Tahera Diamond Corporation 130 Adelaide St. W., Suite 1900 Toronto, ON M5K 1P2 Tel. (416) 777-1998 Fax (416) 777-1898 www.tahera.com



Closure and Reclamation Plan Update Jericho Diamond Mine, Nunavut

Submitted to:

Nunavut Water Board Gjoa Haven, Nunavut

Submitted by: **Tahera Diamond Corporation**Toronto, Ontario

April 2007

Water Licence 2AM-JER0410



					Page
FXF	CUTI	VF SUN	MMARY		VII
/					
1.0	INTF				
	1.1			DE	
	1.2			NOBJECTIVES	
	1.3			NACTIVITIES	
	1.4	MINE	PLAN		16
2.0	SITE	COME	PONENTS	S	17
	2.1			DUMPS	
		2.1.1		of the Waste Rock Dumps	
			2.1.1.1		
		2.1.2		ion Conditions	
			2.1.2.1		
				Waste Dump Site 2	
		2.1.3		esigns	
			2.1.3.1	•	
			_	Waste Dump Site 1	
				Waste Dump Site 2	
	2.2	OPEN			
		2.2.1		e Angles	
		2.2.2		gn	
	2.3		ESSED	(IMBERLITE CONTAINMENT AREA	25
		2.3.1		npoundment	
		2.3.2		am	
			2.3.2.1	Design Cross-Sections	
			2.3.2.2	Material Properties	
			2.3.2.3	Run-Of-Mine Rockfill	
			2.3.2.4	Till	
			2.3.2.5	20 mm Minus Core	
			2.3.2.6	Geocomposite Clay Liner	
			2.3.2.7	Liner Bedding	
			2.3.2.8	Transition Material	
			2.3.2.9	Quantities	
		2.3.3		d Southeast Dams	
			2.3.3.1	Dam Siting and Alignment Selection	
			2.3.3.2	Foundation Conditions	29
			2.3.3.3	Design Cross-Sections	
			2.3.3.4	Material Properties	
			2.3.3.5	Slope Protection	
			2.3.3.6	Coarse Processed Kimberlite Tailings	
			2.3.3.7	Till	
			2.3.3.8	Geomembrane Liner	
				Liner Bedding	



		Page
	2.3.3.10 Transition Material	34
	2.3.3.11 Rockfill	34
	2.3.3.12 Quantities	34
	2.3.4 Divider Dyke	34
	2.3.4.1 Dyke Siting and Alignment Selection	
	2.3.4.2 Foundation Conditions	
	2.3.4.3 Design Cross-Sections	38
	2.3.4.4 Material Properties	38
2.	2	
C	CUIT REJECTS	
	2.4.1 Kimberlite Ore Stockpile	
	2.4.2 Foundation Conditions at the Stockpiles	
	2.4.2.1 Kimberlite Ore Stockpile	
	2.4.2.2 Coarse PK Stockpile	
	2.4.3 Stockpile Designs	
	2.4.3.1 General	
	2.4.3.2 Kimberlite Ore Stockpile	
	2.4.3.3 Coarse PK Stockpiles	
2.	2.4.3.4 Recovery Circuit Rejects Stockpile PADS AND MINE ALL WEATHER ACCESS ROADS	43
۷.	2.5.1 Main Haul Road	
	2.5.2 Other Access Roads	
	2.5.3 Facilities Pads and Laydowns	
2.	SEDIMENT PONDS AND DITCHES	44 11
۷.	2.6.1 Pit Pond	
	2.6.2 East Sump	
2.	FUEL AND HAZARDOUS MATERIALS BERMS	47 45
2.	BORROW PITS	
۷.	2.8.1 Exploitable Esker Area	
2.	AIRSTRIP	
2.	WATER INTAKE CAUSEWAY	
	STREAM C1 DIVERSION	
ΤI	. MATERIALS AND HANDLING PLAN	55
3.		
3.	SALVAGE REQUIREMENTS AT FULL MINE DEVELOPMENT	55
	3.2.1 Waste Rock Dumps	55
	3.2.2 Ore Stockpile Pad	55
	3.2.3 PKCA	
	3.2.4 Roads and Pads	
	3.2.5 Open Pit	
	3.2.6 Summary	
3.	TILL STOCKPILE DESIGN AND CONSTRUCTION	
3.	TOP DRESSING PLACEMENT STRATEGY	57

3.0



				Page
4.0	CLO	SURE I	EROSION AND SEDIMENT CONTROL PLAN	58
5.0	REV	'FGFTA	ATION PLAN	59
0.0	5.1		DDUCTION	
	5.2		SULTATION WITH ARCTIC DIAMOND MINES	
	5.3		GETATION OBJECTIVES	
	5.4	MINE	LAND UNITS	59
		5.4.1	Ecological Zones	59
		5.4.2	Surficial Geology of Mine Units	60
	5.5		AMATION RESEARCH	
	5.6	RECL/	AMATION TRIALS	61
6.0	RFC	I AMAT	ΓΙΟΝ PROGRAM	62
0.0	6.1		ORARY SHUTDOWN	
		6.1.1	Open Pit	
		6.1.2	Processing Plant	
		6.1.3	Surface Infrastructure	62
		6.1.4	Mine Waste and PKCA	
		6.1.5	Water Management Facilities	
		6.1.6	Monitoring	
	6.2		FINITE SHUTDOWN	
		6.2.1	Open Pit Mine	
		6.2.2	Processing Facilities	
		6.2.3	Surface Infrastructure	
		6.2.4	Mine Waste and PKCA	
		6.2.5	Water Management Facilities	
	6.3	6.2.6	MonitoringOING RECLAMATION	
	0.3	6.3.1	Borrow Areas	
		6.3.2	Waste Rock Dumps	
		6.3.3	Open Pit	
		6.3.4	Ore Stockpiles	
		6.3.5	Access Roads	
		6.3.6	Monitoring of Progressive Reclamation	
	6.4		RECLAMATION	
		6.4.1	Schedule of Studies Required for Closure	
		6.4.2	Waste Rock Dumps	
			6.4.2.1 Reclamation	68
			6.4.2.2 Long-term Stability	68
			6.4.2.3 Alternatives and Contingencies	
		6.4.3	Open Pit	
			6.4.3.1 Final Configuration	
			6.4.3.2 Alternatives and Contingencies	
			6.4.3.3 Exploration Portal	69



			Page
		6.4.3.4 Post-Closure Water Management	70
		6.4.3.5 Long-term Stability	
	6.4.4	PKCA	
		6.4.4.1 Reclamation	73
		6.4.4.2 Long Term Stability	73
		6.4.4.3 Alternatives and Contingencies	75
	6.4.5	Coarse Kimberlite and Recover Circuit Rejects Stockpiles	
		6.4.5.1 Final Configuration	75
		6.4.5.2 Alternatives Considered	77
		6.4.5.3 Long-term Stability	77
	6.4.6	Ore Stockpile Pad	78
		6.4.6.1 Final Configuration	
		6.4.6.2 Alternatives Considered	
		6.4.6.3 Long-term Stability	
	6.4.7	Mine and Access Roads	
		6.4.7.1 Final Configuration	78
		6.4.7.2 Alternatives Considered	
		6.4.7.3 Long-term Stability	
	6.4.8	Sediment Ponds, Berms and Ditches	
		6.4.8.1 Final Configuration	
		6.4.8.2 Alternatives Considered	
		6.4.8.3 Long-term Stability	
	6.4.9	Borrow Areas	
		6.4.9.1 Final Configuration	
		6.4.9.2 Alternatives Considered	
		6.4.9.3 Long-term Stability	
	6.4.10	Airstrip	
		6.4.10.1 Final Configuration	
		6.4.10.2 Alternatives Considered	
		6.4.10.3 Long-term Stability	
	6.4.11	Freshwater Intake Causeway	
		6.4.11.1 Final Configuration	
		6.4.11.2 Alternatives Considered	
		6.4.11.3 Long-term Stability	
	6.4.12	C1 Diversion	
		6.4.12.1 Final Configuration	80
		6.4.12.2 Alternatives Considered	
		6.4.12.3 Long-term Stability	
	6.4.13	Infrastructure	
		6.4.13.1 Final Configuration	
		6.4.13.2 Alternatives Considered	
		6.4.13.3 Estimated Volume of Demolition Waste	
	6.4.14	Soils Testing	83
7.0	MINE ABAN	IDONMENT	84



		Р	age
	7.1 INFRASTRUCTURE		84
	7.2 DRAINAGE CONTROLS		84
	7.3 SEDIMENTATION PONDS		84
		NT	
	7.4.1 Wildlife Habitat		86
	7.4.2 Fish Habitat		86
	7.4.3 Recreation		86
	7.5 MONITORING AFTER ABAND	ONMENT	86
	7.5.1 Post Closure Monitoring	J	87
	7.5.2 Post Abandonment Mor	nitoring	87
	7.6 GLOBAL WARMING CONSIDE	ERATIONS	88
8.0	AESTHETICS		89
9.0	COST		90
KEI	FERENCES		91
	LIS	T OF FIGURES	
Figu	ure 2-1: Waste Dumps Layout		18
Figu	ure 2-2: Waste Dump Sections		20
Figu	ure 2-3: Ultimate Pit		22
		Southeast Dams	
_	•		
		Dyke Location	
_	•		
_	•	t	
		g Topography	
_			
_		Layout	
		ction	
		On a see DIV Ota aluella	
_	•	Coarse PK Stockpile	
_		W	
		ay	
rıgt	ure <i>r-</i> r. Conceptual Closure Drainage		മാ



Page

LIST OF TABLES

Table 1-1: Concordance Table – Reclamation and Closure Plan Requirements U	Inder Water
Licence Part M, Items 2 and 7 and Schedule M, Item 1	11
Table 1-2: Concordance Table - Reclamation and Closure Plan Requirements Und	der NWB 25
August 2006 Letter to Tahera	12
Table 2-1: Jericho Facilities	17
Table 2-2: General Dimensions and Storage Capacities of the Waste Rock Dumps	19
Table 2-3: Pit Slope Angles	23
Table 2-4: Dam Material Quantities	29
Table 2-5: East and Southeast Dam Material Quantities	34
Table 2-6: Long Lake Divider Dyke Probe Results	35
Table 2-7: General Dimensions and Storage Capacities of the Stockpiles	43
Table 3-1: Reclamation Top Dressing Material Requirements	56
Table 5-1: Approximate Areas of Surface Disturbance at Full Mine Development by	y Ecological
Zone	60
Table 6-1: Reclamation Areas by Year	64
Table 6-2: Studies Required Before Final Closure	68
Table 6-3: Post-Closure Estimates of Pit Water Quality	72
Table 6-4: Summary of Critical Factors of Safety for Kimberlite Stockpile	77
Table 6-5: Guidelines for Minimum Design Factor of Safety - Waste Rock Dumps	78
Table 6-6: Volume Estimate for Demolition Industrial Waste	83

LIST OF APPENDICES

Appendix A	Drawings
Appendix B	Jericho Ecological Zones Descriptions
Appendix C	Chapman Report on In-Pit Treatment
Appendix D	Closure Cost Estimate to 31 December 2006
Appendix E	Pre-construction Site Photos



EXECUTIVE SUMMARY

This reclamation and closure plan update was written to address Jericho Diamond Mine (Jericho) requirement for an update of the 2005 Closure and Reclamation Plan (AMEC 2006) pursuant to Nunavut Water Board (NWB) approval (letter to Greg Missal dated 25 August 2006). Jericho commenced construction in Q1 2005; this update reflects as-built to 31 December 2006. This plan updates reclamation requirements and activities required to address reclamation and closure at Jericho based on the mine operations to the end of 2006.

Reclamation Objectives

The reclamation plan for the mine has the objective of minimizing the environmental impact of mining operations to the extent practical, and of maintaining the overall present productivity of the site. The end-land use will be to leave disturbed areas so that they may return as quickly as possible to productive wildlife habitat.

Reclamation Activities

The general reclamation program components will be as follows:

- salvage and stockpile till from the areas of disturbance where practical;
- revegetate areas disturbed by the pre-production phase to the extent practical pending results from trials;
- reslope rock dumps to a maximum overall 2:1 slope angle (26°); average slope angle will be approximately 19°; this will be accomplished by grading off the benches which will be 10 m high and set back from the one below 15 m;
- prepare surfaces for the replacement of top dressing materials;
- recover suitable stockpiled till and spread it over reclaimed areas that would benefit from addition of top dressing material;
- depending on reclamation trials results, coarse PK may be substituted for top dressing material if the PK proves to be a suitable growth medium;
- revegetate the prepared areas where appropriate and indicated from reclamation trials;
- establish test plots to optimize growth mediums, particularly on the PKCA where Ekati Diamond Mine™ (Ekati) experience has shown positive results; and
- monitor growth and develop performance objectives which will be developed as part of revegetation research.

Till Requirement Estimate

The table below contains a summary of top dressing material requirements for reclamation. Top dressing material will be till (preferred) or esker (alternate). Till is a mine unit that is already disturbed, whereas use of esker will require additional disturbance.



Reclamation Top Dressing Material Requirements

Facility	Requirements for 0.3 m Cover 31 December 2006 (Year 2) (m³)	Requirements for 0.3 m Cover Final Mine Configuration (m³)
Waste Rock Dump 1 Top	0	35,900
Waste Rock Dump 2 Top	29,790	29,790
PKCA	28,137	35,259
Slurry containment cells		
Coarse Kimberlite Tops ¹	8,979	20,200
Pads: Camp Storage, Explosives Storage, Crusher Site, Laydown, Waste Transfer	69,800	69,800
Airstrip	0	0
Total	136,706	190,949

Notes

Top Dressing Placement Strategy

For reclamation, top dressing material will be windrowed along the top dressing area in preparation for a dozer to replace the material. Stockpiles located remote to the replacement area will be hauled by truck, and again windrowed along the top dressing area for replacement.

Closure Erosion and Sediment Control Plan

In summary, all clean water (runoff from undisturbed areas) will be routed around the site as required. All runoff from disturbed areas will be directed to the open pit, east sump or sediment ponds (when constructed) as required for settling of suspended sediment and then released to the environment (in most cases, upland tundra). Alternatively, this water will be discharged to the PKCA if water licence criteria are not met. On closure mine area drainage will be directed to the open pit which will act as a sink until it eventually fills and overflows, either into Stream C1 or an open channel to direct water away from Stream C1.

Revegetation

Revegetation studies are scheduled to commence in 2007. Pre-existing native plant communities cannot be completely re-established, however some reclamation is possible. Many species of wildlife (e.g. caribou, canids) should resume use of disturbed esker habitats when the infrastructure is removed. A cooperative approach will be sought with Ekati and Diavik mines information exchange on reclamation research at diamond mines in Arctic environments. Wherever possible islands of undisturbed vegetation will be left in disturbed areas. These islands will provide a seed source for adjacent areas once reclamation of those areas commences.

Reclamation trials will be conducted throughout the mine life with greater intensity of activity during the initial years. The purpose of the trials will be to develop a database on establishment and growth success of vegetation on reclaimed land.

Should revegetation trials indicate successful plant growth on coarse PK, no top dressing will be applied.



Reclamation Program

On Going Reclamation

The current plan calls for mining to cease after Year 6 and processing to continue for the following two years. At the end of Year 6 the waste rock dump tops can be reclaimed. Minor amounts of reclamation may be possible prior to that time, but most of the mine area will remain active. Waste rock dump slopes will be graded off to result in a final angle of about 19 degrees.

Final Reclamation

On closure all salvageable equipment will be taken off site. Buildings and other facilities with no salvage value will be demolished. Scrap will be decontaminated if necessary, buried in the waste rock dump or open pit, and covered with waste rock.

Dumps that remain active throughout mine life will be reclaimed at closure; the dump tops may be revegetated. The final slope after grading down is expected to be stable; post closure monitoring will be employed to verify this expectation.

A safety berm will be constructed around the open pit on closure a minimum of 10 m back from the crest which will be graded back at a gentle slope. Once the pit fills with water it will be allowed to flow back into the pre-mining stream channel if water quality meets objectives; if not water will be treated prior to discharge. A passive treatment system is envisaged which will not require maintenance.

The part of the PKCA holding fines will be covered with coarse PK and possibly till and vegetated if reclamation trials during operations indicate probable success. If success is not indicated, non-acid-generating waste rock will be placed on the prepared surface to retard dusting. Dams will remain in place after closure. The West Dam will be breached and natural drainage through the basin is expected to be restored. Water quality in the pond at the west end of the PKCA will have to meet discharge criteria before release is allowed.

Coarse PK

Coarse PK will be graded down in a manner similar to waste rock dumps. Overburden cover will be placed on the coarse PK stockpile tops if vegetation trials indicate probably successful vegetation establishment; otherwise rock armouring will be used to retard dusting.

Pads, Roads and Airstrip

Once equipment is removed, pads will be scarified and vegetated if practical.

Sediment Ponds, Berms and Ditches

Sediment ponds, berms and ditches will be reclaimed on closure. Berms for petroleum tanks will be tested for hydrocarbons and burned or shipped off site if concentrations of hydrocarbons are above guidelines. Liners will be removed and shipped off site.



To the extent possible, natural drainage will be restored at Jericho on closure. Other than streams C1 and C3, only ephemeral streams will have been affected by mine development.

Borrow Areas

Borrow areas will be graded to shallow angles to retard erosion. If practical, these areas will be revegetated.

Post Closure Monitoring

During the period immediately after mine closure, sedimentation ponds, berms, and outfall (if required) will be maintained. Water quality will be monitored monthly for parameters controlled by the Jericho Project Water Licence in place at the time of closure. An annual seepage survey will be conducted for two years post closure. If results indicate water quality is improving, annual surveys will cease and be replaced by surveys at Year 5 post closure and every 5 years after that until abandonment.

Land Use At Abandonment

Wildlife Habitat

Disturbed areas, other than mesic and moist soil microhabitats will only very slowly revegetate. Wildlife habitat lost to create dumps, pads, and roads will regain pre-disturbance productivity at the same rate as vegetation returns. Every practical effort will be made to accelerate this process. Upon successful establishment of vegetation, wildlife habitat in these areas should return to pre-mining conditions.

Fish Habitat

Enhancements constructed during mine operations (spawning shoals constructed in lakes) will function long after the mine closes. Stream C1 will be maintained until the open pit fills and, depending on water quality in the filled pit, will either be allowed to flow through the former pit in its pre-mining course or be permanently diverted away from the pit. Fish habitat in the lower portion of Stream C1 will thus be maintained.



1.0 INTRODUCTION

This reclamation and closure plan update was written to address Jericho Diamond Mine (Jericho) requirement for an update of the 2005 Closure and Reclamation Plan (AMEC 2006) pursuant to Nunavut Water Board (NWB) approval (letter to Greg Missal dated 25 August 2006). Jericho commenced construction in Q1 2005; this update reflects as-built to 31 December 2006.

1.1 Concordance

Two concordance tables are provided in this section:

- 1. an updated concordance table for Water Licence Part M and Schedule M;
- 2. a concordance table for the information requests contained in the NWB 25 August 2006 approval letter.

Table 1-1: Concordance Table – Reclamation and Closure Plan Requirements Under Water Licence Part M, Items 2 and 7 and Schedule M, Item 1

Schedule M, Item 1 Requirement	Closure Plan Section
a: The combined use of a Inuksuit built by Elders, berms, and signs to warn people and animals about the unfilled open pit. The edge of the Pit Lake shall be contoured and controlled-blasted on a shallow 5:1 angle into the lake for a 10 meter distance so as not pose a hazard to people or wildlife	Not applicable at the current mine stage
b: Maintenance of the diversion channel, as a permanent structure beyond closure should water quality dictate. This issue shall be further addressed during operation and resolve the issue prior to closure, when water quality concerns and the options available to re-instate the flows in the channel are better understood	Not applicable at the current mine stage
c: the implementation of revegetation through the abandonment and restoration planning	Section 5.5
d: to conduct re-vegetation research on the kimberlite to determine if the post-closure conditions can be improved	Section 5.5
e: details of the proposed methodology for recovering the stockpiled overburden materials for reclamation purposes	Section 3.3
f: address how meltwater from the stockpile is managed to prevent release of suspended sediment	Section 4 refers to the planned closure drainage control
g: revisions based on all monitoring data collected to that time	No revisions of handling methods based on monitoring to the end of 2006
h: an updated prediction of pit fill rate and effluent discharge quality after closure	Only one construction and one operating year of data collected and more data are required.
i: a plan to remove and dispose all chemicals and regulated materials in a manner that meets all current regulations	Section 6.4
j: An evaluation of alternative closure and reclamation measures for each project component, including the rationale for selection of the preferred measures, to include, but not be limited to all site facilities/infrastructure as defined in this licence	Section 6.4
k: detailed description, including maps and other visual representations, of the pre-disturbance conditions for each site, accompanied by a detailed description of the proposed final landscape, with emphasis on the restoration of surface drainage over the restored units	Sections 4.4, 5.0. Maps in Appendix A, photos in Appendix E.
I: a comprehensive assessment of materials suitability, including geochemical and physical characterization, and schedule of availability for restoration needs, with attention to top-dressing materials, including maps where appropriate, showing sources and stockpile locations of all reclamation construction materials	Section 5.5. Schedules for use cannot be developed until materials are identified as suitable.
m: an assessment of the long-term physical stability of project components	Section 6.4
 n: an assessment and description of any required post-closure treatment for drainage water that is not acceptable for discharge from any of the reclaimed mine components including a description for handling and disposing of post-closure treatment facility sludges 	Section 7
o: monitoring programs to assess reclamation performance and environmental conditions including, but not limited to, monitoring locations for surface water and groundwater, parameters, schedules and overall timeframes	Section 7
p: contingency measures for all reclamation components including action thresholds that are linked to the monitoring programs	Sections 6.4



Schedule M, Item 1 Requirement	Closure Plan Section
q: a description of the proposed means for providing long-term maintenance of each reclaimed project component, including the water collection and distribution systems, retaining structures and spillways	Section 6.4
r: an evaluation of the potential to re-vegetate disturbed sites that includes the identification of criteria to be used to determine technical feasibility and alternative restoration options	Revegetation studies are scheduled to commence in 2007
s: a description of how Waste Rock Dumps and the PKCA could use a geomorphic approach to simulate surrounding landscape conditions, rather than the highly engineered closure designs	The current designs are optimized for safety, long-term stability and minimization of footprint. Options within these constraints will be reviewed as mining moves forward. Dumps are graded to direct runoff water toward the open pit.
t: an identification of the research needs for reclamation	Section 5.5
u: a description of how progressive reclamation will be employed and monitored throughout the life of the mine, plus reclamation scheduling and coordination of activities with the overall sequence of the project; details of restoration scheduling and procedures for coordinating restoration activities within the overall mining sequence and materials balance	The exploration camp area has been cleaned up and tents removed. All other disturbed areas are actively used.

Table 1-2: Concordance Table – Reclamation and Closure Plan Requirements Under NWB 25 August 2006 Letter to Tahera

25 August 2006 Information Request	Closure Plan Section
The approved 2006 Interim Closure and Reclamation Plan was developed during	This plan
construction of the mine and therefore has only taken into account the facilities as they	
existed on December 31, 2006 (as noted in the introduction of the Plan); the next	
submission shall be updated to reflect the fully operational status of the mine.	
2. A more detailed description of the site components is required to provide a stand-alone	Section 2
document for future use.	
3. Include a schedule of the studies required for final Closure and Reclamation Planning. Due	Section 6.5
to the relatively short duration of the mining operations, the studies referenced (especially	
the vegetation studies) require initiation in the early stages of the mine life.	
4. The concordance table indicates that information is pending U of A reclamation research.	Section 5.0
This research should be documented and a timeline given as to when this information will	
be made available for incorporation into the Plan.	0 :: 00
5. Rather than referencing supporting documents for further information, the C&R Plan	Section 2.0
should be a stand alone plan and where items such as design details for the divider dyke are	
referred to, the Plan should include as-built designs and drawings.	0
6. The Plan should identify a period of time for monitoring that would precede any decision	Section 6.5
for looking at the alternatives presented in the Plan and a revision of the estimates that were	
developed in the design phase of the project (i.e. pit infilling and in-pit water treatment).	Sections 6.1.6 and 6.2.6
7. Clarification is required with respect to the monitoring for each closure scenario,	Sections 6.1.6 and 6.2.6
temporary, indefinite and final closure. If monitoring should change for any of these scenarios, or no additional monitoring is being recommended, this should be identified in	
the Plan.	
8. The issue of global warming has not been addressed. An indication of whether or not any	Section 7.6
of the plans for closure would be influenced by the anticipated effects of global warming in	Section 7.6
the long term.	
Section 5.5.2.3 suggests that Tahera has 8 years of operations and up to twenty years post	Appendix D
closure to establish the end-pit water quality before discharge to Carat Lake. The Closure	Appendix D
Cost Estimate provided in Appendix D should be extended to account for monitoring over	
this period. The current estimate only allows for 10 years of overall monitoring.	
10. In-Pit water treatment may be required and a treatment contingency provided. These costs	Appendix D
should be incorporated into the estimate in Appendix D.	, appointed by
11. Executive summary, pages iv and v; Reclamation/revegetation trials are considered a	Section 5 discusses
significant part of the Plan, these are required early in the mine life in order to proceed	revegetation
with progressive reclamation. This needs to be included in the Plan Schedule to indicate	
timing and progress.	



25 August 2006 Information Request	Closure Plan Section
12. Page v; Major reclamation is to occur following completion of open pit mining with the	All surfaces of dumps are
reclamation of the waste dumps. These waste dumps are ongoing from the start of	currently active. As areas
mining and areas may be available for reclamation prior to completion of open pit	become inactive they will be
mining. These should be included in a Reclamation Schedule as part of the Plan.	stabilized and reclaimed.
13. Page 8, Section 2.2; Provide an explanation as to why the dump slopes are not anticipated	Section 2.2
to be receiving top dressing materials. There could be potential for enhanced growth due	
to the slope and increased sun exposure (depending on direction of facing slope). Are the	
vegetation trials going to address the potential for growth (or no growth) on the slopes?	
14. In addition to the above, any top-dressing materials to be used (amendments) that are	No unnatural top dressing
used in addition to the natural materials need to conform with the New Substances	materials will be used
Notification Regulations under the CEPA.	
15. Page 8, Section 2.2., M1-h; Estimates of the pit infill rates are to be provided and refined	Section 6.5
once adequate water balance data are collected by the mine. The Plan is to be revised by	
providing an updated prediction, or a timeline when suitable data will be available for	
providing a more accurate fill rate and effluent discharge quality estimate.	
16. M1-I; All materials to be utilized for restoration are to be characterized for stability and	Section 5.6
their resulting geochemisty as suitable materials. The concordance table and current plan	
with reference to M1-I, only refer to the materials (specifically overburden) being	
assessed based on vegetation trials. These trials should not be the only deciding factor in	
determining the suitability of materials.	
17. Page 12, Section 4.0, M1-c; Provide a progress update on the cooperative approach with	Section 5.5
Ekati, Diavik and Snap Lake mines on reclamation research in Arctic environments. It is	
also indicated that the research on reclamation will begin in the early operating life of the	
mine, with the assistance of Dr. Anne Naeth of the UofA. This program should be	
included in the Reclamation Schedule to be prepared for the Plan revision.	
18. Page 16, Section 4.6; In addition to the above, expand on the planned revegetation trials. It was	Revegetation trials were not
indicated in the C&R Plan that experience at Diavik has been limited due to its recent development.	undertaken in 2006 but are
Therefore, Jericho with the relative short mine life in comparison to the Ekati and Diavik mines,	scheduled to commence in
should be initiating these trials early in the life of mine and relying on the other mines for experience	2007.
as a basis for trials at Jericho.	
19. The Interim C&R Plan needs to address how these trials at Jericho will be reported and the	Section 5.5. Reports will be
recommendations brought forward for inclusion in the C&R Plan.	forwarded to NWB when
	received and reviewed.
20. Page 18, Section 5.1; remediation objectives are to be included for the soils placed within the	Not applicable. There will
Landfarm; how they will be ultimately used and what will be the alternative if the objectives are not	be no landfarm at Jericho
met.	
21. Page 19, Section 5.2.3; under temporary closure scenarios, what is the contingency for	Section 6.1.3 states the
operation of the Wastewater Treatment Plant and meeting its treatment criteria. Is there alternative	sewage treatment plant
treatment planned.	would be operated as
	normal. No alternatives for
	short-term closure are
	anticipated.
22. Page 20, Section 5.4.1 and 5.5.8; monitoring of the reclaimed borrow pits is to be included after	Section 7.5.1
closure to ensure erosion and potential deposits to water are not taking place.	
closure to ensure erosion and potential deposits to water are not taking place. 23. Page 24. Section 5.5. M1-i: Not all of the mine components have been addressed to fulfill the	For some mine facilities.
23. Page 24, Section 5.5, M1-j; Not all of the mine components have been addressed to fulfill the	For some mine facilities, such as pads and roads,
23. Page 24, Section 5.5, M1-j; Not all of the mine components have been addressed to fulfill the requirement of providing alternatives to closure and reclamation measures. An evaluation is	such as pads and roads,
23. Page 24, Section 5.5, M1-j; Not all of the mine components have been addressed to fulfill the	such as pads and roads, there are no alternatives
23. Page 24, Section 5.5, M1-j; Not all of the mine components have been addressed to fulfill the requirement of providing alternatives to closure and reclamation measures. An evaluation is	such as pads and roads, there are no alternatives other than to revegetate or
23. Page 24, Section 5.5, M1-j; Not all of the mine components have been addressed to fulfill the requirement of providing alternatives to closure and reclamation measures. An evaluation is	such as pads and roads, there are no alternatives other than to revegetate or stabilize to prevent erosion
23. Page 24, Section 5.5, M1-j; Not all of the mine components have been addressed to fulfill the requirement of providing alternatives to closure and reclamation measures. An evaluation is	such as pads and roads, there are no alternatives other than to revegetate or
23. Page 24, Section 5.5, M1-j; Not all of the mine components have been addressed to fulfill the requirement of providing alternatives to closure and reclamation measures. An evaluation is	such as pads and roads, there are no alternatives other than to revegetate or stabilize to prevent erosion into water bodies. Those for
23. Page 24, Section 5.5, M1-j; Not all of the mine components have been addressed to fulfill the requirement of providing alternatives to closure and reclamation measures. An evaluation is required, providing an explanation on alternatives for each component.	such as pads and roads, there are no alternatives other than to revegetate or stabilize to prevent erosion into water bodies. Those for which there are alternatives are discussed in Section 6.
23. Page 24, Section 5.5, M1-j; Not all of the mine components have been addressed to fulfill the requirement of providing alternatives to closure and reclamation measures. An evaluation is required, providing an explanation on alternatives for each component. 24. M1-k; provide detailed maps and description of the proposed final landscape and the restoration	such as pads and roads, there are no alternatives other than to revegetate or stabilize to prevent erosion into water bodies. Those for which there are alternatives are discussed in Section 6. Drawing 2, Appendix A
23. Page 24, Section 5.5, M1-j; Not all of the mine components have been addressed to fulfill the requirement of providing alternatives to closure and reclamation measures. An evaluation is required, providing an explanation on alternatives for each component. 24. M1-k; provide detailed maps and description of the proposed final landscape and the restoration	such as pads and roads, there are no alternatives other than to revegetate or stabilize to prevent erosion into water bodies. Those for which there are alternatives are discussed in Section 6. Drawing 2, Appendix A provides a map of the
23. Page 24, Section 5.5, M1-j; Not all of the mine components have been addressed to fulfill the requirement of providing alternatives to closure and reclamation measures. An evaluation is required, providing an explanation on alternatives for each component. 24. M1-k; provide detailed maps and description of the proposed final landscape and the restoration of surface drainage over the restored units, including any alterations that may not be restored.	such as pads and roads, there are no alternatives other than to revegetate or stabilize to prevent erosion into water bodies. Those for which there are alternatives are discussed in Section 6. Drawing 2, Appendix A provides a map of the planned final configuration.
 23. Page 24, Section 5.5, M1-j; Not all of the mine components have been addressed to fulfill the requirement of providing alternatives to closure and reclamation measures. An evaluation is required, providing an explanation on alternatives for each component. 24. M1-k; provide detailed maps and description of the proposed final landscape and the restoration of surface drainage over the restored units, including any alterations that may not be restored. 25. Page 24, Section 5.5.2, M1-a; The final configuration of the Pit is not planned until the closure, 	such as pads and roads, there are no alternatives other than to revegetate or stabilize to prevent erosion into water bodies. Those for which there are alternatives are discussed in Section 6. Drawing 2, Appendix A provides a map of the planned final configuration. It is not possible to place the
 23. Page 24, Section 5.5, M1-j; Not all of the mine components have been addressed to fulfill the requirement of providing alternatives to closure and reclamation measures. An evaluation is required, providing an explanation on alternatives for each component. 24. M1-k; provide detailed maps and description of the proposed final landscape and the restoration of surface drainage over the restored units, including any alterations that may not be restored. 25. Page 24, Section 5.5.2, M1-a; The final configuration of the Pit is not planned until the closure, at which time a safety berm will be constructed beyond the ultimate crest of the till slope. This berm 	such as pads and roads, there are no alternatives other than to revegetate or stabilize to prevent erosion into water bodies. Those for which there are alternatives are discussed in Section 6. Drawing 2, Appendix A provides a map of the planned final configuration. It is not possible to place the berm until the final pit limits
 23. Page 24, Section 5.5, M1-j; Not all of the mine components have been addressed to fulfill the requirement of providing alternatives to closure and reclamation measures. An evaluation is required, providing an explanation on alternatives for each component. 24. M1-k; provide detailed maps and description of the proposed final landscape and the restoration of surface drainage over the restored units, including any alterations that may not be restored. 25. Page 24, Section 5.5.2, M1-a; The final configuration of the Pit is not planned until the closure, at which time a safety berm will be constructed beyond the ultimate crest of the till slope. This berm should be in place, where possible as early on in the life of mine, unless there are other measures in 	such as pads and roads, there are no alternatives other than to revegetate or stabilize to prevent erosion into water bodies. Those for which there are alternatives are discussed in Section 6. Drawing 2, Appendix A provides a map of the planned final configuration. It is not possible to place the berm until the final pit limits are reached in most
 23. Page 24, Section 5.5, M1-j; Not all of the mine components have been addressed to fulfill the requirement of providing alternatives to closure and reclamation measures. An evaluation is required, providing an explanation on alternatives for each component. 24. M1-k; provide detailed maps and description of the proposed final landscape and the restoration of surface drainage over the restored units, including any alterations that may not be restored. 25. Page 24, Section 5.5.2, M1-a; The final configuration of the Pit is not planned until the closure, at which time a safety berm will be constructed beyond the ultimate crest of the till slope. This berm should be in place, where possible as early on in the life of mine, unless there are other measures in 	such as pads and roads, there are no alternatives other than to revegetate or stabilize to prevent erosion into water bodies. Those for which there are alternatives are discussed in Section 6. Drawing 2, Appendix A provides a map of the planned final configuration. It is not possible to place the berm until the final pit limits are reached in most locations because the berm
 23. Page 24, Section 5.5, M1-j; Not all of the mine components have been addressed to fulfill the requirement of providing alternatives to closure and reclamation measures. An evaluation is required, providing an explanation on alternatives for each component. 24. M1-k; provide detailed maps and description of the proposed final landscape and the restoration of surface drainage over the restored units, including any alterations that may not be restored. 25. Page 24, Section 5.5.2, M1-a; The final configuration of the Pit is not planned until the closure, at which time a safety berm will be constructed beyond the ultimate crest of the till slope. This berm should be in place, where possible as early on in the life of mine, unless there are other measures in 	such as pads and roads, there are no alternatives other than to revegetate or stabilize to prevent erosion into water bodies. Those for which there are alternatives are discussed in Section 6. Drawing 2, Appendix A provides a map of the planned final configuration. It is not possible to place the berm until the final pit limits are reached in most locations because the berm would restrict access to the
 23. Page 24, Section 5.5, M1-j; Not all of the mine components have been addressed to fulfill the requirement of providing alternatives to closure and reclamation measures. An evaluation is required, providing an explanation on alternatives for each component. 24. M1-k; provide detailed maps and description of the proposed final landscape and the restoration of surface drainage over the restored units, including any alterations that may not be restored. 25. Page 24, Section 5.5.2, M1-a; The final configuration of the Pit is not planned until the closure, at which time a safety berm will be constructed beyond the ultimate crest of the till slope. This berm 	such as pads and roads, there are no alternatives other than to revegetate or stabilize to prevent erosion into water bodies. Those for which there are alternatives are discussed in Section 6. Drawing 2, Appendix A provides a map of the planned final configuration. It is not possible to place the berm until the final pit limits are reached in most locations because the berm would restrict access to the pit ramps which are moved
 23. Page 24, Section 5.5, M1-j; Not all of the mine components have been addressed to fulfill the requirement of providing alternatives to closure and reclamation measures. An evaluation is required, providing an explanation on alternatives for each component. 24. M1-k; provide detailed maps and description of the proposed final landscape and the restoration of surface drainage over the restored units, including any alterations that may not be restored. 25. Page 24, Section 5.5.2, M1-a; The final configuration of the Pit is not planned until the closure, at which time a safety berm will be constructed beyond the ultimate crest of the till slope. This berm should be in place, where possible as early on in the life of mine, unless there are other measures in place that accomplish the same goal. 	such as pads and roads, there are no alternatives other than to revegetate or stabilize to prevent erosion into water bodies. Those for which there are alternatives are discussed in Section 6. Drawing 2, Appendix A provides a map of the planned final configuration. It is not possible to place the berm until the final pit limits are reached in most locations because the berm would restrict access to the pit ramps which are moved as required.
 23. Page 24, Section 5.5, M1-j; Not all of the mine components have been addressed to fulfill the requirement of providing alternatives to closure and reclamation measures. An evaluation is required, providing an explanation on alternatives for each component. 24. M1-k; provide detailed maps and description of the proposed final landscape and the restoration of surface drainage over the restored units, including any alterations that may not be restored. 25. Page 24, Section 5.5.2, M1-a; The final configuration of the Pit is not planned until the closure, at which time a safety berm will be constructed beyond the ultimate crest of the till slope. This berm should be in place, where possible as early on in the life of mine, unless there are other measures in place that accomplish the same goal. 26. Page 26, Section 5.5.2.2; The exploration portal will not be removed by the open pit 	such as pads and roads, there are no alternatives other than to revegetate or stabilize to prevent erosion into water bodies. Those for which there are alternatives are discussed in Section 6. Drawing 2, Appendix A provides a map of the planned final configuration. It is not possible to place the berm until the final pit limits are reached in most locations because the berm would restrict access to the pit ramps which are moved as required. The exploration portal is now
 23. Page 24, Section 5.5, M1-j; Not all of the mine components have been addressed to fulfill the requirement of providing alternatives to closure and reclamation measures. An evaluation is required, providing an explanation on alternatives for each component. 24. M1-k; provide detailed maps and description of the proposed final landscape and the restoration of surface drainage over the restored units, including any alterations that may not be restored. 25. Page 24, Section 5.5.2, M1-a; The final configuration of the Pit is not planned until the closure, at which time a safety berm will be constructed beyond the ultimate crest of the till slope. This berm should be in place, where possible as early on in the life of mine, unless there are other measures in place that accomplish the same goal. 	such as pads and roads, there are no alternatives other than to revegetate or stabilize to prevent erosion into water bodies. Those for which there are alternatives are discussed in Section 6. Drawing 2, Appendix A provides a map of the planned final configuration. It is not possible to place the berm until the final pit limits are reached in most locations because the berm would restrict access to the pit ramps which are moved as required.



25 August 2006 Information Request	Closure Plan Section
27. Page 29, Section 5.5.3.2, M1-n; The C&R Plan indicates that water from the PKCA would be treated if necessary to meet discharge criteria. The planning of research objectives for treatment of PKCA water should be included within the Interim Plan and the schedule of activities for closure.	Section 6.5, Table 6-2; Section 6.5.3.2
28. The section on long-term stability should include as-built drawings of all structures and their planned "final" design configuration for closure, including methods to be used for "breaching" of the West Dam and preliminary design of the overflow or spillway.	Drawing 2, Appendix A: site arrangement Figure 6-2: ultimate pit Figure 6-3: conceptual West Dam spillway
29. Page 31, Section 5.5.5, M1-j; An alternative to the revegetation option is required in the event that trials indicate low probable plant growth.	As indicated in the Plan, Section 4.0, rock armouring will be used where erosion may be problematic in the event vegetation trials indicate low probability of revegetation success.
30. Page 31, Section 5.5.6; Long term maintenance issues with the road between the camp and airstrip need to be addressed. Describe potential issues for sedimentation of nearby water bodies through erosion or any drainage issues that need to be addressed.	Section 6.5.6.3
31. Page 31, Section 5.5.10; Additional detail is required on the potential volumes of infrastructure that will require disposal at closure, the decontamination of this infrastructure, hazardous materials, disposal of liners (if any) from sedimentation ponds and the location as to where non-salvageable items would be buried. Infrastructure should be reduced in size (cut up, crushed etc.) to minimize void space prior to disposal.	Structures: Section 6.5.10 Berms: Section 6.5.7
32. The removal of infrastructure will require considerable time, will this be possible the first winter of final closure? This major component of the reclamation needs to be included in the schedule of activities for closure.	Given the existing infrastructure was transported to site in one winter, given normal winter road opening, infrastructure should be backhauled off site in one winter
33. Page 32, Section 5.5.11; landfarming of contaminated soils is presented as the only treatment with the exception of shipment off-site. Alternative options should be considered or included.	A landfarm will not be constructed at Jericho. Contaminated soils left at closure will be placed in the PKCA or backhauled off site, depending on volume.
34. Information is requested on how long the Dams/dykes will operate post closure and how or when the various dams and dykes on site will be breached at closure.	Dams and dykes, except the West Dam, will remain in perpetuity. The West Dam will be breached on closure. Section 6.5.3
35. Page 32, M1-i; The removal of hazardous materials will require the registration with the Government of Nunavut, Department of Environment as a waste generator as well as carrier (if applicable) prior to transport. This requirement should be identified as a requirement within the C&R Plan.	Jericho Hazardous Waste Generator Number: NUG100017
36. Page 33 and 35, Section 6 and 6.5.1, M1-o; the identification of surface water monitoring sites is presented. Figure 6.1 provided identifies Stream C3 outlet. This station is to be added to the list under section 6.5.1.	Section 7.5.1
37. The evaluation of the requirement for groundwater monitoring is to be included for any site components with the potential to affect groundwater quality.	Section 7.5.1
38. The figure provided (Figure 6.1) does not illustrate the mine site as it would be presented at closure for the post closure monitoring under Section 6.5.1. A revised map is to be included that includes all the remaining site components at closure (pit, PKCA etc).	See Drawing 2, Appendix A

1.2 Reclamation Objectives

The reclamation plan for the mine has the objective of minimizing the environmental impact of mining operations to the extent practical, and of maintaining the overall present productivity of the site. The end-land use will be to leave disturbed areas so that they may return as quickly as possible to productive wildlife habitat.

The short-term reclamation objectives are to:



- progressively reclaim disturbed areas as soon as they are no longer active;
- minimize the risk and impact of water erosion and sediment transportation;
- stabilize slopes;
- restore drainage;
- cover ground to prevent fine material drifting/dust;
- start to rejuvenate the top dressed material; and
- (where practical) create a green cover for aesthetic reasons.

Long-term objectives are to:

- maintain or improve the level of wildlife habitat; and
- (to the extent practical) create an aesthetically pleasing environment.

Specific commitments made by Tahera on the Jericho Diamond Project with respect to achieving the objectives include:

- to the extent practical, minimize disturbed areas through progressive reclamation;
- · where stripping occurs, recover all overburden practical;
- conduct revegetation trials through the mine life to determine what prescriptions work most effectively at Jericho;
- maintain an active liaison with other mines in the Canadian Arctic with respect to reclamation initiatives at their mine sites.

This abandonment and restoration plan has been developed consistent with the objectives of the *Mine Site Reclamation Policy for Nunavut* (INAC 2002).

1.3 Reclamation Activities

The general reclamation program components will be as follows:

- salvage and stockpile till from the areas of disturbance where practical;
- revegetate areas disturbed by the pre-production phase to the extent practical pending results from trials;
- reslope rock dumps to a maximum overall 2:1 slope angle (26°); average slope angle will be approximately 19°; this will be accomplished by grading off the benches which will be 10 m high and set back from the one below 15 m;
- prepare surfaces for the replacement of top dressing materials;
- recover suitable stockpiled till and spread it over reclaimed areas that would benefit from addition of top dressing material;
- depending on reclamation trials results, coarse PK may be substituted for top dressing material if the PK proves to be a suitable growth medium;
- revegetate the prepared areas where appropriate and indicated from reclamation trials;



- establish test plots to optimize growth mediums, particularly on the PKCA where Ekati Diamond Mine™ (Ekati) experience has shown positive results; and
- monitor growth and develop performance objectives which will be developed as part of revegetation research.

1.4 Mine Plan

The Jericho Mine Plan was submitted to the NWT/NU Mines Inspector 17 October 2005 and accepted January 2006. The plan provides details on construction and operation of the open pit mine. The construction phase was substantially complete at the end of 2005 and operation commence Q1 2006.



2.0 SITE COMPONENTS

The Jericho site components that will be present at full mine development are discussed in this section. This section includes discussion of facilities listed in Table 2-1 in the order listed in the table which also contains references to documents submitted to NWB.

Table 2-1: Jericho Facilities

Facility	Reference Document
Waste Rock Dumps	SRK (2005) Waste Rock Management Plan (Part
·	1)
Open Pit	Tahera Diamond Mine, Notice to Commence Work,
·	Version 2, October 2005.
	Piteau Associates (2005). Jericho Diamond Mine
	Geotechnical Investigations and Preliminary Slope
	Design Criteria for the Proposed Open Pit.
	Tahera (2003) Jericho Final EIS, Appendix A.1,
	Project Description
PKCA	EBA (2006) PKCA Management Plan
Kimberlite Ore, Coarse Processed Kimberlite and	SRK (2006) Waste Rock Management Plan (Part
Recovery Circuit Rejects	2)
Mine Access Roads and Pads	Tahera (2005a). Jericho Diamond Mine Notice of
	Intention to Commence Work, Version 2 (Mine
	Plan)
Sediment Ponds and Ditches	Tahera (2005b). Water Management Plan
Fuel and Hazardous Materials Berms	Tahera (2005c). Fuel Farm Design Plan
Borrow Areas	Tahera (2005d). Borrow Management Plan
Airstrip	Existing; extension in 2006 to 1374 m
Freshwater Intake Causeway	SRK. 2005. Specification for the Fresh Water
·	Intake Causeway.
C1 Diversion	EBA (2005). Letter Report to Tahera, 30 August
	2005
Infrastructure	Tahera (2005a). Mine Plan

2.1 Waste Rock Dumps

The Jericho Waste Rock Management Plan (SRK 2005) provides details of the construction and operation at the waste rock dumps.

2.1.1 Design of the Waste Rock Dumps

2.1.1.1 General Layout

The layout of the waste dumps is illustrated in [Figure 2-1] Drawing WRMP-P1-1 and was selected to:

- Minimize the number of catchments potentially affected by drainage from the waste dumps;
- Facilitate the design and operation of seepage control structures related to the waste dumps;
- Maintain an adequate buffer zone between the toe of waste dump #1 and Carat Lake;
- Optimize the offsetting impacts associated with the minimized project footprint and conformity with the natural relief in the immediate area; and
- Minimize haul distances.