



EKATI DIAMOND MINE

Interim Closure and Reclamation Plan Terms of Reference.

EKATI Diamond Mine
BHP Billiton Diamonds Inc.

June 2006



Terms of Reference for the EKATI Diamond Mine Interim Closure and Reclamation Plan

BHP Billiton Diamonds Inc (BHP Billiton) is updating the Interim Closure and Reclamation Plan (ICRP) for The EKATI Diamond Mine, and submitting it to the Wek'eezhii Land and Water Board (WLWB) January 15th, 2007. The ICRP will be a comprehensive document which incorporates the requirements of BHP Billiton's regulatory and corporate reclamation and closure planning. The following Terms of Reference have been presented in the form of a Table of Contents for the ICRP, and contains the major tasks and components of the ICRP, and those reclamation requirements that are outlined in the two Class A Water Licenses MV2003L2-0013 and MV2001L2-0008. References to the Water Licenses have been provided throughout the document to the specific requirements outlined in each of MV2003L2-0013 (0013 Part J) and MV2001L2-0008 (0008 Part L). The format of the ICRP will be designed as an easy reference document for regulatory stakeholders, communities, and BHP Billiton, and which integrates with the EKATI Life of Mine (LOM) Plan.

1. EXECUTIVE SUMMARY

The Executive Summary section will include a company overview.

2. INTRODUCTION

The Introduction section will outline the stages of closure planning, objectives of the ICRP and a cost estimate summary.

2.1. CLOSURE PLAN REQUIREMENTS

2.1.1. Regulatory Requirements

This section will open with a discussion on the development of the ICRP since 1995 when the Environmental Impact Statement was submitted to Environmental Assessment Review Panel. There are a number of regulatory requirements that affect the content and development of the ICRP. BHP Billiton is required to prepare and submit for approval an updated ICRP under the two Class A Water Licenses; MV2003L2-0013 and MV2001L2-0008. As a condition of the original Class A Water License N7L2-1616, the ICRP was submitted to the Mackenzie Valley Land and Water Board (MVLWB) in October 1997 and subsequently approved by the Board in February 1998. The Plan was later updated in 2000 and approved in 2002.

Regulatory documents which have specific reclamation and closure requirements for the EKATI Diamond Mine have been listed below. The requirements for each of these will be summarized in the ICRP.

- Class A Water License MV2003L2-0013. The license is a renewal of the N7L2-1616 Class A Water License and covers the main EKATI Minesite, including

- Panda, Koala, Fox and Misery Pits. The license was issued October 2005, and expires October 2013.
- Class A Water License MV2001L2-0008, Sable, Pigeon, Beartooth expansion. The license was issued in August 2002, and expires in August 2009.
 - Environmental Agreement. Issued January 1997.
 - Class B Water License MV2001L2-0004, Sable Haul Road, Falcon Road Watering Station. The license was issued in October 2001, and expires in October 2006.
 - Class B Water License MV2001L2-0002, Lac de Gras Area, Misery Road Watering. The license was issued in July 2002, and expires in July 2013
 - Class B Water License MV2002L2-0003, Misery Area, Experimental Water Treatment Project. The license was issued in March 2003, and expires in March 2008.
 - Class A Land Use Permits MV2002C0040 (EKATI Claim Block); MV2001F0032 (EKATI Minesite); MV2001X0071 (Sable Pipe); and MV2001X0072 (Pigeon Pipe).
 - Land Leases: 76D-9-3-2; 76D-9-4-2; 76D-10-2-2; 76D-10-3-2; 76D-10-4-2; 76D-10-5-2; 76D-10-7-2; 76D-15-4-2.
 - Authorization for the Harmful Alteration, Disruption or Destruction of Fish Habitat (Fisheries Authorizations, Fish Habitat Compensation Agreements), (SCA96021, SC00028, SCO1111, and SCO1168).

2.1.2. Regulatory Conformance

A summary table and cross reference document will be developed and included to demonstrate how and where the specific regulatory requirements for closure are considered in the ICRP. This section will also include a description of the measures required, actions taken, and how success of reclamation measures will be evaluated, to achieve the objectives stated in the January 2006 Indian and Northern Affairs Canada (INAC) “Mine Site Reclamation Guidelines for the NWT” [0013 Part J.1,a) & d); and 0008 Part L. 1, c)].

2.1.3. BHP Billiton Closure Standards

BHP Billiton has a Closure Standard that guides and assists the company in achieving a number of objectives with respect to responsible reclamation and closure worldwide. There are 7 Requirements within the Closure Standard which are mandatory for all BHP Billiton investment opportunities and controlled operations. The Closure Standard does not take the place of legislative or regulatory requirements, therefore, when applying the procedures set out in the Closure Standard, relevant legal frameworks shall also be complied with.

The 7 Requirements in the BHP Billiton Closure Standard are as follows:

- Closure plans are required for all investment opportunities.
- Closure plans are required for all operations.
- Identification of risks and potential outcomes.

- Estimation of the expected cost of closure.
- Timely and efficient execution of closure plans.
- Reporting, auditing and governance procedures.
- Application of project management practices.

3. SCOPE

3.1. TERMS AND DEFINITIONS

Closure and reclamation terms and definitions are identified as important information when discussing the primary activities and purpose of conducting reclamation planning and operations. The following are selected terms and definitions included in this Terms of Reference and the ICRP:

- **Reclamation:** Activities which return affected areas to viable and, wherever practicable, self-sustaining ecosystems that are compatible with a healthy environment and with human activities.
- **Closure:** When a mine ceases commercial production (in whole, or in part through progressive closure of mine components) without the intent to resume mining activities in the future.
- **Mine Component:** A physical area of the mine site treated as an independent unit for reclamation planning and application of reclamation goals and closure criteria.
- **Closure Options:** One or more proposed reclamation activities for mine components.
- **Goal:** The goal of reclamation is to return the EKATI mine site to viable and, wherever practicable, self-sustaining ecosystems that are compatible with a healthy environment and with human activities.
- **Objectives:** Describes what the reclamation activities intend to achieve for each mine component (eg. Stable landforms, protection of water resources and re-establishment of productive use of land – Aboriginal and wildlife).
- **Closure Criteria:** Closure criteria are used to define specific performance requirements for progressive reclamation and closure of mine components. They are also used to determine successful reclamation and the completion of monitoring programs (eg. water license discharge criteria).

A comprehensive list of acronyms and a glossary of reclamation related terms, together with corresponding Aboriginal Glossary for each of Innuinaqtun, Tlicho, and Chipewyan terms will be included in Appendix A.

3.2. COMMUNITY

3.2.1. Community Strategy and Consultation

A strategy for incorporation of traditional knowledge will be included, as well as a summary of the community and stakeholder consultation that has taken place in the development of closure objectives and the ICRP. An overview of traditional knowledge

incorporation, participating communities, consultation meetings, and topics of discussion will be covered in Appendix B. Locations and activities where Traditional Knowledge has been used for reclamation will be provided.

3.2.2. Social and Economic Benefits

A number of social and economic benefits to the local and regional communities have been provided through the development and operation of the EKATI Mine. There are also similar issues regarding closure of the mine that will be addressed such as ongoing employment during reclamation and closure, alternative uses for the facilities, long-term ownership of the site and business opportunities during closure.

4. PROJECT BACKGROUND

4.1. GENERAL

A brief summary providing the history of the EKATI mine site from exploration through development will be included in this section.

4.2. LOCATION AND ACCESS

This section will contain a brief description of the region and logistics, including maps and figures.

4.3. CLIMATE

Historical (where possible) and current regional climate data will be summarized and presented, along with trends, and any predicted changes.

4.4. TERRESTRIAL ENVIRONMENT

The physical environment within the EKATI project area will be described including landscape, vegetation and permafrost features.

4.5. AQUATIC, FLORA AND FAUNA ENVIRONMENT

The aquatic, flora and fauna environment within the EKATI project area will be described.

4.6. LAND USE

The pre-mining and current land use within the EKATI project area will be described. This will include a detailed description, including maps and other visual presentations, of the pre-disturbance conditions for each mine component. [\[0013 Part J. 1, e\); and 0008 Part L. 1, d\)\]](#). A summary of historical and current land use in the EKATI lease area by Aboriginal peoples, and other users will be included. The current predominant land use is wildlife habitat. Land use by Valued Ecosystem Components (VECs) that were defined

by communities during the EKATI environmental assessment will be described. These VECs include animals such as the Bathurst Caribou which migrate through the area to access spring calving and winter forage grounds; Grizzly bears, wolves, foxes, wolverines and small mammals. Most bird species are only summer residents but include loons, sandpipers, passerines, and a few raptor species. Ravens and snowy owls are present year round. The lakes support predominantly lake trout, round whitefish, and arctic grayling.

4.7. LESSONS LEARNED

The Lessons Learned section will include examples and lessons learned in successful planning throughout BHP Billiton, and from other northern mines.

The Environmental Impact Statement for the EKATI Diamond Mine (1995) outlined the Reclamation, Decommissioning and Closure Plan for EKATI. This section will also include a comparison summary of the reclamation objectives covered in the 1995 EIS, and the subsequently approved Abandonment and Reclamation Plan compared to the updated ICRP. Results from research studies, mining experience, updated Life of Mine Plans, and changes in the regulatory regime will be included as part of a section on lessons learned and the evolution of the ICRP through operational life of the mine. The 2000 Interim Abandonment and Reclamation Plan is the most recent plan approved by the MVLWB, in 2002. This approved plan will serve as the basis for development and comparison of the updated ICRP.

5. MINE OVERVIEW

5.1. MINE COMPONENTS

The following list of mine components will be covered in the ICRP:

- Open Pits (Sable, Pigeon, Beartooth, Panda, Koala, Fox and Misery)
- Underground Mines (Koala North, Panda and Koala)
- Waste Rock Storage Areas (Sable, Pigeon, Panda/Koala/Beartooth, Fox and Misery)
- Long Lake Containment Facility
- Dams, Dykes and Channels (Two Rock Dam and Dyke, Pigeon Diversion Channel, Bearclaw Dam, Beartooth Pipeline, Panda Dam, Panda Diversion Channel, Outlet Dam, King Pond Dam, Waste Rock Dam, East/West Coffey Dams)
- Buildings and Infrastructure (Equipment, petroleum and chemical storage facilities, borrow pits (quarry sites), landfills and waste disposal sites, sedimentation ponds, laydown and camp pads, ore storage pads, surface structures and buildings, roads and airstrip, satellite facilities and exploration camps).

[0013 Part J.1, c); and 0008 Part L.1, a), & g)].

5.2. MINING

An overview of the mining process will be included in this section. The general steps involved in both the open pit and underground mining operations will be summarized. This summary will provide a layman's description of the various processes required to mine and deliver kimberlite ore for processing and diamond recovery.

5.3. KIMBERLITE PROCESSING

An overview of the kimberlite processing facilities and operation will be provided. The relationship and effects of the kimberlite processing operation on the Long Lake Containment Facility (LLCF) will be discussed.

5.4. FACILITIES AND INFRASTRUCTURE

The support and ancillary facilities will be discussed, including camp accommodations, sewage treatment, maintenance/truck shop, power generation, offices and warehouse, and fuel storage.

5.5. MATERIALS/WASTE MANAGEMENT

The program of managing waste and waste materials (hydrocarbon impacted soils, non hazardous wastes) during mine operations will be summarized. The details for remediation of remaining wastes will be presented, along with volumes of waste materials produced and stored by type and location (to the extent possible), with attention to materials requiring mitigative measures [0013 Part J. 1, l); and 0008 Part L .1,l)]. Also included will be land fill locations and expected volumes of demolition materials at mine closure. Maps showing sources and stockpile locations of present and future materials proposed for reclamation needs will be included [0013 Part J.1,f); and 0008 Part L.1,3)].

5.6. LIFE OF MINE PLAN

The current corporate approved Life of Mine Plan (LOM) will be presented as the basis for future disturbance and progression of the operation. The LOM is a dynamic, living document and it is expected to change during the period of time that the ICRP is being prepared. The Fiscal Year 2005 LOM will form the basis for the progressive reclamation schedule, decommissioning and closure monitoring schedule.

5.7. ORGANIZATION STRUCTURE

The management and reporting system (organization chart), qualifications, and company position of BHP Billiton employees, as well as consultant companies responsible for reclamation planning and closure, conducting reclamation activities and closure monitoring will be provided [0013 Part J. 1,o); and 0008 Part L. 1,o)].

6. SUMMARY OF CLOSURE REQUIREMENTS

6.1. OPEN PITS

6.1.1. Pre-Disturbance Conditions

A detailed description including maps and other visual representations where available will be included to show the pre-disturbance condition of the Open Pits components [0013 Part J.1,e); and 0008 Part L.1,d)]. In addition to the landscape and physical features, aquatic habitat and chemical (water quality) conditions will be summarized and presented.

6.1.2. Development Status

A visual representation and written summary of current disturbance and development of the Open Pits components will be provided.

6.1.3. Projected Development and Final Landscape

A visual representation and written summary of the expected development of each individual open pit at the end of the mine life will be presented. This will include expected pit dimensions, areas and volumes, a description of the final landscape, including connecting streams and surface drainage into and adjacent to open pits, and how aesthetic concerns will play a role in reclamation [0013 Part J.1,e), & n); and 0008 Part L.1,d) & n)]. Considerations and examples of designing for closure during the mining operations phase will also be covered, as well as an assessment of long term climate change effects in the closure planning of open pits.

6.1.4. Closure Objectives and Criteria

Reclamation closure objectives and criteria will be provided for the Open Pits mine components. Closure criteria will be used to measure reclamation success [0013 Part J. 1, a)], [0013 Part J.1,a) & c); and 0008 Part L.1,a)]. A complete list of closure objectives and criteria for all mine components will be located in Appendix C.

6.1.5. Engineering and Environment Work

The selected closure options identified for the Open Pits mine components will be presented in this section, including a summarized description of the physical reclamation activities undertaken to close mine components and achieve closure objectives and closure criteria. Because closure options may vary between open pits this section will include the list of activities associated with each of the selected options.

6.1.6. Identified Risks and Contingencies

Identified high level closure and reclamation risks, including any identified residual risks and effects will be summarized for the Open Pits mine components. Contingency measures will be included for the identified risks. This will be an integrated approach in which monitoring results will be used to review and update risk registries and contingency measures, as well as measure the effectiveness and performance of the closure criteria.

An example of a potential risk for open pits (should they be filled with water) is that meromictic conditions may result in water quality which does not meet discharge criteria. [0008 Part L.1,b)]. Monitoring results from water quality sampling will assess the ability to meet this criteria. An example of a contingency measure for this potential risk would include description of any post-closure treatment potentially required for drainage water that is not acceptable for discharge from the mine component or involve the identification of alternative closure methods. [0013 Part J.1,h); and 0008 Part L.1,a) & b) & h)]. Pit water quality predictions for each open pit will be provided for pit closure options and contingency measures for meromictic conditions in possible pit lakes [0013 Part J.1,l); and 0008 Part L.1,l)]. A complete list of identified risks and contingencies for all mine components will be located in Appendix E.

6.1.7. Reclamation Research

This section would include a summary of opportunities that require further investigation. Because this is an Interim Closure Plan continuing research studies will be identified for alternative closure methods and identified reclamation projects for open pits. Analysis of pit closure options will include a literature review and summary of converting open pits into pit lakes, an evaluation of flooding alternatives, primarily natural and pump flooding, effects on source lakes, and evaluation to minimize effects on source lakes. A research study that assesses the water quality trends in existing pit waters as well as predicted models for pit water quality post closure will be outlined and included as part of the Reclamation Research Plan in Appendix F.

6.1.8. Post Closure Monitoring

A list of monitoring requirements and monitoring schedule for the Open Pit mine components will be provided. Monitoring parameters and schedule to measure and assess reclamation success against closure criteria and provide triggers for maintenance and contingency actions will also be included. Because closure options may vary for each or a combination of the open pits, the post closure monitoring will pertain to the closure option identified. Pitwall geochemistry and potential for acid/alkaline rock drainage and metal leaching is an example of one of the monitoring components which may be included in this section [0013 Part J.1,l); and 0008 Part L.1,l)]. The complete list of monitoring requirements and schedule for all mine components will be provided in Appendix.G.

6.1.9. Cost Estimate

A table will be provided that summarizes the reclamation cost estimate for the Open Pits mine components. A complete summary of the reclamation cost estimates for all mine components will be located in Appendix H.

6.2. UNDERGROUND MINES

6.2.1. Pre-Disturbance Conditions

A detailed description including maps and other visual representations where available will be included that shows the pre-disturbance condition of the Underground mine components [0013 Part J.1,e); and 0008 Part L.1,d)].

6.2.2. Development Status

A visual representation and written summary of the current disturbance and development of this reclamation unit will be provided.

6.2.3. Projected Development and Final Landscape

A visual representation and written summary of the expected development of each individual underground mine at the end of the mine life will be presented. This will include a description of the final landscape, and how aesthetic concerns will play a role in reclamation [0013 Part J.1,e), & n); and 0008 Part L.1,d) & n)] as well as predicted groundwater quality and quantities, and status of talik (if available). Considerations and examples of designing for closure during the mining operations phase will be covered.

6.2.4. Closure Objectives and Criteria

Reclamation closure objectives and criteria will be provided for the Underground mine components. Closure criteria will be used to measure reclamation success [0013 Part J. 1, a)], [0013 Part J.1,a) & c); and 0008 Part L.1,a)].

6.2.5. Engineering and Environment Work

The selected closure options identified for the Underground mines components will be presented in this section, including a summarized description of the physical reclamation activities undertaken to close mine components and achieve closure objectives and closure criteria.

6.2.6. Identified Risks and Contingencies

Identified high level closure and reclamation risks, including residual risks and effects will be summarized for the Underground mine components. Contingency measures will be included for the identified risks. This will be an integrated approach in which

monitoring results will be used to review and update risk registries and contingency measures, as well as measure the effectiveness and performance of the closure criteria.

6.2.7. Reclamation Research

This section would include a summary of opportunities that require further investigation. Because this is an Interim Closure Plan continuing research studies will be identified for alternative closure methods and identified reclamation projects for underground mines.

6.2.8. Post Closure Monitoring

A list of monitoring requirements and monitoring schedule for the Underground mine components will be provided. Monitoring parameters and schedule to measure and assess reclamation success against closure criteria and provide triggers for maintenance and contingency actions will also be included.

6.2.9. Cost Estimate

A table will be provided that summarizes the reclamation cost estimate for the Underground Mine components. A complete summary of the reclamation cost estimates for all mine components will be located in Appendix H.

6.3. WASTE ROCK STORAGE AREAS (WRSA)

6.3.1. Pre-Disturbance Conditions

A detailed description including maps and other visual representations where available will be included to show the pre-disturbance condition of the WRSA mine components [0013 Part J.1,e); and 0008 Part L.1,d)]. In addition to the landscape and physical features, biological, vegetation and wildlife conditions will be summarized and presented.

6.3.2. Development Status

A visual representation and written summary of the current disturbance and development of the WRSA mine components will be provided.. Areas, heights, slope angles, relevant topography [0013 Part J.1,l); and 0008 Part L.1,l)] and methods of storing potentially acid generating (PAG) materials in waste rock storage facilities/dumps will be included.

6.3.3. Projected Development and Final Landscape

Volumes of waste materials produced and stored by type and location will be included, with particular attention to materials requiring measures to mitigate impacts from water that is not acceptable for discharge. Wildlife considerations will be addressed. The section will also include considerations of other potential uses of waste rock during closure. Also included will be a description of the final landscape, and surface drainage from the WRSA mine components, and how aesthetic concerns will play a role in

reclamation [0013 Part J.1,e), & n); and 0008 Part L.1,d) & n)]. Information about temperature trends and ice content in waste rock storage areas will be provided. The efficacy of waste rock pile designs will be described. An assessment of the long term trends and potential for impacts on physical stability (related to temperature or re-handling) and water quality and quantity will be presented, as well as an assessment of long term climate change effects in the closure planning of WRSA's. Considerations and examples of designing for closure during the mining operations phase will be covered.

6.3.4. Closure Objectives and Criteria

Reclamation closure objectives and criteria will be provided for the WRSA mine components. Closure criteria will be used to measure reclamation success [0013 Part J. 1, a)], [0013 Part J.1,a) & c); and 0008 Part L.1,a)].

6.3.5. Engineering and Environment Work

The selected closure options identified for the WRSA mine components will be presented.

6.3.6. Identified Risks and Contingencies

Identified high level closure and reclamation risks, including residual risks and effects will be summarized for the WRSA mine components. Contingency measures will be included for the identified risks. This will be an integrated approach in which monitoring results will be used to review and update risk registries and contingency measures, as well as measure the effectiveness and performance of the closure criteria.

Water quality trends in the WRSA, coarse kimberlite rejects and low grade kimberlite stockpiles will be provided [0013 Part J.1,l); and 0008 Part J.1,l)]. The potential for metal leaching characteristics and/or ARD from waste rock storage material will be assessed, and a description of any contingency treatment required for waste rock seepage will be included [0013 Part J.1,h), l);and 0008 Part L.1,h) & l)].

6.3.7. Reclamation Research

This section would include a summary of opportunities that require further investigation. Because this is an Interim Closure Plan continuing research studies will be identified for alternative closure methods and identified reclamation projects for WRSA mine components.

6.3.8. Post Closure Monitoring

A list of monitoring requirements and monitoring schedule for the WRSA mine components will be provided. Monitoring parameters and schedule to measure and assess reclamation success against closure criteria and provide triggers for maintenance and contingency actions will also be included.

6.3.9. Cost Estimate

A table will be provided that summarizes the reclamation cost estimate for the WRSA mine components. A complete summary of the reclamation cost estimates for all mine components will be located in Appendix H.

6.4. LONG LAKE CONTAINMENT FACILITY (LLCF)

6.4.1. Pre-Disturbance Conditions

A detailed description including maps and other visual representations where available will be included to show the pre-disturbance condition of the LLCF mine component [0013 Part J.1,e); and 0008 Part L.1,d)]. In addition to the landscape and physical features, aquatic habitat and chemical (water quality) conditions will be summarized and presented.

6.4.2. Development Status

A visual representation and written summary of the disturbance and development of the LLCF unit will be provided. This serves as the basis for developing closure alternatives. The general operating parameters and conditions of the LLCF will be described. Topics including access, water reclaim system and operation, intermediate dykes, spring freshet, water management and ice entrainment will be discussed to set the framework for the operational issues of the LLCF. The historic tonnage and volume placement by area within the LLCF will be presented along with a potential sequential filling schedule and timeline for the remaining cells and capacity in the LLCF.

6.4.3. Projected Development and Final Landscape

The basis of the LOM development for the LLCF will be the design and management plan developed as a result of the Multiple Accounts Analysis completed in August 2004 (Option 3aM). A visual representation and written summary of the expected development of the LLCF at the end of the mine life will be presented, along with a description of the final landscape, and how aesthetic concerns will play a role in reclamation [0013 Part J.1,e), & n); and 0008 Part L.1,d) & n)]. The methods, timing and details respecting the placement of a rock cover (if selected as the closure option) and the development of permafrost in processed kimberlite will be discussed as part of the reclamation process [0013 Part J.1,i); and 0008 Part L.1,i)]. Areas of processed kimberlite beaches and consolidated slurries will be included in a projected layout of the facility at the end of operations [0013 Part J.1,i)]. Methods for stabilization of processed kimberlite from water and wind erosion during operations and post closure will be covered. The construction and stability of surface drainage channel(s) over reclaimed processed kimberlite will be included in this section as part of the long-term conditions of the closed facility [0013 Part J.1,i); and 0008 Part L.1,i)]. Permafrost development, expected changes in geochemistry and water quality trends will also be covered, as well as an assessment of long term climate change effects in the closure planning of the LLCF.

Considerations and examples of designing for closure during the mining operations phase will be covered.

6.4.4. Closure Objectives and Criteria

Reclamation closure objectives and criteria will be provided for the LLCF mine component. Closure criteria will be used to measure reclamation success [0013 Part J. 1, a)], [0013 Part J.1,a) & c); and 0008 Part L.1,a)].

6.4.5. Engineering and Environment Work

The selected closure options identified for the LLCF mine component will be presented in this section, including a summarized description of the physical reclamation activities undertaken to close the LLCF and achieve closure objectives and closure criteria. Cover design options will be discussed as well as the methods, timing, and details respecting the placement of material or water or vegetation (if selected).

6.4.6. Identified Risks and Contingencies

Identified high level closure and reclamation risks, including residual risks and effects will be summarized for the LLCF mine component. Contingency measures will be included for the identified risks. This will be an integrated approach in which monitoring results will be used to review and update risk registries and contingency measures, as well as measure the effectiveness and performance of the closure criteria. An example of an identified risk is metals uptake by wildlife and humans. A Tier 1 risk assessment is currently being conducted to assess the feasibility of vegetation as a cover material for processed kimberlite. The results from this assessment will assist in determining the future reclamation approach for the LLCF. Also, in the event the long-term chemical stability and water quality performance in the LLCF is not acceptable, treatment contingency and management plans will be presented to ensure acceptable discharge water quality from this facility [0008 Part L.1,b)].

6.4.7. Reclamation Research

This section would include a summary of opportunities that require further investigation. A reclamation research schedule and the questions which the research intends to answer will also be included. Because this is an Interim Closure Plan continuing research studies will be identified for alternative closure methods and identified reclamation projects for the LLCF.

6.4.8. Post Closure Monitoring

A list of monitoring requirements and monitoring schedule for the LLCF mine component will be provided. Monitoring parameters and schedule to measure and assess reclamation success against closure criteria and provide triggers for maintenance and contingency actions will also be included.

6.4.9. Cost Estimate

A table will be provided that summarizes the reclamation cost estimate for the LLCF mine component. A complete summary of the reclamation cost estimates for all mine components will be located in Appendix H.

6.5. DAMS, DYKES AND CHANNELS

6.5.1. Pre-Disturbance Conditions

A detailed description including maps and other visual representations where available will be included to show the pre-disturbance condition of the Dams, Dykes and Channel mine components [0013 Part J.1,e); and 0008 Part L.1,d)]. In addition to the landscape and physical features, biological, vegetation and wildlife conditions will be summarized and presented.

6.5.2. Development Status

A visual representation and written summary of the disturbance and development of the Dams, Dykes and Channels mine components will be provided.

6.5.3. Projected Development and Final Landscape

The projected status, development and location of the dams, dykes and channels located throughout the site will be presented. Considerations and examples of designing for closure during the mining operations phase will be covered, as well as how aesthetic concerns will play a role in reclamation [0013 Part J.1,n); and 0008 Part L.1, n)].

6.5.4. Closure Objectives and Criteria

Reclamation closure objectives and criteria will be provided for the Dams, Dykes and Channels mine components. Closure criteria will be used to measure reclamation success [0013 Part J. 1, a)], [0013 Part J.1,a) & c); and 0008 Part L.1,a)].

6.5.5. Engineering and Environment Work

The selected closure options identified for the Dams and Dykes and Channels mine components will be presented in this section, including a summarized description of the physical reclamation activities undertaken to close mine components and achieve closure objectives and closure criteria. Breach locations and sizes for dams and dykes (if required) will also be provided [0008 Part L.1,a)].

6.5.5.1. Panda Diversion Channel (PDC)

The Panda Diversion Channel was constructed in 1995 – 1997 as a temporary means of bypassing natural runoff around the Panda and Koala pits as they were developed and

mined. One closure option is to leave the PDC in place as a permanent landscape feature and fish passage channel. Modifications and design requirements for long-term use of the PDC will be presented as will an option for permanent closure. Constructability and permafrost issues will be included in the analysis. Effects on Fisheries Authorizations and the current aquatic habitat of the channel will also be discussed.

6.5.5.2. *Pigeon Stream Diversion*

The Pigeon Stream Diversion has not yet been constructed. It is anticipated to be a temporary means of bypassing natural runoff around the Pigeon pit as it is developed and mined. Closure options will be evaluated.

6.5.5.3. *Beartooth Pipeline*

The Beartooth pipeline was constructed as a temporary means of transferring natural runoff, and flow from the Bearclaw Lake around Beartooth pit, to Upper Panda Lake as it is developed and mined. Closure options for the pipeline will be discussed in this section.

6.5.6. Identified Risks and Contingencies

Identified high level closure and reclamation risks, including residual risks and effects will be summarized for the Dams, Dykes and Channels mine components. Contingency measures will be included for the identified risks. This will be an integrated approach in which monitoring results will be used to review and update risk registries and contingency measures, as well as measure the effectiveness and performance of the closure criteria.

6.5.7. Reclamation Research

This section would include a summary of opportunities that require further investigation. Because this is an Interim Closure Plan continuing research studies will be identified for alternative closure methods and identified reclamation projects for dams, dykes and channels.

6.5.8. Post Closure Monitoring

A list of monitoring requirements and monitoring schedule for the Dams, Dykes and Channels mine components will be provided. Monitoring parameters and schedule to measure and assess reclamation success against closure criteria and provide triggers for maintenance and contingency actions will also be included.

6.5.9. Cost Estimate

A table will be provided that summarizes reclamation cost estimate for the Dams, Dykes and Channels mine components. A complete summary of the reclamation cost estimates for all mine components will be located in Appendix H.

6.6. BUILDINGS AND INFRASTRUCTURE

6.6.1. Pre-Disturbance Conditions

A detailed description including maps and other visual representations where available will be included that shows the pre-disturbance condition of the Buildings and Infrastructure mine components [0013 Part J.1,e); and 0008 Part L.1,d)]. In addition to the landscape and physical features, aquatic habitat and chemical (water quality) conditions will be summarized and presented.

6.6.2. Development Status

A visual representation and written summary of the disturbance and development of these mine components will be provided. This serves as the basis for developing closure alternatives.

6.6.3. Projected Development and Final Landscape

A description and representation of the anticipated development and status of all buildings and infrastructure will be provided. Considerations and examples of designing for closure during the mining operations phase will be covered, as well as how aesthetic concerns will play a role in reclamation [0013 Part J.1,n); and 0008 Part L.1,n)].

6.6.4. Closure Objectives and Criteria

Reclamation closure objectives and criteria will be provided for the Buildings and Infrastructure mine components. Closure criteria will be used to measure reclamation success [0013 Part J. 1, a), [0013 Part J.1,a) & c); and 0008 Part L.1,a)].

6.6.5. Engineering and Environment Work

The selected closure options identified for the Buildings and Infrastructure mine components will be presented in this section, including a summarized description of the physical reclamation activities undertaken to close mine components and achieve closure objectives and closure criteria.

Selected closure and demobilization options for all building and facilities, equipment, petroleum and chemical storage areas, quarry sites, sedimentation ponds, laydown and camp pads, and roads and the airstrip will be provided in this section.

6.6.6. Identified Risks and Contingencies

Identified high level closure and reclamation risks, including residual risks and effects will be summarized for the Buildings and Infrastructure mine components. Contingency measures will be included for the identified risks. This will be an integrated approach in which monitoring results will be used to review and update risk registries and contingency measures, as well as measure the effectiveness and performance of the closure criteria.

6.6.7. Reclamation Research

This section would include a summary of opportunities that require further investigation. Because this is an Interim Closure Plan continuing research studies will be identified for alternative closure methods and identified reclamation projects for buildings and infrastructure.

6.6.8. Post Closure Monitoring

A list of monitoring requirements and monitoring schedule for the Buildings and Infrastructure mine components will be provided. Monitoring parameters and schedule to measure and assess reclamation success against closure criteria and provide triggers for maintenance and contingency actions will also be included.

6.6.9. Cost Estimate

A table will be provided that summarizes the reclamation cost estimate for the Buildings and Infrastructure mine components. A complete summary of the reclamation cost estimates for all mine components will be located in Appendix H.

7. TEMPORARY CLOSURE MEASURES

7.1. TEMPORARY CLOSURE MEASURES

Details of closure measures proposed in the event of a premature or temporary shutdown at any time during the term of the License will be included in this section [[0013 Part J.1,m](#)]; and [0008 Part L.1,m](#)].

7.2. SAFETY, SECURITY, ACCESS

The ICRP will discuss safety procedures for reclamation activities, as well as security and access considerations during both the active reclamation and closure period and the post closure period.

8. ENVIRONMENTAL ASSESSMENT

8.1. OVERVIEW

The environmental assessment section will provide the reader with an assessment of the predicted environmental condition in the receiving environment, including any predicted residual risks and effects at the minesite for the post closure period. The assessment assumes that the proposed physical reclamation has been fully completed.

8.2. PREDICTIVE WATER QUALITY MODELING

A site wide predictive water quality model will be presented as the basis for the environmental assessment section and the prediction of water quality in the receiving environment post closure. Inputs for the model will be identified, as well as the steps taken to obtain the information outlined.

8.3. AQUATIC RESOURCES

Reclamation of aquatic habitat for all areas will be discussed [0008 Part L.1,a)]. This will include pit lakes, and staging areas for water intake should the open pits be reclaimed by pump flooding.

8.4. TERRESTRIAL RESOURCES

The potential and predicted impacts to the terrestrial resources and VEC's will be presented.

8.5. OTHER RESOURCE USERS

Impacts to other resource users within the localized area of the minesite will be presented in this section.

8.6. ENVIRONMENTAL IMPACTS

Methods and procedures to stabilize and mitigate potential impacts to wildlife, terrestrial and aquatic environments during the reclamation process will be included for the overall minesite. These will include management of erosion, remediation of contaminated sites, groundwater contamination, impacts to aquatic environments, and wildlife safety.

9. PROGRESSIVE RECLAMATION

9.1.1. Progressive Reclamation Completed

Selected reclamation activities have been conducted at the EKATI Minesite since the commencement of mining operations. Descriptions of the reclamation work, locations, including the lessons learned from past reclamation work will be provided.

9.1.2. Progressive Reclamation Planning

The section on progressive reclamation planning will include a description of the processes employed for progressive reclamation, a progressive reclamation schedule and the procedures for coordinating reclamation activities with the overall mine plan/ mining sequence and materials balance [0013 Part J.1,g); and 0008 Part L.1,f)]. Because the reclamation and closure planning process is in the interim phase and final minesite closure is planned for 2020, the ICRP will include conceptual, feasibility and execution plans for closing mine components.

10. LITERATURE CITED

This section will include literature referenced in the ICRP.

11. APPENDIX A TERMS AND DEFINITIONS

11.1. ACRONYMS AND DEFINITIONS

A list of acronyms and definitions for mining and closure related terms will be provided. Since many of the sections and topics in the ICRP can be highly technical in nature, these will assist in the review process.

11.2. ABORIGINAL TERMS GLOSSARY

An Aboriginal Glossary of Terms will also be included in the Tlicho, Innuinaqtun and Chipewyan languages.

12. APPENDIX B COMMUNITY CONSULTATION

This appendix will include a record of participating communities, consultation meetings, and a summary of discussions that have taken place, including issues raised and BHP Billiton's response, that have taken place in development of the ICRP.

13. APPENDIX C CLOSURE OBJECTIVES AND CRITERIA

A summary of closure objectives and criteria for mine components will be included in Appendix C.

14. APPENDIX D ENGINEERING SUMMARY

The appendix will include a table which outlines the stage of closure planning (conceptual, pre-feasibility, feasibility and execution) for each of the mine component areas. Engineering design detail for mine components will also be included.

15. APPENDIX E RISKS AND CONTINGENCIES

This appendix will include a summary of the identified high level closure and reclamation risks, including residual risks for each of the mine components, and for the general minesite. The ranking system for low, medium and high risks used in the assessment will also be included. Contingency measures will be provided for the identified risks. This will be an integrated approach in which monitoring results will be used to review and update risk registries and contingency measures, as well as measure the effectiveness and performance of the closure criteria.

16. APPENDIX F RECLAMATION RESEARCH PLAN

16.1.1. Reclamation Research Summary

A reclamation research plan will be provided that outlines current and future research needs for reclamation and summarizes reclamation research to date. The reclamation research plan will include discussion on how the results will inform the reclamation planning [0013 Part L.1,p); and 0008 Part L.3,a)], a timetable of future requirements [0008 Part L.3,b)], details of further reclamation research the company will undertake to resolve the needs identified [0013 Part J.1,p) & ,k)], a description of a process to ensure that the reclamation procedures that might result from the research are ecologically, socially responsible and appropriate, viable and achievable, and a description of how the research will incorporate objectives relating to the reclamation or creation of viable wildlife (terrestrial and aquatic) habitat (if this was selected as a closure option)[0013 Part J.1,p); and 0008 Part L.3, c) & d)].

A description of QA/QC protocols for conducting research, how research progress will be monitored, and how results may affect the operational reclamation program will also be provided in this section [0013 Part J.1,p); and 0008 Part L.3,g)]. The success of applying reclamation research will be discussed [0013 Part J.1,l); and 0008 Part L.1,l)].

A comprehensive assessment of materials suitability will form part of the Reclamation Research Plan, including geochemical and physical characterization and availability for reclamation needs, with attention to top-dressing materials [0013 Part J.1,f); and 0013 Part L.1,d)].

16.1.2. Metals Uptake Research

Results of metal uptake studies in revegetation and a description of how metal uptake in revegetated plant communities will be monitored will be included in this section. This research will guide decision making and reclamation planning for various mine area components, most notably the LLCF [0013 Part J.1,p); and 0008 Part L.3,e)].

16.1.3. Revegetation Plans

Revegetation plans to stabilize disturbed sites, will be included in the ICRP. These will include a description of proposed revegetation plans, incorporating a description of the

manner in which invasive non-indigenous plant species in the re-vegetated areas will be addressed, how initial vegetation cover will promote successional development on reclaimed landscape units, what the expected progression and time-frame will be, biodiversity issues, and how it will be compatible with local ecosystem characteristics [0013 Part J.1,j); and 0008 Part L.1,k)]. Techniques for assisting natural recovery, application methods, amendments, projected areas and descriptions of plant ecosystems will also be included.

17. APPENDIX G POST CLOSURE MONITORING

17.1.1. Inspections and Monitoring

A summary of monitoring requirements and monitoring schedule for all mine components will be provided, including a process used to identify what is in the Monitoring Plan. Monitoring parameters and schedule to measure and assess reclamation success against closure criteria and provide triggers for maintenance and contingency actions will also be included.

A description of how the potential for post-closure groundwater contamination will be assessed and monitored during the term of the License will also be included [0013 Part J.1,i); and 0008 Part L.1,j)].

17.1.2. Reporting

An environmental reporting program will be presented in this section to report on the results of the environmental management system.

18. APPENDIX H EXPECTED COST OF CLOSURE AND RECLAMATION

18.1. OVERVIEW

The expected cost of closure will be determined in accordance with international financial reporting requirements for publicly traded companies. The BHP Billiton Closure Standards and other related documents described below were developed to meet these international requirements and collectively these define a clear methodology for the determination of the expected cost of closure.

Supporting documents will include BHP Billiton's Investment Standards, Investment Evaluation Standards, Corporate Accounting Policies, BHP Billiton Guidelines for the Development and Management of Contingency and Guidelines for Capital Cost Estimating. The 2002 Mine Site Reclamation Policy for the Northwest Territories will also be used as a reference document.

18.2. COST BASIS

Where possible, actual operating costs based on experience at EKATI will be used. Third-party cost factors will be applied to the EKATI costs. Included will be a description of how the cost model is linked to individual reclamation measures for mine components and how contingency has been applied.

The expected cost of closure will include an estimate of the annual cost of progressive reclamation during the mine life as well as costs for the closure execution phase post mining as well as post closure monitoring costs. Contingencies and risk based factors will be incorporated where appropriate.

18.3. COST MODEL

In the absence of a clearly defined framework or methodology for determining the cost of closure in the NWT, BHP Billiton will apply international financial standards to develop this estimate. The RECLAIM model will not be used. Rather, the liability estimate for EKATI will involve the use of a risk-based model with both deterministic and probabilistic estimation techniques to determine the long term expected cost of closure. This section will include a description of the how the above risk-based model works.

18.4. LIABILITY REDUCTION SCHEDULE

A set of reclamation criteria for each mine component to determine exactly when any specific mine components have been successfully reclaimed will be developed and included as part of a security reduction schedule.

The Mine Site Reclamation Policy for the NWT, produced by DIAND in 2002 will be used as a reference document for securities release. However, there is currently no mechanism available to release security as liability is reduced and mine reclamation and closure work is completed to agreed standards and criteria. This creates a circumstance where interim and progressive reclamation may be completed without recognition that liability has been reduced as progressive reclamation is completed to agreed standards. This will be addressed in this section.

19. APPENDIX I PLAIN LANGUAGE SUMMARY

A Plain Language Summary will be included in this appendix. It will be a useful document for Aboriginal communities and it will summarize the major sections of the Interim Closure and Reclamation Plan.