

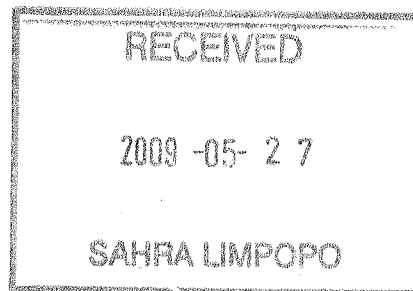
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**Directorate Minerals Regulations: Limpopo Region**

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 Reference nr: LP30/5/1/1/3/2/1/2025 EM

**REGISTERED MAIL**

**The Manager:**  
**The Provision- Sahra Limpopo**  
**P. O. Box 1371**  
**Polokwane**  
**0700**



Attention: Mr. Daonald Lithole/Victor Netshiavha

**CONSULTATION IN TERMS OF SECTION 40 OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT 2002, (ACT 28 OF 2002) FOR THE APPROVAL OF AN ENVIRONMENTAL MANAGEMENT PLAN IN RESPECT OF THE FARMS OLLEVENFONTEIN 457 KR, ZANDSPRUIT 472 KR, DROOGELAAGTE 485 KR, KLIPPAN 490 KR AND TWEEFONTEIN 462 KR SITUATED IN THE MAGISTERIAL DISTRICT OF BELA-BELA: LIMPOPO REGION.**  
**APPLICANT: TOPAZ SKY TRADING 295 (PTY) LTD.**

Attached herewith, please find a copy of an EMPR received from the above-mentioned applicant, for your comments.

It would be appreciated if you could forward any comments or requirements your Department may have in the case in hand to this office and to the applicant within 60 days as from 18 May 2009 to 20 July 2009, failure of which will lead to the assumption that your Department has no objection(s) or comments with regard to this application and this Department will in that instance proceed with the finalisation thereof.

Consultation in this regard has also been initiated with other relevant State Departments. In an attempt to expedite the consultation process please contact M<sup>s</sup>. Dorris Maluleke of this office to make arrangements for a site inspection or for any other enquiries with regard to this application.

Your co-operation will be appreciated.

  
 REGIONAL MANAGER-LIMPOPO REGION  
 19/05/2009

File number: LP 30/5/1/1/2/2025 PR

**DEPARTMENT OF MINERALS AND ENERGY**

**AMMENDED ENVIRONMENTAL MANAGEMENT PLAN**

**Submitted in support of application for a prospecting right**

Section 39 and Regulation 52 of the Minerals and Petroleum Resources Development Act,  
2002 (Act 28 of 2002)



Application for a:

Prospecting Right	YES
Mining Permit	

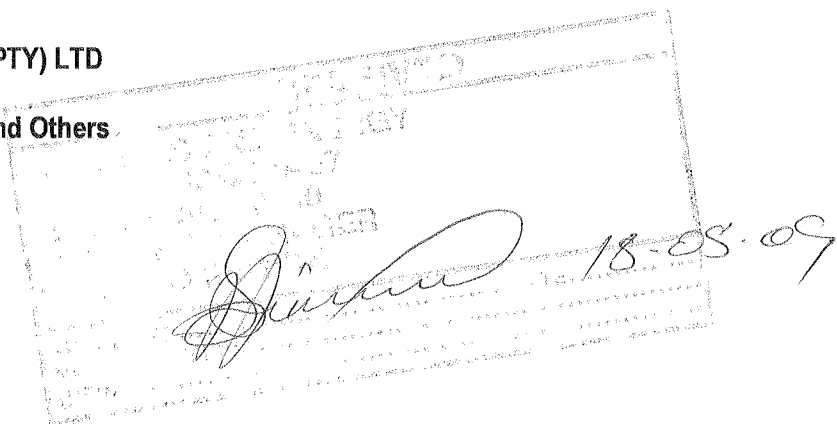
Applicant: Topaz Sky Trading 295 (PTY) LTD

Farm: OLLEVENFONTEIN 475 KR and Others

District: Bela - Bela

Mineral: Coal

Date: 05 October 2008



October 2008

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## SECTION A

### A.1 INTRODUCTION

It is the aim of this document to provide the Department of Mineral and Energy Affairs and other related authorities with sufficient information to satisfy the requirements of an application for a prospecting right/permission for the farm OLLEVENFONTEIN 475 KR, ZANDSPRUIT 472 KR, DROOGLAAGTE 485 KR, KLIPPART 490 KR, NOOITGEDACTH 489 KR, TURFBULT 494 KR, TWEEFONTEIN 462 KR AND TWEEFONTEIN 462 KR S, so as to comply with the relevant legislation and environmental regulations as they apply to their respective applications in terms of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002) (MPRDA)

The prospecting right is applied for in terms of geological mapping, trenching, core drilling and percussion drilling for exploration purposes. The areas to be disturbed are each less than 1.0ha in extent, and are applied for in terms of a permit as contemplated in Section 27 of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002).

### A.2 SCOPE

The intended scope of work will involve the development of:

- Track road access to drill platforms,
- Drilling platforms and
- Drilling sump excavations

The drilling operations will be undertaken in a manner that:

- Minimizes the disturbance of the environment,
- Does not disturb areas greater than 1.5 hectares.
- Might disturb the topography of an area somewhat but have no significant impact on the geology.

### A.3 Purpose

This aim of the investigation is to:

- Provide information required for the submission of the Environmental Management Plan for the proposed **COAL** prospecting operation.
- Ensure compliance with Regulation 52 of the MPRDA.
- Obtain information that the Department of Minerals and Energy (DME) requires so as to comply with Regulation 52 (2) of the (MPRDA).
- Assist the DME to obtain enough information about the proposed prospecting operation to assess the possible environmental impacts and to determine corrective action before the right is granted and the operation commences.

### A.4 Use of the document

This document is designed for use by non-professionals and newcomers to the environmental management industry and it incorporates a very simple Environment Impact assessment (EIA).

The EIA is contained in section c of this document and was designed specifically with the target sectors of the mining industry(Described in A.2) in mind.

The aim is ultimately to (a) gather information from applicants themselves (b) to assess the impact of the operation based on that information and then (c) to guide the applicant to mitigate environment impacts to limit damage to the environment.

Section B of the document gathers demographic information about the application. Section C gathers the information that will be used in the environment impact assessment. The applicant must complete the relevant sections of this document, but the regional office of the DME will do the scoring for the impact assessment rating in section D.

Section F (the Environmental Management Plan) of the document is prescriptive and gives guidance to the miner or prospector on how to limit the damage of the operation on the environment. This part may be added to by the regional manager, who has the prerogative to decide whether this Environment Management Plan will adequately address the environmental impacts expected from the operation or whether additional requirements for proper environmental management need to be set. Where this additional requirement are set, they will appear in section G of this document. The Environmental Management Plan (Section F) of the document is legally binding once approved and, in the undertaking contained section H, the applicant effectively agrees to implement all the measures outlined in the Environmental Management plan.

## A.5 LEGISLATION/REGULATIONS

The relevant sections of the Mineral and Petroleum Resources Development Act and its supporting Regulations are tabulated below. It is the responsibility of the proponent to adhere to the regulations as stipulates herein:

Section of Act	Legislation Activity/ Instruction/ Responsibility or failure to comply
5(4)	No person may prospect, mine, or undertake reconnaissance operations or any other activity without an approved EMP, right, permit or permission or without notifying the landowner.
19	Holder of a Prospecting right must: lodge right with Mining Titles Office within 30 days, commence with prospecting within 120 days, comply with terms and conditions of prospecting right, continuously and actively conduct prospecting operations, comply with requirements of approved EMP, pay prospecting fees and royalties.
20(2)	Holder of prospecting right must obtain Minister's permission to remove any mineral or bulk samples.

Section of Act	Legislated Activity/Instruction/Responsibly or failure to comply
26(3)	A person who intends to beneficiate any mineral mined in SA outside the borders of SA may only do so after notifying the Minister in writing and after consultation with the Minister.
28	Holder of a mining right or permit must keep records of operations AND financial records and must submit to the DG: monthly returns, annual financial report and a report detailing compliance with social & labour plan and charter.
29	Minister may direct owner of land or holder/applicant of permit/right to submit data or information.
38(1)(c)	Holder of permission/permit/right MUST manage environmental impacts according to EMP and as ongoing part of the operations.
42(1)	Residue stockpiles must be managed in prescribed manner on a site demarcated in the EMP.
42(2)	No person must temporarily or permanently deposit residue on any other site than that demarcated and indicated in the EMP.
44	When any permit/right/permission lapses, the holder may not remove or demolish buildings, which may not be demolished in terms of any other law, which has been identified by the Minister or which is to be retained by agreement with the landowner.
92	Authorized persons may enter mining sites and require holder of permit to produce documents/reports/or any material deemed necessary for inspection.
94	No person may obstruct or hinder an authorized person in the performance of their duties or powers under the Act.
95	Holder of a permit may not subject employees to occupational detriment on account of employee disclosing evidence or information to authorized person (official).
All sections	Inaccurate, incorrect or misleading information.
All sections	Failure to comply with any directive, notice, suspension, order, instruction, or condition issued.

## A.6 OTHER REVELENT LEGISLATION

Compliance with the provisions of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002) and its Regulations does not necessarily guarantee that the applicant is in compliance with other Regulations and legislation. Other legislation that may be immediately applicable includes, but are not limited to:

- National Monuments Act, 1969 (Act 28 of 1969).
- National Parks Act, 1976 (Act 57 of 1976).
- Environmental Conservation Act, 1989 (Act 73 of 1989)
- National Environmental Management Act, 1998 (Act no.107 of 1998)
- Atmospheric Pollution Prevention Act, 1965 (Act 45 of 1965)
- The National Water Act, 1998 (Act 36 of 1998)
- Mine Safety and Health Act, 1996 (Act 29 of 1996)
- The Conservation of Agricultural Resources Act, 1983 (Act 43 of 1983)

## A.7 WORD DEFINITION

In this document, unless otherwise indicated, the following words will have the meanings as indicated here:

<b>The Act</b>	Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002)
<b>Borehole</b>	A hole drilled for the purposes of prospecting i.e. extracting a sample of soil or rock chips by pneumatic, reverse air circulation percussion drilling, or any other type of probe entering the surface of the soil.
<b>CARA</b>	The Conservation of Agricultural Resources Act
<b>EIA</b>	An Environmental Impact Assessment as contemplated in Section 38(1)(b) of the Act.
<b>EMP</b>	An Environmental Management Plan as contemplated in Section 39 of the Act
<b>Fauna</b>	All living biological creatures, usually capable of motion, including insects and Predominantly of protein-based consistency.
<b>Flora</b>	All living plants, grasses, shrubs, trees, etc. usually incapable of easy natural motion and capable of photosynthesis.
<b>Fence</b>	A physical barrier in the form of posts and barbed wire and/or “Silex” or any other concrete construction, (“palisade”- type fencing included), constructed with the purpose of keeping humans and animals within or out of defined boundaries.
<b>House</b>	Any residential dwelling of any type, style or description that is used as a residence by any human being.
<b>NDA</b>	National Department of Agriculture
<b>NWA</b>	National Water Act, Act 36 of 1998
<b>Pit</b>	Any open excavation
<b>“Porrel”</b>	The term used for the sludge created at alluvial diamond diggings where the alluvial gravels are washed and the diamonds separated in a water-and-sand medium.
<b>Topsoil</b>	The layer of soil covering the earth which- (a) provides suitable environment for the germination of seeds, (b) allows penetration of water,



- (c) is a source of micro-organisms, plant nutrients and in some cases seed, and
- (d) is not of a depth of more than 0,5 meters or such depth as the Minister may prescribe for a specific prospecting or exploration area or mining area.

**Trench** A type of excavation usually made by digging in a line towards a mechanical excavator and not pivoting the boom – a large, U-shaped hole in the ground, with vertical sides and about 6-8 meters in length also a prospecting trench.

**Vegetation** Any and all forms of plants, see also Fauna.

**DWAF** The Department of Water Affairs and Forestry – both national office and their various regional offices, which are divided across the country on the basis of water catchment areas.

**MPRDA** The Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002).

**EMPlan** An Environmental Management Plan as contemplated in Regulation 52 of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002) – this document.

## Section B

### B. BIOGRAPHIC DETAILS OF THE APPLICANT:

<b>B.1.1</b> Full name (and surname) of person or company applying for permit or right	TOPAZ SKY TRADING 295 (PTY) LTD
<b>B.1.2</b> ID number of person or company/CC registration number	2008/011958/07
<b>B.1.3</b> Postal address	P.O. BOX 4069 Southgate 2082
<b>B.1.4</b> Physical/ residential address	25 Wellington Road Parktown Johannesburg 2001
<b>B.1.5</b> Applicant's telephone number	+2711 484 6005
<b>B.1.6</b> Applicant's cellular number	+2773 902 5500
<b>B.1.7</b> Alternative contact's name	Neel Khoza
<b>B.1.8</b> Alternative contact's fax	011 642 9611

<b>B.2.1</b> Full name of the property on which mining/prospecting operations will be Conducted.	OLLEVENFONTEIN 475 KR, ZANDSPRUIT 472 KR, DROOGLAAGTE 485 KR, KLIPPART 490 KR, NOOITGEDACTH 489 KR, TURFBULT 494 KR, TWEEFONTEIN 462 KR AND TWEEFONTEIN 462 KR S
<b>B.2.2</b> Name of subdivision	As above
<b>B.2.3</b> Approximate center of mining/prospecting area:  Latitude Longitude	As per attached sketch plan
<b>B.2.4</b> Magisterial district	Bela - Bela
<b>B.2.5</b> Name of the registered owner of the property	As per attached annexure B
<b>B.2.6</b> His/her Telephone number	
<b>B.2.7</b> His/her Postal address	Annexure B
<b>B.2.8</b> Current uses of surrounding areas? – Pre dominantly grazing and limited production for animal fodder.	
<b>B.2.9</b> Are there any other, existing land uses that impact on the environment in the proposed mining/prospecting area? None other than farming activities mentioned ?                      no	
<b>B.2.10</b> What is the name of the nearest town? Bela - Bela	

Year 1	Phase 1	Specialist/ Expert
Month 1-3	Data Gathering	Geologist
Month 4-5	Data Interpretation and modeling	Geologist
Month 6	Decision to commence with prospecting activities	Geologist
Month 7 - 10	Geophysical Surveys	Geophysicist technician
Month 11 - 12	Interpretation of Data	Geophysicist technician
Year 2	Phase 2	Specialist/ Expert
Month 13 - 20	Drill Geological Holes (75 % of proposed holes)	Drilling Company
Month 21 - 24	Logging and sampling	Geologist
Year 3	Phase 3	Specialist/ Expert
Month 25 - 27	Drill Geological holes (25%) logging and sampling	Drilling Company
Month 28 – 32	Compile Geological report reserve determining and pre feasibility study.	Economical Geologist
Month 33 – 36	Conduct Mining feasibility study, market research and sales agreement etc,	Geologist, mine Engineer surveyors, Etc.

**SECTION C****C. ENVIRONMENTAL IMPACT ASSESSMENT:**

The information detailed in this section is provided as an aid to the relevant authorities in better understanding the scale and degree of severity of possible biophysical and socio-economic impacts that the prospecting operation will have on the environment.

**C.1 DESCRIPTION OF THE ENVIRONMENT LIKELY TO BE AFFECTED BY PROPOSED PROSPECTING/MINING OPERATIONS: (REGULATION 52(2)(a))**

ENVIRONMENTAL ELEMENT/IMPACTOR	VALUE	TICK	OFFICE USE
<b>C.1.1 What does the landscape surrounding the proposed operation look like?</b>			
<b>Steep slopes, level plateaus</b>			
<b>C.1.2 Describe the type of soil on the surface of the site</b>			
Consists of sandy soil forms with shallow Dystrophic to mesotrophic characteristics.	VALUE	TICK	OFFICE USE
<b>C.1.3 How deep is the topsoil?</b>	0 – 300mm		8
	300 - 600mm	X	4
	600mm +		2
<b>C.1.4 What plants, trees and grasses grow naturally in the area around the site?</b>			
Occasional wattle, Redstem, Acacia species 80% of the project area is utilized for dryland cultivation purposes and the natural vegetation has been largely removed.			
<b>C.1.5 What animals naturally occur in the area?</b>			
Various bird species, Dassies, rabbits, snakes and Mongoose.			
<b>No endangered or rear species were observed or reported for the site.</b>			
	VALUE	TICK	OFFICE USE
<b>C.1.6 Are there any protected areas (game parks/nature reserves, monuments etc) close to the proposed operation?</b>	Yes		4
		X	0

	No		
<b>C1.7</b> What minerals are you going to prospect or mine for?	<b>COAL</b>		
<b>C1.8</b> Describe the type of equipment that will be used:			
Diamond drilling equipment is proposed, comprising a diesel engine to drive a core drilling rod into the ground. The core is retrieved on a wire line from underground. The drilling is undertaken using a diamond drill bit in association with drilling extracted from the ground and can be logged to determine what the Lithologies are at depth. It is also lubricants and water to cut into the rock. The rock is possible, that an air percussion rig will be employed to drill into the ore body. This will employ a wheeled drilling and compressor to the percussion hammer.			

<b>C.2 HOW WILL THE PROPOSED OPERATION IMPACT ON THE NATURAL ENVIRONMENT? (REGULATION 52(2)(b))</b>			
<b>ENVIRONMENTAL ELEMENT/IMPACTOR</b>	<b>VALUE</b>	<b>TICK</b>	<b>OFFICE USE</b>
<b>C.2.1</b> What will the ultimate depth of the proposed prospecting/mining operations be?	0-5m		2
	6-10m		4
	10-25m		8
	25m+	<b>X</b>	10
<b>C.2.2</b> How large will the total area of all excavations be?	Drilling Sumps		<10ha
<b>C.2.3</b> How large will each excavation be before it is filled up? Two small sumps	<10 X 10M	<b>X</b>	2
	<20 X 20M		4
	>20 X 20M		8
<b>C.2.4</b> How many prospecting boreholes or trenches will there be?	906 HOLES PROPOSED		
	<b>VALUE</b>	<b>TICK</b>	<b>OFFICE USE</b>
<b>C.2.5</b> Will employees prepare food on the site and collect firewood?	YES		4
	NO	<b>X</b>	2
<b>C.2.6</b> Will water be extracted from a river, stream, dam or pan for use by the proposed operation?	YES		4
Water will be carted to site in water bowser	NO	<b>X</b>	2

<b>C.2.7</b> If so, what is the name of this water body?	<b>N/A</b>		
<b>C.2.8</b> If water will not be extracted from an open surface source, where will it be obtained?	Water will be supplied through a water cart.		
	<b>VALUE</b>	<b>TICK</b>	<b>OFFICE USE</b>
<b>C.2.9</b> How much water per day will the mineral processing Operation require? – None – only exploration	1000 – 10 000 Litres		2
	20 000 – 40 000 Litres		3
	40 000 – 60 000 Litres		5
	60 000 – 1000 000 Litres		8
	More		10
<b>C.2.10</b> How far is the proposed operation from open water (dam, river, pan, lake)?	More than 120 m		
Greater than 120			
<b>C.2.11</b> What is the estimate depth of the water table/Borehole?	15 – 30 meters		
<b>C.2.12</b> How much water per day will the proposed operation utilize for employees?	60 Litres		
<b>C.2.13</b> What toilet facilities will be made to workers?	None		8
	Pit latrine (long drop)		4
	Chemical toilet	<b>X</b>	2
<b>C.2.14</b> Would it be necessary to construct roads to access the proposed operations?	Yes		4
	No	<b>X</b>	0
	<b>VALUE</b>	<b>TICK</b>	<b>OFFICE USE</b>
<b>C.2.15</b> How long will these access road(s) be (from a public road to the proposed operations)	<b>N/A</b>		
<b>C.2.16</b> Will trees be uprooted to construct these access road(s)?	Yes		4
	No	<b>X</b>	0
<b>C.2.17</b> Will any foreign material, like crushed stone, limestone, or any material other than the naturally occurring topsoil be placed on the road surface?	Yes		4
	No	<b>X</b>	0

<b>C.3 TIME FACTOR</b>			
<b>C.3.1</b> For what time period will prospecting/mining Operations be conducted on this particular site?	0 – 6 months		2
Prospecting -	6 –12 months		4
	12 –18 months		6
	18 – 24 months		8
	> 24 months	<b>X</b>	10
<b>C.4 HOW WILL THE PROPOSED OPERATION IMPACT ON THE SOCIO-ECONOMIC ENVIRONMENT? (REGULATION 52(2)(b))</b>			
ELEMENT/IMPACTOR	VALUE	TICK	OFFICE USE
<b>C.4.1</b> How many people will be employed?	. 6		
<b>C.4.2</b> How many men?	. 5		
<b>C.4.3</b> How many women?	. 1		
<b>C.4.4</b> Where will employees be obtained? (Own or employed from local communities?)	Own	<b>X</b>	2
	Local		4
<b>C.4.5</b> How many hours per day will employees work?	Sunrise to Sunset	<b>X</b>	4
	Less		2
	More		8
	VALUE	TICK	OFFICE USE
<b>C.4.6</b> Will operations be conducted within 1 kilometre from a residential area	Yes		6
	No	<b>X</b>	1
<b>C.4.7</b> How far will the proposed operation be from the Nearest fence/windmill/dam/built structure?	0 –5 meters		8
	51 – 100 meters		4
	150 or more meters	<b>X</b>	2
<b>C..5 HOW WILL THE PROPOSED OPERATION IMPACT ON THE CULTURAL HERITAGE OF THE SURROUNDING ENVIRONMENT? REGULTION 52(2)(b)</b>			
ELEMENT/ IMPACTOR	VALUE	TICK	OFFICE USE
<b>C.5.1</b> Are there any graveyards of old houses or site of historic significance within 1 Kilometre of the area	YES		8
	NO	<b>X</b>	0

## C.6 SPECIFIC REGULATORY REQUIREMENTS

### C.6.1 Air quality management and control (Regulation 64)

Describe how the operation will impact on the quality of the air, taking into account the predominant wind direction and other affected parties in the downwind zone

*The proposed exploration drilling will produce no dust, or have any impact on the air quality. The drilling operation is undertaken using water, hence no dust and the diesel Engine is Monitored and the exhaust is baffled to comply with the health and safety standards, thus minimising noise*

### C.6.2 Fire prevention (Regulation 65)

Applicants for Permits, rights or permission involving **coal or Bituminous** rock must:

- **Indicate on a plan** where the coal or rock discard dump will be located  
(If applied for a permit to mine or prospect for coal or bituminous rock, indicate the exact location of the discard dump on the plan and write “EMPlan C.6.2” next to it)

No coal is to be mined during the prospecting phase – Hence no discard

### C.6.3 Noise control (Regulation 66)

Indicate how much noise the operation will generate, and how it will impact on the surrounding environment, who might be influenced by noise from your operation.

*The noise produced will be limited to the drilling machine. The Drill will be maintained within the manufactures specifications. There are no immediate neighbours that will be impacted on.*

### C.6.4 Blasting, vibration and shock (Regulation 67)

Please indicate whether any blasting operations will be conducted.

Blasting YES/NO	<b>NO</b>	How Often?	<b>N/A</b>
-----------------	-----------	------------	------------

### C.6.5 Disposal of waste material (Regulation 69)

**Indicate on your plan** where waste will be dumped in relation to the beneficial works/washing pans also indicate below how domestic waste material will be managed.

*All domestic waste and any waste associated with the drilling operation will be collected on site and transported in a waste skip to a licensed landfill. All Maintenance of machinery will be undertaken off site, and any oil/ greases will be returned to the manufacturers for recycling and/or disposal.*

### C.6.6 Soil pollution and erosion control (Regulation 70)

6.6.1 Indicate how topsoil will be handled on the area

*There will be only limited disturbance of the soil during the drilling operations. The small sumps constructed for the drilling circulation (Approximately 1m X 1m) will be backfilled and replaced **in sequence**.*

### 6.6.7 Describe how spills of oil, grease, diesel, acid or hydraulic fluid will be dealt with.

*All, or any spills of hydrocarbons will be picked up (including the contaminated soils) and disposed of at an appropriate and licensed landfill (H:H) site*

### 6.6.3 Briefly describe the storage facilities available for the above fluids:

*There will be no storage of Hydrocarbons on site; Diesel and Oils will be transported to site daily, or as required. All storage will be off site in case of any spillage, contaminated soils will be cleaned up immediately and disposed of at a registered waste disposal site.*

<p><b>C.6.7 If significant impacts on any element of the environment mentioned in Section C 1 to 6.6 above have been identified summarise all of them (Regulation 52 (2)(C))</b></p> <p>Example: Section C 6.4 Blasting. I have identified that the people living on the neighbouring property are sensitive to loud noises as they have children that must study during the afternoon</p> <p>Section C 2.4 – Approximately 906 boreholes will be sited and drilled over a prospecting area.</p> <p>Section C 2.10 – Streams / Rivers associated with the proposed prospecting area</p> <p>Section C 4.6 – The movement of drilling contractor personnel, persons required to work or execute any functions with regards to drilling process and visitors may result in damage of land – Owners property</p> <p>Section C 6.1 On windy days, dust generation may exceed the 100m dust fallout.</p> <p>Section C .6.3 Noise from prospecting activities is more audible during the evening. This may impact on surrounding residents</p> <p>Section C 6.6 – Oil grease, hydraulic Fluids &amp; Diesel, if spills will contaminate the soil.</p>	<p><b>C.6.8 How will the negative impacts on the environment be mitigated or managed (as Described in 6.11 to the left?(Regulation 579(2)(C))</b></p> <p>Example: I will mitigate the impact of my blasting operations to school hours. When no one in the affected area is at home.</p> <p>The siting of Boreholes will be conducted to ensure that rocky ridges, sensitive grassland, indigenous trees and shrubs, site of geological importance and farm lands actively used for crop farming will be avoided</p> <p>No prospecting activities will be conducted 100m of any water course including wetlands</p> <p>No contractor personnel, any person required to do work or to execute any function with regards to the drilling process and visitors to the drilling site will be allowed to leave the camp site, the drilling site and may not leave their vehicles and wander around the farm without the permission of the owner</p> <p>Dust suppression by water cart will be undertaken on windy days to minimize dust generation</p> <p>No prospecting will be conducted during the period 18h00 to 06h00, all employees will be issued with earplugs as prescribed in the provision of the mine health and safety ACT 1996 (ACT 29 of 1996)</p> <p>Tar Paulins will be placed o the ground to prevent oil grease, hydraulic fluids or diesel and in case of any spillage, the contaminated soils will be removed and disposed of at the waste disposal facility. All machines will be checked for leakages and the appropriate action will be taken to prevent such leaks</p>
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**C.7 FINANCIAL PROVISION: (REGULATION 54)**

Enter the amount of financial provision required here: See annexure A
---

What method will be used to furnish DME with this financial provision?

Cash deposit	<b>X</b>
Bank guarantee	
Trust Fund	
Other: (specify) (Note: other methods must be approved by the minister)	

**C.8 Monitoring and performance assessment**

Regulation 55 of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002) is to be followed in the monitoring and auditing of the performance of this plan so as to adequately address environmental impacts from the operation. The following information is provided:

<b>C.8.1 Please describe how the adequacy of this programme will be assessed and how any inadequacy will be addressed. (Regulation 55(1) and 52(e))</b>
---

<i>We will, on a bi-monthly basis, check every aspect of our operation against the prescriptions given in Section F of this document and, if we find that certain aspects are not addressed, or impacts on the environment are not mitigated properly, we will rectify the identified inadequacies immediately.</i>
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<b>C.9 Describe, in brief terms, what the environment will look like after a closure certificate has been obtained.</b>
---

Clearly state the intend end use of the area prospected/mined after closing of operations.
--

**C.10 CLOSURE**

In terms of Regulations 56 to 62, which outline the entire process of mine closure, (Refer to Section F) and also addresses the legal responsibility of the applicant with regard to the proper closure of his operation, the following information is supplied.

In terms of Section 37 of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002), the holder of a permit is liable for any and all environmental damage or degradation emanating from his/her operation, until a closure certificate is issued in terms of Section 43 of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002).

The applicant is required to abide by these conditions.

**C.11 PUBLIC PARTICIPATION: (REGULATION 52(2)(g))**

The following I&AP's were consulted in terms of the proposed prospecting activities, and were given the opportunity to comment and raise concerns in this regard. The following information is recorded:

<b>Name of Interested affected party</b>	<b>Contact details: Address &amp; telephone number</b>	<b>How did consultation take place?</b>	<b>What were his/her main concern about the operation?</b>
1. DRIESUS EIENDOMME (PTY) LTD	POSBUS 72430 LYNWOODRIF 0040	REGISTERED MAIL	No comment as yet
1.AFGRI OPERATIONS LTD	P.O. BOX 3559 CRAMERVIEW 2060	REGISTERED MAIL	NO COMMENT AS YET

## Section D

### D SCORING OF EIA

Section C1		Section C2		Section C4		Section C5				Time Factor Section C 3		Score (Impact rating)
	+		+		+		=	= Subtotal	X		=	
Total		Total		Total		Total						
	+		+		+		=		X		=	

#### D.1.1 CALCULATION TABLE - *For Officials Use Only.*

#### D.1.2 IMPACT RATING SCALE

SCORE ATTAINED	IMPACT RATING	REMARKS
46 - 300	Low	No additional objectives needed - this programme is sufficient
301 - 800	Medium	Some specific additional objectives to address focal areas of concern may be set
801 -1160	High	Major revision of Environmental Management Plan for Adequacy and full revision of objectives.

#### *Additional Objectives:*

Based on the information provided and the results of the regional office's assessment attached, combined with the interpretation of the scoring and impact rating attained for this particular operation, the Regional Manager of the regional office of the DME may possibly have additional comments and objectives/requirements that will need to be complied with. If additional measures are required, they will be "**specific and will address specific issues of concern that are not adequately covered in this standard version of the document**" These requirements are not listed here, but are specified under Section G of this document so as to form part of the legally binding part of this Environmental Management Plan.

## Section E

### Undertaking

I, NEEL KHOZA on behalf of TOPAZ SKY TRADING 295 (PTY) LTD, the applicant for a prospecting right hereby declare that the above information is true, complete and correct. I under to implement the measures as described in section F and G hereof. I understand that this undertaking is legally binding and that the failure to give effect hereto will render me liable for prosecution in terms of Section 98 (b) and 99 (1)(g) of the mineral and petroleum resources Development Act, 2002 (act 28 of 2002

I am also aware that the regional manager may, at any time but after consultation with me make such changes to this plan, as he/she may deem necessary.

Signed on this 05 day of October 2008 at EMALAHLENI (place)

  
\_\_\_\_\_  
Signature of Applicant

October 2008

## Section F

### F. ENVIRONMENTAL MANAGEMENT PLAN:

#### INTRODUCTION

This Environmental Management Plan contains guidelines, operating procedures and rehabilitation/pollution control requirements, which are binding on the holder of the prospecting permission once approval of the Environmental Management Plan has been obtained. It is essential that this portion be carefully studied, understood, implemented and adhered to at all times.

#### F.1 GENERAL REQUIREMENTS

##### F.1.1 MAPPING AND SETTING OUT

###### F.1.1.1 LAYOUT PLAN

- A copy of the layout plan as provided for in Regulation 2.2 must be available at the prospecting/mining site for scrutiny when required.
- The plan must be updated on a regular basis with regard to the actual progress of the establishment of surface infrastructure, mining operations and rehabilitation (a copy of the updated plan shall be forwarded to the Regional Manager on a regular basis).
- A final layout plan must be submitted at closure of the mine or when operations have ceased.

NOTE: Regulation 2.2 of the regulations promulgated in terms of the Act requires:

***An application contemplated in sub-regulation (1) must be accompanied by a plan that must contain : -***

- a) *the co-ordinates of the land or area applied for;*
- b) *the north point;*
- c) *the scale to which the plan has been drawn;*
- d) *the name, number and location of the land or area covered by the application;*
- e) *and in relation to farm boundaries and surveyed points*
  - i. *the size and shape of the proposed area;*
  - ii. *the boundaries of the land or area comprising the subject of the application concerned; the layout of the proposed reconnaissance, prospecting, exploration, mining or*
  - iii. *production operations surface structures and servitudes;*
  - iv. *the topography of the land or area;*
  - v. *the topology of the land or area*

**F.1.1.2 DEMARCATING THE MINING PROSPECTING AREA**

- The mining/prospecting area must be clearly demarcated by means of beacons at its corners, and along its boundaries if there is no visibility between the corner beacons.
- Permanent beacons as indicated on the layout plan or as prescribed by the Regional Manager must be firmly erected and maintained in their correct position throughout the life of the operation.
- Mining/ prospecting and resultant operations shall only take place within this demarcated area.

**F.1.1.3 DEMARCATING THE RIVER CHANNEL AND RIVERINE ENVIRONMENT**

The following is applicable if operations are conducted within the riverine environment (See F 3.2):

- Beacons as indicated on the layout plan or as prescribed by the Regional Manager must be erected and maintained in their correct position throughout the life of the operation.
- These beacons must be of a permanent nature during the operations and must not be easily removable, especially those in a river channel. The beacons must however, be removed at the end of the operations.
- The mining of and prospecting for any mineral shall only take place within this demarcated mining area.
- If riverine vegetation is present in the form of reeds or wetland vegetation, the presence of these areas must be entered in Part C 1.45 of the EMPlan and indicated on the layout plan.
- The holder of the mining permit/prospecting right will also be required to permanently demarcate the areas as specified in F 1.1.2.

**F.1.2 RESTRICTIONS ON MINING/ PROSPECTING**

- On assessment of the application, the Regional Manager may prohibit the conducting of mining or prospecting operations in vegetated areas or over portions of these areas.
- In the case of areas that are excluded from mining or prospecting, no operations shall be conducted within 5 m of these areas.

**F .1.3 RESPONSIBILITY**

- The environment affected by the mining/ prospecting operations shall be rehabilitated by the holder, as far as is practicable, to its natural state or to a predetermined and agreed to standard or land use which conforms with the concept of sustainable development The affected environment shall be maintained in a stable condition that will not be detrimental to the safety and health of humans and animals and that will not pollute the environment or lead to the degradation thereof.
- It is the responsibility of the holder of the mining permit/prospecting right to ensure that the manager on the site and the employees are capable of complying with all the statutory requirements which must be met in order to mine, which includes the implementation of this EMP.
- If operations are to be conducted in an area that has already been disturbed, the holder must reach specific agreement with the Regional Manager concerning the responsibilities imposed upon himself/herself pertaining to the rehabilitation of the area and the pollution control measures to be implemented.

## INFRASTRUCTURAL REQUIREMENTS

### F.2.1 TOPSOIL

- Topsoil shall be removed from all areas where physical disturbance of the surface will occur.
- All available topsoil shall be removed after consultation with the Regional Manager prior to the commencement of any operations.
- The topsoil removed, shall be stored in a bund wall on the high ground side of the mining/prospecting area outside the 1:50 flood level within the boundaries of the mining area/prospecting.
- Topsoil shall be kept separate from overburden and shall not be used for building or maintenance of access roads.
- The topsoil stored in the bund wall shall be adequately protected from being blown away or being eroded.

### F.2.2 ACCESS TO THE SITE

#### 6.2.2.1 Establishing access roads on the site

- The access road to the mining/prospecting area and the camp-site/site office must be established in consultation with the landowner/tenant and existing roads shall be used as far as practicable.
- Should a portion of the access road be newly constructed the following must be adhered to:
  - The route shall be selected that a minimum number of bushes or trees are felled and existing fence lines shall be followed as far as possible.
  - Water courses and steep gradients shall be avoided as far as is practicable.
  - Adequate drainage and erosion protection in the form of cut-off berms or trenches shall be provided where necessary.
- If imported material is used in the construction or upgrading of the access road this must be listed in C 2.17
- The erection of gates in fence lines and the open or closed status of gates in new and existing positions shall be clarified in consultation with the landowner/tenant and maintained throughout the operational period.
- No other routes will be used by vehicles or personnel for the purpose of gaining access to the site.

**NOTE: The design, construction and location of access to provincial roads must be in accordance with the requirements laid down by the Provincial or controlling authority.**

#### F .2.2.2 Maintenance of access roads

- In the case of dual or multiple use of access roads by other users, arrangements for multiple responsibility must be made with the other users. If not the maintenance of access roads will be the responsibility of the holder of the mining permit/prospecting right
- Newly constructed access roads shall be adequately maintained so as to minimise dust erosion or undue surface damage.

**F.2.2.3 Dust control on the access and haul roads**

- The liberation of dust into the surrounding environment shall be effectively controlled by the use of, inter alia, water spraying and/or other dust-allaying agents. The speed of haul trucks and other vehicles must be strictly controlled to avoid dangerous conditions, excessive dust or excessive deterioration of the road being used.

**F .2.2.4 Rehabilitation of access roads**

- Whenever a mining permit/prospecting right is suspended, cancelled or abandoned or if it lapses and the holder does not wish to renew the permit or right any access road or portions thereof, constructed by the holder and which will no longer be required by the landowner/tenant shall be removed and/or rehabilitated to the satisfaction of the Regional Manager.
- Any gate or fence erected by the holder, which is not required by the landowner/tenant, shall be removed and the situation restored to the pre mining/prospecting situation.
- Roads shall be ripped or ploughed, and if necessary, appropriately fertilised (based on a soil analysis) to ensure the re-growth of vegetation. Imported road construction materials, which may hamper re-growth of vegetation, must be removed and disposed of in an approved manner prior to rehabilitation.
- If a reasonable assessment indicates that the re-establishment of vegetation is unacceptably slow, the Regional Manager may require that the soil be analysed, and any deleterious effects on the soil arising from the mining/prospecting operation, be corrected and the area be seeded with a seed mix to the Regional Manager's specification.

**F.2.3 OFFICE/CAMP SITES****F.2.3.1 Establishing office/ campsites**

- Office and campsites shall be established, as far as is practicable, outside the flood plain, above the 1 in 50 flood level mark within the boundaries of the mining/ prospecting area.
- The area chosen for these purposes shall be the minimum reasonably required and which will involve the least disturbance to vegetation. Topsoil shall be handled as described in F 2.1 above.
- No camp or office site shall be located closer than 100 meters from a stream, river, spring, dam or pan.
- No trees or shrubs will be felled or damaged for the purpose of obtaining firewood, unless agreed to by the landowner/tenant.
- Fires will only be allowed in facilities or equipment specially constructed for this purpose. If required by applicable legislation, a firebreak shall be cleared around the perimeter of the camp and office sites.
- Lighting and noise disturbance or any other form of disturbance that may have an effect on the landowner/tenant/persons lawfully living in the vicinity shall be kept to a minimum.



**F.2.3.2 Toilet facilities, waste water and refuse disposal**

- As a minimum requirement the holder of a mining permit/ prospecting right shall, at least, provide pit latrines for employees and proper hygiene measures shall be established.
- Chemical toilet facilities or other approved toilet facilities such as a septic drain shall preferably be used and sited on the campsite in such a way that they do not cause water or other pollution.
- The use of existing facilities must take place in consultation with the landowner/tenant.
- In cases where facilities are linked to existing sewerage structures, all necessary regulatory requirements concerning construction and maintenance should be adhered to.
- All effluent water from the camp washing facility shall be disposed of in a properly constructed French drain, situated as far as possible, but not less than 200 meters, from any stream, river, pan, dam or borehole.
- Only domestic type wash water shall be allowed to enter this drain and any effluents containing oil, grease or other industrial substances must be collected in a suitable receptacle and removed from the site, either for resale or for appropriate disposal at a recognized facility.
- Spills should be cleaned up immediately to the satisfaction of the Regional Manager by removing the spillage together with the polluted soil and by disposing of them at a recognized facility.
- Non-biodegradable refuse such as glass bottles, plastic bags, metal scrap, etc., shall be stored in a container at a collecting point and collected on a regular basis and disposed of at a recognized disposal facility. Specific precautions shall be taken to prevent refuse from being dumped on or in the vicinity of the campsite.
- Biodegradable refuse generated from the office/camp site, processing areas vehicle yard, storage area or any other area shall either be handled as indicated above or be buried in a pit excavated for that purpose and covered with layers of soil, incorporating a final 0,5 meter thick layer of topsoil (where practicable). Provision should be made for future subsidence of the covering.

**F.2.3.3 Rehabilitation of the office/camp site**

- On completion of operations, all buildings, structures or objects on the camp/office site shall be dealt with in accordance with section 44 of the Mineral and Petroleum Resources Development Act 2002 (Act 28 of 2002), which states:
  - 1) *When a prospecting right, mining right, retention permit or mining permit lapses, is cancelled or is abandoned or when any prospecting or mining operation comes to an end, the holder of any such right or permit may not demolish or remove any building, structure, object*
    - a) *which may not be demolished in terms of any other law;*
    - b) *which has been identified in writing by the Minister for purposes of this section or;*
    - c) *which is to be retained in terms of an agreement between the holder and the owner or occupier of the land, which agreement has been approved by the Minister in writing.*
    - d) *The provision of subsection (1) does not apply to bona fide mining equipment which may be removed*
- Where office/camp sites have been rendered devoid of vegetation/grass or where. Soils have been compacted owing to traffic, the surface shall be scarified or ripped.
- Areas containing French drains shall be compacted and covered with a final layer of topsoil to a height of 10cm above the surrounding ground surface.
- The site shall be seeded with a vegetation seed mix adapted to reflect the local indigenous flora.
- If a reasonable assessment indicates that the re-establishment of vegetation is unacceptably slow, the Regional Manager may require that the soil be analyzed and any deleterious effects on the soil arising from the mining/prospecting operation be corrected and the area be seeded with a vegetation seed mix to his or her specification.
- Photographs of the camp and office sites, before and during the mining/ prospecting operation and after rehabilitation, shall be taken at selected fixed points and kept on record for the information of the Regional Manager.

**F.2.4 VEHICLE MAINTENANCE YARD AND SECURED STORAGE AREAS****F.2.4.1 Establishing the vehicle maintenance yard and secured storage areas**

- The vehicle maintenance yard and secured storage area will be established as far as is practicable, outside the flood plain, above the 1 in 50 flood level mark within the boundaries of the mining/prospecting area.

- The area chosen for these purposes shall be the minimum reasonably required and involve the least disturbance to tree and plant life. Topsoil shall be handled as described in F 2.1 above.
- The storage area shall be securely fenced and all hazardous substances and stocks such as diesel, oils, detergents, etc., shall be stored therein. Drip pans, a thin concrete slab or a facility with PVC lining, shall be installed in such storage areas with a view to prevent soil and water pollution.
- The location of both the vehicle maintenance yard and the storage areas are to be indicated on the layout plan.
- No vehicle may be extensively repaired in any place other than in the maintenance yard.

#### **F.2.4.2 Maintenance of vehicles and equipment**

- The maintenance of vehicles and equipment used for any purpose during the mining/prospecting operation will take place only in the maintenance yard area.
- Equipment used in the mining/prospecting process must be adequately maintained so that during operations it does not spill oil, diesel, fuel, or hydraulic fluid.
- Machinery or equipment used on the mining/prospecting area must not constitute a pollution hazard in respect of the above substances. The Regional Manager shall order such equipment to be repaired or withdrawn from use if he or she considers the equipment or machinery to be polluting and irreparable.

#### **F.2.4.3 Waste disposal**

- Suitable covered receptacles shall be available at all times and conveniently placed for the disposal of waste.
- All used oils, grease or hydraulic fluids shall be placed therein and these receptacles will be removed from the site on a regular basis for disposal at a registered or licensed disposal facility.
- All spills should be cleaned up immediately to the satisfaction of the Regional Manager by removing the spillage together with the polluted soil and by disposing of them at a recognized facility.

#### **F.2.4.4 Rehabilitation of vehicle maintenance yard and secured storages areas**

- On completion of mining/prospecting operations, the above areas shall be cleared of any contaminated soil, which must be dumped as referred to in section F 2.4.3 above.
- All buildings, structures or objects on the vehicle maintenance yard and secured storage areas shall be dealt with in accordance with section 44 of the Mineral and Petroleum Resources Development Act 2002.

- The surface shall then be ripped or ploughed to a depth of at least 300mm and the topsoil previously stored adjacent the site, shall be spread evenly to its original depth over the whole area. The area shall then be fertilised if necessary (based on a soil analysis).
- The site shall be seeded with a vegetation seed mix adapted to reflect the local indigenous flora.
- If a reasonable assessment indicates that the re-establishment of vegetation is unacceptably slow, the Regional Manager may require that the soil be analyzed and any deleterious effects on the soil arising from the mining/prospecting operation be corrected and the area be seeded with a seed mix to his or her specification.

### **F.3 OPERATING PROCEDURES IN THE MINING AREA**

#### **F.3.1 Limitations on mining/prospecting**

- The mining of or prospecting for precious stones shall take place only within the approved demarcated mining or prospecting area.
- Mining/ prospecting may be limited to the areas indicated by the Regional Manager on assessment of the application.
- The holder of the mining permit/prospecting right shall ensure that operations take place only in the demarcated areas as described in section F 1.1.2 above.
- Operations will not be conducted closer than one and a half times the height of the bank from the edge of the river channel and in such manner that the stability of the bank of the river is affected.
- Precautions shall also be taken to ensure that the bank of the river is adequately protected from scouring or erosion. Damage to the bank of the river caused by the operations, shall be rehabilitated to a condition acceptable to the Regional Manager at the expense of the holder.
- Restrictions on the disturbance of riverine vegetation in the form of reeds or wetland vegetation must be adhered to. The presence of these areas must be entered in Part of the Programme and indicated on the layout plan.

#### **F.3.2 Mining/ prospecting operations within the riverine environment**

**NOTE: The Department of Water Affairs and Forestry may impose additional conditions, which must be attached to this EMP. In this regard, please see the Best Practice Guideline for small-scale mining developed by DWAF (BPG 2.1)**

(Available from <http://www.dwaf.gov.za>)

- The mining of or prospecting for precious stones in the river or the banks of the river will be undertaken only after the Regional Manager has consulted with the Department of Water Affairs and Forestry
- The canalisation of a river will not be undertaken unless the necessary permission has been obtained from the Department of Water Affairs and Forestry. Over and above the conditions imposed by the said Department which conditions shall form part of this EMPlan, the following will also apply:

- ❖ The canalisation of the flow of the river over different parts of the river bed shall be constructed in such a manner that the following are adhered to at all times:
  - The flow of the river may not be impeded in any way and damming upstream may not occur.
  - The canalisation of the flow may not result in scouring or erosion of the riverbank.
  - Well points or extraction pumps in use by other riparian users may not be interfered with and canalisation may not impede the extraction of water at these points.
- Access to the riverbed for the purpose of conducting excavations in the riverbed, shall be through the use of only one access at a time. The location of the access to the river channel across the riverbank shall be at a point of the riverbank where the least excavation and damage to vegetation will occur and shall not be wider than is reasonably required. The position of the river access together with all planned future access points must be indicated on the layout plan.

#### **F .3.2.1 Rehabilitation of access to river-bed**

- When rehabilitating the access point the original profile of the river-bank will be reestablished by backfilling the access point with the original material excavated or other suitable material.
- The topsoil shall then be returned over the whole area to its original depth and if necessary fertilized and the vegetation allowed to grow.
- If a reasonable assessment indicates that the re-establishment of vegetation is unacceptably slow, the Regional Manager may require that the soil be analyzed and any deleterious effects on the soil arising from the mining/prospecting operation be corrected and the area be seeded with a seed mix to his or her specification.
- In the event of damage from an occurrence where high flood waters scour and erode access points in the process of rehabilitation over the river-bank or an access point currently in use, repair of such damage shall be the sole responsibility of the holder of the mining permit or prospecting right
- Repair to the riverbank to reinstate its original profile to the satisfaction of the Regional Manager must take place immediately after such event has occurred and the river has subsided to a point where repairs can be undertaken.
- Final acceptance of rehabilitated river access points will be awarded only after the vegetation has re-established to a point where the Regional Manager is satisfied that the river-bank is stable and that the measures installed are of durable nature and able to withstand high river-flow conditions.

#### **F .3.2.2 Rehabilitation of mining/prospecting area in the bed of the river**

- The goal of rehabilitation with respect to the area where mining/prospecting has taken place in the river-bed is to leave the area level and even, and in a natural state containing no foreign debris or other materials and to ensure the hydrological integrity of the river by not attenuating or diverting any of the natural flow.
- All scrap and other foreign materials will be removed from the bed of the river and disposed of as in the case of other refuse (see section F 2.3.2 above), whether these

accrue directly from the mining/prospecting operation or are washed on to the site from upstream.

- Removal of these materials shall be done on a continuous basis and not only at the start of rehabilitation.
- Where reeds or other riverine vegetation have been removed from areas, these shall be re-established systematically in the approximate areas where they occurred before mining/prospecting.
- An effective control programme for the eradication of invader species and other exotic plants, shall be instituted on a regular basis over the entire mining/prospecting area under the control of the holder of the mining permit/prospecting right both during mining/prospecting and at the stage of final rehabilitation.

#### **F.4 THE WATER USE LICENCE**

The National Water Act (Act 36 of 1998), is based on the principles of sustainability, efficiency and equity, meaning that the protection of water resources must be balanced with their development and use.

In addition to being issued with a prospecting right or mining permit a small-scale miner may also need to get a water use license for the proposed water uses that will take place, except in certain cases.

NOTE: The Department of Water Affairs and Forestry (DWAF) developed specific Best Practice Guideline for small-scale mining that relates to storm water management, erosion and sediment control and waste management. Copies of these guidelines can be obtained from the regional office of DME or DWAF.

Applications for a water use license must be made in good time, such that approval can be granted before a water use activity can begin. The appropriate license forms for each kind of expected water use should be completed together with supporting documentation. The main supporting document required is a technical report. To make the technical report easier, you can refer to sections in this EMPlan, as most of what the technical report requires has already been done in the EMPlan. If you refer to the EMPlan it must be attached to the technical report.

##### **F.4.1 EXCAVATIONS**

###### **F.4.1.1 Establishing the excavation areas**

- Whenever any excavation is undertaken for the purpose of locating and/or extracting ore bodies of all types of minerals, including precious stone-bearing gravels, the following operating procedures shall be adhered to:
  - ❖ Topsoil shall, in all cases (except when excavations are made in the river-bed), be handled as described in F 2.1 above.
  - ❖ Excavations shall take place only within the approved demarcated mining/prospecting area.
  - ❖ Overburden rocks and coarse material shall be placed concurrently in the excavations or stored adjacent to the excavation, if practicable, to be used as backfill material once the ore or gravel has been excavated.
  - ❖ Trenches shall be backfilled immediately if no ore or precious stone-bearing gravel can be located.

###### **F.4.1.2 Rehabilitation of excavation areas**

The following operating procedures shall be adhered to:

- The excavated area must serve as a final depositing area for the placement of tailings during processing.
- Rocks and coarse material removed from the excavation must be dumped into the excavation simultaneously with the tailings.
- Waste, as described in paragraph F 2.3.2 above, will not be permitted to be deposited in the excavations.
- Once excavations have been refilled with overburden, rocks and coarse natural materials and profiled with acceptable contours and erosion control measures, the topsoil previously stored, shall be returned to its original depth over the area.
- The area shall be fertilised if necessary to allow vegetation to establish rapidly. The site shall be seeded with a local or adapted indigenous seed mix in order to propagate the locally or regionally occurring flora.
- If a reasonable assessment indicates that the re-establishment of vegetation is unacceptably slow, the Regional Manager may require that the soil be analysed and any deleterious effects on the soil arising from the mining/ prospecting operation, be corrected and the area be seeded with a vegetation seed mix to his or her specification.

## **F.5 PROCESSING AREAS AND WASTE PILES (DUMPS)**

### **F.5.1 Establishing processing areas and waste piles**

- Processing areas and waste piles shall not be established within 100 meters of the edge of any river channel or other water bodies.
- Processing areas should be established, as far as practicable, near the edge of excavations to allow the waste, gravel and coarse material to be processed therein.
- The areas chosen for this purpose shall be the minimum reasonably required and involve the least disturbance to vegetation.
- Prior to development of these areas, the topsoil shall be removed and stored as described in paragraph F 2.1 above.
- The location and dimensions of the areas are to be indicated on the layout plan and once established, the processing of ore containing precious stones shall be confined to these areas and no stockpiling or processing will be permitted on areas not correctly prepared.
- Tailings from the extraction process must be so treated and/or deposited that it will in no way prevent or delay the rehabilitation process.

### **F.5.2 Rehabilitation of processing areas**

- Coarse natural material used for the construction of ramps must be removed and dumped into the excavations.
- On completion of mining/prospecting operations, the surface of the processing areas especially if compacted due to hauling and dumping operations, shall be scarified to a depth of at least 300mm and graded to an even surface condition and the previously stored topsoil will be returned to its original depth over the area.
- Prior to replacing the topsoil the material that was removed from the processing area will be replaced in the same order as it originally occurred.
- The area shall then be fertilised if necessary to allow vegetation to establish rapidly. The site shall be seeded with a local, adapted indigenous seed mix.
- If a reasonable assessment indicates that the re-establishment of vegetation is unacceptably slow, the Regional Manager may require that the soil be

analysed and any deleterious effects on the soil arising from the mining/prospecting operation be corrected and the area be seeded with a seed mix to his or her specification.

## **F.6 TAILINGS DAM (S) (SLIMES DAM)**

The permission of the Regional Manager must be obtained should a tailings dam be constructed for the purpose of handling the tailings of the mining/prospecting operations. The construction, care and maintenance of tailings dams have been regulated and the relevant regulation is copied herewith, both for your information and as a guideline to the commissioning, management, operation, closing and aftercare of a tailings deposition facility.

*Regulation 73 promulgated under the Mineral and Petroleum Resources Development Act 2002 (Act 28 of 2002) requires the following:*

### ***Management of residue stockpiles and deposits***

- (1) *The assessment of impacts relating to the management of residue stockpiles and deposits, where appropriate, must form part of the environmental impact assessment report and environmental management Programme or the environmental management plan*
- (2) *Residue characterization*
  - (a) *Mine residue must be characterized to identify any potentially significant health and safety hazard and environmental impact that may be associated with the residue when the site(s) under consideration.*
  - (b) *Residue stockpiles and deposits must be characterised in terms of its physical characteristics, which may include*
    - (aa) the size distributor of the principal constituents;*
    - (bb) the permeability of the compacted material;*
    - (cc) void ratios of the compacted material;*
    - (dd) the consolidation or settling characteristics of the material under its own weight and that of any overburden;*
    - (ee) the strength of compacted material;*
    - (ff) the specific gravity of the solid constituents; and*
    - (gg) the water content of the material at the time of deposition, after compaction, and at other phases in the life of the deposit.*
  - (ii) chemical characteristics, which may include*
    - (aa) the toxicity;*
    - (bb) the propensity to oxidize and or decompose;*
    - (cc) the propensity to undergo spontaneous combustion;*
    - (dd) the pH and chemical composition of the*



*water separated  
from the solids;  
(ee) stability and reactivity and the rate  
thereof; and  
(ff) neutralizing potential.*

*(iii) mineral content, which include the specific  
gravity of the  
residue particles and its impact on particle  
segregation and consolidation;*

- (3) (a) *All residue stockpiles and deposits must be classified  
Into one or a combination of the following categories*
- (i) *The safety classification to differentiate  
between residue stockpiles and deposits  
of high, medium and low hazard on the  
basis of their potential to cause harm to  
life or property; and*
- (ii) *the environmental classification to  
differentiate between residue stockpiles  
and deposits with*
- (aa) a potentially significant  
impact on the  
environment due to its spatial  
extent,  
duration and intensity of  
potential impacts; or  
(bb) no potential significant  
impact on the environment.*
- (b) *All mine residue stockpiles and deposits must be  
classified by a suitably qualified person(s)*
- (c) *The classification of residue stockpiles and deposits shall  
determine the*
- (i) level of investigation and assessment  
required;*
- (ii) requirements for design, construction,  
operation, decommissioning, closure and post  
closure maintenance; and*
- (iii) qualifications and expertise required of  
persons undertaking the investigations,  
assessments, design, construction thereof.*
- (d) *The safety classification of residue stockpiles and  
deposits shall be based on the following criteria*

<i>Number of residents in zone of influence</i>	<i>Number of workers in zone of influence</i>	<i>Value of third party property in zone of influence</i>	<i>Depth to underground mine workings</i>	<i>Classification</i>
<i>0</i>	<i>&lt; 10</i>	<i>0- R2 m</i>	<i>&gt; 200m</i>	<i>Low hazard</i>
<i>1-10</i>	<i>11-100</i>	<i>R2m-R20m</i>	<i>50m-200m</i>	<i>Medium hazard</i>
<i>&gt; 10</i>	<i>&gt; 100</i>	<i>&gt; R20 m</i>	<i>&lt;50m</i>	<i>High hazard</i>

- (e) *A risk analysis must be carried out and documented on al/ high hazard  
residue stockpiles and deposits.*
- (f) *The environmental classification of residue stockpiles and deposits must be  
undertaken on the basis of.*
- (i) the characteristics of the residues*

- (ii) *t*  
 (B) The geotechnical investigations may include *t*  
 ~) the characterization of the soil profile over the entire area to be covered by the  
 residue facility and associated infrastructure to define the spatial extent and depth of the  
 different soil horizons;  
 (it) the characterization of the relevant engineering properties of foundations soils and  
 the assessment of strength and drainage characteristics.

- a*  
 the importance and vulnerability of the environmental components that are at  
 the importance and vulnerability of the environmental components that are at  
 on and dimensions of the deposit (height surface  
 area);  
 (iii) the importance and vulnerability of the  
 environmental components that are at risk; and  
 (iv) the spatial extent, duration and intensity of potential  
 impacts

- (g) An assessment of the environmental

Further investigation on the preferred site, shall include ~) land use;  
 (ii) topography and surface drainage;  
 (iii) infrastructure and man-made features;  
 (iv) climate;  
 (v) flora and fauna;  
 (vi) soils;  
 (vii) ground water morphology, flow, quality and usage;  
 and (vii) surface water.

impacts shall be done on all  
 environmental components,

- (h) The

(4) Site selection and investigation:

- (a) The process of investigation and selection of a site must entail  
 (i) the identification of a sufficient number of possible candidate sites to ensure  
 adequate consideration of alternative sites;  
 (ii) quantitative evaluation and ranking of all alternative sites;  
 (iii) Quantitative investigation of the top ranking sites to review the ranking done in (ii); (iv) a feasibility  
 study to be carried out on the highest ranking site(s), including  
 (aa) a preliminary safety classification;  
 (bb) an environmental classification;  
 (cc) geotechnical investigations; and  
 (dd) groundwater investigations.

- (b) From these investigations, a preferred site must be identified.
- (C) The groundwater investigations may include
- (i) the potential rate of seepage from the residue facility;
  - (ii) the quality of such seepage;
  - (iii) the geohydrological properties of the strata within the zone that could potentially be affected by the quality of seepage;
  - (iv) the vulnerability and existing potential use of the groundwater resource within the zone that could potentially be affected by the residue facility which are significantly affected assessment of impacts and analyses of risks shall form part of the environmental assessment and management programme

## 5. Design of residue stockpile and deposit

- (a) The design of the residue stockpile and deposit shall be undertaken by a suitably qualified person.
- (b) An assessment of the typical soil profile on the site is required for residue stockpiles and deposits which

*The investigations, laboratory test work, interpretation of data and recommendations for the identification and selection of the most appropriate and suitable site for the disposal of all residue that have the potential to generate leachate that could have a significant impact on the environment and groundwater must be carried out by a suitably qualified person.*

- i. have a low hazard potential,' and
- ii. have no significant impact on the environment.

(c )

*Other design considerations, as appropriate to the particular type of stockpile and deposit must be incorporated*

*(i) the control of storm water on and around the residue stockpile or deposit by*

*making provision for the maximum precipitation to be expected over a period of 24 hours with a frequency of once in a 100 years, in accordance with the regulations made under section 8 of the National Water Act, 1998;*

*(ii) the provision, throughout the system, of a freeboard of at least 0.5 m above the expected maximum water level, in accordance with regulations made under the National Water Act 1998, to prevent overtopping;*

*(iii) keeping the pool away from the walls; where there are valid technical reasons for deviating from this, adequate motivation must be provided and the design must be reviewed by a qualified person as required in terms of sections 9(6) or 9(7) of the Mine Health and Safety Act, 1996;*

*(iv) the control of decanting of excess water under normal and storm conditions;*

*(aa) the retention of polluted water in terms of polluted water in terms of GN*

*R991 (9), where measures may be required to prevent water from the residue deposit from leaving the residue management system unless it meets prescribed requirements;*

*(e) the design of the penstock, outfall pipe, under-drainage system and return water dams;*

*the height of the phreatic surface, slope angles and method of construction of the outer walls and their effects on shear stability;*

*the erosion of slopes by wind and water, and its control by*

*(ee) vegetation, berms catchment paddocks; and the potential for pollution.*

*Relevant information must be included in the draft environmental management programme or environmental management plan.*

*(6) Construction and operation of residue deposits:*

*(a) A system of routine maintenance and repair in respect of the residue deposit must be implemented to ensure the ongoing control of pollution, the integrity of rehabilitation and health and safety matters at the site.*

*(b)*

*The design of the residue stockpile and deposit must take into account all phases of the life cycle of the stockpile and deposit, from construction through to closure and must include*

*(i) the characteristics of the mine residue;*

*(ii) the characteristics of the site and the receiving environment;*

*(iii) the general layout of the stockpile or deposit, whether it is a natural valley, ring dyke, impoundment or a combination thereof and its 3-dimensional geometry at appropriate intervals throughout the planned incremental growth of the stockpile or deposit;*

*(iv) the type of deposition method used; and (v) the rate of rise of the stockpile or deposit.*

*A monitoring system for residue stockpiles and deposits with respect to potentially significant impacts as identified in the environmental assessment must be included in the environmental management programme or environmental management plan.*

7 *Monitoring of residue stockpiles and deposits:*

*(a)*

*In the design of a monitoring system for a residue stockpile or deposit, consideration must be given to*

*(i) baseline and background conditions with regard to air, surface and groundwater*

*quality;*

*(ii) the air, surface and groundwater quality objectives;*

*(iii) residue characteristics;*

*(iv) the degree and nature of residue containment;*

*(v) the receiving environment and specifically the climatic, local geological, hydrogeological and geochemical conditions;*

*(vi) potential migration pathways;*

*(vii) potential impacts of leachate;*

*(viii) the location of monitoring points and the prescribed monitoring (ix) protocols; and the reporting frequency and procedures.*

*(7) Decommissioning, closure and after care:*

*(a)*

*The decommissioning, closure and post closure management of residue deposits must be addressed in the closure plan, which must contain the following*

*(i) the environmental classification, including assumptions on which the classification*

*were based;*

*(ii) the closure objectives, final land use or capability; conceptual description*

*(iii) and details for closure and post closure cost estimates and financial*

*(iv) provision for closure and post-closure. And*

*(v) residual impacts, monitoring and requirements to obtain mine c the Act.*

*The holder of any right or permit in terms of the Act, must ensure that*

*(i) the residue deposits, including any surrounding catchment paddocks, is constructed and operated in accordance with the approved environmental management programme or environmental management plan;*

*(ii) the design of the residue deposit is followed implicitly throughout the construction thereof, and that any deviations from the design be approved by the Regional Manager and the environmental management programme and environmental management plan be amended accordingly;*

*(iii) as part of the monitoring system, measurements of all residues transported to the site and of all surplus water removed from the site are recorded;*

*(iv) the provision for appropriate security measures be implemented to omit unauthorised access to the site and intrusion into the residue deposit; (v) specific*

*action be taken in respect of any sign of pollution; (vi) adequate measures be implemented to control dust pollution and erosion of the slopes; and*

*(vii) details of rehabilitation of the residue deposit be provided in the draft environmental management programme or environmental management plan.*

## F.7 FINAL REHABILITATION

- All infrastructure, equipment plant, temporary housing and other items used during the mining period will be removed from the site (section 44 of the MPRDA) Waste
- material of any description, including receptacles, scrap, rubble and tires, will be removed entirely from the mining area and disposed of at a

*As part of the general terms and conditions for a prospecting right, mining right or mining permit and in order to ensure compliance with the approved environmental management programme or plan and to assess the continued appropriateness and adequacy of the environmental management programme or plan, the holder of such right must*

- (a) conduct monitoring on a continuous basis;*
- (b) conduct performance assessments of the environmental management programme or plan as required; and*
- compile and submit a performance assessment report to the Minister to demonstrate adherence to sub-regulation (b).*

recognized landfill facility. It will not be permitted to be buried or burned on the site.

- Final rehabilitation shall be completed within a period specified by the Regional Manager.

### F.7.1 MONITORING AND REPORTING

#### F.7.1.1 INSPECTIONS AND MONITORING

- Regular monitoring of all the environmental management measures and components shall be carried out by the holder of the prospecting right~ mining permit or reconnaissance permission in order to ensure that the provisions of this programme are adhered to.
- Ongoing and regular reporting of the progress of implementation of this programme will be done.
- Various points of compliance will be identified with regard to the various impacts that the operations will have on the environment
- Inspections and monitoring shall be carried out on both the implementation of the programme and the impact on plant and animal life.
- Visual inspections on erosion and physical pollution shall be carried out on a regular basis.

Regulation 55 promulgated in terms of the MPRDA requires the following:

#### Monitoring and performance assessments of environmental management programme or plan

*When the holder of a prospecting right, mining right or mining permit intends closing such operation, a final performance assessment shall be conducted and a report submitted to the Minister ensure that*

- (a) the requirements of the relevant legislation have been complied with;*
- (b) the closure objectives as described in the environmental management programme or plan have been met; and*
- all residual environmental impacts resulting from the holder's operations have been identified and the risks of latent impacts, which may occur, have been identified, quantified and arrangements for the management thereof have been assessed.*

*Subject to section 30(2) of the Act, the performance assessment report submitted by the holder shall be made available by the Minister to any person on request.*

*The final performance assessment report shall either precede or accompany the application for a closure certificate in terms of the Act.*

## **10. COMPLIANCE REPORTING / SUBMISSION OF INFORMATION**

- Layout plans will be updated on a regular basis and updated copies will be submitted on a biennial basis to the Regional Manager
- Reports confirming compliance with various points identified in the environmental management programme will be submitted to the Regional Manager on a regular basis and as decided by the said manager.
- Any emergency or unforeseen impact will be reported as soon as possible.
- An assessment of environmental impacts that were not properly addressed or were unknown when the programme was compiled shall be carried out and added as a corrective action.

### **F.8 CLOSURE**

When the holder of a prospecting right mining permit or reconnaissance permission intends closing down his/her operations, an environmental risk report shall

*The performance assessment report, shall be in the format provided in guidelines that will from time to time be published by the Department and shall as a minimum contain*

- (a) information regarding the period that applies to the performance assessment;*
- (b) the scope of the assessment;*
- (e) the procedure used for the assessment;*
- (d) the interpreted information gained from monitoring the approved environmental management programme or plan;*
- the evaluation criteria used during the assessment;*
- the results of the assessment; and*
- recommendations on how and when deficiencies that are identified and/or aspects of non-compliance will be rectified.*

*The holder of a prospecting right, mining right or mining permit may appoint an independent qualified person(s) to conduct the performance assessment and compile the performance assessment report provided that no such appointment shall relieve the holder of the responsibilities in terms of these regulations.*

accompany the application for closure. The requirements of such a risk report is contained in Regulation 60 of the Regulations promulgated in terms of the Act and is quoted below:

*If upon consideration by the Minister, the performance assessment executed by the holder is not satisfactory or the report submitted by the holder is found to be unacceptable, the holder must*

- (a) repeat the whole or relevant parts of the performance assessment and revise and resubmit the report; and/or*
- submit relevant supporting information; and/or*
- appoint an independent competent person(s) to conduct the whole or part of the performance assessment and to compile the report.*

*If a reasonable assessment indicates that the performance assessment cannot be executed satisfactorily by the holder or a competent person(s) appointed by the holder, the Minister may appoint an independent performance assessment person(s) to conduct such performance assessment. Such appointment and execution shall be for the cost of the holder.*

**F.8.1 ENVIRONMENTAL RISK REPORT****F.8.2 CLOSURE OBJECTIVES**

Closure objectives form part of this EMPlan and must

- a) identify the key objectives for mine closure to guide development and management of environmental objectives; provide broad
- b) future land use objective(s) for the site; and provide proposed
- c) closure cost

**F.8.3 CONTENTS OF CLOSURE PLAN**

A closure plan forms part of the EMP and must include the following:

- a) a description of the closure objectives and how these relate to the prospecting or mine operation and its environmental and social setting;
- b) a plan contemplated in Regulation 2(2), coordinated according to generally accepted standards, showing the land or area under closure;
- c) a summary of the regulatory requirements and conditions for closure negotiated and documented in the environmental management programme or plan;
- d) a summary of the results of the environmental risk report and details of identified residual and latent impacts;
- e) a summary of the results of progressive rehabilitation undertaken;
- f) a description of the methods to decommission each prospecting or mining component and the mitigation or management strategy proposed to avoid,

*An application for a closure certificate must be accompanied by an environmental risk report which must include*

- (a) *the undertaking of a screening level environmental risk assessment where*
  - (i) *all possible environmental risks are identified, including those, which appear to be insignificant; (ii) the process is based on the input from existing data; (iii) the issues that are considered are qualitatively ranked as*
    - (aa) *a potential significant risk; and/or*
    - (bb) *a uncertain risk; and/or*
    - (cc) *an insignificant risk.*
  - the undertaking of a second level risk assessment on issues classified as potential significant risks where*
    - (i) *appropriate sampling, data collection and monitoring be carried out;*
    - (ii) *more realistic assumptions and actual measurements be made; and*
    - (iii) *a more quantitative risk assessment is undertaken, again classifying issues as posing a potential significant risk or insignificant risk.*
  - assessing whether issues classified as posing potential significant risks are acceptable without further mitigation;*
  - issues classified as uncertain risks be re-evaluated and re-classified as either posing potential significant risks or insignificant risks;*
  - documenting the status of insignificant risks and agree with interested and affected persons;*
  - identifying alternative risk prevention or management strategies for potential significant risks which have been identified, quantified and qualified in the second level risk assessment;*
  - agreeing on management measures to be implemented for the potential significant risks, which must include*
    - (i) *a description of the management measures to be applied;*
    - (ii) *a predicted long-term result of the applied management measures;*
    - (iii) *the residual and latent impact after successful implementation of the management measures;*
    - (iv) *time frames and schedule for the implementation of the management measures;*
    - (v) *responsibilities for implementation and long-term maintenance of the management measures;*
    - (vi) *financial provision for long-term maintenance; and (vii) monitoring programme to be implemented.*



- minimize and manage residual or latent impacts;
- g) details of any long-term management and maintenance expected;
- h) details of financial provision for monitoring, maintenance and post closure management if required;
- i) a plan or sketch at an appropriate scale describing the final land use proposal and arrangements for the site;
- j) a record of interested and affected persons consulted; and
- k) technical appendices, if any.

#### **F.8.4 TRANSFER OF ENVIRONMENTAL LIABILITIES TO A COMPETENT PERSON**

Should the holder of a prospecting right mining permit or reconnaissance permission wish to transfer any environmental liabilities and responsibilities to another person or persons, the following will pertain:

- (1) An application to transfer environmental liabilities to a competent person in terms of section 48) of the Ac~ must be completed on Form 0 as set out in Annexure 1 to the Regulations and be lodged to the Minister for consideration.
- (2) The holder of a prospecting right~ mining right or mining permit may transfer liabilities and responsibilities as identified in the environmental management plan and the required closure plan to a competent person as contemplated in Regulation 58.
- (3) When considering the transfer of environmental liabilities and responsibilities in terms of section 48) of the Ac~ the Minister must consult with any State department which administers any law relating to matters affecting the environment
- (4) No transfer of environmental liabilities and responsibilities to a competent person may be made unless the Chief Inspector of Mines and the Department of Water Affairs and Forestry have confirmed in writing that the person to whom the liabilities and responsibilities is transferred to, have the necessary qualifications pertaining to health and safety and management of potential pollution of water resources.

#### **F.8.S NOTES ON LEGAL PROVISIONS**

**NOTES:** The holder of a prospecting right, mining permit or reconnaissance permission must also take cognisance of the provisions of other legislation dealing with matters relating to conservation, and which include, *inter alia*, the following:

- National Monuments Act 1969 (Act 28 of 1969).
- National Parks Act 1976 (Act 57 of 1976)
- Environmental Conservation Act 1989 (Act 73 of 1989)
- National Environmental Management Act 1998 (Act No. 107 of 1998)
- Atmospheric Pollution Prevention Act, 1965 (Act 45 of 1965)
- The National Water Act, 1998 (Act 36 of 1998)
- Mine Safety and Health Act 1996 (Act 29 of 1996)
- The Conservation of Agricultural Resources Act 1983 (Act 43 of 1983).

## Section G

### G. SPECIFIC ADDITIONAL REQUIREMENTS DETERMINED BY THE REGIONAL MANAGER

Officials in regional offices may use the following matrix to determine the necessity for additional objectives to be included in this Section of the document:

POTENTIAL ENVIRONMENTAL IMPACTS OF MINING										
Activity	Disturbance					Pollution				Visual
	Landform	Soil	Flora	Fauna	Heritage	Land	Water	Air	Noise	
Mining	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Access	L	L	L	L	VL	VL	VL	VL	L	L
Topsoil removal	VL	L	VL	VL	VL	VL	VL	VL	VL	L
Overburden removal	N/A									
Mineral Extraction	N/A									
Tailings disposal	N/A									
Water Abstraction	N/A									
Pipeline route	N/A									
Transport	N/A									
Accommodation	N/A									
Waste Disposal	N/A									
Electricity	N/A									
Hydrocarbon storage	N/A									
Workforce	N/A	N/A								

Please indicate VL, L, M, H, and VH for Very Low, Low, Medium, high and Very High in each column to determine the main area and severity of impact.

G. This section outlines the specific additional requirements that may be set for the operation by the Regional Manager. Additional requirements will only have been set if the Regional Manager is of the opinion that there are specific impacts on the environment which will not be adequately mitigated by the provisions set within the standard version of the Environmental Management Plan. These requirements form part of the Environmental Management Plan and all elements and instructions contained herein must be complied with by the applicant

**Section H**

**UNDERTAKING**

I, Neel Khoza,

The undersigned and duly authorized thereto by

TOPAZ SKY TRADING 295 (PTY) LTD

Company have studied and understand the contents of this document in its entirety and hereby duly undertake to adhere to the conditions as set out therein including the amendment(s) agreed to by the Regional Manager in Section G and approved on.....

Signed at EMALAHLENI this 05 day of October 2008

.....  
Signature of applicant

DIRECTOR  
Designation

**Section J**

**J.APPROVAL**

Approved in terms of Section 39(4) of the Mineral and Resources Development Act, 2002  
(Act 29 of 2002).

Signed at.....this.....day of.....20.....

.....  
**REGIONAL MANAGER**

**REGION:**.....

October 2008

## Annexure A

### 1. Introduction

INTERMS OF Regulation 54 of the Mineral and Petroleum Resources Development Act (28 of 2002) Topaz Sky Trading 295 (PTY) LTD is required to determine the quantum of pecuniary provision for the rehabilitation requirements in respect to its Prospecting activities on the OLLEVENFONTEIN 475 KR, ZANDSPRUIT 472 KR, DROOGLAAGTE 485 KR, KLIPPART 490 KR, NOOITGEDACTH 489 KR, TURFBULT 494 KR, TWEEFONTEIN 462 KR AND TWEEFONTEIN 462 KR S. The quantum of pecuniary provision is based on the requirements stipulated in the Environmental Management Plan, using current contractors' prices, and reflects the provision necessary to rehabilitate all the prospecting actions. It should be noted that the quantum of provision is thus for the entire prospecting area and reflects the total rehabilitation cost for the project. the duration of the prospecting activities on site will be a maximum of 48 months.

### 2. Location

The proposed Topaz Sky Trading 295 (PTY) LTD's prospecting project is situated on the following farms: OLLEVENFONTEIN 475 KR, ZANDSPRUIT 472 KR, DROOGLAAGTE 485 KR, KLIPPART 490 KR, NOOITGEDACTH 489 KR, TURFBULT 494 KR, TWEEFONTEIN 462 KR AND TWEEFONTEIN 462 KR S.

### 3. Brief prospecting activity description

The proposed prospecting activities involve the drilling of geological boreholes on a predetermined grid. The geological boreholes will be drilled to intersect the underlying dwyka to ensure that all coal seams are intersected. Borehole cores will be logged, and samples taken from the coal seams for analyses. No access roads will be constructed since existing farm roads will be used to access the prospecting area. A campsite will be situated on the prospecting area. This campsite will consist of caravans.

### 4. Rehabilitation specifications as indicated in EMP

The following specifications are indicated for the rehabilitation of the prospecting area:

- Remove all foreign material from site.
- Rotovate all hardened surfaces and vegetate.
- Plug all prospecting boreholes with a concrete plug 0.5 meters below the natural ground level and backfill with topsoil and vegetate.

### 5. Pecuniary provision determination

The pecuniary provision was determined based on the proposed prospecting layout plan as indicated in the EMP and attached to this document. As such the determination represents the total rehabilitation cost of the prospecting project.

All affected areas were demarcated and areas determined.

Costs were determined on current contractor prices. Note that contractor prices are site specific. The following contractor's rates were used:

Installation of a concrete plug in boreholes, seeding included	<b>R150.00 per plug</b>
Backfill prospecting borehole sumps, seeding included	<b>R150.00 per borehole</b>
Rotovating (ripping)	<b>R150.00 per ha</b>
Seeding (incl. Labour)	<b>R150.00 per ha</b>

The following assumptions were used during the determination of costs:

#### *Installation of concrete plugs in boreholes*

The concrete plugs will be 0,4 x 0,4 x 0,2m. thus 0,032m of concrete will be necessary for each borehole.

#### *Cover concrete plugs with soil*

A 300mm layer of soil will be placed over the concrete plug. This soil is stockpiled in close proximity to the sump. The sumps can be backfilled manually by spade.

#### *Rotovation*

Cost based on hire of tractor, diesel and labour.

*Seeding*

Cost based on purchase of seed and labour to disperse the seed.

*Management*

A management component was included in the cost determination. This maintenance includes erosion control, follow-up seeding estimated at 15% of the rehabilitated areas.

The determination of the pecuniary provision for the year 2008 is expanded in Table 1.

Boased on the calculation indicted in table 1, the quantum of pecuniary provision required for the OLLEVENFONTEIN 475 KR, ZANDSPRUIT 472 KR, DROOGLAAGTE 485 KR, KLIPPART 490 KR, NOOITGEDACTH 489 KR, TURFBULT 494 KR, TWEEFONTEIN 462 KR AND TWEEFONTEIN 462 KR S. Prospecting area for the year 2008 is **R132, 237.5.50**

Note that the quantum is inclusive of 14% VAT.

The included VAT amount is R 18, 513.18

Table 1: Determination of pecuniary provision (2008) Elandfontein 401 KR; OLLEVENFONTEIN 475 KR, ZANDSPRUIT 472 KR, DROOGLAAGTE 485 KR, KLIPPART 490 KR, NOOITGEDACTH 489 KR, TURFBULT 494 KR, TWEEFONTEIN 462 KR AND TWEEFONTEIN 462 KR S, Topaz Sky Trading 295 (PTY) LTD

Action	Volume/Area	Rate	Cost	Sub-Total	
1.Rehabilitation of site office/campsite area.	1.5 ha	R1,500.00 ha	R2.250.00		
Renovation of hardened surface (Rip 100mm) seeding					
<b>Sub Total 1</b>				<b>R5,250.00</b>	
2. Rehabilitation of prospecting boreholes					
Placement of 0.4x0.4x0.2 concrete plugs and					
Replacement of soil over plug +	906		R 90,600.00		
seeding	906	R 100 Plugs R100.00 B/H	R 90,600.00		
<b>Sub Total 2</b>					
				<b>R181,200.00</b>	
<b>Total Rehabilitation</b>					<b>R 181,720.00</b>
<b>Management costs</b>					
Administration, Supervision,					
Development of a Closure plan					<b>R 20,00.00</b>
<b>Maintenance</b>	15% of total rehabilitation cost				<b>R27,258</b>
Erosion control, follow up seeding.					
<b>Total estimated pecuniary provision (to nearest thousand rand) inclusive of 14% vat</b>					<b>R 210, 978.00</b>