite classified as biotite granite and globally typical contains very minor (<0.1%) regional levels of pyrite, carbonate and traces of chalcopyrite. (iii). Schist: is significant at Misery Pipe. Low levels of fine grained pyrite or pyrrhotite (mostly less than <0.5%) and contains negligible carbonate. The schist material generates acid in laboratory tests, however, no evidence of acidic drainage is identified under field conditions. (iv). Diabase (all pipes): consisting of regional dyke swarm that are thin near vertical dykes containing negligible concentrations of carbonate and sulphide.

An understanding of the site bedrock geology is required by reviewers to fully comment on the geochemistry of site drainage. This is particularly relevant for three main reasons:

- Unlike emplacement of metal ores, emplacement of kimberlite (diamond ore) does not have a significant chemical affect on the surrounding host rocks. This is important because it relates to the approach used to geochemically characterize waste rock.
- The genesis of the various rock types controls their mineralogical and geochemical characteristics.

- A wide range of rock types are present with variable geochemical characteristics. These characteristics have been established through experience elsewhere. A lay reader might be concerned by the elevated chromium and nickel content of kimberlite but this is a well known characteristic of ultramafic rocks and in itself is not unusual. It is not causing an adverse downstream effect at this time, but nickel does require ongoing monitoring. These rock types and their geochemical characteristics are not unique to the EKATI mine site.

The following changes, additions and issues were further highlighted at the EIR session regarding the 2006 and subsequent surveys:

- **Reduction of ABA monitoring.**
  The rationale for the reduction is that kimberlite does not produce a mineralizing effect and the country rocks are not unique to the mine. Monitoring to date has shown consistent and predictable characteristics and management decisions can be made based on rock type (granite, biotite schist and kimberlite). Geochemical data are not needed for waste rock management and the IEMA's expert agrees with reduction. Therefore the following recommendations were provided: reduce scope to visual monitoring for rock type characteristics, report rock type for each blast, randomly select a single blast from each rock type in each pit bench for confirmatory analysis, and reduce Coarse Kimberlite Reject (CKR) monitoring to quarterly.

- **ARD classification of kimberlite wastes.**
  The rationale for the classification is that kimberlite is classified as not-PAG based on carbonate as the source of Neutralization Potential (NP). But type of carbonate mineral is unknown and could affect the classification and we expect carbonates are calcite or magnesite. Recommendation for each kimberlite pipe: collect three samples from each pipe in 2006, perform Rietveld XRD, determine carbonate mineral content using microprobe, and use results to indicate method for calculating NP from carbonate content.

- **Significance of pH neutral leaching of kimberlite wastes.**
  The rationale for this is that kimberlite is a source of leachable Ni and Mo, but what is source and release mechanism? Metals could be leached from silicates and/or sulphides and this could affect long term closure considerations. Recommendations for 2006 include using existing information on pH-neutral leaching to calculate potential water quality effects at closure. If risk of impacts at closure is real, design additional mineralogy studies to evaluate source of leachable components and sinks.

- **Field performance of "potentially reactive wastes".**
  The rationale for this is that the field performance of waste rock and processing residues is not well understood due to tundra contact effects. Large controlled field tests would show field weathering effects without the effect of tundra leaching. Recommendation includes constructing small waste rock piles on liners to evaluate weathering behaviour. Candidate materials are granite, schist, CKR and waste kimberlite.

- **Evaluate origin of acidity in SEEP-019 waters.**
  The rationale for this is that seepage emerging from this location (and others) has shown lower pH than natural tundra. Speculated source is emergence of iron-rich waters resulting in pH depression and Dr. Bill Price has suggested that an ion exchange mechanism may be involved. An understanding of the mechanism will help to indicate potential for future changes in pH. Therefore a recommendation was made to design laboratory experiments to investigate the ion exchange mechanism.

In conclusion, BHP Billiton believes that the 2005 Waste Rock Storage Area Seepage and Waste Rock Survey Report meets with the spirit and requirements of the Water Licence (Condition Part F, 4 a to f) and should therefore be accepted by the Board. We respectfully disagree with the Independent Environmental Monitoring Agency's assertion that BHP Billiton has not met the terms of the Licence. The responsibility for management decisions relating to waste management issues ultimately rest with the Company and any decisions will be in accordance with relevant management plans discussed above that have been reviewed by the Board.

We trust that this information meets with the Boards requirements at this time. If you have any questions or concerns, please do not hesitate to contact me at 867-880-2232.

Sincerely,
BHP Billiton Diamonds Inc.

Brent Murphy, M.Sc., P.Geol.
Chief Environment Officer - Operations

RBM/cjm/cch…
cc. Scott Stewart, INAC District Manager

Attachments

SEEPAGE – COMMENT/RESPONSE TABLE

Tracking Number	Reviewer	Comment ID	Plan Section	Topic	Review Comment	BHP Billiton Response	BHP Billiton Proposed Revision	Resolved ? (yes or no)	Action Item (if applicable)
A: IEMA Letter, dated April 7, 2006									
1	IEMA	IEMA-1	n/a	Water Licence	*"the report importantly does not provide any discussion about the management implications of results, something that we have been urging the company to do for several years. This is a serious omission and, as a result of the new requirement in the recently re-issued Type A Water Licence for the mine Part F, Item 4(f) to provide this information, it means that BHPB has not met the terms of its licence in this regard."*	We respectfully disagree with the Independent Environmental Monitoring Agency's assertion that BHP Billiton has not met the terms of the Licence. The Part F requirement of the water licence is met by the seepage report which provides yearly results of the seepage surveys, a comparison to previous years analytical data and identifies potential problem areas from which adaptive approaches need to be potentially generated. It is a monitoring data report with the analysis described above. It needs to be read along side the Waste Rock and Ore Storage Management Plan and Adaptive Management Plan, which is due to the Board in November of 2006. These latter reports contain the management alternatives sought by some of the reviewers. The responsibility for management decisions relating to waste management issues ultimately rest with the Company and any decisions will be in accordance with relevant management plans discussed above that have been reviewed by the Board. Other appropriate management plans include the following: the Wastewater and	None		None

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						Processed Kimberlite Management Plan, the ARD and Geochemical Characterization Plan, the Interim Closure and Reclamation Plan, and the Quarry Management Plan, as well as Re-vegetation Research/ Progressive Reclamation studies. Simply, the seepage report is the seepage report - it is not intended to address management and closure implications of the monitoring results.			
					B: INAC Letter, dated April 7, 2006				
2	INAC	INAC-1	*Section 2.1 (Waste Rock Characterization)*	Sample protocol	*"Section 2.1 (Waste Rock Characterization):* *Request: A full and critical review of the 2005 waste rock monitoring program data can not be conducted until the information used to decide on sampling locations (i.e. random, or based on lithology in blast pattern) as well as the frequency of sampling be made available. While this information is provided in separate reports, it should also be included in a summarized form in the current document."*	The sampling protocol is available in previous reports and there is no reason to repeat each year. The sampling protocol referenced in the 2004 Report is based upon our standard operating procedure for ABA Pit Sampling (ENVR-SOP-ABA-01) which was contained in the 2003 version of the Report. The Independent Review of 2004 Waste Rock Storage Area Seepage and Waste Rock Survey Report for the IEMA (Bill Price, Natural Resources Canada) provided the following information on Sampling – "The different rock types are visually identified. Sampling for the geochemical characterization of different rock types is done from post-blast muck. The frequency of sampling is based on the tonnage mined and depends on the particular rock type and pit. The ABA pit sampling guidelines (Nov 2002)	The 2006 report can be amended to include the tonnage mined and the frequency of sampling for different rock types in different pits for the past year and in total. Reduction of ABA monitoring. The rationale for the reduction is that kimberlite does not produce a mineralizing effect and the country rocks are not unique to the mine. Monitoring to date has shown consistent and predictable characteristics and management decisions can be made based on rock type (granite, biotite schist and kimberlite). Geochemical data are not needed for waste rock management and the IEMA's expert agrees with reduction. Therefore the following recommendations were provided: reduce scope to visual monitoring for rock type characteristics, report rock type for each blast, randomly select a single blast from		SRK to add to 2006 report

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						suggest that samples be taken at two locations from different parts of the blast so that each sample represents approximately 50% of the blast. These guidelines provide useful safety and labeling information." It should also be noted that the Independent Review of 2004 Waste Rock Storage Area Seepage and Waste Rock Survey Report for the IEMA (Bill Price, Natural Resources Canada) provided the following comments on Sampling – "BHPB should review the consistency of the results for the different rock type/waste/pit combinations and where the geology is homogeneous and there are no drainage chemistry concerns suggest reductions in the sampling frequency. Sampling Frequency "	each rock type in each pit bench for confirmatory analysis, and reduce Coarse Kimberlite Reject (CKR) monitoring to quarterly.		
3	INAC	INAC-2	*"Section 2.3.2 (Field and Laboratory Methods)*	Sampling	*"In order to allow a more through review of the data presented in this report, a brief description, and/or table, should be included outlining aliquots collected, parameters analyzes, and post-sampling treatment."*	Table 2.3 (pg 6) outlines parameters analyzed.	The 2006 report will summarize aliquots collected and post treatment in the main body of the text.		SRK to summarize for 2006 report
4		INAC-3	*Section 2.3.3 (Quality Control Results)*	Travel blanks	*(i) For future seepage surveys, the quality control measures should be re-evaluated in order to ensure more meaningful discernment of contamination sources. Specifically, placing the travel blank in the sampling stream*	(i) Treatment of travel blanks has been reconsidered in light of the comment, and it has been decided that the present protocol will be maintained. However, it should be clarified that travel blanks are not immersed in seepage water at a field station. Travel blanks are	None		None

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					should be reconsidered since it increases, unrealistically, the potential for contamination of this blank.	carried into the field and returned to the field lab unopened, and then travel blanks are shipped to the analytical laboratory in the same shipment as seepage samples.			
5	INAC	INAC-4		QA/QC data	*(ii) Laboratory QA/QC data should be included and summarized in the report, including analytical method blanks, analytical replicates, and certified reference materials. This will allow a more critical evaluation of the data provided.*	(ii) Laboratory QA/QC records will be included and summarized in the 2006 report.	Include summary of QA/QC in 2006 report		SRK to include QA/QC summary in report
6	INAC	INAC-5	*Section 3.3.3 (Beartooth blast rock characteristics)*	*Mineralogical analysis*	*If not done so already, the pulps used in the static tests and metals determination of each sample should be retained after analysis. This would ensure that if contamination from another lithology is suspected, confirmation using mineralogical analysis, such as X-ray diffraction and subsequent Rietveld refinement, could be conducted. Not only would this identify the minerals present, but also it would provide the relative abundance of each mineral phase in the sample. Due to the significant mineralogical differences between granite, schist, and mafic xenoliths, mineralogical analysis would identify any significant contamination that had occurred during sampling.*	The use of Rietveld XRD has been previously recommended for checks on mineralogy primarily to clarify NP form. An initial program could be designed in 2006 for the evaluation of NP form and used for the clarification of the long term management of the CKR and waste kimberlite piles. The Rietveld XRD method is unsuitable for determining the occurrence of nickel except possibly as a basis to eliminate the occurrence of abundant nickel sulphide minerals such as pentlandite.	No action recommended		None

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					This would allow more through characterization of blast muck samples that were improperly logged or collected.				
7	INAC	INAC-6	*Section 3.3.3 (Beartooth blast rock characteristics) and 3.4 (Coarse Kimberlite Reject Characterization)*	*Statistics for samples*	*Summary ABA and metals statistics for samples collected from each waste type in 2005 should be provided separately from the summary statistics for the entire historical monitoring dataset. As well, a table providing the average values from each of the previous years would allow detection of increasing or decreasing trends as well as allowing better evaluation of the current monitoring program and how it compares to previous sample results.*	Recommendations for statistical summaries to include annual statistics in addition to cumulative statistics have been received. SRK has recommended that only cumulative statistics be provided for the host rocks because the growing database provides geochemical results against which to classify individual current year results. Annual statistics for kimberlite may be revealing because vertical variations in kimberlite characteristics may be expected.	Annual statistical summaries for kimberlite may be provided in the 2006 report.		SRK to provide statistical summaries for kimberlite in 2006 report
8	INAC	INAC-7	*Section 4.2.2 (Misery blast rock characteristics)*	*Mineralogical analysis*	*(i) The pulps used in the static tests and metals determination of each sample should be retained after analysis. This would ensure that if contamination from another lithology is suspected , confirmation using mineralogical analysis, such as X-ray diffraction and subsequent Rietveld refinement, could be conducted. This would help identify the minerals present and indicate the relative abundance of each mineral phase in the sample. Due to the significant mineralogical differences between the three rock types in the Misery Pit,*	See response INAC-5			

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					mineralogical analysis would be useful in identifying any significant contamination that had occurred during sampling. This would allow more through characterization of blast muck samples that were improperly logged or collected.				
9	INAC	INAC-8		*Statistics for samples*	(ii) *Summary ABA and metals statistics for samples collected from each waste type in 2005 should be provided separately from the summary statistics for the entire historical monitoring dataset. As well, a table providing the average values from each of the previous years would allow detection of increasing or decreasing trends as well as allowing better evaluation of the current monitoring program and how it compares to previous sample results.*	See response for INAC-6			
10	INAC	INAC-9	*Section 4.2.4 (Misery Seepage Monitoring-comparison with Water Licence MV2003L2-0013)*	*Water licence pH criteria*	*Remove the sentence stating that the June 2005 field pH from SEEP-059 is below the lower limit specified in EKATI's water licence.*	The report indicates that: "SEEP-059 is located close to Lac de Gras and is therefore compared to the water licence effluent quality requirements as summarized in Table 4.3." All water entering the Receiving Environment shall meet effluent quality requirements and shall have a pH between 6.0 and 9.0.	Since the June 2005 field pH was 5.9, therefore no change is planned for the 2006 report regarding this topic.		
11	INAC	INAC-10	*Section 4.3.2 (Misery Kimberlite Storage Areas-Seepage*	*Table 4.4*	*Change 2004 to 2005 in Table 4.4*	The Table is mislabeled as 2004 text indicates 2005 data.	None for 2005 report		

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			Monitoring)						
12	INAC	INAC-11	*Section 5.3 (Fox Blast Rock Characteristics)*	*Mineralogical analysis*	*(i) X-ray diffraction and Rietveld refinement analysis should be conducted on the remaining blast muck pulps used for ABA/ML analysis to determine if changes in bulk composition are due to contamination or a change in the rock type itself. Due to the significant mineralogical differences between granite and kimberlite, these analyses would help identify, as well as quantify, the amounts of kimberlite contamination that was occurring in the waste granite.*	See response INAC-5			
13	INAC	INAC-12		*Statistics for samples*	(ii) *Summary ABA and metals statistics for samples collected from each Fox waste type in Fox Pit should be provided separately from the summary statistics for the entire historical monitoring dataset (2003 to 2005). As well, a table providing the avera*	See response INAC-6			
14	INAC	INAC-13	*Section 7.0 (Overall Conclusions)*	*Mineralogical analysis*	*In the event that above average sulphur contents are encountered in waste rock material, these samples should be submitted for mineralogical analysis in order to determine if contamination from other lithologies or an increase in waste rock sulphide content is responsible. Until this is done, the data can only suggest potential*	See response INAC-5			

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					explanations. Item 6 should be changed to more realistically reflect the level of confidence of this conclusion.				