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**Regulations on Use of Water for Mining and Related Activities Aimed at the Protection of Water Resources**

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The Minister of Water Affairs and Forestry has, under the powers vested in him by section 26(1)(b), (g) and (i) of the National Water Act (Act 36 of 1998), made the regulations contained in the Schedule in respect of use of water for mining and related activities aimed at the protection of water resources.

**EXPLANATORY NOTE**

*The Minister of Water Affairs and Forestry is responsible for the protection, use, development, conservation, management and control of the water resources of South Africa on a sustainable basis. The requirements prescribed in terms of the regulations must be seen as minimum requirements to fulfill this goal.*

*The Department subscribes to the principles of co-operative governance and recognises the role of the Department of Minerals and Energy to co-ordinate environmental management within the mining industry and the role of the Department of Environmental Affairs and Tourism as the lead agent on matters affecting the environment. The roles of Environmental Management Programme Reports and Environmental Management Programme Performance Assessment Reports required in terms of the Minerals Act, 1991 (Act 50 of 1991), and Environmental Impact Assessment Reports required in terms of the Environment Conservation Act, 1989 (Act 73 of 1989), are recognised and supported by the Department. Any information, obligations, programmes, permissions and commitments contained in the above reports, procedures, consultation requirements and decision-making processes will be recognised by the Department. To promote coordination, copies of relevant exemptions from the requirements of the regulations will be forwarded to the Department of Minerals and Energy and the Department of Environmental Affairs and Tourism.*

*Implementation of the regulations will be delegated to the appropriate level as soon as the necessary capacity has been created at regional level or catchment level.*

**SCHEDULE****1 Definitions**

In these Regulations any expression to which a meaning has been assigned in the Act, shall have the meaning so assigned, and unless the context indicates otherwise-

**'activity'**, means-

- (a) any mining related process on the mine including the operation of washing plants, mineral processing facilities, mineral refineries and extraction plants, and
- (b) the operation and the use of mineral loading and off-loading zones, transport facilities and mineral storage yards, whether situated at the mine or not-
  - (i) in which any substance is stockpiled, stored, accumulated or transported for use in such process; or
  - (ii) out of which process any residue is derived, stored, stockpiled, accumulated, dumped, disposed of or transported;

**'clean water system'**, includes any dam, other form of impoundment, canal, works, pipeline and any other structure or facility constructed for the retention or conveyance of unpolluted water;

**'dam'**, includes any settling dam, slurry dam, evaporation dam, catchment or barrier dam and any other form of impoundment used for the storage of unpolluted water or water containing waste;

**'dirty area'**, means any area at a mine or activity which causes, has caused or is likely to cause pollution of a water resource;

**'dirty water system'**, includes any dam, other form of impoundment, canal, works, pipeline, residue deposit and any other structure or facility constructed for the retention or conveyance of water containing waste;

**'environmental management programme'**, means an environmental management programme submitted in terms of section 39 of the Minerals Act, 1991 (Act 50 of 1991);

**'facility'**, in relation to an activity, includes any installation and appurtenant works for the storage, stockpiling, disposal, handling or processing of any substance;

**'manager'**, **'mine'** and **'mineral'**, have the meanings assigned to them in the Mine Health and Safety Act, 1996 (Act 29 of 1996);

**'person in control of a mine or activity'**, in relation to a particular mine or activity, includes the owner of such mine or activity, the lessee and any other lawful occupier of the mine, activity or any part thereof; a tributer for the working of the mine, activity or any part thereof; the holder of a mining authorisation or prospecting permit and if such authorisation or permit does not exist, the last person who worked the mine or his or her successors-in-title or the owner of such mine or activity; and if such person is not resident in or not a citizen of the Republic of South Africa, an agent or representative other than the manager of such a mine or activity must be appointed to be responsible on behalf of the person in control of such a mine or activity;

**'residue'**, includes any debris, discard, tailings, slimes, screenings, slurry, waste rock, foundry sand, beneficiation plant waste, ash and any other waste product derived from or incidental to the operation of a mine or activity and which is stockpiled, stored or accumulated for potential re-use or recycling or which is disposed of;

**'residue deposit'**, includes any dump, tailings dam, slimes dam, ash dump, waste rock dump, in-pit deposit and any other heap, pile or accumulation of residue;

**'stockpile'**, includes any heap, pile, slurry pond and accumulation of any substance where such substance is stored as a product or stored for use at any mine or activity;

**'the Act'**, means the National Water Act, 1998 (Act 36 of 1998);

**'water system'**, includes any dam, any other form of impoundment, canal, works, pipeline and any other structure or facility constructed for the retention or conveyance of water;

**2 Information and notification**

(1) Any person intending to operate a new mine or conduct any new activity must notify the Department of such intention not less than 14 days before the start of such operation or activity.

(2) Any person in control of an existing mine or activity must-

- (a) submit a copy of all amendments of their environmental management programme to the Department;

- (b) notify the Department in writing 14 days before the temporary or permanent cessation of the operation of a mine or the conducting of an activity, or the resumption of such operation or activity;
- (c) notify the Department by the fastest possible means of any emergency incident or potential emergency incident involving a water resource at or incidental to the operation of a mine or the conducting of any activity, furnishing information regarding-
  - (i) the date and time of the incident;
  - (ii) a description of the incident;
  - (iii) the source of the pollution or potential pollution;
  - (iv) the impact or potential impact on the water resource and the relevant water users;
  - (v) remedial action taken or to be taken by the person in control of the mine or activity to remedy the effects of the incident; and
- (d) within 14 days after the date of an incident contemplated in paragraph (c) inform the Department in writing of measures taken to correct and prevent a recurrence of such incident.

### 3 Exemption from requirements of regulations

The Minister may in writing authorise an exemption from the requirements of regulations 4, 5, 6, 7, 8, 10 or 11 on his or her own initiative or on application, subject to such conditions as the Minister may determine.

### 4 Restrictions on locality

No person in control of a mine or 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 opencast 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 opencast 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.

### 5 Restrictions on use of material

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.

### 6 Capacity requirements of clean and dirty water systems

Every person in control of a mine or activity 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; and
- (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.
- (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.

### 7 Protection of water resources

Every person in control of a mine or activity must take reasonable measures 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, opencast 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 an authorisation under the Act.

### 8 Security and additional measures

Every person in control of a mine or activity 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.

## **9 Temporary or permanent cessation of mine or activity**

(1) 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.

(2) Any person in control of a mine or activity must ensure that the in-stream 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.

(3) 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.

## **10 Additional regulations relating to winning sand and alluvial minerals from watercourse or estuary**

(1) No person may-

- (a) extract sand, alluvial minerals or other materials from the channel of a watercourse or estuary, unless reasonable precautions are taken to-
  - (i) ensure that the stability of the watercourse or estuary is not affected by such operations;
  - (ii) prevent scouring and erosion of the watercourse or estuary which may result from such operations or work incidental thereto;
  - (iii) prevent damage to in-stream or riparian habitat through erosion, sedimentation, alteration of vegetation or structure of the watercourse or estuary, or alteration of the flow characteristics of the watercourse or estuary; or
- (b) establish any slimes dam or settling pond within the 1:50 year flood-line or within a horizontal distance of 100 metres of any watercourse or estuary.

(2) Every person winning sand, alluvial minerals or other materials from the bed of a watercourse or estuary must-

- (a) construct treatment facilities to treat the water to the standard prescribed in Government Notice R991 dated 26 May 1984 as amended or by any subsequent regulation under the Act before returning the water to the watercourse or estuary;
- (b) limit stockpiles or sand dumps established on the bank of any watercourse or estuary to that realised in two days of production, and all other production must be stockpiled or dumped outside of the 1:50 year flood-line or more than a horizontal distance of 100 metres from any watercourse or estuary; and
- (c) implement control measures that will prevent the pollution of any water resource by oil, grease, fuel or chemicals.

## **11 Additional regulations for rehabilitation of coal residue deposits**

Any person mining or establishing coal residue deposits must rehabilitate such residue deposits so 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.

## **12 Technical investigation and monitoring**

(1) The Minister may, after consultation with the Department of Minerals and Energy and the Department of Environmental Affairs and Tourism, in writing require any person in control of a mine or activity to arrange for a technical investigation or inspection, which may include an independent review, to be conducted on any aspect aimed at preventing pollution of a water resource or damage to the in-stream or riparian habitat connected with or incidental to the operation or any part of the operation of a mine or activity.

(2) Such investigation must be conducted and a report thereon compiled in the manner and within the time period that the Minister may specify.

(3) The person in control of the mine or activity must inform the Minister as to the expertise and qualifications of the persons who are to conduct an investigation or inspection contemplated in subregulation (1) before the commencement thereof.

(4) The Minister may in writing require any person in control of a mine or activity to submit a programme of implementation to prevent or rectify any pollution of a water resource or damage to the in-stream or riparian habitat as recommended by the investigation contemplated in subregulation (1) within the time period that the Minister may specify.

(5) The Minister may in writing direct any person in control of a mine or activity to implement a compliance monitoring network to monitor the programme of implementation contemplated in subregulation (4), through establishing, operating and maintaining monitoring installations of a type, at the locations and in the manner specified by the Minister and to submit the monitoring information and results to the Minister for evaluation.

(6) Subject to Chapter 4 of the Act, any person in control of a mine or activity must submit plans, specifications and design reports approved by a professional engineer to the Minister, not later than 60 days prior to commencement of activities relating to-

- (a) the construction of any surface dam for the purpose of impounding waste, water containing waste or slurry, so as to prevent the pollution of a water resource;
- (b) the implementation of any pollution control measures at any residue deposit or stockpile, so as to prevent the pollution of a water resource; and
- (c) the implementation of any water control measures at any residue deposit or stockpile, so as to prevent the pollution of a water resource.

## **13 General**

The person in control of a mine or activity must provide the manager with the means and afford him or her every facility required to enable the manager to comply with the provisions of these Regulations.

## **14 Offences and penalties**

(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.

#### **15 Repeal of regulations**

The regulations published under Government Notice R287 of 20 February 1976 are hereby repealed.

#### **16 Commencement**

These Regulations will take effect on the date of publication.

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