Tracking Number	Reviewer ID	Topic	Review Comment	BHP Response / Proposed Revision
Format & Structure				
1	IEMA – 1	Organization	While we were able to find most of the information we needed to properly and thoroughly assess the document, much of the important detail is found in the appendices. It would be very helpful if there was a clear description of the organization and presentation of the information in the introduction to the document, and more obvious linkages of the appendices to the relevant text. For example, the appendices might be numbered consecutively and there could be tabs for major sections and individual tables of content for each section to help the reader find relevant material or information. Figures and diagrams in this version of the ICRP are greatly improved. The pre-disturbance and current development status figures using satellite imagery are particularly helpful as these are at the same scale and view. However, post-closure illustrations could have been added to provide the full range of reclaimed landscapes for each mine component. Part J 1(e) of the main water licence (MV2003L2-0013) requires a 'detailed description of the final desired landscape, with emphasis on the reclamation of stream banks and surface drainages over the reclaimed units.'	Section 1.1 Overview will be reviewed and updated to ensure that the reader has a clear description of the organization and presentation of the document. The appendices are numbered in relation to the section in which it first references. The current appendix numbering has been designed for future update of the ICRP – it allows for insert of new appendices for other sections in the document, if these are later required as the ICRP evolves. Tabs will be provided for major sections. Post closure illustrations will be developed for the next update of the ICRP. This is a large project, and to ensure the illustrations provide a realistic depiction of future landuse, it will require some field work for photography of specific mine components, as well as the development of a program to develop images of the projected landscapes at EKATI.
2	INAC – 1	Organization	[the document is very difficult to follow with information located throughout the report. The Appendices are confusing and don't seem to follow a logical progression. For example the table of contents lists the Appendices up to 2.1.1 and then skips to 5.1.1. There is also Appendix 5.1-4A and 5.1-4B. It is unclear why 5.1-4A and B could not simply be 5.1-5 and 5.1-6, respectively? Although this does not affect the content of the report it certainly affects the ability of the reader to find the information effectively.	Please refer to IEMA -1 for response to Appendices referencing. Appendix 5.1.4 A and B will be split over 2 Appendices.
3	IEMA – 2	Wording	The wording found in Appendix 5.1.1 refers to "water licence effluent criteria" (for example, Table 5.1-1, PKCA, Water Objectives 2). The Agency would like to confirm that this phrase 2 refers to closure effluent discharge criteria to be proposed in a future ICRP and formalized in a closure water licence.	The document will be reviewed to ensure that: 1. Discussion and closure criteria related to water quality in receiving environments will be based on Effluent Quality Criteria. 2. Discussion on water quality in end pit lakes is based on water quality criteria. These criteria will be part of the closure water licence. Table 5.1.1D, Water 2 will be reviewed and corrected for consistency.
4	JW – 1	Wording	The text or data sets are not significantly different from that used in the January 2007 ICRP. There are a few new sections, but in most cases each section is almost exactly the same or somewhat reorganized and reformatted with minor additions of text written in response to comments provided during the working group reviews/meetings. Major changes have occurred in the organization and presentation of closure objectives and criteria (these updated tables were provided during the working group sessions and have already been reviewed), and the inclusions of reclamation research plans, and engineering study plans.	No Revision Proposed.
5	JW – 2	Drainage Boundaries	Some of the Figures have been improved (e.g., scales were added, increased areas are now shown, labels and lines were added for clarity, and there is improved formatting on some). However, drainage	The document will be reviewed and watershed boundaries will be included on those figures which represent pre-disturbance, development, and projected development.

			boundaries are not consistently shown. We recommend that they should be provided for all maps where surface water bodies are being affected.	
3.2 Climate				
6	JW – 3	Tables 3.2-1 and 3.2-2	The precipitation and temperature values are different than previous version? Is the data from a different source or just over a longer time period? What years, how many more years than previous?	The precipitation estimates from previous versions were likely based on the estimates derived from the original EIS, which was derived based on data from the Environment Canada station at Lupin. The precipitation estimates provided in Table 3.2-1 are based on frequency analysis of annual precipitation observed at the Koala meteorology station from 1994 to 2004. The temperature data in Table 3.2-2 is based on data from the Koala meteorology station from 2000 to 2008.
3.3 Terrestrial Environment				
7	JW – 4	page 3-3, line 1	The precipitation and temperature values are different than previous version? Is the data from a different source or just over a longer time period? What years, how many more years than previous?	The reference to page 3-3, line 1 appears incorrect. Please see response to comment JW-3 above.
3.5 Water Quality				
8	JW – 5	page 3-4, paragraph 1	Are there no more recent data than a 2002 reference to describe water quality baseline? Are there any updates from control sites in the latest AEMP, for example?	Recent data for reference sites does exist and is published in the AEMP. The most recently published AEMP is the 2007 AEMP.
4.1 Life of Mine Plan				
9	JW – 6	Figure 4.1-1	Some of the beginning or ending dates have been changed from previous version – this would appear to reflect the latest projections – how firm are these new dates (is there still a lot of guessing)?	As outlined in Section 4.1 'Mine planning is an iterative process and changes in response to changing economic and geologic information. The LOM Plan is a dynamic, living document and it is expected to change over the remaining term of the operation. For example, recent iterations extended the Beartooth Open Pit operating life until 2020. Also, conceptual plans for underground operations in the Misery Open Pit as well as a larger and deeper Fox Open Pit are also in the review process. Future versions may include these changes in the mine plan; in which case updates will also be made to the ICRP.' Currently the ICRP is based on the 2005 Life of Mine Plan. Over the course of 3 + years of ICRP update and review there have been changes to this plan, but BHP Billiton has tried to keep it constant to avoid confusion amongst reviewers. The Life of Mine Plan in the December 12, 2008 ICRP was updated to reflect changes that have already occurred to pit operations and significant changes such as the use of Beartooth for water storage.
4.3 Waste Rock Storage				
10	JW – 7	page 4-11, paragraph 3	Is there a map with locations for all the GTCs? (paragraph 4) Would grain/material/particle size also affect cooling? (paragraph 5) It's not clear whether the water that reaches the bottom of the pile could seep through warmer rock found around the pile exteriors? If so, is this a frequent occurrence? And what is the effect on seepage water quality? *Figure 4.3-2* Does water above the ice-saturated rock (e.g., at the frozen fringe) seep down gradient through the rockfill cover (i.e., extend the arrow)?	Maps with the WRSA GTC locations are presented in EBA's "Summary of Ground Temperature Conditions in Waste Rock Storage Areas" (EBA, 2008). Particle size can impact on cooling rates. As noted on Page 4-10 of the ICRP, the development of convective cooling cells is related to particle and available void spacing between particles. Particle size will also affect material thermal properties associated with conductive cooling. The pile exteriors are generally colder than the pile interiors (Page 4-11, last paragraph), and is thought to be a function of convective cooling cells. As noted in the same paragraph, water which does reach the bottom of the pile is prevented from exiting the

				waste rock piles by the use of perimeter toe berms, which reduce the hydraulic gradient in the piles and slow seepage velocity to the point where water freezes before it exits the pile. Where there are no toe berms, there exists the possibility for some seepage to exit the WRSA. Numerous points around the EKATI WRSA are monitored as part of the annual WRSA seepage survey. Discussion pertaining to seepage rates and impact on water quality are available in Annual Seepage Reports. Water flowing along the ice-saturated rock would follow the hydraulic gradient until it was either frozen by the cold temperature inside the pile or encountered the ice-saturated zone around the pile exterior. It would not be expected to exit the pile.
4.8 Materials & Waste Management				
11	JW – 8	page 4-16	It appears as if over a page of description from previous version was deleted – was this moved to another section?	Please refer to Section 5.7.5.
5.2 Open Pits				
12	IEMA – 3	Fish in Pit Lakes and Cell E	The Agency notes that BHPB and DFO are still in discussion over the creation of shallow zones and fish habitat in the pit lakes and Cell E of the LLCF (Long Lake Containment Facility) after closure. It is unclear whether there will be final agreement between these two parties on these matters before the scheduled public hearing on April 7-8, 2009. BHPB's closure objectives and options for the LLCF and the pit lakes include the construction and maintenance of fish barriers at the inflows and outflows of these water bodies. This is inconsistent with the overall site reclamation goal to "return the Ekati mine site to viable, and wherever practicable, self-sustaining ecosystems that are compatible with a healthy environment, human activities, and the surrounding environment". The Agency does not agree with BHPB's rationale for installing barriers to fish movement at the Long Lake outlet and for the pit lakes. BHPB argues that it has compensated for the various impacts to fish habitat from its project, and that it is under no obligation to do anything more with regard to creation and maintenance of fish habitat. However, BHPB's legal requirements and accomplishments on fish habitat under the Fisheries Act do not override any requirements that the Board might set for proper closure of the mine site. In our view, the Board has the authority to provide direction to the company to now revise its ICRP to allow for fish passage and the return of the pit lakes and Cell E to a self-sustaining ecosystem. BHPB should either provide good technical evidence as to why fish passage into Cell E and the pit lakes should be prevented or, alternatively, it should adopt closure objectives and options that are consistent with the reclamation goal by providing fish passage into these water bodies. This, we believe, would require some revision to the reclamation research plan to determine precisely how to meet the revised objective for these mine components. The most important addition would consist of reinserting that portion of the Terms of Reference for the Pit Lakes Study that was dropped by BHPB – Task 7 that dealt with providing "fish passage and refuge in the reclaimed pit lakes" (see Pit Lakes Terms of Reference page 17, accepted by the	BHP Billiton has outlined the reasons why fish habitat is not included as reclamation of pit lakes, the LLCF and other lakes in the Claim Block in Sections 4.2.1,5.2.2.7, 5.2.8.1, 5.5.5.6, and 5.6.5.3. Please refer to BHP Billiton letter to DFO Jan 30, 2009. BHP Billiton will continue to work with DFO in developing a Definitive Agreement on the construction of shallow zones in pit lakes.

			WLWB on May 17, 2005).	
13	IEMA – 4	Beartooth Pit	This version of the ICRP proposes to make use of Beartooth pit as a water retention pond from 2009 until 2020. The Agency will be commenting separately on this proposed change to the Wastewater and Processed Kimberlite Management Plan as requested by WLWB staff on January 6, 2009, but we make the following comment in the context of the ICRP. The ICRP does not address the lost opportunities for reclamation research and monitoring with the use of the Beartooth pit as a water retention pond. The Agency had expected to see some assessment of the opportunity, costs or trade-offs of using Beartooth pit for minewater as opposed to testing the storage of processed kimberlite and/or pump flooding (to study and monitor meromixis). The next available pit for these purposes would be Fox in 2014.	In 2008 BHP Billiton completed a trade-off study (Internal Study) that showed that placing the underground mine water in the completed Beartooth Pit was the most cost effective and environmentally sound management plan for EKATI. The study included assessment of the following: • Increasing chloride concentrations in the LLCF • Treatment for chloride is difficult and very costly • Water balance and water quality models • Evaluation of effects on the LLCF • Potential closure options • Operating costs The Options Assessed were: Option 1 - Pump PK and UG mine water to Beartooth Pit starting 2010 Option 2 - Pump only UG mine water to Beartooth Pit starting 2010 and continue until completion of Koala Mine UG (2017). Option 3 - Pump PK and UG mine water to Beartooth Pit starting 2010. In 2012, pump PK and UG mine water to the LLCF (current configuration). Option 2 was selected as the most effective method which would still allow research and development on alternate mining methods and ultimately on meromixis.
14	LKDFN – 1		At the early meeting there was a concern raised as to what will happen if the pits go lower than the permafrost where the aquifers can exists. We know that in BC, there is a serious pollution in the well waters due to aquifers changing direction if the area of the aquifers is disturbed. There is a need to study this concern. tEMP raised their concern about Ground water that may be impacted by development and development impact an ground water. Is it true that there is a high content of chloride in ground water?	Development of a ground water model and evaluation of expected groundwater behaviour during pit flooding has been identified as a research study in Appendix 5.1-4A Plans 3 and 6. Elevated chloride contents have been observed in ground water encountered below the permafrost table. Ground water influences are also included as part of the research studies on pit lakes water quality. Please refer to Appendix 5.1-4A, Plans 3 and 6.
15	LKDFN – 2		It is a concern that BHP say they already compensated the communities for various impacts, therefore under no obligation to do anything more with regard to creation and maintenance of fish habitat. The NWT Fish Act need to be considered in this case.	Please refer to response for Tracking # 12
16	LKDFN – 3		There is a need to return the pit lakes and Cell E to a self sustaining area for fish habitat since such a large area is now disturbed for fish as well as for other wildlife in the vicinity.	Please refer to response for Tracking # 12
17	LKDFN – 4		Opportunities to study the pits that are closed must be closely monitored with Lutsel K'e Dene involvement to ensure that TK is utilized in this process and regime.	Agreed. BHP Billiton has identified the incorporation of TK into in the ICRP as a reclamation research study. Please refer to Appendix 5.1-4A Plan 26
18	INAC – 2	Beartooth Pit	This section refers to the closure requirements and development status of the Beartooth Pit and states that Beartooth will be used as a mine water retention pond until 2020. This is consistent with a letter that BHP sent to the board titled Update to the Wastewater and Processed Kimberlite Management Plan, dated December 15, 2008. The letter states that BHP-Billiton would like to use Beartooth pit for mine water retention. It is important to note that this has not been discussed or approved by the board. In reading the ICRP, it appears as though not all of the ICRP has been changed to address the effects of pumping a large portion of Beartooth with underground mine water. Section 5.2.5.1 states that 'The closure plan for all the open pits at EKATI is to pump flood with water from selected source lakes on the Claim Block. As each pit or connecting underground operation ceases	All open pits will be flooded with water from source lakes. Deviations from this may include (as outlined in Section 5.2.8), A) backfilling of pit lakes with processed kimberlite, an option which BHP Billiton has stated will be used if an open pit near the process plant is available, and B) backfilling with waste rock if concurrently there is an open pit which is no longer used for mining operations, next to an actively mined pit. BHP Billiton has also proposed to flood Beartooth Open Pit with water from source lakes. A number of scenarios are proposed for the final location of underground mine water that will be stored in Beartooth pit during mining operations, and include: A) mine water remains in Beartooth pit at closure and is topped with source lake water, and B) mine water is pumped into Panda open pit at mine closure (when Koala pit ceases operations), and is then topped with source lake water. The company agrees that

			the pits will be flooded to create post closure pit lakes'. No exceptions or deviations are discussed. Appendix 5.1-4A Research Reclamation Plan on Pit Lake and Water Quality makes no mention of additional research or work that may need to be done specific to Beartooth. Nor does it discuss the potential water quality within the pit or effects on the underlying permafrost. Considering that Beartooth could potentially be filled with underground mine water and is planned to be hydrologically connected to the downstream pits, the ICRP should identify and address any complications that may arise from this. INAC will elaborate on this topic in the forthcoming comment letter to be submitted to the board on January 30.	Beartooth (or Panda) water quality will need to be researched with the use of either of these pits for mine water storage. The Pit Lakes Studies in the ICRP Working Draft Reclamation Research Plan includes those requirements set out in the MV2001L2-0008 Water Licence (Appendix 5.1-4A, Sections 3 and 6). Because the current Pit Lakes Studies is near completion, BHP Billiton had determined that these studies should be completed, but additional studies will need to be included in the future to address the presence of mine water in either of the 2 pits noted above as part of future water quality modeling. This research will commence in 2009, and the ICRP Research Plan will be updated to include this additional research. Please refer to BHP Billiton's letter to the WLWB Dec 15, 2008 RE: **Update to the Wastewater and Processed Kimberlite Management Plan, Water Licences MV2003L2-0013 and MV2001L2-0008.**
19	INAC – 3	Rate of Pit Flooding	The Final Draft ICRP addresses most of the concerns raised in my earlier reviews. Two items for further consideration are the schedule and rate of pit flooding. An earlier start to flooding of at least one pit may provide earlier verification of the water quality predictions. The extended duration of pit flooding might be shortened by more rapid pumping, particularly from Lac de Gras. Clearly, there is need to balance rate of flooding, cost and impacts on the source lake. Refinement of these plans should be anticipated in undated to the ICRP in future years.	Agree.
20	INAC – 4	Water Quality	There is no mention of a contingency for poor water quality in the Misery pit. This may arise due to the relatively large quantity of PAG rock associated with this pit.	Please refer to Table 7.3-1 for pit water quality contingency.
21	INAC – 5	Closure Options	Existing opportunities to test closure techniques do not appear to be fully explored. For example there do not appear to be any plans to use the temporary closure of the Misery Pit as it fills with water to study water/pit interactions or to use the Phase 1 Processed Kimberlite Containment Facility (PKCF) to test the efficacy of the planned closure techniques recommended for the LLCF.	BHP Billiton has stated that Misery Pit water would be used for modeling of water quality and quantity for pit lakes if access to water in the Misery pit was safe for Environment Staff. Water samples and surveyed pit lake elevations were collected in the first couple of years of Misery Pit suspension of operations, but have not continued on a regular basis since the end of 2007 due to pit wall stability concerns. Misery Pit water quality data that has been collected during suspension of operations will be used and the Appendix 5.1.4A Plan # 3 will be reviewed to ensure this is clearly stated. Please refer to Appendix 5.1-4B, Plan # 10, with respect to using Phase 1 lessons learned for the LLCF reclamation.
22	DFO – 1	Surface Drainage	DFO appreciates the fact that BHPB has agreed to design and construct fish barriers in such a way that they are removable if it is deemed appropriate. However, DFO does not agree that they would be removed by DFO. Only BHPB would have the necessary means (equipment etc) to remove the fish barriers so the reference to removal by DFO should be taken out.	Please refer to BHP Billiton letter to DFO Jan 30, 2009.
23	DFO – 2	Open Pit Reclamation Strategy	BHPB states that "BHP Billiton and DFO have formalized agreements where BHP Billiton has provided full compensation for the loss of fish habitat and is not required to construct additional fish habitat in pit lakes at mine closure." It is correct that BHPB has met compensation requirements under the *Fisheries Act* for the pit lakes and the LLCF ; however, it has always been the position of DFO that compensation under the Fisheries Act authorization is completely separate from closure and reclamation requirements under Water Licenses or Land Use Permits. It is the opinion of DFO that the WLWB has the authority to require, and should ensure that both aquatic and terrestrial	Please refer to BHP Billiton letter to DFO Jan 30, 2009 and response to Tracking # 12.

			ecosystems are restored on the mine site. In fact the DFO concurred with the Environmental Assessment conclusions and followed it's issuance of authorizations under the Fisheries Act on the basis that the mine site would fully restore aquatic and terrestrial ecosystems. As stated in DFO's review of Section 2 of the ICRP (July 27, 2007 letter to the WLWB), it is DFO's opinion that the creation of littoral zone areas in the end pit lakes is critical to meeting BHPB's reclamation goal of returning the Ekati minesite "*to viable, and wherever practicable, self sustaining ecosystems that are compatible with a healthy environment, human activities, and the surrounding environment".* Research is needed to meet this reclamation goal which is why it is important to have Task 7 Pit Lake Fish Passage Design brought back into the Terms of Reference for the Pit Lake Study. It is disappointing that Beartooth Pit will not be available for pit lake research as previously thought. With the importance of this research for final closure of the mine site, all options should be examined prior to approval being given for the use of Beartooth as a repository for underground mine water. DFO continues to work together with BHPB to reach an agreement that will ensure that the creation of littoral areas (shallow zones) is included in the ICRP, while addressing BHPB's concerns. It is DFO's goal to have resolution of this issue well in advance of the April 7-8, 2009 public hearing.	
24	DFO – 3	Regulatory Requirements for Pit Flooding	DFO recognizes the fact that predicted impacts on source lakes and outlet streams from pit flooding are preliminary at this point and will be revised as more baseline data is collected. DFO may provide specific comments once these revisions are complete. It should be noted in this section that Harmful Alteration, Disruption or Destruction (HADD) of fish habitat may also occur due to loss of littoral habitat in the source lakes and reductions in stream flow.	BHP Billiton does not expect that HADD will occur in source lakes, and has closure objectives in place to ensure this. If through the research studies HADD is shown as a potential then BHP Billiton and DFO will further discuss regulatory requirements for this.
25	DFO – 4	Figure 5.2-3	Northern limits of developed area is not shown (cut-off) – suggest expanding coverage (slightly smaller scale) to show all of the facilities?	Figure 5.2.3 will be expanded to include northern portions of the developed area.
26	JW – 9	**5.2.2.6** - page 5-11, paragraph 5-6	Statements do not appear to be consistent: 4th sentence in par 5 - "Zooplankton assemblages are largely comprised of copepods, rotifers, and occasionally cladocerans. Benthos assemblages are largely comprised of dipteran insect larvae" with 6th sentence in par 6 - "Round whitefish consume a variety of organisms including bottom dwelling invertebrates, insects, small clams and other fish." How can whitefish consume some of these organisms if they are not part of the zooplankton assemblage?	The word "largely" is used to indicate that these zooplankters and benthic invertebrates are the predominant groups. The statement in no way excludes the existence of other, less numerically abundant invertebrate groups.
27	JW – 10	**5.2.2.8** - page 5-14, paragraph 4, line 5	It is not clear what study or data source was used for the baseline data for each area. For example, the summary of data shown on Table 5.2-2 should be referenced to the source as listed in text.	As stated by the reviewer, the information source is provided in the text (page 5-14), as: *" Pre-disturbance hydrologic conditions (lake dimensions, discharge and watershed areas) are listed in Table 5.2-2, with the majority of this information sourced from the 1995 EIS (BHP and DiaMet, 1995), and Environmental Assessment for Sable, Pigeon and Beartooth pipes (BHP and DiaMet, 2000). Mean measured discharge (at watershed main outflow) was based on stream flow measurement data from the 1995 EIS as well on data collected subsequently from baseline studies. For example Long Lake and Slipper were taken from the 1995 EIS, because this represented pre-development. Data for Cujo Lake was from 1999 and 2000 (pre-development of Misery) and data for Horseshoe, Logan and Pigeon are from more recent baseline studies (BHP and DiaMet, 2000; Rescan, 2000, 2003, 2005a, 2006d, 2007c)."* The table clearly points the reader to the appropriate section to find the source (i.e., the

				table footer reads “See Section 5.2.2.8 for explanatory comments.”)
28	JW – 11	page 5-15	The large reported seasonal and spatial variation in the runoff coefficients (i.e., 0.30 to 0.63 and 0.17 to 0.87) suggest that the runoff coefficients shown on Table 5.2-2 should be used with extreme caution. In what models or analyses are these coefficients used? What sort of sensitivity analyses were conducted to assess this uncertainty?	Based on results from over 10 years of on-site monitoring, an average annual runoff coefficient of 0.5 has been adopted. However, as indicated in the comment, observed variability has been high. This average value is used for general description of conditions, water balance, and for long term modelling. Typically sensitivity analysis in modelling work has focussed on variability in precipitation (the input to runoff) rather than the runoff coefficient itself. In some instances, for example engineering design and sizing, use of a higher runoff coefficient may be warranted.
29	JW – 12	**5.2.3.3** - page 5-15	What was the basis for changing the plans for filling Beartooth Pit (i.e., previous plans called for flooding in 2010)? What water will be directed to this “mine water retention pond” and how will the “pond” be monitored?	Please refer to BHP Billiton’s letter to the WLWB Dec 15, 2008 RE: **Update to the Wastewater and Processed Kimberlite Management Plan, Water Licences MV2003L2-0013 and MV2001L2-0008.**
30	JW – 13	**5.2.3.7** - page 5-16	Previous version listed Misery pipe as located 26 km south-east of main camp – reason for change? Is Misery Pit sill collecting water from surface runoff and any other source? Is water level being monitored? Is water quality being monitored? This data would provide input to pit lake water quality studies.	Corrected distance to Misery was updated in the ICRP. Please refer to Tracking # 21 for response on Misery pit water monitoring.
31	JW – 14	**5.2.4.2 -** page 5-21	2013 was 2014 – why change? The 2007 report indicates further work is required to define ultimate pit size and for engineering – is this still necessary?	Timing of pit operations in mine plans is subject to change with updates of the LOM Plans. Ultimate pit sizes are adjusted throughout the mining operation as additional information is gained from geotechnical studies and drilling, and pipe economics. For example the Misery pit is currently under suspension of operations while assessments are completed on future mining options that include pushback and underground. Either of these will result in changes to pit size.
32	JW – 15	**5.2.5.1** - page 5-27	Par. 1 – need citations for completed research studies Par. 2 – need reference to support assertions regarding talik geometries Par. 4 – Statement indicates that freeze-thaw is expected to be main driver of pit wall instabilities – is it currently the main driver?	Par 1 – Reference will be inserted. Par 2 – Reference will be inserted. Talik geometries are based on known mechanisms of heat transfer. Discussion pertaining to heat transfer is available in Andersland and Ladanyi, 2004. Nixon, 1997 also discusses talik formation. Previous investigations at EKATI and thermal analyses have also indicated the tendency for taliks to form to a greater extent under water bodies as opposed to laterally. Par. 4 – Currently and in order of occurrence the main causes of pit wall instability are: mining, blast damage and freeze thaw actions. At the end of mining operations freeze thaw will be the primary cause of pit wall instabilities.
33	JW – 16	**5.2.5.2** - page 5-28, 4th sentence	Are the connecting channel designs being assessed as part of a proposed engineering or research plan – if so when?	Reference to Appendix 5.1-4B, Section 2 will be included.
34	JW – 17	**5.2.5.2** - page 5-29, paragraph 3	Which research plan is being referenced?	Reference to Appendix 5.1-4B, Section 6 will be included.
35	JW – 18	**5.2.7** - page 5-35, bullet 9	Is it necessary for all the pit lakes to be meromictic and stable?	No, it is not strictly necessary for the pit lakes at EKATI to be meromictic (and physically stable). However, an understanding of whether these pit lakes will be meromictic is useful in improving estimates of the eventual water quality of the pit lakes.
36	JW – 19	**5.2.8.2** - page 5-38	Par. 3 – Is the Ursula Outflow still being gauged? If not, why not? What about the lake water level? Par. 4 – What is the basis for using a runoff coefficient of 0.5? Has the water balance for Exeter Lake considered wet and dry years? Is the Exeter outflow and lake level still being gauged? If not, why not? Par. 5 – Does DDMI maintain a gauge at the Lac de Gras outflow (as part of their AEMP)?	The monitoring periods for Ursula and Upper Exeter Outflows and lake levels are described on Page 3-39. Monitoring has not continued at these stations the past few years, as it is believed sufficient baseline data had been collected, and data monitoring equipment has been deployed at other locations. A runoff coefficient of 0.5 represents the average annual runoff coefficient based on 10 years of on-site monitoring. As described on the bottom of page 5-38, all calculations were based on average conditions. From conversation with DDMI, there is no gauge at Lac de Gras outflow.
37	JW – 20	**5.2.8.2** - page 5-39	Table 5.2-5 represents only average annual conditions. The feasibility, reliability and environmental effects cannot be assessed with this data. Proposed daily pumping rates need to be compared to estimated flow rates for average, wet and dry conditions to better assess risks. This	The many years that will be required for pumping provide the justification for using the average annual conditions. If hypothetically, pumping could be achieved in a single year, then the average condition would clearly not be appropriate. BHP Billiton’s view is that limiting the pumping so that the water surface in a source lake is maintained no

			type of analysis should be referenced as a research need.	lower than a specified level, will ensure that environmental effects can be minimized.
38	JW – 21	**5.2.8.3** - Table 5.2-6	Given a succession of dry years, how would the estimated time to pump fill be affected?	This question will be addressed specifically in the Research Study on Water Withdrawal from Source Lakes, Appendix 5.1-4A, Section 2.
39	JW – 22	**5.2.8.4** - page 5-42	Par 3 – Demonstrate (with hydrographs) how the 15-day reduction of flow duration was determined. Show comparisons using wet and dry years; or add to research plan.	Please refer to response for JW – 21.
40	JW – 23	**5.2.8.5** - page 5-42	Demonstrate (with hydrographs) how the estimated recovery times were determined. Show comparisons using wet and dry years; or add to research plan.	Please refer to response for JW – 21.
41	JW – 24	**5.2.8**, - pages 5-47 to 5-50 (*Tables 5.2-9 to 5.2-15)*	Provide dates for three events: 1) start reclamation 2) end reclamation activities and start monitoring, and 3) end monitoring. Some of the beginning dates are different from previous version? How firm are these dates? Second to last bullet "Establish riparian habitat where needed" – what criteria will this be based on, for example, a license requirement or a consultant's opinion?	The end of reclamation activities and the start of monitoring will be included in the Reclamation Activities tables. Reclamation activity dates were reviewed and updated with this Final Draft of the ICRP since it has been 2 years since last submission of the document. Many dates were changed with the change of Beartooth pit closure change. The assessment of where riparian habitat will be determined by consultant review, and field assessment after major earth works have been completed. This is also a good candidate research for TK inclusion.
42	JW – 25	**5.2.11** - page 5-48 (*Table 5.2-11)*	Pumping period was 3 years in previous version, compared to 2 in this version – what is basis for change?	Beartooth pit requires two pumping seasons (period from June to October) to fill the pit. In the previous version of the ICRP, pumping began late in 2010 and did not allow for a complete pumping season; therefore, pumping carried on into a third year. In this version of the ICRP, the Beartooth pit filling timing was adjusted to allow for a full season of pumping in the first year; hence the filling time was reduced to 2 calendar years.
43	JW – 26	**5.2-12** - page 5-48	Pumping period was 8 years in previous version, compared to 17 in this version – what is basis for change?	17 years represents a combined filling time for the Panda, Koala and Koala North Pits. In the current ICRP, both pit filling scenarios require that all three pits be filled concurrently, hence the common filling time of 17 years.
44	JW – 27	**5.2-13** - page 5-49	Pumping period was 17 years in previous version, compared to 8 in this version – what is basis for change?	Table 5.2-13 indicates a pit filling time of 17 years (8 years in previous version of ICRP). In the previous version of the ICRP high pressure plugs were proposed which allowed the pits to be filled independently. In this version of the ICRP, both filling scenarios (low pressure plugs and no plugs) require that the pits be filled simultaneous, hence the reported cumulative filling time of 17 years.
45	JW – 28	**5.2-14** - page 5-49	Pumping period was 13 years in previous version, compared to 15 in this version – what is basis for change? Pumping period was 5 years in previous version, compared to 7 in this version – what is basis for change?	For Fox Pit, the actual filling time is 13 pumping seasons; however, interruptions in the pit filling schedule have been provided so as to not interfere with the proposed Diavik filling schedule. This extends the filling schedule to 15 calendar years. The pumping duration for Misery pit should be 5 years. The value in Table 5.2-15 will be corrected.
46	JW – 29	**5.2.12** - page 5-51	Last three sentences of first paragraph – do not understand when monitoring will begin. Last sentence indicates that pit water quality monitoring will not commence until pit is completely flooded? Monitoring should begin as soon as conditions permit. Bulleted section: not all the bullets are parameters (e.g., safe working procedures), and some are fairly broad in nature (e.g., water quality). When will these parameters be better defined (i.e., they need to be specific enough so that objective criteria or guidelines can be established)?	As outlined in Section 5.2.12 Monitoring of pit lakes will commence as soon as it is safe to do so. This information will be used to calibrate water quality modeling studies. Because water quality is not expected to be near water quality criteria with initial flooding (eg. increased TSS), BHP Billiton has proposed that formal water quality monitoring, that will be used towards successful completion of closure objectives, would commence with initial verification of acceptable water quality criteria (See Table 5.1-5A for monitoring performance, and Table 5.1-5B for monitoring frequency). Section 5.2.12 will be corrected to ensure the 4th sentence in the 1st paragraph states "The commencement of formal water quality monitoring towards successful completion of closure objectives will coincide with initial verification of acceptable water quality".
5.3 Underground				
47	JW – 30	**5.3** - page 5-52 (*Table 5.3-1)*	Infrastructure is not consistent with that provided in previous version; for example, where are the washrooms, fuel storage areas and wash	The section will be reviewed and checked to ensure that Table 5.3-1 contains the complete list of underground infrastructure.

			bays?	
48	JW – 31	**5.3.4** - page 5-54	Only pit bottom elevations are provided in the text. What are the depths below ground surface?	Section 5.3.4 will be reviewed for approximate underground mine final elevations.
49	JW – 32	**5.3.5.3** - page 5-57, paragraph 1	Apparently the model was updated in March 2008 (from October 2005), but the discussions in the following paragraphs is the same. Are there any revised findings based on the updated model?	The model was developed in 2005 as a working tool for managing the site. The model was published in 2008, with updates to input data such as precipitation, discharge quantities etc.
50	JW – 33	**5.3.9** - page 5-61	The bulleted „underground water quality and quantity listed is not a study. What is the research that is being referenced?	Refer to Appendix 5.1-4A, Section 6.
51	JW – 34	**5.3.11** - page 5-62	Not all the bullets are parameters – what will actually be monitored (what data will be collected)?	Refer to Appendix 5.105, Table 5.1-5C.
5.4 Waste Rock Storage Areas (WRSA)				
52	INAC – 6	Temperature Data	It is curious that BHBP has not updated the ground-temperature data. The most recent ground temperature data for the waste rock piles is from July 2005; more than 3 ½ years ago. In the absence of an update, the comments from my review of July 2007 still apply. These are re-iterated as follow: The zero degree isotherm in August is between 4.5 and 7m deep in 2004. It is not certain that the all PAG rock, coarse kimberlite rejects and other wastes will be permanently contained in permafrost with a 5 m thick granite cover, especially when the effects of global warming are considered. Section 7.8.4 of the Final Draft ICRP (Long-term Climate – Waste rock piles) does not address the issue of a deeper active layer as the climate warms.	Ground temperatures in the WRSA have been regularly monitored subsequent to 2005. The relevant tables in the ICRP will be updated to reflect current temperature readings. For the GTC in question (Cable #1380), overburden was placed over the ground surface in September 2003. The reading taken in September 2004 shows a ground cooling from previous readings; however, it likely had not yet stabilized. Readings subsequent to September 2004 show further cooling of the ground temperatures and a reduction in the active layer thickness. Long-term climate change will impact the active layer thickness in the waste rock piles. Further study of this issue has been identified in Reclamation Research Plan, Appendix 5.1-4A, Plan 7.
53	INAC – 7	Revegetation	The Final Draft ICRP is virtually silent on the subject of revegetation of waste rock piles, except for the possible vegetation of the topsoil/lakebed sediments in the panda/Koala rock pile. These materials are available in various quantities at all open pits. Covering and revegetation of rock piles is expected in most other jurisdictions in north America. The limited supply of suitable materials and the harsh climate certainly make a lesser standard acceptable. However, doing nothing does not appear reasonable.	Waste rock piles will not be revegetated. This was reviewed and discusses as part of the Closure Options Workshop conducted with communities and regulatory groups in July of 2006. INAC was a participant in this workshop.
54	INAC – 8	Wildlife Ramps	Construction of ramps is proposed for wildlife access to the top of the rock piles. TK should be considered in determining the number, location, shape (width & slope), and surface texture of these ramps.	Refer to Appendix 5.1-4A, Plan 26.
55	JW – 35	**5.4.2.1 -** page 5-63 *(Table 5.4-2)*	Change “Angel of repose to Angle of repose. What is the meaning of “other waste? What is the basis for these criteria in this table? Why are values variable for different WRSAs?	The wording will be edited. Other waste is landfill waste. The number for Fox WRSA is incorrect – it should be N/A. Variation in numbers is based on location of WRSA near and within watershed boundaries, and some minor variations in construction.
56	JW – 36	**5.4.3.3 -** page 5-71 *(Table 5.4-3)*	The amounts reflect a June 2006 date, while photos are 2007 and document is Dec 2008. How much have these amounts changed over the last 2-3 years? Suggest updating for those materials with measureable changes.	Not all data in the ICRP could be updated for the December 2008 delivery date. This report was originally submitted in 2005 for approval. BHP Billiton has updated where possible for this final draft to account for major LOM Plan changes.
57	JW – 37	**5.4.3.4**	*Figure 5.4-7* Why is there no data since May 2005? *Figure 5.4-8* Why is there no data since Sept 2004? *Figure 5.4-9* Why is there no data after July 2005? *Figure 5.4-10* Why is there no data after July 2005?	Data will be updated as discussed in Tracking # 52 above.
58	JW – 38	**5.4.3.6** - page 5-79	Citation (HMA, 2005) was (Martens, 2004) in previous version. Is this an updated study or a corrected citation?	Corrected citation.
59	JW – 39	**5.4.3.9** - page 5-84	“Examinations of the ground temperature…” Do we have figures showing these latest trends in the Fox WRSA as listed in the second set	Data for the Fox WRSA is collected regularly; however, ground temperature profiles have not been produced for the ICRP. The discussion in the ICRP of Fox ground

			of bullets? From last paragraph in section, before pile freezes how does water move through the pile? Is there any seepage?	temperatures was updated in late 2008, and was based on a review of the 2007 data, however figures in the ICRP were not updated. This was an oversight and will be corrected. Water is impeded from exiting the pile by low permeable toe berm construction around the waste rock pile perimeter. The toe berms are inspected regularly for seepage and the results presented in the annual waste rock storage area seepage survey.
60	JW – 40	**5.4.4.3** - page 5-91 *(Table 5.4-6)*	Years given are, in some cases, significantly different from previous version. What is basis for change in timing and how firm are these estimates?	Timing of waste rock needs was updated with updates to the LOM Plan. These dates are expected to change in the future with changes to the LOM Plan.
61	JW – 41	**5.4.4.7** - page 5-94	Misery WRSA Water Quality Prediction section – How will the high ammonia concentrations be managed?	The removal efficiency of ammonia (from blasting agents) from King Pond Settling Facility is 95%. These results are based on input analysis from input water (Misery Sump) and ambient water quality in King Pond. This removal takes place through the process of wind mixing. High removal efficiency in the surface waters of pit lakes is also expected.
62	JW – 42	**5.4.7** – *(Tables 5.4-9, 5.4-10, 5.4-12 and 5.4-13)*	Why were works re: hydrocarbon contaminated soils omitted?	The complete omission of any hydrocarbon assessment from these tables was not intended. A complete ESA of a waste rock pile would not be completed when keeping in mind that the Panda/Koala/Beartooth WRSA will encapsulate Zone S as well as other hydrocarbon materials such as fuel farm liners. An assessment of the top surface of the WRSA will be completed when WRSA are no longer required for mining operations. The Reclamation Activity tables will updated to ensure this is included.
63	JW – 43	**5.4.11** - page 5-111	Bullets 4, 5 and 6 are too broad (or vague). The last three are not parameters.	Please refer to Appendix 5.1-5, Table 5.1-5E. If JW has a suggestion for parameters that have been listed, BHP Billiton will review these.
5.5 Long Lake Containment Facility (LLCF)				
64	INAC – 9	Cover	Placement of a 1 m thick rock layer may be difficult due to the rock size in the waste rock piles. A slightly thicker cover may be more practical to construct. BHPB has not provided any rationale or trial work to demonstrate that the original 2 m thick cover (the basis of reclamation security) is not still applicable. It is understood that 2 m is not a performance based thickness, but rather it was put forward as the minimum thickness that could be constructed in a practical manner.	Trial studies for rock placement have been identified in Appendix 5.1-4A Plan 82, Appendix 5.1-4B Plans 9 and 10, and Section 5.5.4.2.
65	INAC – 10	Cover	TK may be needed to refine the distribution of vegetation and rock in the central areas to ensure that the final product does not result in adverse consequences to the wildlife (primarily caribou).	Agreed. BHP Billiton has identified the incorporation of TK into in the ICRP as a reclamation research study.
66	INAC – 11	Cover	It is not certain that the proposed cover concept for the water-interface zone can be constructed or that it will perform as expected. Without test work, the extent to which the rock settles into the EFPK is uncertain. Winter construction would certainly facilitate access for placing the rock. However, the rock could sink out of sight. The expectation that the rock will settle down and stop upon the permafrost is optimistic as permafrost may not have established in this material at the time the reclamation work commences. Annual frost process may affect the long-term stability of the rock – EFPK mixture.	A pilot study for the constructability of the proposed cover has been identified in Reclamation and Research Plan Appendix 5.1-4A Plan 82, and Appendix 5.1-4B Plans 9 and 10, and Section 5.5.4.2.
67	DFO – 5	Water Management	It is the opinion of DFO that there is no need for a fish barrier to be constructed at the outlet of Cell E to prevent fish passage from Leslie Lake as long as water quality is not an issue. Fish are currently present in Cell E and the habitat has not been altered to any significant extent.	BHP Billiton does not have fish habitat replacement, and hence fish access requirements for the LLCF. Please refer to BHP Billiton letter to DFO Jan 30, 2009.
68	JW – 44	**5.5.2.2** - page 5-112 *(Table 5.5-2)*	Average Discharge of 8.0 Mm3/Yr: How was this calculated (over what time period)? What is the daily rate?	The pre-development discharge from Long Lake was taken from the 1995 EIS (0.25 m^3/s, Volume II, Section 2.3.1.7). The period of record in the Koala watershed was insufficient to make long term flood flow predictions in the EIS. As a result, concurrent data from long term regional WSC stations at Indin River, and the Coppermine River at Point Lake,

				were used to determine daily discharge at each station. The average daily rate, calculated from the instantaneous rate is 21,600 m^3/per day.
69	JW – 45	**5.5.2.2** - *Figure 5.5-1*	What was the lake (under Airport Esker in lower map) called? What is the white area on the north east section of the lower map?	The lake in Figure 5.5-1 was Airstrip Lake. A label for this lake will be included in the Pre-Disturbance Figure. Unsure of area in question, but there are 2 areas; the linear area is Misery Road the round shape is cloud.
70	JW – 46	**5.5.3.2** - page 5-120	Process Kimberlite Deposition section: How were the 12% and 35% values derived (what were the assumptions)?	The section will be reviewed and appropriate citation included.
71	JW – 47	**5.5.3.2 -** page 5-121 *(Table 5.5-5)*	Why was the row for % filled deleted from previous version?	Because these were unsupported values.
72	JW – 48	**5.5.5.2** - page 5-129	*Figure 5.5-6* Add watershed boundaries	Watershed boundaries will be included in this figure.
73	JW – 49	**5.5.5.3** - page 5-132	Suggest referencing proposed reclamation research related to fertilizer applications?	Reference to fertilizer applications will be inserted.
74	JW – 50	**5.5.5.3 -** page 5-133, paragraph 2	What are the results of Cell B vegetation plot monitoring through to 2008?	These will be included in the next update of the ICRP.
75	JW – 51	**5.5.5.5** - page 5-134	When would the 300-400 m depth, mentioned in paragraph 4, be attained?	The time for permafrost to develop will vary depending on the thickness of the deposited processed kimberlite, the deposition temperature, moisture content, material density and initial ground temperature profile prior to deposition. Permafrost development has been identified as an area of future study in Reclamation Research Appendix 5.1-4A, Plan # 13.
76	JW – 52	**5.5.5.5 -** page 5-136	How fast is “rapid formation of permafrost”? To attain desired stability (i.e; not in an active zone)?	The rate of permafrost formation is dependent on the factors noted above; however, in well drained areas with no previous talik, permafrost development could be observed within 5 years of material placement. This question will be further addressed as part of Reclamation Research Appendix 5.1-4A. Plan # 13.
77	JW – 53	**5.5.5.6** - page 5-136	As the plugging reduces filter capacity, how is downstream water quality effected (paragraph 3)? In paragraph 4 it says 448 masl. It is 450 in previous version - is this a change or a correction?	Section 5.5.5.6 will be reviewed to ensure effects to water quality downstream of filter dykes are included. This was a change from the previous version of the ICRP. The closure water levels were reviewed and it was found that the lake level in Cell E could be restored to pre-construction elevation.
78	JW – 54	**5.5.5.6 -** page 5-137	The mentioned EFPK final elevation implies the depth of water in Cell D will be 18m, is that correct?	Yes, the water column over the EFPK will be 18 m.
5.6 Dams, Dikes and Channels				
79	INAC – 12		The proposed reclamation approaches for the dams, dikes and channels is reasonable. More detail could be provided on the details for permanent structures such as the Pigeon Stream channel. Further evaluation of the performance of the Panda Diversion Dam after removal of the thermosiphons may be warranted. If the dam does thaw, then frost heave may disrupt the structure, resulting in ever increasing seepage through it, and consequently less in the PDC. The result could be insufficient flow in the PDC for long-term fish habitat and passage.	Detailed designs have not been completed for several of the permanent structures. An evaluation of Panda Diversion Dam has been identified in the Engineering Studies Appendix 5.1-4B, Section 13. The Panda Diversion Dam is constructed of thaw stable material. Freeze thaw processes are not expected to impact on its long-term performance.
80	JW – 55	**5.6.3.1** - page 5-149	What is the expected time from that thermosiphons are needed (less than the practical life span of 20 years?)?	Thermosyphons were installed in the Panda Diversion Dam to freeze a talik under the dam footprint. The thermosyphons have cooled the dam core and underlying soil / rock to well below typical permafrost temperatures, and as such have served their intended function. The thermosyphons continue to operate; however, they would not likely be required for continued dam operation throughout the remaining mine life.
81	JW – 56	**5.6.4.2** - page 5-154	Panda Diversion Channel (PDC) section - In the last paragraph it is not clear what final bank shapes will be. How is cut area graded into non-cut area beyond the 18m wide bench?	The channel will be benched as shown in Figure 5.1-2E in Appendix 5.1-2. The shaded areas shown in the figure will be excavated to construct the bench. The cut section will be transitioned into the non-cut area by narrowing the bench width beyond the

				stabilizing zone and blending into the existing slope.
82	JW – 57	**5.6.5.1** - page 5-156	The figure 5.1-2F referenced goes to only August 2004. Update to 2008.	The figure will be updated to 2007.
83	JW – 58	**5.6.5.2** - page 5-156	In the Bearclaw Diversion Pipeline section, why was a previous reason for the jetty omitted re: function as fish habitat?	Section 5.6.5.2 will be reviewed to ensure the reason for the jetty to remain in place is included.
84	JW – 59	**5.6.5.3** - page 5-157	What are the contingencies of Two Rock Lake if it doesn't meet water license criteria? Should there be research on whether or not sediments are to be removed from the Two Rock Pond? In the King Pond Settling Facility section how were HIS scores determined (is there a reference)?	BHP Billiton does not expect water quality will be a concern in Two Rock Sedimentation Pond. The facility will be managed similarly to King Pond during mining operations. If water quality is shown as a concern during Sable operations BHP Billiton will assess management of the facility as part of Adaptive Management. Please refer to ***Review of Effluent Quality Criteria (EQC) for the Sable Site, January 2009*** for discuss on water quality in Two Rock Sediment Pond. A reference for HIS scores for King Pond Settling Facility will be included.
85	JW – 60	**5.6.8**	*Table 5.6-3* (page 5-159) Are there contingencies for construction modifications to diversion channel based on monitoring? *Table 5.6-5* (page 5-160) When during the operations will the reclamations activities start? *Table 5.6-7* (page 5-161) What is meant by enhance? Are specific DFO recommendations or criteria being followed?	Table 5.6-3 Construction design changes would have come from hydrologic and geotechnical monitoring. Table 5.6-5 will be corrected to ensure start of Reclamation Activities is included. Table 5.6-7 Refer to Section 5.6.5.3 and Appendix 1.1-4, Table 1.1-4C.
86	JW – 61	**5.6.11** - page 5-163	Parameter 5 is vague. Parameters 8-11 listed are not parameters.	Please refer to Appendix 5.1-5, Table 5.1-5I. If JW has a suggestion for parameters that have been listed, BHP Billiton will review these.
5.7 Roads				
87	IEMA – 5	Decommissioning	The Agency is concerned about the need to undertake some experimental design and monitoring for road decommissioning, or at the very least to provide more detail on what is planned for road reclamation and closure. In section 5.7 on Buildings and Infrastructure, there is no classification of roads (including mapping of roads or sections, by type of road), or specific timelines provided for decommissioning various stretches when they may no longer be needed. We are unsure which sections of road will be modified at closure, and how these sections align with pre-development caribou travel routes and habitat. As a further example of this issue, page 5-186 states "Except in those sections of road considered hazardous to wildlife, shoulder berms will be knocked down and contoured to provide access for wildlife." The Agency would like BHPB to define what is meant by "hazardous" and map such sections. The Agency is concerned about the filter or barrier effect to caribou movement because of roads left on the mine site. The Agency expects to see this level of detail in the next version of the ICRP, along with more specific decommissioning activities and criteria. This is an excellent opportunity to incorporate Traditional Knowledge into closure planning.	Road classification, timing of reclamation and areas of significance (caribou migration areas and potentially hazardous areas will be included in the next update of the ICRP. Section 5.7.9.10 will be reviewed to ensure that explanation is provided for the term hazardous areas. Please refer to Appendix 5.1-4A Plan 26 for research using TK.
88	JW – 62	**5.7.7.1** - page 5-179	Reference noted research to specific study in Reclamation Research Plan?	Section 5.7.7.1 will be reviewed to ensure appropriate references are included.
89	JW – 63	**5.7.9.6** - page 5-184	Is there any further work to be conducted associated with Fred□s Channel (paragraph 3)?	A technical review of the Airport Esker (including Fred's Channel) was completed in 2008. Results from that assessment will assist with the closure plan for the esker. The results have not yet been reviewed by BHP Billiton.
90	JW – 64	**5.7.9.12** - page 5-186	In reference to the bullets, what do these results suggest for rate of colonization and reclamation success?	Section 5.7.9.12 will be reviewed and an explanation of how the monitoring results inform reclamation success will be included.

Appendix 5.1.1				
91	INAC – 13	Closure Objectives & Criteria	Overall this section is also greatly improved. It directs the reader to the appropriate information. Some of the closure criteria continue to be a little too vague, some are not measurable and some do not refer to reclamation research that is designed to support their development. For example the Open Pits water section lists the following closure criteria. *a) Source lakes and connecting outlet streams water levels remain within natural fluctuations.* *b) Water quality and fish habitat in source lakes is maintained.* Table 5.1-1 provides the link between closure objectives and criteria to research and monitoring. However, it appears that not all the research plans are referenced in the table. For example, Table 5.1-D, PKCA Water only references Appendix 5.1-4A Section 12. Sections 13 and 14 are also relevant and should also be listed. The Section on Open Pits lists 'CCME (industrial) for Contaminated Site Remediation' as closure criteria for hydrocarbon contamination. Given the pristine nature of the surrounding environment CCME industrial guidelines may not be appropriate. Evidence proving that this will not affect the quality of the LLCF and the surrounding environment would be appropriate.	Table 5.1-1A Water 1 and 2 will be updated to ensure references are provided to appropriate documentation on lake and stream levels, and on water quality and fish habitat in source lakes. All tables in Appendix 5.1-1 will be reviewed to ensure all appropriate research and monitoring plans are referenced. BHP Billiton will review the closure criteria for hydrocarbon contamination and provide a response to the WLWB.
92	INAC – 14	Closure Objectives & Criteria	The general approach to this aspect of the ICRP has been modified from the earlier versions of the document. The approach of "physical and chemical stability, and land use" has not been included in the Final Draft ICRP. In general, many of the closure criteria are actually the proposed closure activities, and not criteria as suggested. In Section 1.4, there is the statement: "Closure criteria are a set of performance based standards that measure the performance of closure activities in successfully meeting closure objectives." Many of the criteria are non-specific. A few examples are: • criteria for open pits includes: "water quality and fish habitat in source lakes is maintained". This is not a measurable criteria. • Water criteria for dikes, spillways and channels includes "channel flow through constructed channels to downstream watershed". There is no reference to any hydraulic criteria (such as the 1:200 year flood). The Land criteria for waste rock are good. In summary, the closure criteria are acceptable, but there is room for improvement.	BHP Billiton agrees that closure criteria will be refined in future updates of the ICRP. Please also refer to BHP Billiton response to Tracking # 91.
93	GNWT – ENR	Closure Objectives & Criteria	Section 5.4.5 states, "Material that is successfully treated to the GNWT's Industrial Remediation criteria will either be used for site remediation work or placed in the WRSA." With respect to *GNWT's Contaminated Site Remediation Guidelines*, Industrial is defined as "All land uses in which the primary activity is related to the production, manufacture and storage of materials. The public does not usually have uncontrolled access to this type of land". The definition of Residential/Parkland is defined as, "All uses of land in which dwelling on a permanent, temporary or seasonal basis is the primary activity. This includes activity that is recreational in nature…	BHP Billiton will review the closure criteria for hydrocarbon contamination and provide a response to the WLWB.

			Residential/Parkland is often readily accessible to the public. The criteria, as listed in the *GNWT Guidelines* are in the context of consideration for the protection of human and environmental health. It is important to note that it is the *intended* future land use that governs the decision on the level of remediation performed at a site. BHPB has stated that the Reclamation Goal for the EKATI Diamond Mine is to return the mine site to viable, and wherever practicable, self-2 sustaining ecosystems that are compatible with a healthy environment, human activities, and the surrounding environment. Therefore, ENR recommends that the level of remediation conducted on soils intended for use in remediation work on site, be remediated to residential/parkland criteria.	
94	IEMA – 6	Closure Objectives & Criteria	Table 5.1-1F in Appendix 5.1-1 that defines closure objectives and criteria for Buildings and Infrastructure, states in Land criterion 4 that hydrocarbon contamination will be remediated to the CCME Contaminated Sites Remediation Guidelines for "industrial use". The Agency questions whether an industrial remediation standard is the appropriate one as the mine site will likely not be used for industrial purposes but returned to use by wildlife and occasional human activities. We are of the view that the 'parkland' remediation standard would be closer to the anticipated use and should be considered by BHPB and regulators.	BHP Billiton will review the closure criteria for hydrocarbon contamination and provide a response to the WLWB.
95	IEMA – 7	Closure Objectives & Criteria	Closure objectives and criteria are set out in Appendix 5.1-1 for each mine component. One of the stated wildlife closure objectives for each mine component is "wildlife are using the Ekati claim block", with an accompanying closure criterion that is stated as "wildlife observed using the Ekati claims block". Closure criteria for wildlife use should be developed for each mine component along with appropriate monitoring methods and indicators that relate back to Valued Ecosystem Components. Therefore, a more appropriate closure objective might be something like "indigenous wildlife species can safely use (name the component)". For example, wildlife use closure criteria for the waste rock storage areas might be something like: • Caribou use of the waste rock storage areas is similar to analogous landforms such as rocky plateaus; • Waste rock piles do not result in increased predation rates on caribou; and • The vegetation on waste rock piles is safe for wildlife consumption.	BHP Billiton included wildlife monitoring for individual mine components in the January 2007 ICRP submission, but later changed the closure objectives and criteria to the general claim block to ensure that the WEMP continued through to end of closure. The WEMP was originally designed upon, and is currently monitored and reported on VEC's. Also the WEMP now has a considerable amount of data upon which BHP Billiton and reviewers monitor for trends and changes brought about by mine operations. It is expected that this program will also be useful as the mine components are reclaimed, to monitor wildlife patterns at closure against those observed pre-development and during operations. The WEMP should also be adapted to encompass wildlife monitoring as mine components close, to measure wildlife use at and near the closed components in relation to the patterns and trends across the claim block. BHP Billiton has stated that WRSA and other mine components will be reclaimed to ensure these areas are safe for wildlife use, but not to be specific attractants to wildlife. In addition, BHP Billiton does not agree that there are analogous landforms to that of WRSA in the claim block upon which to base reference data. Appendix 5.1-1 will be reviewed to ensure consistent wording is used for wildlife closure objectives and criteria, and that the WEMP is referenced appropriately.
96	LKDFN – 5	Closure Objectives & Criteria	Closure criteria for wildlife use need to be developed for each mine component with monitoring methods that will be used. This is to ensure that certain closed component is suitable for wildlife to return to safely and to find out how long It will take for wildlife to return to site that is reclaimed.	Please refer to BHP Billiton response to Tracking # 95.
Appendix 5.1-4A Reclamation Research Plan (RRP) and 5.1-4B Engineering Studies				
97	INAC – 15		Overall the RRP is an improvement and does a good job of detailing the planned research as it relates ultimately to closure objectives and criteria. Comments from our consultant specific to the LLCF	

			permafrost reclamation research plan will be sent to the board upon receipt.	
98	INAC – 16		Reclamation Research is distributed throughout the ICRP, rather than a distinct section as in the previous document. The sooner these projects are started, the sooner it will be possible to update the ICRP with details and specifics about the closure measures.	Agree
99	JW – 65		The December 2008 versions are significantly better organized and presented; however, the outline used throughout each plan does not follow BHPB□s outline as presented in their June 27, 2008 response to WLWB – which essentially followed the intent of the recommendations provided to BHPB in JWA□s June 18, 2008 verification comments. More specifically, the outline used does not follow the correct order of presentation, that is, Steps 4 (Data and Information Required), 5 (Data Available and Research Completed), 6 (Data and Information Gaps Assessment), and 7 (Scope of Work) was presented as Steps 4, 7, 5, 6. Thus, the Scope of Work is presented before the data and information gaps assessments, and so the logic in **all** the plans is confusing, and as a result **all** the research plans are incomplete. The Scope of Work should reflect the work still to be done (not work already completed) and should be the difference between what is needed (original Step 4) and what has already been done (original Step 5), but the current versions of the Scope of Work do not distinguish between the work that has been completed and that that has still to be done in (In some cases there are general references in the identified data and information gaps back to specific tasks in the Scope, but this is a confusing presentation).	During the development of the Reclamation Research Plan, the *Scope of Work* section was moved to ensure that a full summary of the research scope was included in each plan. The *Data and Information Required* section is used to list data and information needed – but does not outline the scope of research. It was assessed that the full scope was needed. A full scope of work projects is a normal method of laying out the Tasks for the whole project, and assists the reviewer in budget and schedule planning and determining which work has been completed and which still remains. To provide only a scope of the remaining work without the full 'picture' would have led to BHP Billiton to explain/include this when questioned on the research as a whole, as it only provides a part of the work plan. Once the full scope is outlined then the following section, *Data Available and Research Completed* Section describes what work has been completed in the Scope, and the *Identified Data and Information Gaps* section describes what data and information outlined in the Scope still need to be completed.
100	JW – 66		Further, in most cases there are no details or methods for how the Identified Data and Information Gaps will be examined or researched. The Scope of Work should provide enough information about the research methodology to provide a real context for estimating schedule and costs. The total estimated costs for the 26 research plans ranges from $5,470,000 to $7,390,000 (or an average estimate of $6,430,000). This implies an overall accuracy of ±15% (the minimum or maximum is 15% less or greater than mean of estimate), which suggests that methods, field involvement and types of analyses should be fairly well known. How good are these estimates? Without any methodology in the scope, it is difficult to know how the cost estimates and schedules were derived. As described in JWA□s June 18, 2008 verification comments, the Scope of Work (only the work still to do) should be based on the results of the Data and Information Gaps Assessment and have the following elements, as appropriate: Describe anticipated field work (e.g., site-specific details regarding the use and installation of continuous-recording lake level or stream flow gauges) that will be required to fill the data and information gaps. Include specifics on timing, duration of activities and the numbers and locations of field sites, and the types of data and/or information that will be collected or generated. Describe any anticipated field or office research (including interviews, literature reviews) that will be required to fill data and information gaps.	Remaining reclamation research is outlined under Project Tracking and Schedule. Specific work scopes and budgets will be developed as part of the Task development. Research tasks have been based on conceptual estimates (approximate to 30% +/-) and will be refined with consultants and mine operations at the time of work scope development. The research tasks that will be completed in the next 5 years will be reviewed to ensure that they provide the appropriate level of detail that describes field work, document reviews, and how the data will meet the research objectives.

			Describe any anticipated analyses and/or modeling required. Describe how the output from scope of work will meet the research objectives, and how it supports the goal(s) of the closure plan. Finally, the Data and Information Gaps Assessment should also include a discussion of the existing data uncertainties (quantified if possible) and how these uncertainties affect, for example, the achievement of the goals and objectives of each plan or the establishment of water license criteria. As the plan is presented now, the step on Data and Information Gaps, only provides a summary wish list, or a general concept of a particular task (in many cases the data and info gaps appears to be a re-statement of the scope).	
101	JW – 67		In two cases (Plans 6 and 9) there are no identified data and information gaps – so why is there a research plan?	These plans will be reviewed to ensure that any data gaps will be identified.
102	JW – 68		Also, there appears to be redundancies in the plans in, for example, researching vegetation cover and surface stability. A different plan is provided for each of the main mine components (e.g., open pits, waste rock storage areas, processed kimberlite containment area, buildings and infrastructure), but the plans have many of the same elements and so should be assessed as a group while identifying particular aspects or challenges that might occur for each component (i.e., vegetation cover doesn't recognize the mine component, but differentiates on the basis of physical, chemical and biologic properties). As such, most of work will entail the same field tasks (although in different areas) and use the same types of methods and analyses.	Methodologies, tasks and analyses are often similar. However substrate, moisture conditions, metals uptake, nutrient conditions etc are variable across mine components, and these differences are accounted for in the research.
103	JW – 69		The engineering study plans are organized in the same way as the reclamation research plans, and as such have the same drawbacks. All the general comments provided above for the reclamation research plans apply equally to **all** the engineering study plans.	Please refer to BHP Billiton response in Tracking # 99.
104	GNWT – ENR		ENR is appreciative of the proposed annual reporting of the reclamation research and engineer planning progress, as this will allow reviewers to provide input into future uncertainties. In addition, it will provide reviewers with updates on results. ENR looks forward to continued progress with respect to these Plans.	BHP Billiton has and will continue to provide updates to reclamation work undertaken over the past year and an outline of work anticipated for the next year, as part of the Water Licence and Environmental Agreement Annual Report.
105	IEMA – 8		These sections could be made more easily understood by better cross referencing and minimizing duplication amongst the research plans and engineering studies, consistent numbering of tasks through the later sections and making sure that the research and engineering work is properly referenced in the Tables in Appendix 5.1-1 that set out the Closure Objectives and Criteria for each mine component. More importantly, more information is required to properly describe the actual work that has to be done to address the existing information gaps as defined in the appendix. A substantial body of work is urgently required to address these information gaps and we encourage the company to provide details on research progress (and proposed work for the following year) in its Annual Environmental Report. The current ICRP now proposes more detailed reporting on reclamation research and engineering studies on an annual basis. This will help to build confidence that the necessary effort is being invested by the company so that the overall site can be	BHP Billiton will continue to seek opportunities to conduct research on mine components, in particular the LLCF, as early in the mining operations as possible. The Pilot Studies outlined in 5.5.4.2 will be refined with more detail and scope planning over 2009 and 2010, as part of BHP Billiton's 5 year planning process. This work will include schedules, budgets, equipment and labour needs. BHP Billiton has included research that will look at how the LLCF will be reclaimed to ensure wildlife safety. Based on the design plans, risk assessments, and research plans the company does not at this time believe that the LLCF will be unsafe for wildlife use when the facility is closed. The Pilot Study outlined in Section 5.5.4.2 will be used to assist with the final closure design of the facility, including surface stability and vegetation – all of which have a major focus on wildlife safety.

			closed safely and in a timely manner. Three specific areas of reclamation research require additional attention: First, it is our understanding that BHPB does not intend to deposit any further tailings in the top end of Cell B, following an internal review of the Fay Lake spill. The ICRP currently proposes to begin a pilot study on revegetation in Cell B in 2013, and ending either in 2016 (see Figure 5.1-4A line on Establishment of Self-Sustaining Plant Communities), or in 2019 (pg. 72 of the Reclamation Research Plan). Page 5-133 of the ICRP also suggests that at least two decades are needed to establish a mature plant cover. All of these point to a serious timing problem, and an urgent need to begin significant pilot-scale revegetation studies as soon as possible, ideally much sooner than 2013. Delaying this work to 2013 is very unlikely to provide sufficient time to properly design and carry out large-scale revegetation of the LLCF at closure. Second, the Reclamation Research Plan (Appendix 5.1-4a) identifies eight research programs relating to the LLCF, and the Engineering Studies section (Appendix 5.1-4b) identifies three studies that will be undertaken with respect to PKCA stability. Our review of these reveals that more detail is required about the tasks that will be undertaken to deal with at least two of the known uncertainties about long-term tailings stability. These are [a] effectiveness and engineering specifications for the water cover required in the LLCF to keep EFPK stabilized in situ; and [b] constructability and trafficability for conducting reclamation work on the interface zone in the LLCF. While the ICRP recognizes that these issues need to be addressed, they do not describe how the investigations will be carried out. It is therefore difficult to be able to verify that the intended work will, in a timely fashion, produce the information needed to inform the respective reclamation measures that will need to be implemented. The final area of concern is the sequencing and direction of the research for revegetation and stabilization of the LLCF (Plans 16-18). Three fundamental uncertainties about vegetation and ground stability on the LLCF need to be resolved to design the appropriate closure measures: a) whether the plants are taking up significant amounts of toxins/heavy metals, b) whether these plants are attractive to grazers (caribou, geese), and c) whether the water interface zone is safe for animals. Answers to these initial questions will determine whether BHPB should reconsider the closure objective of making the LLCF safe for wildlife or simply deter wildlife altogether. It is not clear which direction BHPB is going. BHPB's initial health risk assessment suggests little risk to wildlife or human health (except for Ni as a potential risk) but, as recommended in our letter to BHPB of April 8, 2005, this study had several deficiencies and needed to be redone to get more reliable answers to these issues. The safety of the water-tailings interface for wildlife is not currently	

			demonstrated, and it is likely more conservative to consider measures to discourage wildlife use, particularly if natural plant colonization of the LLCF promotes plants that are preferred by caribou or other wildlife. The research plan should also consider the impacts to browsers (e.g. arctic hare) if willow is being planted on the LLCF.	
5.1-5 Post-Closure Monitoring				
106	INAC – 17		The post closure monitoring table lists response thresholds. Should these not be the same as closure criteria? Similar to the closure criteria the response thresholds should be measurable values. The response thresholds as they are listed in the table are too vague. For example, greater detail is needed to define what a 'negative trend from baseline' is, and what constitutes 'prolonged period of no flow', and what would indicate an 'increasing trend towards exceedence of discharge criteria'. If there is research in place to define these then they should be referenced in the table.	Appendix 5.1-5, Section 5 describes the use of thresholds in the closure monitoring plan. Closure criteria are end targets, whereas thresholds identify trends when closure criteria will be exceeded, and the potential for closure objectives not to be met.
107	IEMA – 9		Figures and diagrams in this version of the ICRP are greatly improved. The pre-disturbance and current development status figures using satellite imagery are particularly helpful as these are at the same scale and view. However, post-closure illustrations could have been added to provide the full range of reclaimed landscapes for each mine component. Part J 1(e) of the main water licence (MV2003L2-0013) requires a 'detailed description of the final desired landscape, with emphasis on the reclamation of stream banks and surface drainages over the reclaimed units.'	Please refer to Tracking # 1 for BHP Billiton response.
7.0 Environmental Assessment				
108	JW – 70	**7.3 -** page 7-4	*Figure 7.2-1* – a number of values have changed from previous version – what is basis for changes?	In the previous version of figure, volumes in dark blue were based on the average annual volume observed at various hydrometric monitoring stations. However, the period of record was different for each station, so that results could not easily be compared among watersheds. Results could also not be directly compared with pumping volumes (light blue), that were based on 2005 measurements. This updated figure uses 2005 observed precipitation, and the watershed area for each station to estimate runoff volume (dark blue). In this way the volume of water can be tracked as it increases in relation to other inputs moving downstream.
109	JW – 71	**7.4.3** - page 7-15	*Figure 7.4-1* – not clear how St* was derived/calculated; if include in text/table, must show derivation or simplify discussion. As it is right now, the figure is obtuse and findings or interpretations cannot be readily made.	The stability of a lake gives the amount of energy needed to mix the entire lake (Wetzel, 2001); this energy is usually divided by the area of the lake to give units of J/m^2. In a stratified lake, the surface layer is less dense and the deep water is more dense. Stratification may result from temperature, salt or both. When the entire lake is mixed, the dense deep water is lifted and mixed throughout the lake: this raises the center of mass of the water in the lake, doing work against gravity. The stability integrates the amount of work that must be done against gravity. In the middle of summer, the pit lakes will be stratified in both temperature and salinity. However, just before freeze up, the lake will have cooled and temperature will no longer contribute significantly to stability. In the fall, only the salinity stratification will maintain the stratification. To determine the stability in the fall, we start with the salinity stability at maximum heat content in summer, St*. The salinity stability is the stability of the pit lake due to salinity alone and is computed by setting the temperature to a constant (4 ºC) in the

				calculation of density. In effect, St* excludes the large and changing effect of temperature. The salinity stability in summer, St*, is then compared to typical changes of salinity stability over the fall, ΔSt, observed at other sites. If St* >> ΔSt, meromixis is likely and if St* ~ ΔSt then meromixis is unlikely. The formula for computing the stability of a water body is given by $St = \left(\frac{g}{A(0)}\right)\int_0^z A(z)(\rho(z) - \bar{\rho})dz$ (J m^{-2}) where, *z* is the depth from the surface, $\rho(z)$ is the density, $\bar{\rho}$ is the mean density, *A(z)* is the area of the pit, *H* is the total depth and *g* is gravity. **Reference** Wetzel, R. G. 2001. Limnology, 3rd ed. Academic Press.
110	JW – 72	**7.4.7.3** - page 7-23	*Figure 7.4-5* – what method was used to determine percentages?	For each lake section, transects perpendicular to the shoreline were established at approximately 50 m intervals. The top of each transect was established at the high water mark, as was determined by examining the rocks and vegetation on the shoreline. Transects were extended out into the lake to a maximum water depth of approximately 1.2 m. The first measuring points included the high water mark, one or more ground points if the shoreline was sloping and long enough, and the water surface elevation or water level. The survey continued into the lake, with measuring points at every 100 mm increase in water depth. Additional measuring points were used in areas where the substrate was dominated by large boulders. At each measuring point, the following three variables were recorded using a survey rod with a Trimble RTK Differential Global Positioning System (DGPS) attached to the top of the rod (Plate 4.2-1): - Northing GPS co-ordinate (using the UTM12 NAD83 datum); - Easting GPS co-ordinate; and - elevation above mean sea level. At each measurement point, the rod was held upright and the three coordinates were recorded by the instrument at the push of a button. The system automatically subtracted the length of the rod to give elevation at the base of the rod. The system has a design accuracy of ± 20 mm in each of the three dimensions. Error was slightly higher for elevation than for Easting and Northing because the tip of the rod occasionally sank in soft substrate. Distance (m) of each measuring point from the high water mark was calculated from Easting and Northing co-ordinates. Three control stations were set on high points near the areas of the lakes that were to be surveyed and were tuned to EKATI's GPS radio signal. The base station was set over one of the new control points, and broadcasting commenced on a separate radio signal. The other control points were used to check the base station setup to ensure that the RTK survey data files would be accurate. The surveys were conducted using the separate radio signal being transmitted from the base station. Percent substrate composition (e.g., bedrock, boulder, cobble, gravel and sand) was recorded to the nearest 5% at each measuring point along each transect except for those points on dry land above the water surface that were covered in moss, shrubs or other terrestrial vegetation. For all sites in which substrate composition was recorded,

				the percentages of bedrock, boulder, cobble, gravel and sand/fines added up to 100%. Percent vegetation cover for both submergent and emergent vegetation was also recorded at each point, but the two percentages did not have to add up to 100% because the two types of vegetation could overlap each other. Photographs were taken with a digital camera every few transects, or at obvious changes in substrate characteristics, as backup support for substrate characterization. At least two pictures were taken along each transect, one on shore and a second at an approximate depth of 0.4 m. These pictures are on file.
111	JW – 73	**7.5** - page 7-26	*Figure 7.4-7* – where are the transect locations? Provide locations on a map.	For each lake section, transects perpendicular to the shoreline were established at approximately 50 m intervals.
112	JW – 74	**7.8.1** - page 7-33	*Table 7.8-1* – as these are estimated long-term temperature values, they do not match the values reported in Table 3.2-2. Did they incorporate that data set, or were only Yellowknife and Lupin values used? (Are the Ekati values shown on Figure 7.8-1 the same as those used in Table 3.2-2?).	As noted in Section 7.8-1, the long-term temperature trends were based on EKATI climate data from 1993 to 2005. However the EKATI data set was not of sufficient length to allow long-term trends to be evaluated. As such the data from Lupin and Yellowknife (both have longer data sets) were used to adjust the EKATI temperatures to determine long-term trends. The EKATI values in Figure 7.8-1 are average annual temperatures. The data in Table 3.2-2 are mean monthly EKATI temperatures for the time period of 2000 to 2008.
113	JW – 75	**7.8.3** - page 7-36	*Last line* – the "further work" should reference proposed research plan or engineering studies plan.	The appropriate reference will be included.
114	JW – 76	**7.8.5** - page 7-38	*Last line* – the "further modeling" should reference proposed research plan or engineering studies plan.	The appropriate reference will be included.
115	JW – 77	**7.8.5** - page 7-38 *(Table 5.1-3E)*	Values should be in K rather than M (e.g., $500 K to $5 M, and $50 K to $500 K)	The document will be reviewed to ensure consistent units are used throughout the ICRP.
8.0 Progressive Reclamation				
116	IEMA – 10		The Agency is of the view that BHPB should make every effort to learn from the progressive reclamation that has taken place at site or will take place before final closure of all components. Some examples will help illustrate this point. BHPB has now closed several of its exploration sites and there may be some good experience and lessons learned about natural plant colonization, remediation of hydrocarbons or other matters. If the Phase I PKCA closure option includes a drainage channel through the facility, this could be used to better design and monitor similar channels in the LLCF. While the Misery site is in temporary shutdown until 2012, there are opportunities for monitoring of the open pit and waste rock storage area that can lead to better design of similar features in the Panda-Koala-Beartooth areas. For example, monitoring of the pit edges and the waste rock piles for wildlife use at Misery should lead to better design of wildlife use closure measures and criteria, the desirability and placement of access ramps, and similar matters. The Agency is prepared to work with BHPB and others to help design an active monitoring program at Misery while it is temporarily closed, which should facilitate improved closure at other parts of the mine site.	BHP Billiton will continue to seek opportunities for lessons learned that assist with mine reclamation. However, the company has stated previously that wildlife monitoring of the Misery open pit and WRSA during suspension of operations, for the purposes of learning how wildlife interact/use the site at closure will not be conducted. The Misery site, while under suspension of operations is still an active site. Up until 2007 kimberlite ore haulage continued from the Misery WRSA. Also during that time and up to present day the site has been active with exploration work and equipment. Because the site remains active, the company will maintain responsible wildlife management which includes: 1) the safety of workers around potentially dangerous animals, and 2) the safety of wildlife near mobile equipment.
Additional Comments/Information Requests				
117	LKDFN – 6		There is a need to finalize the information that the community is	BHP Billiton has assessed as part of the original baseline studies that water flow from

			getting about the direction of the flow of water from Ekati watershed. Lutsel K'e Dene believes that water flow from Ekati to the east and now we have information that water is also flowing from Ekati to the west. We are concern about the watershed around Ekati which may divert the flow of water to the North shore of Macleod Bay MacLeod Bay is a heavily used by Lutsel K'e Dene for many traditional and cultural activities, including teachings to the youth and to Lutsel K's Dene. Macleod bay is directly in the proposed Park in the East Arm.	Lac de Gras does not flow toward Great Slave Lake. However, if the LDFN have information that shows this baseline information is incorrect the company would be interested in reviewing this.
118	LKDFN – 7		A concern in this community is what will happen to the land despite Ekati claiming that remediated for industrial use. Does this mean that there will be some industry using the area for Something? What does this mean? We find it difficult what other industry will take place at the abandoned area.	Please refer to Tracking # 91 response.
119	LKDFN – 8		Lutsel K'e Dene is concern that Traditional Knowledge from this community is not respected since it states very little of the traditional Knowledge of the area by Lutsel K'e Dene. TK of Lutsel K'e must be used in the 1Cl~P of Ekati. In 1990s, NWT Power Corporation caused a huge land disturbance by flooding and causing two members of Lutsel K'e to drown. TK of Lutsel K'e was not used nor addressed at the time but Lutsel K'e Dene caused the Company to allow the study to be conducted using the Lutsel K'e TK. Western science was incorporated into TK. There is a need for Lutsel K'e Dene to be part of the TK in design and consultation on the ICRP from the beginning to the completion of the plan. Elders have to be involved and the meetings and consultation with elders need to take place In the community. There are about 10 elders that can participate.	Agreed. BHP Billiton has identified the incorporation of TK into in the ICRP as a reclamation research study.
120	LKDFN – 9		A study to be done on caribou to find out how long It would take for caribou to return to reclaimed site with Lutsel K'e Dene Involvement.	Wildlife studies would be part of the TK research included in Appendix 5.1.4A, Plan # 26.
121	LKDFN – 10		We need to know about the baseline information that is available for all the lake that is being used by BHP. This is for education sake for the Community of Lutsel K'e.	BHP Billiton will ensure the LKDFN are provided with the baseline data for EKATI.
122	LKDFN – 11		Lutsel K'e is concern about the nitrate from the explosives to the LLCF including the roads. Nitrates tend to make things grow faster and bigger.	Vegetation research has not indicated that nitrates levels in processed kimberlite affect vegetation growth. Nitrate is monitored as part of the LLCF water quality modeling.
123	LKDFN – 12		Concern about mixing zones that touch land opposite the outflow and in river system.	This research is included as part of the Pit Lakes water quality studies – Appendix 5.1-4A, Plan #3.
124	LKDFN – 13		Is there any arsenic found at Ekati site? If so where is it coming from? Mine has not proof that arsenic is not found at mine site. Lutsel K'e Dene needs to be assured that studies have been done to satisfy First Nation.	Arsenic is not used for any of the processing of ore at EKATI, and is not present in the processed kimberlite or other waste materials, and if present would only be only be found in natural tundra soils.
125	LKDFN – 14		Are there any components of the mine that do not freeze? If they don't freeze, which area and why not?	WRSA monitoring and LLCF monitoring indicates that permafrost is growing into these mine components. At this time there is no indication that components of the mine do not freeze.