

APPENDIX B:

PERSPECTIVE ON THE LEGAL LIFE CYCLE OF COAL MINING IN RELATION TO RESOURCE PROTECTION, FROM A MINING MANAGER'S PERSPECTIVE

The following appendix was developed to understand which requirements would come into view to an environmental manager of a coal mine setting out to understand what is required of him or her.

A mining manager needs to follow many different pieces of legislation to legally prospect, mine/produce and close a mining site. These include: The National Water Act, 1998; The National Environmental Management Act, 1998; The Mineral and Petroleum Resources Development Act, 2002; Mine Health and Safety Act, 1996; National Heritage Resources Act, 1999. These are available to all mining companies who wish to apply or renew their various licenses involved in the mining life cycle, as well as a range of guidelines to help them check whether or not they adhere to them, and how to apply. The Department of Mineral Resources has a web page dedicated to applying and renewing the various mining rights called Samrad (<http://portal.samradonline.co.za/>, you need to register to access the page, but this is easily done, and can be done by anyone), and this is easily accessible to all environmental officers and mining managers. It contains the various forms that need to be filled out, and the required documents at each phase. The Endangered Wildlife Trust (www.ewt.org.za) has all of the necessary legislation that is required to be adhered to, in downloadable format online. This is free to anyone who accesses it. It contains all of the legislations, all the guidelines that an environmental officer or mining manager will need to complete each phase of applying for legislation, as well as templates to follow for each part of the application process.

The instruments needed in applying for mining rights, how to apply, and what legislation that needs to be followed is clearly found online, with various ways of accessing this information.

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There are 3 phases to a mining lifecycle:

Reconnaissance and Prospecting; Mining/Production and Decommissioning and closure.

Each of these phases need their own distinct licenses from various government authorities.

1 RECONNAISSANCE AND PROSPECTING

The reconnaissance phase of a mining lifecycle is the survey phase of the region that is being investigated for the potential of mineral or petroleum resources. This is a quick and low cost operation, done in order to find an area that is viable to do more extensive research, known as the prospecting phase.

According to Kang (2004), coal exploration is done in order to determine the location, nature and extent of the resources available in the area being researched, and to delineate any features that could potentially affect the economy of the extraction. Exploration generally has two objectives; 1) to find a location in which a certain amount of coal of a required quality may be recovered successfully, and 2) to determine the amount of a required quality of coal can be extracted economically from a certain location.

To evaluate the coal deposits, the following operations are needed according to Kang (2004):

1. Obtain a prospecting right from the South African Government,
2. Evaluate the available geological information
3. Do a surface exploration
4. Do a subsurface exploration
5. Analyse collected samples
6. Estimate the coal resources available and any geological factors in their potential extraction

At this stage, the Mining and Petroleum Resources Development Act (MPRDA) requires the mine to get permission for the reconnaissance and prospecting (Mining and Biodiversity Guideline, 2013). This is known as a Prospecting right.

1.1 Mining Prospecting Right

An application for a mining prospecting right will need to include the following:

1. Details of the land or area. Submission of the prescribed plan in the prospecting work programme will be deemed compliance herewith.
2. A prospecting work programme: The Full particulars of the prospecting work programme (regulation 7).

This prospecting work programme needs to include:

- The full particulars of the applicant (The contact person and correspondence address are an authorised representative of the company)
- A visualisation of the land which the application relates
- A registered description of the land, specifying the farm name and subdivision.
- What mineral or minerals to be prospected for.
- A geological description of the land, including a geological map at a scale that can substantiate the prospecting methods, a detailed geological description that can substantiate the prospecting methods, and a geological description of known mineral/rock/commodity deposits of economic interest within the regional geology
- A description of how the mineral resource and its distribution will be determined. An action plan is required with timeframes showing what information, maps, reports and studies will be produced. This needs to include: Borehole results, Sampling analyses, Maps showing location depth of prospecting work with sampling points and the lithology, mineral content and mineral distribution, the geophysical survey data, geochemical results, results from any other investigations, geological modelling, feasibility reports
- A description of the prospecting method or methods to be implemented. Including: - A description of the extent, depth, locality of any excavations, trenching, pitting, and drilling; - a description of the extent, depth and locality of bulk sampling and testing; -

a surface plan of the prospecting area, showing intended location, extent and depth of all boreholes, trenches or excavations; – a list of literature surveys, desk top studies, geophysical, research and target identification, prospecting phases relating to initial invasive and infill work, analytical and modelling work, environmental studies, pre-feasibility studies, and phases related to investment decision making; – drilling technique (e.g diamond core drilling, auger drilling)

- A schedule of prospecting activities, such that prospecting activities must be done in phases and within specific timeframes
 - Technical data detailing the prospecting method or methods to be implemented and the time required for each phase. An explanation of the technical work and expertise is required
 - A cost estimate of the expenditure to be incurred for each phase of the prospecting operation. This includes a realistic estimate of the environmental management and rehabilitation cost to be identified in the environmental management plan
 - Documentary proof of the applicants' technical ability or access thereto to conduct the proposed prospecting operation
 - Documentary proof of a budget and of the applicants financial ability or access thereto. This includes loan agreements, resolution by a company to provide finances, any other mechanism
 - An undertaking to adhere to the proposals as set out by the prospecting work programme, signed by the applicant
3. Financial and technical competence: Details and documentary proof of the applicant's technical ability and financial resources that are compatible with the prospecting work programme, that are readily available or how they will be provided that will allow the applicant to carry out the prospecting activities in terms of the prospecting work programme, as well as to mitigate and rehabilitate relevant environmental impacts satisfactorily. Submission of the prescribed information in the prospecting work programme will be deemed compliance herewith.
 4. Title deeds or deeds in respect of land: These need to be certified copies of the title deed or deeds in respect of the land or area to which the application applies. Accurate title deed reference number(s) will be deemed compliant.
 5. Existing rights and past provisions of the Act: A list of the existing rights and permits held by the applicant, tabled with indication of the region, location with regard to the land name and the existing right or permit number for each mineral or minerals.
 6. R500 ZAR prescribed fee
 7. A certified copy of the identity document of the applicant
 8. A certified copy of the certificate of Incorporation, if applicable
 9. A certified copy of the certificate to commence business, if applicable
 10. A copy of resolution, if acting in a representative capacity
 11. Other documents include: Consultation (within 30 days), Environmental Management Plan Template (within 60 days) and the BEE Template (within 30 days).

1.2 Consultation:

The methodology applied to consultation, wherein the applicant must:

- 1.1 Name the community as defined in the guideline, or explain why no such community was identified
- 1.2 Specifically state whether or not the Community is also the landowner.
- 1.3 State whether or not the Department of Land Affairs been identified as an interested and affected party
- 1.4 State specifically whether or not a land claim is involved
- 1.5 Name the Traditional Authority identified by the applicant.

- 1.6 List the landowners identified by the applicant. (Traditional and Title Deed owners)
 - 1.7 List the lawful occupiers of the land concerned
 - 1.8 Explain whether or not other persons' (including on adjacent and non-adjacent properties) socio-economic conditions will be directly affected by the proposed prospecting or mining operation and if not, explain why not.
 - 1.9 Name the Local Municipality identified by the applicant
 - 1.10 Name the relevant Government Departments, agencies and institutions responsible for the various aspects of the environment and for infrastructure which may be affected by the proposed project.
 - 1.11 Submit evidence that the landowner or lawful occupier of the land in question, and any other interested and affected parties including all those listed above, were notified.
2. A description of the existing status of the cultural, socio-economic or biophysical environment, as the case may be, prior to the proposed prospecting or mining operation;
 3. An identification of the anticipated environmental, social or cultural impacts,
 4. A description of any proposed land use or development alternatives, proposed, alternative means of carrying out the proposed operation, and the consequences of not proceeding with the proposed operation.
 5. A description of the process of engagement with identified communities, landowners and interested and affected parties: The applicant must;
 - 5.1 Provide a description of the information provided to the community, landowners, and interested and affected parties to inform them in sufficient detail of what the prospecting or mining operation will entail on the land, in order for them to assess what impact the prospecting will have on them or on the use of their land;
 - 5.2 Provide a list of which of the identified communities, landowners, lawful occupiers, and other interested and affected parties were in fact consulted.
 - 5.3 Provide a list of their views in regard to the existing cultural, socioeconomic or biophysical environment, as the case may be,
 - 5.4 Provide a list of their views raised on how their existing cultural, socio-economic or biophysical environment potentially will be impacted on by the proposed prospecting or mining operation;
 - 5.5 Provide list of any other concerns raised by the aforesaid parties.
 - 5.6 Provide the applicable minutes and records of the consultations.
 6. A description of the most appropriate means to carry out the proposed operation with due accommodation of the issues raised in the consultation process.

According to Endangered Wildlife Trust (2012), the application for a prospecting right has three separate and distinct public consultation processes that must be conducted; 1) The Department of Mineral Resources (DMR) Regional Manager Notification and objection process, 2) The Applicant notification and consultation process, and 3) Preparation and submission of an Environmental Management Programme (EMP).

1. An application for a prospecting right must be lodged at the office of the DMR Regional Manager, where the Regional Manager will either accept or reject it depending on whether or not it fulfils the requirements. If accepted, it needs to appear in one of the following places within 30 days of acceptance, as well as on a notice board in the office of the Regional Manager: Provincial gazette, posted in the

Magistrate's Court or in a local or national newspaper (Endangered Wildlife Trust, 2012).

2. Once the application has been accepted, the interested and affected persons (according to the MPRDA, these include companies, trusts and associations with an interest in the prospecting application or who may be affected by the prospecting activities) need to be called upon with regards to the land in question, where they must submit their comments within 30 days from the date of notice.
The applicant must notify the landowner/lawful occupier as well as any other affected party of its application for a prospecting right.
3. An Environmental Management Plan (EMP) must be submitted when applying for a prospecting right. The EMP must contain the stipulated contents required by Regulation 52 of the MPRDA Regulations.
The applicant must be granted a prospecting right as well as the approval of an EMP by the DMR.

Prospecting activities should adhere to the prospecting work program and the EMP, with performance assessment reports on both of these aspects submitted to the Regional Manager at prearranged intervals (usually every two years).

Interested and affected parties include, but are not limited to:

- Host Communities
- Landowners (Traditional and Title Deed Owners)
- Traditional Authority
- Land Claimants
- Lawful land occupier
- The Department of Land Affairs
- Any other person (including on adjacent and non-adjacent properties) whose socio-economic conditions may be directly affected by the proposed prospecting or mining operation
- The local municipality
- The relevant Government Departments, Agencies and institutions responsible for the various aspects of the environment and for infrastructure which may be affected by the proposed project

1.3 Environmental Management Plan (EMP)

An applicant needs to submit an environmental management plan when applying for a prospecting right. The EMP needs to include:

- A description of the environment likely to be affected by prospecting or mining operation. – Describe environment on site relative to the surrounding area; - Describe specific environmental features that may require protection, remediation, management or avoidance; - a map showing the spatial locality of environmental, cultural/heritage and current land use features identified on site; -Confirm description of the environment has compiled with the participation of the community, and interested and affected parties; -If no community participation was done, a detailed explanation must be provided.
- Assessment of the potential impacts of the prospecting or mining operation on the environment, socio-economic conditions and cultural heritage.

1) Describe the proposed prospecting or mining operation, which must include: 1.1. A list of all the main prospecting activities, such as access roads, topsoil storage sites; 1.2. A plan showing the spatial location and extent of the main activities with dimensions; 1.3. An estimated timeline of the phases in relation to the implementation of these activities and infrastructure; 1.4. Any listed activities in terms of the NEMA EIA regulations that will be occurring.

2) Identify the potential impacts which identification must: 2.1. A list of the potential impacts of each of the aforesaid activities; 2.2. Describe all cumulative impacts; 2.3. A specialist report on cultural and heritage resources; 2.4. A list of potential impacts on communities, individuals or competing land uses that are in a close proximity to activity; 2.5. Confirm whether or not the list of potential impacts involved participation of the interested and affected parties; 2.6. A detailed explanation as to why the landowner was not involved with the list of potential impacts if that is the case; 2.7. A specialist report relating to the investigation, in line with baseline information and proposed activities

- A summary of the assessment of the significance of the potential impacts and the proposed mitigation measures to minimise adverse impacts. This includes: 1. The criteria of assigning significance to potential impacts; 2. A list of potential impacts identified in respect of each of the main prospecting activities throughout the phases, with the corresponding significance assessment; 3. A summary of the assessment of potential cumulative impacts. The proposed mitigation measures must provide: 1. A list of actions, activities or processes that have sufficiently significant impacts to require mitigation; 2. A list of technical or management options chosen and a concomitant list of options chosen to modify, remedy, control or stop any action, activity, or process that will cause a significant impact; 3. A review of the significance of the identified impacts in relation to mitigation measures proposed
- Financial Provision must be made for an identified disturbance. A plan is needed showing the location and aerial extent of the main mining actions, activities, or processes anticipated. A rehabilitation plan needs to be aligned with closure objectives. A calculation of the quantum of the financial provision required to manage and rehabilitate the environment. An indication of the required amount of financial provision that will be available if the right is granted.
- Planned monitoring and performance assessment of the environmental management plan. The applicant is required to: 1. Provide a list of identified impacts which will require monitoring programmes; 2. Describe the functional requirements of the monitoring programmes; 3. Define the roles and responsibilities for the execution of the monitoring programmes; 4. Commit to time frames for monitoring and reporting.
- Closure and environmental objectives. The applicant is required to: 1. Include a rehabilitation plan showing the areas and extent of the prospecting activities, with an anticipated prospected area at the time of closure; 2. Include closure objectives and extent to which they have been aligned to the baseline environment; 3. Confirm the environmental objectives in relation to closure have been consulted with interested and affected parties.
- The public participation records and results are required, with the identification of interested and affected parties include: 1. The name of the community or communities; 2. State whether or not the community is the landowner; 3. State whether or not the Department of Land Affairs is an interested and affected party or not; 4. State if a land claim is involved; 5. Name the Traditional Authority identified; 6. List the landowners identified; 7. List the lawful occupiers of the land; 8. Explain whether or not other persons' socio-economic conditions will be directly affected by the prospecting or mining activity; 9. Name the local Municipality; 10. Name the Government Departments, agencies and institutions responsible for the various aspects of the environment and for the infrastructure which could potentially be affected by the project; 11. Submit evidence that the landowner or lawful occupier and any other interested and affected parties were notified.
- In terms of the engagement process, these need to be provided: 1. A description of the information provided to the interested and affected parties (including community and landowners), that details what the prospecting or mining activity will entail on the land; 2. A list of which of the identified interested and affected parties were in fact consulted; 3. A list of their views on existing cultural, socio-economic or biophysical

environment; 4. A list on how they believe their existing views on cultural, socio-economic or biophysical environment will be impacted on by the prospecting or mining operation; 5. A list of any other concerns raised by the interested and affected parties; 6. The applicable minutes and records of the consultations; 7. Information on any objections received.

The details regarding the manner in which the issues were addressed should also be included.

- The environmental awareness plan must describe how the applicant intends to inform his/her employees of environmental risk which may result from their work, the manner in which the risk must be dealt with to avoid pollution or degradation to the environment, and the general environmental awareness training and dealing with emergency situations and remediation measures for such emergencies.
- The applicant must have the capacity or have provided for the capacity to rehabilitate and manage negative impacts on the environment. The applicant is required to state the amount it requires to both manage and rehabilitate the environment, and details as to how the amount was derived. They also have to specifically confirm the stated amount has been adequately provided for in corresponding budget reflected in the Prospecting Work Programme. This requirement is not the same as the financial provision which concerns the financial risk to the State, and may not necessarily be accessible to fund rehabilitation or manage the environment.
- The environmental management plan, if approved, will become an obligation in terms of the right issued

1.4 Granting and duration of a prospecting right

1. The Minister must within 30 days of receipt of the application from the Regional Manager, grant a prospecting right if -
 - a) the applicant has access to financial resources and has the technical ability to conduct the proposed prospecting operation optimally in accordance with the prospecting work programme;
 - b) the estimated expenditure is compatible with the proposed prospecting operation and duration of the prospecting work programme;
 - c) the prospecting will not result in unacceptable pollution, ecological degradation or damage to the environment and an environmental authorization is issued;
 - d) the applicant has the ability to comply with the relevant provisions of the Mine Health and Safety Act, 1996 (Act No. 29 of 1996);
 - e) the applicant is not in contravention of any relevant provision of this Act; and
 - f) in respect of prescribed minerals, the applicant has given effect to the objects referred to in section 2(d).
2. The Minister must, within 30 days of receipt of the application from the Regional Manager, refuse to grant a prospecting right if:
 - a) the application does not meet all the requirements referred to in subsection (1);
 - b) the granting of such right will result in the concentration of the mineral resources in question under the control of the applicant and their associated companies with the possible limitation of equitable access to mineral resources.
3. If the Minister refuses to grant a prospecting right the Minister must, within 30 days of the decision, in writing notify the applicant of the decision with reasons.
4. The Minister may, having regard to the type of mineral concerned and the extent of the proposed prospecting project, request the applicant to give effect to the object referred to in section 2(d).

5. If the application relates to land occupied by a community, the Minister may impose such conditions as are necessary to promote the rights and interests of the community, including conditions requiring the participation of the community.
6. A prospecting right granted in terms of subsection (1) comes into effect on the effective date.
7. A prospecting right is subject to this Act, any other relevant law and the terms and conditions stipulated in the right and is valid for the period specified in the right, which period may not exceed five years.

2 MINING / PRODUCTION

This phase of the mining lifecycle is where the greatest environmental impacts are likely to occur. In this phase, the adequacy of the mitigation measures as described in the EMP, which have been approved by DMR and/or DEA, are tested. The EMP will direct the management of impacts on biodiversity and ecosystem services. (Mining and Biodiversity Guideline, 2013).

2.1 An application for a Mining Right will need to include the following:

1. Details of the land or area.
(Note: Submission of the prescribed plan in the Mining work programme will be deemed compliance herewith)
2. Mining work programme

The mining work programme needs to include:

- 1(1) (a) Full particulars of the applicant
- 1(1) (b) Showing of the land and mining area to which the application relates.
- 1(1) (c) A registered description of the land or area to which the application relates.
- 1(1) (d) Details of the identified mineral deposit concerned with regard to the type of mineral or minerals to be mined, its locality, extent, depth, geological structure, mineral content and mineral distribution.

The applicant is required to provide a detailed description of the identified mineral deposit concerned with regard to the type of mineral to be mined, its locality, extent, depth, geological structure, mineral content and mineral distribution, supported by a tabulated categorization of proven and probable reserves, cross referenced to supporting reserve plans over the area applied for.

The aforesaid information must include and be cross referenced to a mineral resource map and include, but not be limited to:

- i. The mineral to be mined;
- ii. The locality of the mineral deposit in relation to the nearest town/city;
- iii. The locality of the mineral deposit relative to the mining area,
- iv. The information required in terms of regulation 8 in cases where the application was preceded by a prospecting right,
- v. existing exploration results and supporting geological reports,
- vi. A brief description of the geological structure of the mineral deposit;
- vii. The size of the deposit,
- viii. The depth of the mineral deposit below surface;
- ix. Details of proven and probable reserves, taking into consideration previous mining and extraction rates,
- x. Estimated grades, and a reserve statement that can be understood relative to the mineral resource map

1(1) (e) Details of the market for, the market's requirements and pricing in respect of, the mineral concerned.

This regulation requires the determination of the price assumptions to be used in the prescribed cash flow forecast required in terms of regulation 1(1) (g) (vi), supported by the relevant market conditions affecting the pricing of the minerals concerned. The aforesaid information should typically include, but should not be limited to:

- i. A list of products and their proportionate quantities
- ii. A list of product consumers,
- iii. For each specific product, give an indication of whether the market is :-
 - a. Local
 - b. Regional
 - c. International
- iv. Details of infrastructure requirements such as roads, rail, electricity and water,
- v. Contract details such as:
 - a. Duration
 - b. Annual consumption
 - c. Quality specifications
 - d. Uses
 - e. Prevailing market prices
 - f. Selling arrangements.
- vi. A detailed explanation of the price assumptions together with supporting specialist analyses and forecasts where applicable.

The price determined must be transferred into line item 2 of the cash flow forecast required in terms of regulation 1(g) (vi).

1(1) (f) Details with regard to the applicable timeframes and scheduling of the various implementation phases of the proposed mining operation, and a technically justified estimate of the period required for the mining of the mineral deposit concerned.

The applicant is required to provide detail with regard to the applicable timeframes and scheduling of the various implementation phases of the intended mining operation, and a technically justified estimate of the period required for the mining of the mineral deposit concerned. The information required to meet the requirements of the regulations must include, but should not be limited to:

- i. The various construction and implementation phases from the planning stage up to the commencement of full production,
- ii. A production forecast based on the reserve statement and the expected extraction, recovery and residue rates, which explains the sources of production over the period reflected in the cash flow forecast.
- iii. A justification, based on proven and probable reserves and on production rates of the period over which the mine is expected to remain in production.

This information, must serve to provide the necessary verification of the production rates reflected in the cash flow forecast required in terms of regulation 1(g) (vi).

1(1) (g) (i) Details and costing of the mining technique, mining technology and production rates applicable to the proposed mining operation.

Compliance with the aforesaid regulation requires the applicant to provide the basic design and costing of the mining operation, which information must include, but should not be limited to:

- i. A map indicating the basic mine design together with a description of how, and in what sequence, the mineral reserve will be extracted, including the specific mining techniques to be used such as:
 - a. Opencast mining, underground mining, excavating and loading, drilling and blasting, monitoring, conventional mining, trackless mining, block caving, shrinkage, pumping, dredging, or any other technique to be used.
 - b. Equipment and machinery, stores and materials, electricity, water, maintenance, consumables and any other costs.
 - c. The position of access roads, shafts or declines, workshops, offices and stores, pumping facilities, primary development or pit design, processing plant locality, residue deposition sites, topsoil storage sites, stockpiles, waste dumps, and any other basic mine design features.
- ii. A description of any specific engineering constraints that may be anticipated in accessing and extracting the mineral resource, such as groundwater management, flooding, surface protection, fly rock risks, seismicity, or any other identified constraints.
- iii. A description of planned engineering solutions to any constraints identified.
- iv. A forecast of annual production rates;
- v. Information as to whether the mining operation or part thereof is to be contracted out, and
- vi. The annual operating costs of mining (excluding capital, labour and processing plant costs) in a cash flow format together with a detailed explanation of the relationship of these costs to the mining method to be used to extract the mineral deposit.

The costs thus derived must be clearly explained and used to justify the numbers that are reflected in line item 4 of the cash flow forecast required in terms of regulation 1(1) (g) (vi).

1(g) (ii) Details and costing of the technological process applicable to the extraction and preparation of the mineral or minerals to comply with market requirements.

Compliance with Regulation 1(1) (g) (ii), requires the applicant to describe:

- i. The full range of mineral commodities or products that are to be produced by the mine,
- ii. The basic design, supported by a process flow diagram, of any
 - a. metallurgical extraction process,
 - b. washing plant,
 - c. mechanical sorting, crushing or screening plant, or
 - d. any other plant or process, that may be required to extract the products or commodities that are to be produced to meet market requirements,
- iii. An explanation of the efficiency of the process, together with an estimate of the mineral recovery rate, and the expected mass or volume of mine waste or residues,
- iv. The annual operating costs, in a cash flow format, of the aforesaid mineral processing plant, together with a detailed explanation of the relationship of these costs to the specific methods to be used to extract the mineral commodity or mine product from the mineral deposit, and to dispose of mine waste or residues.

The costs thus derived must be clearly explained and used to justify the numbers that are reflected in line item 5 of the cash flow forecast required in terms of regulation 1(1) (g) (vi).

1(1) (g) (iii) Details and costing of the technical skills and expertise and associated labour implications required to conduct the proposed mining operation.

Compliance requires that this section is compatible with the information contained in the Social and Labour Plan, and must show:

- i. The entire organizational structure required to operate the mine, including services, whether parts thereof will be outsourced or not,

- ii. The respective skills requirements to conduct the proposed mining operations,
- iii. The number of people that will be employed in each skill category required to operate the mine.
- iv. The associated annual cost in respect of wages and salaries, and
- v. Information as to whether any part of the mining operation is to be contracted out, including:
 - a. the necessary organizational structure for such a contract,
 - b. the respective skills requirements for such a contract, and
 - c. persons in each skills category for such a contract,
 - d. the annual cost of wages, salaries, and directors fees of such a contract
 - e. the annual cost of such a contract, and
 - f. how it will be ensured that compliance with applicable mining legislation will be maintained in such circumstances.

The costs thus derived must be clearly explained and used to justify the numbers that are reflected in line item 6 of the cash flow forecast required in terms of regulation 1(1) (g) (vi).

1(1) (g) (iv) Details and costing of regulatory requirements in terms of the act and other applicable law, relevant to the proposed mining operation.

Compliance requires that the applicant provides information regarding the cost of Government regulation that will become a cost to the mining operation, including, but not limited to the following:

- i. Environmental management and rehabilitation costs, which costs must be presented in an annual cash flow format, and must be a realistic estimate of both the ongoing environmental management cost, and the environmental rehabilitation cost, which estimate must later be substantiated by the Environmental Management Programme, In this regard please provide the following information: complete the standard guideline document developed for financial provision. Complete 10 forecasts (one for each year of operation) and to then determine the progressive total in year 10 (excluding concurrent rehabilitation). The progressive total determined for Year 10 must be transferred to Table I as a cost in the first year. Attach 10 forecast plans. (one for each year of operation)
- ii. Royalty payments, which must be substantiated by the annual rate of production which has been planned,
- iii. Mine Health and Safety Regulations, which include, among others, the drawing up of prescribed mine plans,
- iv. Occupational health,
- v. Rates and taxes, and
- vi. National Skills Fund,

The costs thus derived must be clearly explained and used to justify the numbers that are reflected in line item 7 of the cash flow forecast required in terms of regulation 1(1) (g) (vi).

1(1) (g) (v) Provisions for the execution of the social and labour plan

Compliance with this sub-regulation requires the applicant to provide financially for the implementation of the Social and Labour Plan in terms of the implementation of:

- i. Human resource development programme,
- ii. Local economic development programme, and
- iii. The processes to manage downscaling and retrenchments.

The abovementioned costs must be reflected as per the Social and Labour Plan. The costs quantified in the aforesaid categories must be presented in an annual cash flow format that

justifies the numbers that are reflected in line item 8 of the cash flow forecast required in terms of regulation 1(1) (g) (vi).

1(g) (vi) Details regarding other relevant costing, capital expenditure requirements, and expected revenue applicable to the proposed mining operation.

Compliance requires that the applicant provides:

- i. A list of all other annual costs which may not be provided for elsewhere in the standard format of the cash flow forecast.
- ii. A complete cost list of all capital items, which list must be compatible with the capital items identified to implement the mine design and processing plant design referred to in terms of regulations 1(1) (g) (i) and (ii) above, respectively.
- iii. The total capital cost which must be stated in the year in which it is to be incurred,
- iv. The expected expenditure on any ongoing capital investment to be made in the year in which it is expected to be incurred, and
- v. Costing details of any contingencies not specifically catered for in these regulations. The costs thus derived must be clearly explained and used to justify the numbers that are reflected in line item 9 of the required cash flow forecast in terms of regulation 1(1) (g) (vi).

1(g) (vi) A detailed cash flow forecast and valuation, excluding financing of the proposed mining operation, which forecast must also clearly indicate how the applicable regulatory costs will be accommodated therein.

In order to comply, the Mining Work Programme must present a detailed cash flow forecast and valuation, excluding financing, of the mining operation required by Regulation 1(1) (g) (vi) in accordance with the following format and line items:

The content of each line item contained in the aforementioned format must be explained in detail in order to comply with the relevant provisions of the Regulation. The requirements of the Regulation will not be met by simply referring to the cash flow forecast when explaining the said line items, in that their purpose is precisely to justify and explain the numbers used in the said forecast. The numerical content of the specified line items must, therefore, be fully justified and informed by a detailed derivation as described above for the purpose of meeting the requirements of Regulations 1(1) (d), (e), (f), and (g) (i), (ii), (iii), (iv), (v) and (viii).

1(g) (vii) Details regarding the applicant's resources or proposed mechanisms to finance the proposed mining operation, and details regarding the impact of such financing arrangements on the cash flow forecast.

Compliance requires that the applicant shows how the foregoing cash flow forecast required in terms of regulation 1(1) (g) (vi) will be financed. The applicant is therefore required to:

- i. Identify the applicable start-up cost requirements as identified in comparison with said cash flow forecast,
- ii. Identify any negative amounts in the cash flow which would require financing. The purpose of this section, therefore, is to
- iii. Explain how the identified funding requirement will be provided for, and
- iv. Provide the necessary evidence that the required funding has been secured. Funding a project could be available in a large variety of ways, such as current assets, retained earnings, loan finance, mezzanine finance, or equity. The applicant is required to:
 - i. Show, in cash flow format, how such financing will impact on the foregoing cash flow forecast and valuation.

- ii. Provide conclusive evidence that the applicant has the identified amount available, or
- iii. Any other particular party has resolved or undertaken to provide the identified amount, or
- iv. Any other particular party has underwritten the identified amount, and
- v. Provide the necessary documentary evidence that the applicant or the other particular party referred to above has the means to provide or underwrite the identified amount.

1(h) An undertaking, signed by the applicant, to adhere to the proposals as set out in the mining work programme.

The mining work programme becomes an obligation of the holder of a mining right, in terms of the Regulation and the applicant is required to sign an undertaking to adhere to the proposals as set out therein.

3. Financial and technical competence.
Provide details and documentary proof of the applicant's technical ability and financial resources compatible with the Mining Work Programme that are readily available or how they will be provided for, to enable the applicant to carry out the Mining activities in terms of the Mining Work Programme and to mitigate and rehabilitate relevant environmental impacts satisfactorily. (Note: Submission of the prescribed information in the Mining Work Programme is deemed to be compliance herewith)
4. Detailed financing plan.
(Note: Submission of the prescribed information in the Mining Work Programme is deemed to be compliance herewith).
5. Title deed or deeds in respect of land.
Provide a certified copy or copies of the title deed or deeds in respect of the land or area to which this application relates. (Note: Submission of the accurate title deed reference number(s) is deemed to be compliance herewith)
6. Existing rights.
Provide a list of existing rights and permits held by the applicant to be compiled in tabular form which indicate the region, the location with regard to the land name and the existing right or permit number for each mineral or minerals.
7. Social and labour plan.

The Social and Labour plan needs to include:

Preamble

- 1.1 Name of the company/applicant Organization's registered name
- 1.2 Name of mine/ production Operation
- 1.3 Physical Address Mine address and not corporate address
- 1.4 Postal Address
- 1.5 Telephone Number
- 1.6 Fax Number
- 1.7 Location of mine or production Operation Route or locality map with clear direction to the operation
- 1.8 Commodity Commodities to be mined
- 1.9 Life of the mine- projected period that the mine will remain operational before closure as justified by Mining Work Programme.
- 1.10 Financial Year Date of financial year for the company
- 1.11 Reporting Year by 31st March of each year.
- 1.12. Responsible person Mine Manager
- 1.13 Geographic origin of employees (mine community and labour sending areas).

Human resource development programme

Compliance with Skills development Legislation

Applicants who by law have to register with SETAs must provide the following:

Name of SETA.

Registration number with the SETA.

Confirmation of having appointed a Skills Development Facilitator.

Proof of submission of workplace skills plan and date of submission.

Skills development plan

Provide a detailed skills development plan that outlines how the Mine or Production Operation intends to offer employees development of requisite skills in respect of learnerships, bursaries (of core and critical skills), artisans, ABET training (level I, II, III, IV and NQF 1), other training initiatives reflective of demographics as defined in the amended Mining Charter. The following should be provided:

Form Q Number and education levels of the workforce:

Determine current illiteracy level and ABET needs;

Provide the targets to be trained and the timeframes; and

Provide how ABET would be implemented.

Form R Hard-to-fill vacancies

Provide the vacancies that the Mine or Production Operation has been unable to fill for a period longer than 12 months despite concerted effort to recruit suitable candidates, if any, in the format of Form R.

Career Progression (path) Plan

The following should be provided: Career development matrices of each discipline (inclusive of minimum entry requirements and timeframes); Develop individual development plans for employees; Identify a talent pool to be fast tracked in line with the needs; and Provide a comprehensive plan with targets, timeframes and how the plan would be implemented.

Mentorship Plan

The following should be provided:

Mentorship plan for employees Identify areas of development that require mentoring, Provide a detailed plan highlighting number of mentors and mentees with target and timeframes and how the plan will be implemented; Link with individual development programmes; Focus on learners, career progression targets, employment equity targets, interns and bursars; and Detailed plan with targets, timeframe and how they will be achieved.

Bursary and Internship Plan

The purpose is to provide bursary and experiential learning opportunities to employees and mine communities. The following should be considered:

The company must, however, apply fair selection criteria in this regard. The plan must conform to the skills development plan, and should focus on building capacity in various skills and careers for employees and mine communities reflective of demographics as defined in the Mining Charter.

Bursary Plan

Provide targets, timeframes and budget; Provide areas of learning in line with the needs of the company; Separate internal and external bursars; and indicate whether bursaries are continuous or new intakes.

Internship Plan

Provide targets, timeframes and budget; Provide areas of learning in line with the needs of the company; Provide how interns would be afforded the opportunity for experiential learning; Separate internal and external internships; The plan should be inclusive of own funded studies; and The plan should be reflective of demographics as defined in the amended Mining Charter.

Employment equity plan

The purpose of the plan is to ensure diversity as well as participation of HDSA at all decision-making positions and core occupational categories in the mining industry. Every mining company must achieve a minimum of 40% HDSA in management reflective of demographic representation. The plan should reflect the annual progressive targets. The following should be considered:

Provide form S and the current management structure as reflected below;

- Executive Management (Board);
- Senior management (EXCO);
- Core and Critical skills;
- Middle management level; and
- Junior management level.

Provide the current management structure reflective of demographics;
The plan should reflect the annual progressive targets; and Provide a detailed plan on how the targets would be met.

Mine community development

Social and economic background information

Provide the social and economic baseline information of the mine community. The background information must include but not limited to the following: Gender Profile; Population Profile; Health and HIV/AIDS Prevalence; Economic Profile; Education Levels; Expenditure Profile; Employment Profile; Income Profile; Infrastructure, Housing; Water and Sanitation as well as Electricity.

Key economic activities

Provide the key economic activities of the mining community.
Provide names of other mining companies that operate in your area of operation.

Negative Impact of the mining operation

Relocation of people;
Exhumation of graves; and
Influx of people –Informal settlements.

Infrastructure and poverty eradication projects that the mine would undertake in line with the (IDP) of the areas and other relevant frameworks in which the mine operates and the major sending areas.

Having specified the needs, identify projects that will be implemented in line with the needs; Provide an implementation plan of the identified projects that will be implemented to address the needs; and Provide the impact that the identified projects would have on the Community(ies) and the areas in line with the duration of the mining right.

Development Projects

Projects to be implemented should be classified as follows:

Infrastructure projects; Income generating projects. The following is an example of a project implementation template. Additions to provide more information are acceptable.

Measures to address housing and living conditions

The following should be considered: Provide the current status of available dwelling for employees; Provide current status of houses within the community; Provide the municipality's strategy to address housing; Establish the preferred requirements for housing and living conditions of the workforce; and The plan should include but is not limited to: Promotion of home ownership; Converting hostels into single quarters and family units; and Reduction of occupancy rate reflecting the following targets:

•2011 = 25% •2012 – 50 % •2013 = 75 % •2014 = 100%

Processes pertaining to management of downscaling and Retrenchment

Organizations have to retrench workers from time to time for economic reasons and to remain globally competitive. It is therefore important that employers should first make sure that no other viable options to achieve operational requirements are available before considering downscaling of workers. The Declaration of the Presidential Jobs Summit during October 1998 provided a framework for a Social Plan to prevent job losses where possible and to guide the affected parties who have to deal with retrenchments. The framework included a broad proposal for implementation of the Social Plan.

A detailed process, in conjunction with section 52 of the Act and regulation 46 (e), for saving jobs, managing downscaling and regenerating local economies must be developed for implementation at the time of such need. This process must also be in line with the Department of Labour's Social Plan Guidelines. Your company must take note of and follow the procedures for downscaling and retrenchment as set out by the Department of Labour (DoL) and the Labour Relations Act (LRA). The mine must develop turnaround strategies and mechanisms to save jobs, prevent unemployment and avoid downscaling. In particular, your operation must follow the "notification process" as outlined in the Social Plan Guidelines and the LRA. Your company, through the Future Forum, should anticipate downscaling, manage potential retrenchments on a basis that is informed by the skills development process relating to the preparation of employees for such events, and assist the affected employees with alternative forms of employment or sustainable livelihood opportunities. The communication process should strive for active participation by employees, mine management, communities, government authorities and community organisations.

Establishment of future forum

Provide an undertaking to establish a Future Forum within six months after the conversion of an old order mining right and two year after the new mining right has been granted. The Future Forum should comprise of management and workers or their representatives. The functions of the Future Forum include but are not limited to: Promote ongoing discussions between worker representatives and employers about the future of the mine; Look ahead to identify problems, challenges and possible solutions with regard to productivity and employment; Develop turnaround and redeployment strategies to help reduce job losses and to improve business sustainability; and Implement strategies agreed upon by both employer and worker parties.

Mechanisms to save jobs, provide alternative solutions and procedures for creating job security where job losses cannot be avoided.

Provide an undertaking to establish a Future Forum within six months after the conversion of an old order mining right and two year after the new mining right has been granted. The Future Forum should comprise of management and workers or their representatives. The functions of the Future Forum include but are not limited to: Promote ongoing discussions between worker representatives and employers about the future of the mine; Look ahead to identify problems, challenges and possible solutions with regard to productivity and employment; Develop turnaround and redeployment strategies to help reduce job losses and to improve business sustainability; and Implement strategies agreed upon by both employer and worker parties.

Management of retrenchments

Outline the process to be followed in managing retrenchments humanely in consultation with organized labour. The proposed plan should be in line with the terms of Section 52 (1) of the MPRDA, National Social plan guideline of DoL and Section 189 of the LRA.

Mechanisms to ameliorate the social and economic impact on individuals, regions and economies where retrenchment or closure of the operation is certain.

Outline the process to be followed to ameliorate the social and economic impact on individuals, regions and economies. The process must include but not limited to:
Comprehensive self-employment training programmes;
Comprehensive training and re-employment programmes;
Comprehensive portable skills development plan;
The projects earmarked for absorbing the retrenched should be outlined; and
The abovementioned plans must be submitted to DMR 24 months prior to the commencement of the downscaling process.

Financial provision

In order to meet the requirements of Regulation 46 (e) (i), (ii), (iii), the following should be considered: In line with sections 23 (1) (e) and 84 (1) (g), the applicant for a mining and production right must provide financially and otherwise for the social and labour plan.

Financial provision should be in monetary value (Rand); and
The provision should cater for all components of SLP.

Undertaking

The person responsible for the social and labour plan, who is responsible to make known the social and labour plan to the employees and who must be contacted for follow-ups, requests, reports, queries, enquiries, discussions, etc. at time of such needs must make the following undertaking on behalf of the Mine or Production Operation. The Chief Executive Officer, Managing Director or any other person so appointed must approve the social and labour plan.

8. Prescribed fee.
An amount of R1000.00 ZAR, being the application fee.
9. Copy of identity document.
In the case of a natural person, a certified copy of the identity document must be attached.
10. A certified copy of the certificate of Incorporation, if applicable
11. A certified copy of the certificate to commence business, if applicable
12. Copy of resolution, if acting in a representative capacity
13. The Minister may require additional information to be submitted, in terms of the provisions of section 29 of the Act

Other Documents to upload

- Environmental Management Program

Regulation 51 (a) - This regulation requires a description of the environmental objectives and specific goals for mine closure, the management of identified environmental impacts emanating from the mining operation, the socio economic conditions as identified in the social and labour plan, and historical and cultural impacts, if applicable.

Regulation 51 (b) – Outline of the implementation programme. This Regulation read with the provisions of section 39 (3) (d) (i) of the Act requires a description of the technical and management option chosen (a) in respect of each action, activity or process which causes pollution or environmental degradation for (b) each environmental impact, socio economic condition, and historic and cultural aspect and (c) for each phase of the mining operation.

- Scoping
- BEE

The Environmental Management Program needs to include:

1. Description of environmental objectives and specific goals for the management of identified environmental impacts emanating from the proposed mining operation. This description must be informed by the information provided in the EIA in terms of Regulation 50 (h).

1.1. Provide a list of environmental aspects that describe the pre-mining environment as informed by the description of the baseline environment contained in the foregoing environmental impact assessment that will serve to guide the setting of environmental objectives for mine closure.

1.2. Provide a list of the measures required to contain or remedy any causes of pollution or degradation or the migration of pollutants, both for closure of the mine and post closure.

2. Description of environmental objectives and specific goals for the socio-economic conditions as identified in the social and labour plan.

The applicant is required to:

2.1. Provide a list of identified impacts which will require monitoring programmes.

2.2. Provide a list of the source activities that are the cause of the impacts which require to be managed.

2.3. List those management activities which, where applicable, will be conducted daily, weekly, monthly, quarterly, annually or periodically as the case may be in order to control any action, activity or process which causes pollution or environmental degradation.

2.4. Define the roles and responsibilities for the execution of the monitoring and management programmes.

3. Description of environmental objectives and specific goals for mine closure. The applicant is required to modify, remedy, control or stop any action, activity or process that could impact negatively on the socio-economic conditions of the persons concerned.

The applicant must:

3.1. Provide a list describing various aspects of the socio-economic conditions in the vicinity of the mine, as identified in the Social and Labour plan.

3.2. Provide a list describing specific environmental objectives and goals to control, remedy or stop potential impacts emanating from the mine such as noise air quality, blasting vibrations, access roads, safety, etc. which may impact on communities and interested and affected parties identified in the social and labour plan.

4. Description of environmental objectives and specific goals for historical and cultural aspects.

4.1. Provide a list of stated environmental objectives and goals in respect of historical and cultural aspects identified in specialist studies conducted during the EIA phase.

5. Describe the appropriate technical and management options chosen for each environmental impact, socio-economic condition and historical and cultural aspect in each phase of the mining operation

5.1. Provide a list for each phase (construction, operational, closure and post closure) of the mining operation, describing each action, activity or process, including any NEMA EIA Regulation listed activity, which causes pollution or environmental degradation that will be conducted during that phase.

5.1.1. Indicate which of the aforesaid actions, activities or processes will cause significant impacts on the environment, the socio-economic conditions of directly affected persons, and on historical and cultural aspects.

5.2. Provide a concomitant list describing the appropriate technical or management options chosen 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 as identified.

5.2.1. Each technical or management option must be further described in detail, in suitably cross referenced format and where necessary, appendices must be attached.

6. Provide Action plans to achieve the objectives and specific goals contemplated in Regulation 50 (a).

6.1. Provide concomitant time schedules that describe in detail the deadlines for each action to be undertaken to implement each technical or management option chosen to prevent, manage and remediate each environmental impact, socio-economic condition and historical and cultural aspect, as identified. The time schedules must indicate:-

6.1.1. Specific timeframes during which each technical or management options chosen for the prevention of impacts will be in place such as, but not limited to the construction of clean and dirty water systems, access control during blasting, etc.

6.1.2. Specific timeframes for the implementation of each technical or management option chosen to remediate impacts such as, but not limited to, the various stages of rehabilitation work during the various phases of the mining operation, arrangements to remedy socio-economic or cultural impacts, etc

6.1.3. Specific timeframes for the management of environmental impacts such as, but not limited to dust suppression, noise control, environmental monitoring, etc.

6.1.4. Provide detail of those management activities which, where applicable, will be conducted daily, weekly, monthly, quarterly, annually or periodically as the case may be in order to manage the identified impacts effectively.

7. Procedures for environmentally related emergencies and remediation
 - 7.1. Provide an Environmental Emergency plan, which plan must include
 - 7.1.1. A description of the ongoing monitoring and management measures to be implemented, to provide the early warning systems necessary to avoid environmental emergencies.
 - 7.1.2. A description of procedures that will be in place in cases of environmental related emergencies,
 - 7.1.3. The technical, management and financial options that will be in place to deal with the remediation of impacts in cases of environmental emergencies.

8. Planned monitoring and environmental management programme performance assessment.
 - 8.1. Provide a description of planned monitoring of the aspects of the environment which may be impacted upon. Such description must include;
 - 8.1.1. A list of the environmental aspects that will be monitored.
 - 8.1.2. A description of the manner in which the monitoring will be conducted, and the location where each monitoring activity will be carried out.
 - 8.1.3. A description of the various standards that must be maintained, which standards must meet the requirements of the regulatory authority concerned, or the relevant SABS standard as the case may be.
 - 8.1.4. A description of the frequency of the monitoring to be conducted in each specific case.
 - 8.1.5. A description of the analysis to be conducted, the frequency thereof, and the records to be kept.
 - 8.1.6. A description of the standard procedures for cases where the results of monitoring indicate non-compliance with the relevant standards.
 - 8.2. Provide a description as to how the implementation of the action plans contemplated in regulation 51 (b) (ii) as described will be monitored as described in paragraph 6 of the EMP will be monitored.
 - 8.3. State the frequency that the performance is proposed to be reported on for assessment purposes.

9. Financial provision in relation to the execution of the environmental management programme

The applicant is required to:

 - 9.1. Provide a plan showing the location and aerial extent of the aforesaid main mining actions, activities, or processes anticipated to be conducted until the resource is depleted, as required to calculate the financial provision in accordance with the Department's published guideline. This plan must show the annual progress of the mining operation relative to the overall plan.
 - 9.1.1. Ensure that the rehabilitation plan is compatible with the closure objectives determined in accordance with the baseline study as prescribed.
 - 9.1.2. Complete the standard guideline document developed for financial provision. Complete the standard guideline in respect of all the main mining actions activities or processes anticipated to be conducted until the resource is depleted.
 - 9.2. Complete 10 forecasts (one for each of the first 10 years of operation) and to then determine the progressive total in year 10 (excluding concurrent rehabilitation).

The progressive total determined for Year 10 must be specifically stated.

- 9.3. Confirm the amount that will be provided should the right be granted.
- 9.4. Provide details of the method of providing financial provision contemplated in Regulation 53.

- 10. Environmental Awareness Plan (Section 39 (3) (c)) - the applicant must in this section include an environmental awareness plan in accordance with Section 39 (3) (c).

This plan must:

- 10.1. Describe how the applicant intends to inform his or her employees of any environmental risk which may result from their work, and
- 10.2. Describe the manner in which the risk must be dealt with in order to avoid pollution or degradation of the environment.
- 10.3. Describe the general environmental awareness training and training on dealing with emergency situations and remediation measures for such emergencies.

- 11. Attachment of specialist reports, technical and supporting information.
 - 11.1. All supporting information that remains necessary to submit, and specialist reports not already attached in terms of the EIA should be attached as appendices

- 11. SECTION 39 (4) (a) (iii), Capacity to manage and rehabilitate the environment
Section 39 (4) (a) (iii) of the Act, read together with section 37 (2) of the Act, requires that the applicant will have the capacity, or have provided for the capacity, to rehabilitate and manage negative impacts on the environment. This requirement is not the same as that for financial provision, which concerns the financial risk to the State and, which may not necessarily be accessible to the applicant to fund rehabilitation or manage the environment.

The applicant is required to:-

- 12.1. State the amount it requires to both manage and rehabilitate the environment, and provide a detailed explanation as to how the amount was derived; which amount should not be less than the sum of the amounts reflected in paragraph 9.1.3 herein, and the amount reflected in paragraph 6.5.3 of the EIA.
- 12.2. Specifically confirm that the stated amount has been adequately provided for in the corresponding budget reflected in the Mining Work Programme as required in Accordance with Regulation 11 (1) (g) (iv).

- 13. Undertaking

13.1. The Environmental Management Programme will, should it comply with the provisions of section 39 (4) (a) of the Act and the right be granted, be approved and become an obligation in terms of the right issued. As part of the proposed Environmental Management Programme, the applicant is required to provide an undertaking that it will be executed as approved and that the provisions of the Act and regulations thereto will be complied with.

2.2 The Granting and Duration of a mining right

- 1. Subject to subsection (4), the Minister must grant a mining right if:
 - a) The mineral can be mined optimally in accordance with the mining work programme;
 - b) The applicant has access to financial resources and has the technical ability to conduct the proposed mining operation optimally;
 - c) The financing plan is compatible with the intended mining operation and the duration thereof;

- d) The mining will not result in unacceptable pollution, ecological degradation or damage to the environment and an environmental authorization is issued;
- e) The applicant has provided for the prescribed social and labour plan;
- f) The applicant has the ability to comply with the relevant provisions of the Mine Health and Safety Act, 1996 (Act No, 29 of 1996);
- g) The applicant is not in contravention of any provision of this Act; and
- h) The granting of such right will further the objects referred to in section 2(d) and (f) in accordance with the charter contemplated in section 100 and the prescribed social and labour plan.

2. The Minister may, having regard to the nature of the mineral in question, take into consideration the provisions of section 26.

- a) If the application relates to the land occupied by a community, the Minister may impose such conditions as are necessary to promote the rights and interests of the community, including conditions requiring the participation of the community.

3. The Minister must, within 60 days of receipt of the application from the Regional Manager, refuse to grant a mining right if the application does not meet the requirements referred to in subsection (1).

4. If the Minister refuses to grant a mining right, the Minister must, within 30 days of the decision, in writing notify the applicant of the decision and the reasons.

5. A mining right granted in terms of subsection (1) comes into effect on the effective date.

6. A mining right is subject to this Act, any relevant law, the terms and conditions stated in the right and the prescribed terms and conditions and is valid for the period specified in the right, which period may not exceed 30 years.

3 DECOMMISSIONING AND CLOSURE

Closure objectives, in general, are to return the land that was being mined to as closely as possible to the pre-mining condition. Before prospecting or mining rights can be approved, there needs to be a financial provision for rehabilitation and closure. This may be made by an approved contribution to a trust fund, a financial guarantee from a registered or DMR approved bank in South Africa, a deposit into a specified account, or any other method that is determined by the DMR.

The holder of a prospecting right, mining right, retention permit or mining permit remains responsible for any environmental liability, pollution or ecological degradation, and the management thereof, until the Minister has issued a closure certificate to the holder concerned.

- On written application by the holder of a prospecting right, mining right or mining permit in the prescribed manner, the Minister may transfer such environmental liabilities and responsibilities as may be identified in the environmental management plan or the environmental management programme and any prescribed closure plan to a person with such qualifications as may be prescribed.
- The holder of a prospecting right, mining right, retention permit or mining permit, as the case may be, must apply for a closure certificate upon:
 - a) The lapsing, abandonment or cancellation of the right or permit in question;
 - b) Cessation of the prospecting or mining operation;
 - c) The relinquishment of any portion of the prospecting of the land to which a right, permit or permission relate; or

- d) Completion of the prescribed closing plan to which a right, permit or permission relate.
- An application for a closure certificate must be made to the Regional Manager in whose region the land in question is situated within 180 days of the occurrence of the lapsing, abandonment, cancellation, cessation, relinquishment and must be accompanied by the prescribed environmental risk report.
- No closure certificate may be issued unless the Chief Inspector and the Department of Water Affairs and Forestry have confirmed in writing that the provisions pertaining to health and safety and management of potential pollution to water resources have been addressed.
- When the Minister issues a certificate he or she must return such portion of the financial provision contemplated in section 41 as the Minister may deem appropriate to the holder of the prospecting right, mining right, retention permit or mining permit in question, but may retain any portion of such financial provision for latent and or residual environmental impact which may become known in the future.
- This amount must be assessed annually and adjusted accordingly. A closure plan is also required, and must comply with the MPRDA. The holder of the mining licence will remain responsible for any environmental liability, ecological degradation and pollution until a closure certificate is issued (Endangered Wildlife Trust, 2012).

3.1 Removal of buildings, structures and other objects

- 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 or object—
 - a) Which may not be demolished or removed 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.
- 2) The provision of subsection (1) does not apply to bona fide mining equipment, which may be removed.

3.2 Minister's power to recover costs in event of urgent remedial measures

- 1) If any prospecting, mining, reconnaissance or production operations cause or results in ecological degradation, pollution or environmental damage which may be harmful to the health or well-being of anyone and requires urgent remedial measures, the Minister may direct the holder of the relevant right, permit or permission to—
 - a) Investigate, evaluate, assess and report on the impact of any pollution or ecological degradation;
 - b) Take such measures as may be specified in such directive; and
 - c) Complete such measures before a date specified in the directive.
- 2a) If the holder fails to comply with the directive, the Minister may take such measures as may be necessary to protect the health and well-being of any affected person or to remedy ecological degradation and to stop pollution of the environment.
 - b) Before the Minister implements any measure, he or she must afford the holder an opportunity to make representations to him or her.
 - c) In order to implement the measures contemplated in paragraph (a), the Minister may by way of an ex parte application apply to a High Court for an order to seize and sell such property of the holder as may be necessary to cover the expenses of implementing such measures.
 - d) In addition to the application in terms of paragraph (c), the Minister may use funds appropriated for that purpose by Parliament to fully implement such measures.
 - e) The Minister may recover an amount equal to the funds necessary to fully implement the measures from the holder concerned.

3.3 Minister's power to remedy environmental damage in certain instances

1) If the Minister directs that measures must be taken to prevent pollution or ecological degradation of the environment or to rehabilitate dangerous occurrences but establishes that the holder of the relevant reconnaissance permission, prospecting right, mining right, retention permit or mining permit, as the case may be, or his or her successor in title, is deceased or cannot be traced or, in the case of a juristic person, has ceased to exist, has been liquidated or cannot be traced, the Minister may instruct the Regional Manager concerned to take the necessary measures to prevent further pollution or degradation, or to make the area safe.

2) The measures contemplated in subsection (1) must be funded from the financial provision made by the holder of the relevant reconnaissance permission, prospecting right, mining right, retention permit or mining permit, where appropriate, or if there is no such provision or if it is inadequate, from money appropriated by Parliament for that purpose.

3a) Upon completion of the measures contemplated in subsection (1), the Regional Manager must apply to the registrar concerned that the title deed of the land in question be endorsed to the effect that such land had been remedied.

b) The registrar concerned must, on receipt of an application contemplated in paragraph a), make such endorsements as he or she may deem necessary so as to give effect to provisions of that paragraph, and no office fee or other charge is payable to the registrar in respect of such endorsement.

The Minerals and Petroleum Resources Development Act, 2002 provides for the issuing of a closure certificate by the Minister of Minerals and Energy, in which the environmental liabilities are transferred to a competent person. The application for a closure certificate must also have an environmental risk report, with supporting regulations for mine closure such as: the Principles for mine closure, the application for mine closure, the application to transfer environmental liabilities to a competent person (including the qualifications of such a person), the content for an Environmental Risk Report, and the content of a closure plan.

3.4 Restriction or prohibition of prospecting and mining on certain land

1) Subject to section 48 of the National Environmental Management: Protected Areas Act 2003 (Act No. 57 of 2003), and subsection (2), no reconnaissance permission, prospecting right, mining right may be granted or mining permit be issued in respect of:

- a) Land comprising a residential area;
- b) Any public road, railway or cemetery;
- c) Any land being used for public or government purposes or reserved in terms of any other law; or
- d) Areas identified by the Minister by notice in the Gazette in terms of section 49.

2) A reconnaissance permission, prospecting right, mining right or mining permit may be issued in respect of the land contemplated in subsection (1) if the Minister is satisfied that -

- a) Having regard to the sustainable development of the mineral resources involved and the national interest, it is desirable to issue it;
- b) The reconnaissance, prospecting or mining will take place within the framework of national environmental management policies, norms and standards; and
- c) The granting of such rights or permits will not detrimentally affect the interests of any holder of a prospecting right or mining right.

Mining agents need to comply with South Africa's constitutions and common laws, where section 24(a) of the Constitution states that all South Africans have the right to an environment that is not harmful to his or her health and well-being, which supersedes all other legislation. The Minerals Act. 1991 (Act 50 of 1991) provides the requirements for enforcing environmental protection, the management of environmental impacts and the rehabilitation of the affected

environment of prospecting and mining. Other important legislation needed when closing a mine are the National Environmental Act, 1998, the National Water Act, 1998, the Atmospheric Pollution Prevention Act, 1965, and the National Nuclear Regulator Act, 1999, among other related legislation.

The Mine Health and Safety Act, 1996 (Act No. 29 of 1996) states that the employer must ensure and maintain a safe and healthy environment at the mine during closure, supply adequate health and safety equipment, training and access and respond to any risk or hazard where employees may be exposed, there needs to be a medical surveillance system, as well as the rights of employees to access information, duties for health and safety as well as permission to leave a dangerous working place if need be.

Atmospheric Pollution Prevention Act, 1965 prevents mines from disposing assets in certain circumstances, meaning that proper closure is the only way to avoid a prohibition on the disposal of mine assets.

The Nuclear Energy Act, 1999 require mines that deal with radioactive elements to meet radiological requirements before the closure certificate is granted.

The National Water Act, 1998 (Act No. 35 of 1998) sets a water management hierarchy, which is based on a precautionary approach, and consist of: Pollution prevention, Water re-use or reclamation, water treatment, discharge. In order for a mine to comply with this hierarchy, they require an integrated mine water management system which adhere to these principles: Comply to all legislation, follow a life-cycle approach for water management throughout the life of the mine, cradle-to-grave approach to waste streams and consequential impacts, the long-term and current risks of water management need to be quantified with a risk-based approach.

The National Water Act has regulations on the use of water for mining aimed at protecting the water resources.

With regards to restrictions on locality, no person in control of a mine or mining activity may:

- a) locate or place any residue deposit, dam, reservoir, together with any associated structure or any other facility within the 1:100 year flood-line or within a horizontal distance of 100 metres from any watercourse or estuary, borehole or well, excluding boreholes or wells drilled specifically to monitor the pollution of groundwater, or on water-logged ground, or on ground likely to become water-logged, undermined, unstable or cracked;
- b) except in relation to a matter contemplated in regulation 10, carry on any underground or open-cast mining, prospecting or any other operation or activity under or within the 1:50 year flood-line or within a horizontal distance of 100 metres from any watercourse or estuary, whichever is the greatest;
- c) place or dispose of any residue or substance, which causes or is likely to cause pollution of a water resource, in the workings of any underground or open-cast mine excavation, prospecting diggings, pit or any other excavation; or
- d) use any area or locate any sanitary convenience, fuel depots, reservoir or depots for any substance which causes or is likely to cause pollution of a water resource within the 1:50 year flood line of any watercourse or estuary.

This Act also covers restrictions on the use of materials on a mine. No person in control of a mine or activity may use any residue or substance which causes or is likely to cause pollution of a water resource for the construction of any dam or other impoundment or any embankment, road or railway, or for any other purpose which is likely to cause pollution of a water resource.

There are certain requirements of a person in control of a mine or activity with regards to their water systems, in why they must:

- a) Confine any unpolluted water to a clean water system, away from any dirty area;
- b) Design, construct, maintain and operate any clean water system at the mine or activity so that it is not likely to spill into any dirty water system more than once in 50 years;
- c) Collect the water arising within any dirty area, including water seeping from mining operations, outcrops or any other activity, into a dirty water system;
- d) Design, construct, maintain and operate any dirty water system at the mine or activity so that it is not likely to spill into any clean water system more than once in 50 years;
- e) Design, construct, maintain and operate any dam or tailings dam that forms part of a dirty water system to have a minimum freeboard of 0.8 metres above full supply level, unless otherwise specified in terms of Chapter 12 of the Act; and
- f) Design, construct and maintain all water systems in such a manner as to guarantee the serviceability of such conveyances for flows up to and including those arising as a result of the maximum flood with an average period of recurrence of once in 50 years.

Every person in control of a mine or activity needs to take reasonable measures in the protection of the water resources, as to:

- a) Prevent water containing waste or any substance which causes or is likely to cause pollution of a water resource from entering any water resource, either by natural flow or by seepage, and must retain or collect such substance or water containing waste for use, re-use, evaporation or for purification and disposal in terms of the Act;
- b) Design, modify, locate, construct and maintain all water systems, including residue deposits, in any area so as to prevent the pollution of any water resource through the operation or use thereof and to restrict the possibility of damage to the riparian or in-stream habitat through erosion or sedimentation, or the disturbance of vegetation, or the alteration of flow characteristics;
- c) Cause effective measures to be taken to minimise the flow of any surface water or floodwater into mine workings, open-cast workings, other workings or subterranean caverns, through cracked or fissured formations, subsided ground, sinkholes, outcrop excavations, adits, entrances or any other openings;
- d) Design, modify, construct, maintain and use any dam or any residue deposit or stockpile used for the disposal or storage of mineral tailings, slimes, ash or other hydraulic transported substances, so that the water or waste therein, or falling therein, will not result in the failure thereof or impair the stability thereof;
- e) Prevent the erosion or leaching of materials from any residue deposit or stockpile from any area and contain material or substances so eroded or leached in such area by providing suitable barrier dams, evaporation dams or any other effective measures to prevent this material or substance from entering and polluting any water resources;
- f) Ensure that water used in any process at a mine or activity is recycled as far as practicable, and any facility, sump, pumping installation, catchment dam or other impoundment used for recycling water, is of adequate design and capacity to prevent the spillage, seepage or release of water containing waste at any time;
- g) At all times keep any water system free from any matter or obstruction which may affect the efficiency thereof; and
- h) Cause all domestic waste, including wash-water, which cannot be disposed of in a municipal sewage system, to be disposed of in terms of a licence under the Act.

Every person in control of a mine or activity needs to have adequate security measures in place, and must:

- a) Cause any impoundment or dam containing any poisonous, toxic or injurious substance to be effectively fenced-off so as to restrict access thereto, and must erect

warning notice boards at prominent locations so as to warn persons of the hazardous contents thereof;

b) Ensure access control in any area used for the stockpiling or disposal of any residue or substance which causes, has caused or is likely to cause pollution of a water resource so as to protect any measures taken in terms of these regulations;

c) Not allow the area contemplated in paragraph (a) and (b) to be used for any other purpose, if such use causes or is likely to cause pollution of a water resource; and

d) Protect any existing pollution control measures or replace any existing pollution control measures deleteriously affected, damaged or destroyed by the removing or reclaiming of materials from any residue deposit or stockpile, and establish additional measures for the prevention of pollution of a water resource which might occur, is occurring or has occurred as a result of such operations.

With regards to the temporary or permanent cessation of a mine or activity:

a) Any person in control of a mine or activity must at either temporary or permanent cessation of operations ensure that all pollution control measures have been designed, modified, constructed and maintained so as to comply with these regulations.

b) Any person in control of a mine or activity must ensure that the instream and riparian habitat of any water resource, which may have been affected or altered by a mine or activity, is remedied so as to comply with these regulations.

c) On either temporary or permanent cessation of a mine or activity the Minister may request a copy of any surface or underground plans as required in terms of the Minerals Act, 1991.

Coal residue deposits have additional regulations for rehabilitation, where any person mining or establishing coal residue deposits needs to rehabilitate the deposits in that:

a) All residue deposits are compacted to prevent spontaneous combustion and minimise the infiltration of water; and

b) The rehabilitation of the residue deposits is implemented concurrently with the mining operation.

1) Any person who contravenes or, subject to regulation 3, fails to comply with regulation 2, 4, 5, 6, 7, 8, 9, 10, 11, 12 or 13 is guilty of an offence and liable on conviction to a fine or to imprisonment for a period not exceeding five years.

2) Whenever an act or omission by a manager or employee of a mine or activity:

a) Constitutes an offence in terms of these regulations, and takes place with the express or implied permission of the person in control of a mine or activity, that person is, in addition to the manager or employee, liable to conviction for that offence; or

b) Would constitute an offence by the person in control of a mine or activity in terms of these regulations that manager or employee is, in addition to that person, liable to conviction for that offence.

Mining may also need other authorisations and rights in order to proceed with their activities. If a mine requires a water use, such as abstraction, storage, discharge, waste disposal, removal of underground water and alternation to a water course, according to the National Water Act, 36 of 1998, a water license is required. The mine will need to submit an integrated water and waste management plan to the Department of Water Affairs (DWA) together with their water use licence application (Endangered Wildlife Trust, 2012)

A mine will need to comply with the National Environmental Management: Waste Act, 59 of 2008 (Waste Act) with regards to any waste management activities. The applicability to prospecting and mining activities is limited due to the fact that the Waste Act excludes ambient residue deposits and stockpiles. A holder of a prospecting or mining right may have to comply with general duties imposed on them by the Waste Water Act, which include the obligations to avoid generating waste, to minimise the toxicity and amount of waste to unavoidably produced waste, to reuse, reduce, recycle and recover waste among others. The National Environmental Management: Air Quality Act, 39 of 2004 (AQA) is the law that governs air quality in South Africa. In terms of mining, any activities which impact air quality require licencing. These include dust control (which should be addressed in the EMP or EMPR), noise and offensive odours.

Heritage Resources are protected by the The National Heritage Resources Act, 25 of 1999 (NHRA). These resources include movable and immovable objects of historical, archaeological, paleontological or astronomical interest. A heritage impact assessment needs to be done in such areas for certain linear developments (such as a pipeline), which is submitted in the EIA process, which must take into account the Heritage Resources Agency's comments when considering the application (Endangered Wildlife Trust).

No mining activities may be conducted in: 1) a special nature reserve, national park or nature reserve, 2) in a protected area without permission of the Minister and Cabinet member responsible for minerals and energy, or 3) in a protected area referred to in section 9(b), (c) or (d), according to section 48(1) of the National Environmental Management: Protected Areas Act, 57 of 2003 (NEMPAA) (Swart, 2003).

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