

**THE SOUTH AFRICAN LEGISLATIVE
FRAME WORK FOR MINE CLOSURE**

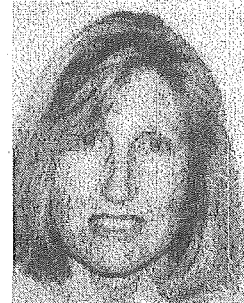
E. Swart

DEPARTMENT OF MINERALS AND ENERGY

THE SOUTH AFRICAN LEGISLATIVE FRAMEWORK FOR MINE CLOSURE

Elize Swart

Department: Minerals and Energy, Private Bag X59, Pretoria, 0001



ABSTRACT

The purpose of this paper is to provide an overview of the current legislative framework for mine closure within South Africa as well as the new requirements in terms of the Mineral and Petroleum Resources Development Act, 2002. The roles and responsibilities of Government, the mining industry and other stakeholders and confusion caused are also highlighted.

1. HISTORICAL BACKGROUND

South Africa has, and still is, relying heavily on mining activities to generate wealth that could be translated into economic development, infrastructure and employment. Formal mining in South Africa is more than 100 years old. Legislation at that time primarily focused on "surface rehabilitation" and the primary emphasis of mining was focused on its economic gains. With regard to environmental management and rehabilitation, mining companies therefore complied with the absolute minimum requirements and also followed a re-active approach.

Mining does in general have a substantial impact on the environment, and has unfortunately left South Africa with an enormous economic, social and environmental legacy. Prior to the enactment of the Minerals Act, 1991 (Act 50 of 1991), mining companies used irresponsible mining methods with no regards towards protecting the environment and had often shirked their responsibility towards environmental rehabilitation by leaving an area unrehabilitated prior to them being liquidated or leaving the country.

This negative legacy also relates to the long term residual effects on the social, health and environmental well being of communities residing in the vicinity of these unrehabilitated mining areas. A further critical complicating factor is that the availability of Government funding to address the magnitude of the mine legacy left behind, is very limited. Furthermore, Government is also forced to respond to issues enjoying media attention and these may not be the most important problems.

2. ROLES AND RESPONSIBILITIES WITH REGARD TO MINE CLOSURE

2.1 The role of Government

The role of Government can be summarised as follows:

- The "Guardian" of the environment through the Constitution.
- Acting as responsible mechanism to serve the public and tax payers interest and to ensure a safe and healthy environment.
- Promoter of sustainable development.
- Final inheritor of remaining problems and mine legacies.
- The Regulator of the mining industry.

2.2 The holder of prospecting or mining right

The holder remains liable and responsible for complying to the relevant provisions of the Mineral Act, 1991 as well as all other applicable legislation until he/she has satisfied Government of compliance to requirements. The holder also applies for a closure certificate.

2.3 Other stakeholders

Apart from the involvement of Government and the holder, the involvement of the following stakeholders are required :

- Mine management.
- Mine employees.
- Shareholders.
- The affected community which include the landowners, local authorities, business and service providers, community groups / NGOs.

3. MINE "CLOSURE SCENARIOUS"

Confusion is certainly being created by current "closure scenarios" which complicate mine closure even further:

- A closed mine where a mine has been granted a closure certificate in terms of section 12 of the Minerals Act, 1991 or in terms of previous legislation Regulation 2.11.
- Temporary closure (Care and Maintenance), where mine is said to be in a state of care and maintenance when it has stopped production for various technical, environmental, financial or labour related reasons but the holder has not declared their intent to finally close the mine.
- An abandoned mine, derelict mine or liquidated mine, where a mine has ceased to operate, environmental management including rehabilitation and/or demolition have not been conducted to acceptable standards and the holder has been liquidated, the mine has been abandoned or left without any responsible legal entity/person.
- "Passing the buck" where irresponsible mining companies "sell" their environmental and social responsibilities to other mining companies.
- Derelict and ownerless mine, where there is no traceable owner/holder.
- "Conditional/provisional closure".
- Partial closure.
- Closure under other legislation
- Offshore closure.

4. CURRENT LEGISLATIVE FRAMEWORK FOR MINE CLOSURE

4.1 Constitution of South Africa, 1996 and common law

Mines have to comply with the South African constitutional and common law by conducting their operational and closure activities with due diligence and care for the rights of others. Section 24(a) of the Constitution states that everyone has the right to an environment, which is not harmful to his or her health and well-being. This supersedes all other legislation.

Therefore a person suffering harm as a result of mining activities may still claim damages from a mine and or its directors and even the shareholders in terms of Company Law, once the mine has closed.

Any common law claims based on pollution emanating from a closed mine will have to be instituted by the plaintiff within three years of the incident which caused the pollution, unless it is an ongoing source of pollution. A claim could be based on any of the following causes of action:

- Nuisance (infringement of the right of a neighbouring owner's use and enjoyment of property);

- Property rights (subsidence);
- Aquilian action (damage to person or property);
- Administrative law (review of an administration decision or act by an official or organ of State).

A court may grant a number of different kinds of relief including an interdict, damages or judicial review of any decision or act of an official or organ of State.

4.2 National Environmental Management Act, 1998 (Act No 107 of 1998)

This Act provides the framework and principles for sustainable development and sets national norms and standards for Integrated Environmental Management (section 24) where all spheres of Government and all organs of state must co-operate, consult and support one another. Section 28 of the Act also imposes a Duty of Care and remediation of environmental damage on any person who causes, has caused or may cause significant pollution or degradation of the environment. Furthermore, sections 32 and 33 of the Act provides for legal standing to enforce environmental laws and private prosecution respectively.

4.3 Closure requirements in terms of minerals and mining legislation

4.3.1 Minerals Act, 1991 (Act No 50 of 1991)

The Minerals Act, 1991 (Act 50 of 1991) provides statutory requirements enforcing environmental protection, the management of the environmental impacts and the rehabilitation of the affected environment of prospecting and mining in South Africa. Other legislation such as the National Environmental Management Act, 1998, the National Water Act, 1998, the Atmospheric Pollution Prevention Act, 1965, and the National Nuclear Regulator Act, 1999 and other applicable legislation provide, *inter alia*, further controlling measures.

The most important requirement concerning the environment and the rehabilitation thereof, is that an Environmental Management Programme (EMP), based on an environmental impact assessment, must be submitted and officially approved. The Minerals Act, 1991, requires in section 38, that the rehabilitation of the surface of land concerned in any prospecting or mining shall be carried out by the holder of the prospecting permit or mining authorization concerned -

- in accordance with the environmental management programme approved in terms of section 39; and
- as an integral part of the prospecting or mining operations concerned throughout the life of the operation until closure.

Government and the mining industry have accepted the principle that the polluter must pay for pollution or the damage that prospecting or mining actions incur on the environment. Regulations have been promulgated in terms of the Minerals Act, 1991, to ensure that financial provision is made by a mine in the form of guarantees for the execution of its EMP.

Regulations for EMP performance assessment and monitoring have been promulgated in *Government Gazette* No 20219 of 25 June 1999, Notice No. R801. The inclusion of monitoring and performance assessment into the mining environmental management process completes the last link of an integrated, cradle-to-grave environmental management process adopted by the DME. The monitoring and EMP performance assessment process will also assist Government as well as the mining industry in determining compliance with the requirements of the EMP, the appropriateness of the EMP and to guide mines to effective and acceptable closure.

Section 54 of the Act requires the holder to notify the Director: Mineral Development in writing at least 14 days before he/she intends to permanently or temporarily cease operations.

In terms of section 12 of the Minerals Act, 1991, the responsibility to comply with the relevant provisions of the Act remains with the holder of a prospecting permit or mining authorization until a closure certificate has been issued to the effect that the said provisions have been complied with. A proviso is, however, that if residual impacts have been identified, these must be described in the mine's EMP and adequate and irrefutable arrangements put in place to ensure that these impacts will be adequately dealt with.

Therefore, in the light of the implementation of an integrated and cradle-to-grave legislative process, tremendous progress has been made to which the mining industry must comply with.

In support of Section 12 of the Act, 1991, the authorities and industry have agreed on policy guidelines acceptable to all the role-players. If the above objectives have been met and all the provisions of the Act, including the EMP, have been complied with, a "closure" certificate will be issued to a mine. A proviso is, however, that if residual impacts have been identified, these must be described in the mine's EMP and adequate and irrefutable arrangements put in place to ensure that these impacts will be adequately dealt with. Such arrangements may include the need for a mine to make financial provision for the financing of post-closure environmental management or for the maintenance of pollution control measures. An acceptable competent third party may be identified to assume responsibility for such management or maintenance and will utilise the funds that the mine has made available for this purpose. It is of the utmost importance that effective planning for closure should take place as early as possible in the life of a mine and, preferably, even before mining operations commence. Equally important is to identify the post-mining land use (or land use options if there is yet no certainty) so that mining methods, the placing of structures and interim rehabilitation actions may be adapted to meet identified goals cost effectively.

The principles and objectives of this Policy guideline have been included in the Regulations in terms of the Mineral and Petroleum Resources Development Act, 2002 as the "Principles for Mine Closure".

4.3.2 Mine Health and Safety Act, 1996 (Act No 29 of 1996)

The Mine Health and Safety Act, 1996 is administered by the Mine Health and Safety Inspectorate of the Department. The following sections apply to mine closure:

- Sections 2 and 5 where the employer must ensure and maintain a safe and healthy environment at the mine, during commissioning, operation, decommissioning and closure.
- Sections 6, 10 and 11 make provision that the employer must provide and supply adequate health and safety equipment, training and assess and respond to any risk or hazard to which employees may be exposed to.
- Sections 12 and 13 pertains to the medical surveillance system.
- Sections 19, 22 and 23 pertains to employees rights with regard to access to information, duties for health and safety and permission to leave a dangerous working place if circumstances arise.

4.4 National Water Act, 1998 (Act No 36 of 1998)

The purpose of the National Water Act, 1998 is to ensure that the nation's water resources are protected, used, developed, conserved, managed and controlled in ways that take into account, amongst other factors:

- Meeting the basic human needs of present and future generations.
- Promoting equitable access to water.
- Facilitating social and economic development.
- Protecting aquatic and associated ecosystems and their biological diversity.
- Reducing and preventing pollution and degradation of water resources.
- Meeting international obligations.
- Promoting dam safety and managing floods and droughts.

The National Water Act, 1998 also contains wide provisions particularly related to responsibility for the integrity of water resources. The basis of water management at mines is therefore the mine water management hierarchy. This hierarchy is based on a precautionary approach and sets the following order of priority for mine water management actions:

- Pollution prevention
- Water re-use or reclamation
- Water treatment
- Discharge

In order to comply to the above hierarchy, an integrated mine water management system is required which must adhere to the following principles:

- Compliance to all legislation.
- Life-cycle approach being followed with regard to water management throughout the life of the mine.
- Cradle-to-grave approach with regard to responsibility for mining waste streams and consequential impacts.
- Risk-based approach must be followed to quantify the current and long-term risks pertaining to water management.

Furthermore, the "Mining Sector Management Strategy" of the Department of Water Affairs and Forestry (DWAF) has been developed at a number of different levels as follows:

- A detailed Management Plan (M3: Policy and strategy for management of water quality regarding the mining industry in the RSA), that sets out strategic objectives, broad strategies and functional and organizational arrangements.
- Operational guidelines that define and document specific procedures (6 guidelines have been completed).
- Technical guidelines that define and document best practices for pollution prevention and impact minimization from mining operations. The Technical guidelines consist of Best Practice Guidelines and Regulations. Regulations dealing with mining operations were published in the *Government Gazette* No 704 of 4 June 1999.

In 2000, DWAF has also published their policy and strategy for groundwater quality management. The essence of groundwater quality management is to be able to choose and deploy those source controls and remediation measures that would be most effective in protecting the resource.

4.5 Atmospheric Pollution Prevention Act, 1965

The obligations contained in terms of this Act with respect to the prevention and control of dust pollution are in addition to and complement with the obligations imposed by the Minerals Act, 1991.

Section 32 contains a prohibition with regard to the disposal of assets by mines in certain circumstances. Proper closure is therefore the only way in avoiding a prohibition on the disposal of mine assets. Where a mine has been abandoned, the persons falling within the definition of owner will continue to be responsible for taking all preventative measures under the Act until a clearance certificate has been issued.

A draft National Environmental Management Air Quality Bill is being finalised which will probably repeal the Atmospheric Pollution Prevention Act in its totality.

4.6 Nuclear Energy Act, 1999

South African gold mines are associated with radio-active elements such as uranium and its decay products due to chemical leachates or oxidation of pyrites. In terms of mine closure, radiological requirements in terms of this Act must also be met before a closure certificate is granted.

5. MINE CLOSURE IN TERMS OF THE MINERALS AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2002

The MPRDA, 2002 is certainly a milestone in the transformation of the mining industry in all aspects. The MPRDA, 2002 provides a holistic cradle-to-grave approach to prospecting and mining, fully internalise economic, social and environmental costs to achieve sustainable development of SA mineral resources.

In the Preamble of the MPRDA, 2002, the State affirms its obligation to :

- protect the environment for the benefit of present and future generations;
- ensures ecologically sustainable development of mineral and petroleum resources;
- promote economic and social development.

Section 37 of the MPRDA, 2002 confirms the adoption of the principles for sustainable development as set out in section 2 of NEMA, 1998 as well as other generally accepted principles of sustainable development by integrating social, economic and environmental factors into the planning, implementation, closure and post closure management of prospecting and mining operations.

Section 38 of the MPRDA, 2002, provides for the application of integrated environmental management and the responsibility to remedy. Section 38(2) makes provision to keep directors of companies or members of closed corporations liable for any damage, degradation or pollution caused by the company or closed corporation which they represent or represented.

Section 39 of the MPRDA, 2002 provides for an environmental impact assessment and environmental management programme or plan to be undertaken by the applicant to identify, mitigate and manage the environmental impacts emanating from prospecting or mining activities. The Regulations pertaining to the environmental management programmes and plans make provision inter alia for mine closure objectives, the future land use objectives for the mining site and the proposed closure cost estimates to be described prior to the approval of the EMP or plan.

Section 40 of the MPRDA, 2002 makes provision for in consultation decision-making (joint decision-making) by Government departments and organs of State on national, provincial and local authority level. Should objections be obtained, section 58 of the MPRDA, 2002 and supporting Regulations provides for the establishment of 10 Regional Mineral Development and Environmental Committees (RMDECs). The purpose of the RMDECs is to ensure the application of the provisions for Co-operative Governance in terms of the Constitution. This procedure for decision-making will apply to all decision-making, including environmental and mine closure decision-making. The objective is therefore to provide mine closure in terms of all applicable legislation and not only the Minerals Act, 1991, as currently the situation.

Section 41 makes provision for financial provision for the remediation of environmental damage. Regulations in this regard prescribe the methods for financial provision and the detailed itemization of all costs, therefore the quantum for financial provision.

Section 42 makes provision for the management of residue stockpiles and deposits. Regulations in this regard also adopt the principles of waste management in the Integrated Pollution Control and Waste Management Policy as well as the precautionary approach followed in terms of the National Water Act, 1998. The Regulations also prescribe waste management throughout the life cycle of a mine including decommissioning, closure and post closure management of deposits.

Section 43 provides for the issuing of a closure certificate by the Minister of Minerals and Energy and the transfer of environmental liabilities to a competent person. The application for mine closure must be accompanied by an Environmental Risk Report. The supporting Regulations for mine closure therefore prescribe:

- Principles for mine closure.
- The application for mine closure.
- The application to transfer environmental liabilities to a competent person.
- The qualifications of such a competent person.
- The content for an Environmental Risk Report.
- The content of a closure plan.

Section 44 provides for the retention or removal of buildings and structures.

Section 45 provides for the Minister to take urgent remedial action pertaining to environmental degradation and pollution and to recover costs in this regard.

Section 46 provides for the Minister to rehabilitate abandoned and ownerless mines/dumps and to register such sites in the title deeds of land and to transfer the liability for maintaining the rehabilitation work being undertaken to the responsible land owner.

The MPRDA, 2002 also provides for the implementation of a Social and Labour Plan. The purpose and objectives of such plan is to:

- Integrate and manage the social, economic and environmental impacts of mining within all the phases of a mine, until closure.
- Avoid job losses and mitigate social and economic impacts on individuals should a mine close prematurely or at the closure of mines.
- Avoid the establishment of settlements, which cannot be sustained after the closure of mines.