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*Your file - Votre référence*

*Our file - Notre référence*

September 29, 2006

Mr. Sean Brennan  
President and Chief Operating Officer  
EKATI Diamond Mine  
BHPBilliton Diamonds Inc.  
#1102 4920-52<sup>nd</sup>. Street  
YELLOWKNIFE NT X1A 3T1

Dear Mr. Brennan

**Re: Minister's Report on the BHPBilliton, Ekati Diamond Mine 2005  
Environmental Agreement and Water Licences Annual Report**

Indian and Northern Affairs Canada (INAC), the Government of the Northwest Territories (GNWT), the Independent Environmental Monitoring Agency (IEMA) and the Aboriginal Peoples have reviewed the Annual Reports pursuant to Article V section 5.1 of the Environmental Agreement. We are providing the following comments and attachments accordingly.

Following the advice from the Deputy Minister of the Government of the Northwest Territories (GNWT), the Annual Environmental Report is deemed unsatisfactory (Attachment 1). Section 5.1 (f) requires that "within sixty (60) days of the receipt by BHPBilliton of the Minister's Report, BHPBilliton shall reply to the Minister's Report and provide the Minister with a revised Environmental Annual Report which addresses satisfactorily the deficiencies described in the Minister's Report."

INAC and the Monitoring Agency have not identified any additional issues that would warrant a Minister's Report. However, we have some concerns (Attachments 2 and 3) and we request that BHPBilliton consider addressing these items in the revised Annual Report. As a point of clarification, items mentioned in Attachments 2 and 3 are not part of the Minister's Report.

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Canada

As a first step, I suggest that BHPBilliton and the Government of the Northwest Territories meet to discuss their comments on the Annual Report as suggested by GNWT. We look forward to working with the parties on the revised Annual Report.

Please contact Mr. David Livingstone, Director of Renewable Resources and Environment at 869-2647 for further details.

Sincerely,



Bob Overvold  
Regional Director General  
Northwest Territories

Encl.: GNWT - Attachment 1  
INAC- Attachment 2  
Monitoring Agency- Attachment 3

C.c. R.P. Bailey, Deputy Minister, GNWT-ENR  
Dr. Bill Ross, Chair Independent Environmental Monitoring Agency  
Stephen Harbicht, Head, Environmental Assessment, Environment  
Canada  
Julie Dahl, Manager Habitant, Department of Fisheries and Oceans  
David Livingstone, Director Renewable Resources and Environment  
David Scott, Manager, Engineering- BHPBilliton  
Brent Murphy, Environment- BHPBilliton  
Annette Hopkins, Director, Operations  
Carolyn Relf, Director, Mineral Development and Petroleum Resources

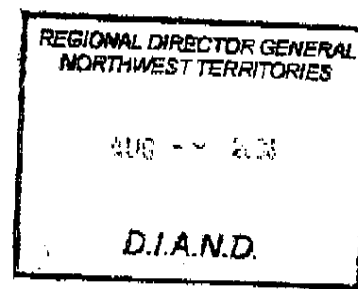
**ATTACHMENT 1**

**GOVERNMENT OF THE NORTHWEST TERRITORIES  
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES**

**ENVIRONMENTAL AGREEMENT AND WATER LICENCES ANNUAL REPORT 2005**



Northwest  
Territories Environment and Natural Resources



Mr. Robert Overvold  
Regional Director General  
Indian and Northern Affairs Canada  
4914-50<sup>th</sup> Street, Bellanca Building  
PO BOX 1500  
YELLOWKNIFE NT X1A 2R3

AUG 24 2006

Dear Mr. Overvold:

**Environmental Agreement Article 5.1(c)  
BHP Billiton Diamonds Inc. Environmental  
Agreement and Water Licences Annual Report 2005**

In accordance with Article 5.1(c) of the Environmental Agreement (EA) between the Government of the Northwest Territories (GNWT), Indian and Northern Affairs Canada (INAC) and BHP Billiton Diamonds Inc. (BHPB) I am writing to inform INAC that the GNWT finds BHPB's Environmental Agreement and Water Licences Annual Report 2005 (the Annual Report) to be unsatisfactory.

Environment and Natural Resources has reviewed the Annual Report and, similar to our findings following review of BHPB's Environmental Impact Report (EIR), we find that data and information has again been omitted while unsubstantiated conclusions are contained within the Annual Report. Examples of these include:

1. Article 5.1(a)(iii) of the EA requires BHPB to include results and findings of environmental monitoring programs in the Annual Report. Article 7.2(h) and (i) of the EA specifically identifies "ambient air quality" and "stationary emissions sources" as components of an environmental monitoring program. While the company has a very limited air quality and emissions monitoring program, the GNWT still expects BHPB to include presentation of the data that is available.
2. Data on TPH and BTEX is not reported for Surveillance Network Program Stations 1616-17, 1616-20, 1616-22, 1616-30 (Table 3.8) although analysis of these parameters is required by the current water licence that came into effect on August 19, 2005.

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3. Page 27 of the Annual Report states that aluminum and iron were detected at elevated levels near Bearclaw and Sable reference areas and that these levels reflect dissolution from the natural tundra soils. However, BHPB also states that metals are deposited onto lichen from activities such as combustion of fuel, blasting, construction and road traffic (EIR Section 5.2.3.5). While it is possible that metals can be elevated as a result of any of these sources, BHPB fails to provide adequate substantiation for the statement in the Annual Report.
4. In the description of Misery waste rock pile sample analysis, the Annual Report states that the results are consistent with previous years (i.e. low neutralizing potential, elevated sulphur in the schist and low sulphur in the granite samples) and that this indicates no issues with the waste rock pile. Until concerns raised by the Independent Environmental Monitoring Agency (IEMA) regarding BHPB's Waste Rock Storage Area Seepage and Waste Rock Survey Report (as described in a letter from IEMA to BHPB dated April 7, 2006) are addressed, this determination cannot be made since it has yet to be established if there are issues with the management of waste rock.

Article 5 1(b) of the EA states:

"In order to prepare each Annual Report and with a view to both ensuring that an opportunity is provided for early disclosure and discussion of problems and that each Annual Report meets with the requirements of this Agreement, BHP shall consult with representatives of the Minister, the GNWT and the Monitoring Agency as BHP compiles the information and data to be included in such Annual Report".

Again, similar to concerns raised in our letter of July 31, 2006, regarding BHPB's approach to providing "final" reports for review, the GNWT does not believe that the consultation requirement as outlined in this Article has been met.

It is anticipated that signatories to the EA will meet in the near future to discuss GNWT concerns with BHPB's EIR. Since BHPB's Annual Report and EIR are closely linked, our concerns with the Annual Report could likely be addressed at the same time.

Sincerely,

  
for R. P. Bailey  
Deputy Minister

**ATTACHMENT 2**

**INDIAN AND NORTHERN AFFAIRS CANADA  
RENEWABLE RESOURCES AND ENVIRONMENT**

**ENVIRONMENTAL AGREEMENT AND WATER LICENCES ANNUAL REPORT 2005**

## INTER - OFFICE

## MEMO

To: Lionel Marcinkoski  
Environmental Scientist  
Environment & Conservation

From: Rebecca Chouinard  
Pollution Control Specialist  
Water Resources

Subject: Environmental Agreement and Water Licences Annual Report 2005

Date: July 24, 2006

The Water Resources Division of INAC has reviewed the aforementioned report and has the following comments, questions and concerns:

- This report could use a better map. There are maps with the SNP stations marked, but none with the seep locations.
- The report is a bit too vague in some sections, which requires the reader to do refer to other reports. This should be a stand alone report that includes any conclusions made in other reports.
- Water transfers between the Process Plant and the LLCF could be made clearer in figure 1 and table 3.4. Table 3.4 lists the volume as an input to the LLCF and figure 1 lists the volume as an input to the Process Plant.
- References to drawdown and freeboard limits would be useful in Table 3.2.
- Table 3.4 has incorrect unit conversion for Solids<sup>2</sup> (should be cubic metres = tonnes/2.7 specific gravity). Also, the inclusion of units in the table's column headings would be useful.
- Table 3.8 should be updated to reflect the August 19, 2005 SNP requirements.
- Table 3.12 should include units and the table heading should read "Tonnes of Processed Ore" rather than the volume.
- Page 27 deals with the seepage survey and some ABA results. This information has been pasted directly from the *Waste Rock Seepage and Waste Rock Survey Report*, and it does not address the reviews/comments made regarding this report. Specifically, more discussion on trends observed over time, numbers of elevated stations (and an idea of what "elevated" means), along with the affects or potential affects of such seepages would be beneficial.
- The table summaries of acid base accounting results and metal analyses combine average results from 2001 to 2005. It is difficult to compare results from 2005 to these averages and statements made regarding this comparison are questionable. It would be more useful to present values for each individual year to identify any trends or outstanding values.
- Page 35 discusses reported spills at the mine site in 2005. The summary of follow-up

actions is limited to a discussion of hydrocarbons; what actions are taken for other types of spills (ie. sewage, ammonium nitrate)?

- Pages 37-39 address the AEMP report. It is important to note that the water quality parameters in question are actually displaying an increasing trend, not just increased values for 2005 as insinuated in this section (which has no accompanying figures or numbers). It is disturbing that the values exceeded discharge criteria and are quickly approaching CCME guidelines, but there is still no action statement with regard to this issue. Furthermore, some of the language and statements in this section are confusing and potentially misleading. For example,
  - Koala Watershed: "it must be noted that the values associated with the parameter exceeded our water license discharge criteria and no significant environmental effects have been detected." Is this correct (Scott)? If so, a discussion of how often they exceed licence requirements and by how much should be included. No significant effects have been detected – YET; it is important to acknowledge the future uncertainty. Should chloride be added to this list of parameters?
  - "...no negative biological effects would be expected or were measured in 2005." It is probably premature to state that no negative biological effects have been observed, since the increased lake benthos density downstream of the L.LCF is still a mystery.
  - "Sulphate and nitrate concentrations were possibly elevated in Lac de Gras in 2005." What does this mean?
  - What potential chloride treatment options for the underground water is Bhp looking at and when will such studies and options be completed/available?
- Page 39 discussing biological changes in Cujo Lake should expand on the "current and residual historic nutrient input."
- Page 42 discusses the updated reclamation liability. Why have the estimates changed as compared to previous estimates? Can this Monte Carlo Simulation Model be audited to track changes or updates? The following section on updates to the mine plan is vague and does not offer details to support the updated security estimate.
- There is some confusion in the wording of the final paragraph on page 45. It is not clear whether the samples that met the criteria were actually collected after or before the "contaminated" sample. Table 4.3, which summarizes the monthly SNP sampling, does not help clarify the issue. Further, the sample referred to in this paragraph should be included in Table 4.4, which lists that samples that exceeded licence limits.
- Page 52 returns to another unresolved issue: the acidity and high aluminum concentration at SEEP 19. Again, there is no indication of how BHP plans to evaluate the source of the acidity.
- On page 73, actions taken or planned to address impacts or compliance problems are listed. Neither the acidity at SEEP-19 nor the increasing water quality parameters downstream of the L.LCF are mentioned.

Please feel free to contact me if you have any questions or concerns related to these comments.

Rebecca Chouinard  
Pollution Control Specialist  
669-2664



**ATTACHMENT 3**

**INDEPENDENT ENVIRONMENTAL MONITORING AGENCY**

**ENVIRONMENTAL AGREEMENT AND ANNUAL ENVIRONMENTAL REPORT 2005**



**INDEPENDENT ENVIRONMENTAL MONITORING AGENCY**

P.O. Box 1192, Yellowknife, NT X1A 2N8 • Phone (867) 669-9141 • Fax (867) 669-9145  
Website: [www.monitoringagency.net](http://www.monitoringagency.net) • Email: [monitor1@yk.com](mailto:monitor1@yk.com)

August 9, 2006

David Livingstone  
Director, Renewable Resources and Environment  
Box 1500  
Yellowknife NT  
X1A 2R3

Dear David

Thank you for the opportunity to submit our comments on BHPB's 2005 Annual Environmental Report. The Agency finds that the Report is generally satisfactory in terms of meeting the requirements of the Environmental Agreement.

A positive endeavour discussed in the 2005 report is more detailed coverage on the topic of Traditional Knowledge (TK) use at Ekati. The Agency is pleased to see both the current increased use of TK at the mine as described in the Caribou and Roads Project discussion, and the commitment to further expand the future use of TK at Ekati and integrate elders with BHPB's environment department activities on a more regular basis.

The Agency does find a number of weaknesses in the Annual Report that it would like to bring to the attention of BHPB and the MVLWB, with a view to improving future such reports. We note in particular, that the coverage of the 2005 Wildlife Effects Monitoring Program results is cursory at best. Given the importance of wildlife to nearby communities and Aboriginal peoples' interest in these matters, the Agency suggests that BHPB make more of an effort to present wildlife incidents, monitoring results and lessons learned. In addition, we note the following:

- Page 6 describes several internal and external audits of Ekati and it would have been even more helpful to summarize the improvements in environmental management resulting from these audits.
- Page 11, Table 3.1 includes the licence limits on use of water and the same feature should be added to other tables that relate to use of water and discharges to show the licence limits.
- Page 12, Table 3.2 on Monthly Lake Levels, it is noted that some levels were not taken due to "scheduling conflicts". What does this mean and how does

- BHPB propose to deal with it in the future?
- Page 14, Table 3.4, the listing of substance loadings to the LLCF does not include petroleum hydrocarbons. While a paragraph was devoted to its discussion in the EIR 2006, the Annual Report is silent on this issue. Indicative of stakeholder interest in this matter, it came up as a concern during the recent Closure Options Evaluation Workshop. The Annual Report should have mentioned the loading rate (10 kg/day) and related it to both the water license limits and the CCME guidelines for soils (as it presumably will constitute a component, however minor, of the exposed tailings in the upstream cells). While we do not believe hydrocarbons to be a problem, such reassurance would be a helpful addition to the annual report.
  - Page 15, Table 3.6 Mine Water Discharges in 2005, there is a relatively large amount in the underground column for June (approx. 166 k cubic metres) compared to all other months (ranging from 0 to 38 k cubic metres). What is the explanation for this variation?
  - Page 27, points (iii) and (iv) suggest that approximately 2251 t of coarse kimberlite and 807,171 t of fine processed kimberlite have been produced. It would appear that the period in the coarse kimberlite number should be a comma and it should be 2,225,000 t.
  - Page 36, Table 3.20 further details should be presented on summaries of follow-up actions as was done in Appendix E of the 2004 Annual Report.
  - Page 37, it is stated, "However it must be noted that the values associated with the parameter exceeded our water license discharge criteria and no significant environmental effects have been detected." We assume this is an error, as of the seven elevated parameters, the only ones regulated by license (pH and arsenic) are well within license limits. The next paragraph in fact states "All water released from the LLCF in 2005 was within compliance limits."
  - Page 42 refers to BHPB's desire for a "system" of closure criteria and mechanism for applying progressive reclamation credits similar to ones developed in the Yukon. A short discussion of what this Yukon system is and its applicability to the NWT and Ekati in particular, would have been beneficial. On this page and again at page 56, a breakdown of the current mine reclamation liability, along with what is currently set aside in security, would have been helpful.
  - Page 50, Table 4.4 comment code does not appear to refer to anything in the table. The comment code may refer to a high TSS measurement at Little Reynolds outflow.

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- Page 51 where there is a figure illustrating the mine plan including a timeline for each mine component. It would be helpful to add closure and reclamation activities to the mine plan in future Annual Reports, especially after the Interim Closure and Reclamation Plan is approved.
- Page 52, situates seep station -019 west of the Panda/Koala waste rock pile, when in fact it is northeast of the rock pile.
- Page 61, a list of the inspection dates with any general comments would have been helpful.
- In the listing of all the studies undertaken by BHPB in 2005, page 65 curtly refers to the nitrate toxicity study on early life stages of fish. While it is welcome news that the study results will be published in a refereed journal, it would have been helpful to present a brief summary of results, or at least the purpose of the study, similar to what is included for all other research listed in that section of this report. Even a reference to the explanation provided in the 2004 annual report would be helpful.
- Page 69 states that a hawk was the sole animal killed by road collision with a vehicle. This statement is not consistent with the data presented in the 2005 Wildlife Effects Monitoring Program Report where 14 vehicle related mortalities in 2005 (at least to October 1, 2005) are presented in Table 3.1-1.
- Pages 69-70 fail to mention results of BHPB studies on caribou behavior related to mining activity. It only states that more caribou were seen on roads a minimum of 50 m away from roads. BHPB concludes that "over the nine years of monitoring...there have been no on-going negative effects from the mine on caribou." This statement is not consistent with the findings of the EIR 2006 where "moderate effects" were noted on caribou.
- Page 70, the discussion on grizzly bears does not mention any of the incidents reported in the 2005 WEMP including the shooting of a bear in poor condition.

We would be please to discuss these comments with BHPB and others to ensure improved public reporting and environmental management at Ekati.

Sincerely,

-original signed by-

Bill Ross  
Chairperson

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ac. Society Members  
Sarah Baines, Wek'eezhi Land and Water Board