



mineral resources

Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

APPLICATION FORM FOR ENVIRONMENTAL AUTHORISATIONS IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 AND THE NATIONAL ENVIRONMENTAL MANAGEMENT WASTE ACT, 2008 IN RESPECT OF LISTED ACTIVITIES THAT HAVE BEEN TRIGGERED BY APPLICATIONS IN TERMS OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2002 (MPRDA) (AS AMENDED).

IMPORTANT NOTICE

Kindly note that:

1. As from 8 December 2014, this document serves as the application form, and incorporates the requisite documents that are to be submitted together with the application for the necessary environmental authorisations in terms of the said Acts.
2. This application form is applicable while the Mineral and Petroleum Resources Development Amendment Act of 2008 is in effect, as the form may require amendment should the Act be further amended.
3. Applicants are required to apply for the necessary water use licence and any other authorisations nor licences to the relevant competent authorities as required by the relevant legislation. Upon acceptance of an application for a right or permit in terms of the MPRDA, applicants will be required to provide evidence to the Regional Manager that a water use licence has been applied for.
4. The Regional Manager will respond to the application and provide the reference and correspondence details of the Competent Authority, and in the event that the application for a right or permit is accepted, together with the date by which the relevant environmental reports must be submitted. Notwithstanding anything that may appear to be stated to the contrary in the acceptance letter, the timeframes are in fact aligned and the prescribed timeframes for the submission of documents as regulated by the NEMA regulations must be strictly adhered to.
5. The application must be typed within the spaces provided in the form. The sizes of the spaces provided are not necessarily indicative of the amount of information to be provided. Spaces are provided in tabular format and will extend automatically when each space is filled with typing.
6. The failure to submit complete information as required in this application form may result in the refusal of the application for an environmental authorisation and consequently of the right or permit applied for.
7. This application must be submitted through the SAMRAD online application system of the Department of Mineral Resources under "Other documents to upload".
8. Unless protected by law, all information filled in on this application form will become public information on receipt by the competent authority. Any interested and affected party should and shall be provided with the information contained in this application on request, during any stage of the application process.
9. Please note that an application fee is payable in terms of the National Environmental Management Act and the National Waste Management Act, which fees must be paid upon lodgement of the application. Should the said application fees not be paid as prescribed the application for a right or permit in terms of the Mineral and Petroleum Resources Development Act cannot be considered to have been made in the prescribed manner and the said application for a right or permit will have to be rejected. In this regard the type of applications must be identified in the table below.

PLEASE STATE TYPE OF AUTHORISATIONS BEING APPLIED FOR.

APPLICATION TYPE	APPLICABLE FEE	Mark with an X where applicable
NEMA S&EIR application on its own	R10 000.00	<input type="checkbox"/>
NEMA BAR application on its own	R 2 000.00	<input checked="" type="checkbox"/>
NEMWA S&EIR application on its own	R10 000.00	<input type="checkbox"/>
NEMWA BAR application on its own	R 2 000.00	<input type="checkbox"/>
NEMA S&EIR application combined with NEMWA S&EIR application	R 15 000.00	<input type="checkbox"/>
NEMA BAR application combined with NEMWA BAR application	R 3 000.00	<input type="checkbox"/>
NEMA S&EIR application combined with NEMWA BAR application	R 11 000.00	<input type="checkbox"/>

1. CONSULTATION BASIC ASSESSMENT AND/ OR SCOPING REPORT

The Draft Basic Assessment Report has been compiled in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA), the Environmental Impact Assessment Regulations (2014) GNR. 982 dated 04 December 2014 thereunder and the National Environmental Management Waste Act, 2008 (Act No.59 of 2008) (NEMWA). The Draft Basic Assessment Report is being made available for public comment at the between 2 July 2018 and 3 August 2018, for a period of thirty (30) days. The Basic Assessment Report will then be finalised to include comments received during the Public Participation Process and thereafter submitted to the Department of Mineral Resources (DMR). Refer also to Section 6 below for further information regarding the Public Participation Process.

2. DETAILS OF THE APPLICANT

Project applicant:	Imerys Refractory Minerals (Pty) Ltd. Anref Andalusite Mine		
Registration no (if any):	M1973/012351/07		
Trading name (if any):			
Responsible Person, (e.g. Director, CEO, etc.):	Hendrik Jones (Operations Manager)		
Contact person:	Hendrik Jones		
Physical address:	Sanlameerzicht, 259 West Street, Centurion		
Postal address:	Sanlameerzicht, 259 West Street, Centurion		
Postal code:	0157	Cell:	082 467 4532
Telephone:	+27 (0)12 643 5880	Fax:	+27 (0)12 643 1966
E-mail:	hendrik.jones@imerys.com		

3. ENVIRONMENTAL ASSESSMENT PRACTITIONER (EAP) INFORMATION

EAP:	Shangoni Management Services (Pty) Ltd.		
Professional affiliation/registration:	-		
Contact person (if different from EAP):	Anika van Vuuren		
Company:	Shangoni Management Services (Pty) Ltd.		
Physical address:	Block C8, Block@Nature, 472 Botterklapper Ave, The Willows, 0081		
Postal address:	P.O. Box 74726, Lynwood Ridge		
Postal code:	0040	Cell:	0769411354
Telephone:	(012) 807 7036	Fax:	0128071014
E-mail:	anika@shangoni.co.za		

If an EAP has not been appointed please ensure that an independent EAP is appointed as stipulated by the NEMA Regulations, prior to the commencement of the process.

The declaration of independence and the Curriculum Vitae (indicating the experience with environmental impact assessment and relevant application processes) of the EAP must also be attached as **Appendix 1**.

4. PROJECT DESCRIPTION

Farm Name:	Portions 12, 13 and the remainders of Portion 8 & 11 of the Farm Kleinfontein 260 JP, Portion 1 and the former Portions 24, 39, 41, 42 and 44 of the Farm Driefontein 259 JP and the remainder of Portion 9 and the Mineral Area 2 of the Farm Wonderfontein 258 JP																					
Application area (Ha)	68 ha																					
Magisterial district:	Ramotshere Moiloa Magisterial District																					
Distance and direction from nearest town	6.5 km west from Groot Marico																					
21-digit Surveyor General Code for each farm portion	T	O	J	P	0	0	0	0	0	0	0	0	0	2	6	0	0	0	0	1	1	
	T	O	J	P	0	0	0	0	0	0	0	0	0	2	6	0	0	0	0	0	1	2
	T	O	J	P	0	0	0	0	0	0	0	0	0	2	6	0	0	0	0	0	1	3
	T	O	J	P	0	0	0	0	0	0	0	0	0	2	6	0	0	0	0	0	0	8
	T	0	J	P	0	0	0	0	0	0	0	0	0	2	5	9	0	0	0	0	0	1
	T	0	J	P	0	0	0	0	0	0	0	0	0	2	5	9	0	0	0	0	2	4
	T	0	J	P	0	0	0	0	0	0	0	0	0	2	5	9	0	0	0	0	3	9
	T	0	J	P	0	0	0	0	0	0	0	0	0	2	5	9	0	0	0	0	4	1
	T	0	J	P	0	0	0	0	0	0	0	0	0	2	5	9	0	0	0	0	4	2
	T	0	J	P	0	0	0	0	0	0	0	0	0	2	5	9	0	0	0	0	4	4
	T	0	J	P	0	0	0	0	0	0	0	0	0	2	5	8	0	0	0	0	0	9
Locality map	Attach a locality map at a scale not smaller than 1:250000 and attach as Appendix 2 .																					
Description of the overall activity. (Indicate Mining Right, Mining Permit, Prospecting right, Bulk Sampling, Production Right, Exploration Right,	<ul style="list-style-type: none"> • Mining Right DMR file reference Number: NW30/5/1/2/2/522MR. • Anref was an Andalusite mine situated west from the town of Groot Marico, which is 25 km east of Zeerust in the North-West Province. • The mine consisted of 5 quarries, one slimes dam, two waste rock dumps (WRDs) and two sheds, used for agricultural activities. No plant or administrative buildings, no drilling or blasting took place. • The mine has not been operational since 2008. • End land use cattle grazing. Large portions of the area already utilised by cattle farmer (grazing on shaped dumps & quarries for water supply). 																					

Reconnaissance permit, Technical co-operation permit, Additional listed activity)	<ul style="list-style-type: none"> Concurrent rehabilitation during the project life that included shaping and seeding the WRDs, vegetation establishment on the slimes dam, establishment of safety berms around the quarries and sloping quarry walls to allow access to water by farm animals. The current financial provision available for Anref Mine is R 959,636 (including VAT).
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5. ACTIVITIES TO BE AUTHORISED

(Please provide copies of Environmental Authorisations obtained for the same property as **Appendix 3**).

(For an application for authorisation that involves more than one listed activity that, together, make up one development proposal, all the listed activities pertaining to this application must be indicated. Please note that any authorisation that may result from this application will only cover activities specifically applied for). (Attach a proposed site plan, drawn to a scale acceptable to the competent Authority, showing the location of all the activities to be applied for, as **Appendix 2**).

NAME OF ACTIVITY (E.g. For prospecting - drill site, site camp, ablation facility, accommodation, equipment storage, sample storage, site office, access route etc....etc....etc. E.g. for mining,- excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablation, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc...etc...etc.)	Aerial extent of the Activity Ha or m ²	LISTED ACTIVITY (Mark with an X where applicable or affected).	APPLICABLE LISTING NOTICE (GNR 544, GNR 545 or GNR 546)	WASTE MANAGEMENT AUTHORISATION (Indicate whether an authorisation is required in terms of the Waste Management Act). (Mark with an X)
Decommissioning and closure of the Anref mine, which includes the biophysical areas: <ul style="list-style-type: none"> Waste rock dumps, Slimes dam, Access roads Opencast quarries 	68 ha	X	GN R983 of 04 December 2014: Activity 22 (i)	N/A

6. PUBLIC PARTICIPATION

(Provide details of the public participation process proposed for the application as required by Regulation.

Details of the Public Participation process to be followed.

6.1.1. IDENTIFICATION OF INTERESTED AND AFFECTED PARTIES TO BE CONSULTED

IDENTIFICATION CRITERIA	Mark with an X where applicable	
	YES	NO
Will the landowner be specifically consulted?	X	
Will the lawful occupier on the property other than the Landowner be consulted?	X	
Will a tribal authority or host community that may be affected be consulted?	X	
Will recipients of land claims in respect of the area be consulted?		X

Will the landowners or lawful occupiers of neighbouring properties been identified?	X	
Will the local municipality be consulted?	X	
Will the Authority responsible for power lines within 100 metres of the area be consulted?	X	
Will Authorities responsible for public roads or railway lines within 100 metres of the area applied for be consulted?	X	
Will authorities responsible for any other infrastructure within 100 metres of the area applied for be consulted? (Specify)		X
Will the Provincial Department responsible for the environment be consulted?	X	
Will all of the parties identified above be provided with a description of the proposed mining /prospecting operation as referred above?	X	
Will all the parties identified above be requested in writing to provide information as to how their interests (whether it be socio-economic, cultural, heritage or environmental) will be affected by the proposed mining project?	X	
Other, Specify		

DETAILS OF THE ENGAGEMENT PROCESS TO BE FOLLOWED

<p>Steps to be taken to notify interested and affected parties (Describe the process to be undertaken to consult interested and affected parties including public meetings and one on one consultations. NB the affected parties must be specifically consulted regardless of whether or not they attended public meetings. Photographs of notice boards, and copies of advertisements and notices notifying potentially interested and affected parties of the proposed application must be attached as Appendix)</p>	<p>PROVIDE DESCRIPTION HERE</p> <p>Key stakeholders will be identified and directly informed of the proposed development by means of the following:</p> <ul style="list-style-type: none"> • Background information document will be sent to the interested and affected parties (I&APs), • Written notices <ul style="list-style-type: none"> • Registered post, • Faxes, • Emails, and • Site notices <p style="margin-left: 40px;">Notice boards (A2 size) in English will be erected at the mine entrance.</p> • Newspaper advertisements <p style="margin-left: 40px;">Advertisements, notifying the public of the project and the Basic Assessment process will be placed in the <i>Noordwester</i>.</p> <p>The draft Basic Assessment Report, EMPr and Closure documentation will be made available for review for 30 days via the following methods:</p> <p>Digital Copy: www.shangoni.co.za</p> <p>Consultation with stakeholders during finalisation of the public participation will entail:</p> <ul style="list-style-type: none"> • Updating the Issues and Response Report with comments on the draft BAR and EMPr.
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	Once DMR has made a decision, registered stakeholders will be notified of the decision.
Information to be provided to Interested and Affected Parties.	<p>Compulsory</p> <ul style="list-style-type: none"> • The site plan. • List of activities to be authorised • Scale and extent of activities to be authorised • Typical impacts of activities to be authorised (e.g. Surface disturbance, dust, noise, drainage, fly rock etc.) • The duration of the activity. • Sufficient detail of the intended operation to enable them to assess what impact the activities will have on them or on the use of their land. <p>Other, specify: The draft BAR, EMPr and closure plan will be uploaded on the Shangoni website and made available to I&APs for a review period of 30 days.</p>
Information to be required from Interested and Affected Parties.	<p>Compulsory</p> <ul style="list-style-type: none"> • To provide information on how they consider that the proposed activities will impact on them or their socio-economic conditions • To provide written responses stating their suggestions to mitigate the anticipated impacts of each activity • To provide information on current land uses and their location within the area under consideration • To provide information on the location of environmental features on site to make proposals as to how and to what standard the impacts on site can be remedied. • Interested and affected parties are requested to make written proposals. • To mitigate the potential impacts on their socio-economic conditions to make proposals as to how the potential impacts on their infrastructure can be managed, avoided or remedied. <p>Other, Specify</p>

7. Description of the assessment process to be undertaken

ITEM	DESCRIPTION
<p>Environmental attributes. Describe how the Environmental attributes associated with the development footprint will be determined.</p>	<p>The following have been identified by Shangoni Management Services as steps to be undertaken that will be sufficient in describing how the attributes associated with the footprint will be determined:</p> <ul style="list-style-type: none"> • A site visit to determine the current status quo of the area. • Review of available information. • Making use of spatial tools (such as GIS) to determine the status quo of the site in relation to the surrounding environment. <p>Consultation with the applicant representatives for technical input and designs</p> <p>As part of the proposed project, all aspects of the environment are considered and include (but are not limited to):</p> <ul style="list-style-type: none"> • Geology, • Topography, • Soil, • Land use and land capability, • Vegetation, • Animal Life, • Surface water, • Groundwater, • Sensitive landscapes, • Air quality, • Noise, • Visual aspects, • Sites of cultural and archaeological importance, • Socio-economic aspects. <p>These aspects of the environment were assessed and described in detail in the Draft Basic Assessment Report.</p>
<p>Identification of impacts and risks. (Describe the process that will be used to identify impacts and risks.</p>	<p>Impacts and risks on the various environmental aspects will be determined through the comparison of the proposed activities, phases of the activities as well as the duration of the proposed activities with the baseline environmental situation and sensitivity of the area (obtained through specialist studies). The potential risks will be further described and assessed in detail as part of the Basic Assessment. These potential risks will also be ranked and the significance determined.</p>
<p>Consideration of alternatives. Describe how alternatives, and in particular the alternatives to the proposed site layout and possible alternative methods or technology to be applied will be determined.</p>	<p>Alternatives (where and if applicable) will be determined through:</p> <ul style="list-style-type: none"> • A site visit. • Review of available information. • Making use of spatial tools (such as GIS)

	<ul style="list-style-type: none"> • Consultation with the applicant representatives for technical input and designs.
<p>Process to assess and rank impacts. Describe the process to be undertaken to identify, assess and rank the impacts and risks each individual activity.</p>	<p>The environmental risks associated with any aspect of the environment is determined by plotting the significance of the impact against the probability of the impact occurring. The following approach will be taken in order to assess and rank the risks of the proposed activity:</p> <p>Step 1: Determination of the Probability of the impact by calculating the average between the following factors:</p> <ul style="list-style-type: none"> • Frequency of the aspect. • Availability of a pathway to the receptor. • Availability of the receptor. <p>Step 2: Determination of the Magnitude of the impact by calculating the average of the following factors:</p> <ul style="list-style-type: none"> • Duration of impact. • Reversibility. • Extent. • Volume / Quantity / Intensity. • Toxicity / Destruction effect. • Sensitivity of environmental component. <p>Step 3: Determination of the Severity of the impact by plotting the averages that were obtained in Step 1 and Step 2 above for Probability and Magnitude, respectively.</p>
<p>Contribution of specialist reports Describe how specialist reports, if required, will be taken into consideration and inform the impact identification, assessment and remediation process.</p>	<p>No additional specialist studies will be conducted for the decommissioning, rehabilitation and closure of the mining area. Existing specialist studies will be utilised in compilation of the BAR and EMP.</p>
<p>Determination of impact management objectives and outcomes. Describe how impact management objectives will be determined for each activity to address the potential impact at source, and how the impact management outcomes will be aligned with standards.</p>	<p>The comparison of the baseline environment with proposed project will allow for the determination of possible impacts and risks associated with the proposed project (refer also to the description of impact assessment). The objectives are then determined by identifying technical or management options to modify, remedy, control or stop any action, activity, or process which will cause significant impacts on the environment, socio-economic conditions and historical and cultural aspects. Therefore, in the process of determining the impact management objectives, appropriate mitigations measures are also identified.</p>

8. OTHER AUTHORISATIONS REQUIRED

LEGISLATION	Mark with an X where applicable			
	AUTHORISATION REQUIRED		APPLICATION SUBMITTED	
	YES	NO	YES	NO
SEMA s				
National Environmental Management: Air Quality Act		X		X
National Environmental Management: Biodiversity Act		X		X
National Environmental Management: Integrated Coastal Management Act		X		X
National Environmental Management: Protected Areas Act		X		X
National Environmental Management: Waste Act		X		X
National legislation				
Mineral Petroleum Development Resources Act		X		X
National Water Act		X		X
National Heritage Resources Act		X		X
Others: Please specify		X		X

Please provide proof of submission of applications in **Appendix 4**.

In the event that an authorization in terms of the National Environmental Waste Management Act is required for any of the activities applied for please state so clearly in order for such an authorisation to be considered as part of this application.

9. **DRAFT EMPR**
For consultation purposes, provide a high level approach to the management of the potential environmental impacts of each of the activities applied for.

ACTIVITIES	PHASE (of operation in which activity will take place).	SIZE AND SCALE (of Disturbance)	TYPICAL MITIGATION MEASURES	COMPLIANCE WITH STANDARDS
<p>(E.g. For prospecting - drill site, site camp, ablation facility, accommodation, equipment storage, sample storage, site office, access route etc...etc...etc</p> <p>E.g. for mining - excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablation, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc...etc...etc.)</p>	<p>State: Planning and design, Pre-Construction Construction, Operational, Rehabilitation, Closure, Post closure.</p>	<p>(volumes, tonnages and hectares or m²)</p>	<p>(Eg. storm water control, dust control, noise control, access control, rehabilitation etc..... etc.....)</p> <ul style="list-style-type: none"> Rehabilitation measures have been implemented to allow for the re-establishment of vegetation on WRD and slimes dam. During the decommissioning phase all slopes need to be finished to the prescribed 18degree slope. Reduce the visual impact of the altered topography by a process of sloping, benching and rehabilitation. Paddocks should be made on top of the old tailings dam and the waste rock dump. These paddocks should assist in retaining surface runoff to promote vegetation growth as well as to prevent erosion down the side slopes. Rocky bunding in the concentrated drainage 	<p>(A description of how each of the recommendations herein will comply with any prescribed environmental management standards or practices that have been identified by Competent Authorities)</p>
<p>Decommissioning and closure of the Anref mine, which includes the biophysical areas:</p> <ul style="list-style-type: none"> Waste rock dumps (WRD), Slimes dam, Access roads Opencast quarries 	<p>Decommissioning & rehabilitation</p>	<p>68 ha</p>	<ul style="list-style-type: none"> Rehabilitation measures have been implemented to allow for the re-establishment of vegetation on WRD and slimes dam. During the decommissioning phase all slopes need to be finished to the prescribed 18degree slope. Reduce the visual impact of the altered topography by a process of sloping, benching and rehabilitation. Paddocks should be made on top of the old tailings dam and the waste rock dump. These paddocks should assist in retaining surface runoff to promote vegetation growth as well as to prevent erosion down the side slopes. Rocky bunding in the concentrated drainage 	<p>Biodiversity and alien invasive management in accordance with NEMBA, 2004.</p> <p>Dust suppressing methods to reduce dust to comply with the Dust Control Regulation GNR 827 of 2013 and NEM:AQA, 2004.</p> <p>Noise control measures in compliance with Code SABS 0328 of 2008</p> <p>Water management measures in compliance with NWA, 1998 and GN 704, 1999.</p> <p>Compliance with DWS's Best Practice Guideline Series in terms of integrated</p>

			<p>areas should decrease the velocity of the runoff to prevent erosion threatening siltation of the water resources.</p> <ul style="list-style-type: none"> The pits have caused destruction of vegetation. Vegetation will return to the pit area once mining has ceased but it will not revert back to the original state prior to mining. The rehabilitation plan will identify appropriate measures in this regard. Water has gathered in the open pit areas. No dewatering will take place and the water will be left for use by local farmers, to recharge the ground water and to evaporate. 	<p>water and waste management and monitoring.</p> <p>Reasonable precaution will be taken to prevent spillage and in case there is spillage, cleaning procedures to be undertaken in order to comply with the principles of pollution prevention and duty of care (NEMA, 1998).</p> <p>Managing general and/or hazardous waste in a manner as to comply with NEM:WA, 2008.</p>
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10. CLOSURE PLAN

<p>In the space provided under each heading below, please provide a high level description of the plan for closure and the information that will be provided in the draft EMPr accompanying draft basic assessment report or environmental impact reports going forward.</p>	
<p>Baseline environment Describe how the baseline environment will be determined with the input of interested and affected parties and due cognizance of the current land uses and or existing biophysical environment</p>	<p>The baseline environment will be determined in line with information from the closure plan, EMPR, rehabilitation plan and relevant documents.</p>
<p>Closure objectives Describe the closure objectives and the extent to which they will</p>	<p>The proposed end-use for this site is cattle or game farming/grazing. Large portions of the area are already utilised by cattle farmers making use of the quarry to the east for livestock watering. All rehabilitation activities should be conducted with the end land use in mind. The list below contains the closure objectives.</p>

<p>be aligned to the baseline environment</p>	<p>Topography</p> <ol style="list-style-type: none"> 1. During the decommissioning phase, all slopes need to be finished to the prescribed 1:3 slope. 2. Reduce the visual impact of the altered topography by a process of sloping, benching and rehabilitation. <p>Soils</p> <ol style="list-style-type: none"> 1. The re-introduction of the topsoil will return the land to its previous land capability. 2. Remove contaminated soil. <p>Land capability and land use</p> <ol style="list-style-type: none"> 1. The land will be returned to cattle/game farming or utilised for other purposes that may become viable in the time of operation. 2. The decommissioning process must take the final use into account in order to achieve a sustainable use. <p>Natural vegetation</p> <ol style="list-style-type: none"> 1. During the decommissioning phase, the final portions of the mined area must be vegetated and care should be taken to investigate the total area previously mined to identify areas where the progressive rehabilitation and vegetation has not been totally successful. 2. Special care should be given to: <ul style="list-style-type: none"> • Quality of vegetation; • Any noxious plants and exotic plants that have established themselves and that have to be removed; and • Any signs of erosion. • Corrective measures need to be taken depending on the problems identified. <p>Animal life</p> <ol style="list-style-type: none"> 1. Animal life will start returning throughout the process of continuous rehabilitation and it is important that disturbance in rehabilitated areas be limited to the minimum. <p>Surface water</p> <ol style="list-style-type: none"> 1. Landscaping should facilitate surface runoff and result in free draining areas. <p>Air quality</p> <ol style="list-style-type: none"> 1. To remove any forms of dust generation due to mining activities. <p>The following objectives were identified for the different mining areas:</p> <ol style="list-style-type: none"> 1) Old slimes dam <ol style="list-style-type: none"> a) Although the slimes dam walls are very steep, it is already well vegetated and further disturbance will not add value. 2) Large waste rock dump
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	<p>a) Visually, the southern side wall is the most significant as it is visible from the national road. The objective is to decrease the height and reduce the slope in order to successfully re-vegetate.</p> <p>b) Material from the waste rock dump will also be used to fill the depression to the north of the WRD and the eastern quarry.</p> <p>c) The mine may also consider selling some of the waste rock material to use during construction or upgrading of roads.</p> <p>3) Topsoil stockpiles east and west Material from the topsoil stockpiles will mainly be used for final sloping and cover to promote vegetation growth. Unused topsoil will be sloped into low lying cavities to allow gradual topography with free drainage.</p> <p>4) Quarry east</p> <p>a) Benches will be sloped using cut and fill techniques.</p> <p>b) The water body to the east will remain intact while the floor to the west of this quarry will be filled with material from the north and south slopes.</p> <p>c) Rocky contours are proposed within main drainage lines to reduce runoff velocity and prevent siltation of the water body.</p> <p>5) Quarry west</p> <p>a) Benches will be sloped using cut and fill techniques.</p> <p>b) The water body will remain intact with sloping of the surrounding high walls limited to the current footprint of the water body.</p> <p>c) Prevention of siltation is again proposed using rocky bund walls within the main drainage lines towards the water body.</p> <p>d) Final slopes around both quarries should allow at least one section with safe and easy access for animals to reach the water.</p> <p>6) Quarry north</p> <p>a) The only objective for the northern quarry is to make it safe by sloping the benches using cut and fill techniques.</p>
<p>Rehabilitation Plan Describe the scale and aerial extent of the prospecting or mining listed activities to be authorised, including the anticipated prospecting or mining area at the time of closure, and confirm that a site rehabilitation plan drawn to a suitable scale will be provided in the draft EMPr to be submitted together with the draft EIR or Basic Assessment Report as the case may be.</p>	<p>The total area owned by the mine is approximately 68 ha.</p> <p>As part of concurrent rehabilitation unused and unwanted structures will be demolished prior to closure. The end land use is grazing.</p> <p>The rehabilitation schedule is incorporated into the financial provision of the mine to ensure sufficient budget for the planned annual actions. The main activities are:</p> <ul style="list-style-type: none"> • Biophysical – sloping, moonscaping, planting and making safe of areas is scheduled to continue from the concurrent rehabilitation that was done during mining, to completed rehabilitation in 2017. • Transition management – monitoring will continue during the decommissioning and rehabilitation, until 2018, after which the DMR may issue a closure certificate or request further monitoring or rehabilitation measures to be taken.
<p>Rehabilitation Cost</p>	<p>Preliminary estimate for rehabilitation cost which includes biophysical and post closure monitoring is R 959,636, including VAT.</p>

Describe how the rehabilitation cost will be determined and provide a preliminary estimate thereof

The following steps were taken to update the environmental closure cost as at December 2017:

- The infrastructure list was reviewed to incorporate any changes to volumes and measurements.
- Concurrent rehabilitation was considered.
- The relevancy of the assumptions was reviewed, and adjusted where necessary.
- The tariffs were adjusted by 6% in line with CPI.

Tariffs

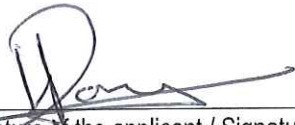
The CES Group was contracted by Shangoni to acquire rates for demolition and rehabilitation of mining activities. Procurement of budget pricing approached by identifying reputable demolition companies, various sites of varying sizes at various locations and identifying local companies in the study area with ability to work on similar scale project. A bill of quantities (BoQ) was distributed to the various companies. The table below indicates the number of contractors to which the BoQ was distributed and the number of tenders received afterwards.

Table 1: Results of rate acquisition process

Area	Number of contractors identified	Tenders received
National	6	1
North West	6	3
Free State	5	1
Northern Cape	7	2
Limpopo	5	3 (One joint venture with national based company)
Total	29	10

The prices received from contractors were reviewed by the CES Group, after which average and meridian rates were drawn rates to correctly establish a baseline rate. The following methods to establish the baseline rates were followed:

	<ul style="list-style-type: none"> • Price A - Average if priced – across the board average of rates received per category; • Price B - Median pricing – “middle” rate of all rates in series per category; • Price C - Average between Price A & B; • Price D - Average rate excluding top and bottom rates per category. • The lowest reasonable average rate was used, unless otherwise indicated in the closure cost spreadsheet “Rate” sheet. <p>The closure budget consists of the following areas:</p> <ul style="list-style-type: none"> • Physical (Infrastructure demolishing) • Bio-physical (actions to safeguard and re-establish the biophysical) • Transition management (actions identified to support planned demolition and rehabilitation activities to transform the mine from an operational mine to final mine closure application status and includes cost identified for: administration, land management and implementation, closure plan civil works, monitoring, specialists’ studies and maintenance). • Labour – The labour cost included relates to internal manpower structure to execute the closure plan.
<p>Decommissioning Considering that rehabilitation must take place upon cessation of an activity, describe when each of activities applied for will be rehabilitated in terms of either the cessation of the individual activity or the cessation of the overall prospecting or mining activity.</p>	<p>The majority of rehabilitation activities were completed in 2017. Financial provision is available for the rehabilitation of access roads that will not be utilised post-closure, as well as for post-closure monitoring and maintenance in 2018/19, or until a closure certificate has been issued.</p>



Signature of the applicant / Signature on behalf of the applicant:

Ineris Refractory Minerals - Anref Andalusite Mine

Name of company (if applicable):

05/06/2018

Date:

**APPENDIX 1
DECLARATION OF THE EAP**

I, Anika van Vuuren, declare that –

General declaration:

- I act as the independent environmental practitioner in this application
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting environmental impact assessments, including knowledge of the Act, Regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, Regulations and all other applicable legislation;
- I will take into account, to the extent possible, the matters listed in regulation 8 of the Regulations when preparing the application and any report relating to the application;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- I will ensure that information containing all relevant facts in respect of the application is distributed or made available to interested and affected parties and the public and that participation by interested and affected parties is facilitated in such a manner that all interested and affected parties will be provided with a reasonable opportunity to participate and to provide comments on documents that are produced to support the application;
- I will ensure that the comments of all interested and affected parties are considered and recorded in reports that are submitted to the competent authority in respect of the application, provided that comments that are made by interested and affected parties in respect of a final report that will be submitted to the competent authority may be attached to the report without further amendment to the report;
- I will keep a register of all interested and affected parties that participated in a public participation process; and
- I will provide the competent authority with access to all information at my disposal regarding the application, whether such information is favourable to the applicant or not
- all the particulars furnished by me in this form are true and correct;
- will perform all other obligations as expected from an environmental assessment practitioner in terms of the Regulations; and
- I realise that a false declaration is an offence in terms of regulation 71 of the Regulations and is punishable in terms of section 24F of the Act.

Disclosure of Vested Interest (delete whichever is not applicable)

- I do not have and will not have any vested interest (either business, financial, personal or other) in the proposed activity proceeding other than remuneration for work performed in terms of the Regulations;

Aluwa

Signature of the environmental assessment practitioner:

Shangoni Management Services (Pty) Ltd

Name of company:

14 June 2018.

Date: