

MINE HEALTH AND SAFETY ACT 29 OF 1996

MINE HEALTH AND SAFETY REGULATIONS

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Under [section 98](#) of the Mine Health and Safety Act, 1996 (Act No. 29 of 1996), I, Penuell Mpapa Maduna, Minister of Minerals and Energy, hereby make the regulations in the Schedule.

P.M.MADUNA,
Minister of Minerals and Energy

SCHEDULE

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[Arrangement of Regulations substituted by GN R907/2002 and GN R1573/2002]

CHAPTER 1

APPOINTMENTS AND ADMINISTRATION

1.1	Prescribed period for representations
1.2	Prescribed period for payment of fine

An italicised word or phrase is defined in [section 102](#) of the Act and such word or phrase in bold is defined in [Chapter 20](#) of these regulations.

1.1 Prescribed period for representations

- (1) Representations invited by the *Principal Inspector of Mines* as contemplated in [section 55D](#) (1) (b) must be submitted to the *Principal Inspector of Mines* within 30 days of the date of the invitation or within such further period or periods as the *Principal Inspector of Mines* may determine.

1.2 Prescribed period for payment of fine

- (1) A fine imposed on an employer in terms of [section 55D](#), must be paid to the *Principal Inspector of Mines* within 60 days of the date on which the fine was imposed or within such further period or periods as the person or court imposing the fine, may determine.
- (2) The date on which the fine is imposed is regarded as the date on which notification of the administrative fine was served on the *employer* by -

- (a) hand;
- (b) registered post; or
- (c) any other form of communication agreed to between the *employer* and the *Principal Inspector of Mines*.
[Chapter 1 inserted by GN R1315/98]

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Regulations not yet promulgated

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Definitions

In this Chapter, unless the context otherwise indicates -

“**explosive**” means

- (a) a substance, or a mixture of substances, in a solid or liquid state, which is capable of producing an explosion;
- (b) a pyrotechnic substance in a solid or liquid state, or a mixture of such substances, designed to produce an effect by heat, light, sound, gas or smoke, or a combination of these, as the result of non-detonative self-sustaining exothermic chemical reaction, including pyrotechnic substances which do not evolve gases;

- (c) any article or device containing one or more substances contemplated in paragraph (a); or
- (d) any other substance or article which the Minister of Safety and Security may from time to time by notice in the *Gazette* declare to be an explosive in terms of the Explosives Act, Act No. 15 of 2003;

“**initiate**” means the action or intended action to detonate or deflagrate explosives;

“**manufacture**” means the making or processing of any explosive, and includes the division of any explosive into its components by any process, the conversion of any kind of explosive into another kind and the alteration, testing or reworking of any explosive;

“**misfire**” means any explosives which have failed to explode;

“**misfired hole**” means a shot hole or part of a shot hole in which any explosives or any portion thereof has failed to explode;

“**primary blasting**” means the blasting operations normally associated with the breaking of in-situ ground for production purposes, including the blasting of big rocks, obstructions in ore passes or box holes or blasting operations where explosives are not contained in a shot hole;

“**secondary blasting**” means the blasting operations not associated with production from in-situ ground which can take place at any time during a shift to remove obstructions or reduce big rocks in size, but excludes the blasting of shot holes drilled in in-situ rock;

“**shot hole**” means any drill hole charged with or intended to be charged with explosives;

“**socket**” means any shot hole, or part of any shot hole, known not to be a misfired hole, which remains after having been charged with explosives and blasted or which, for any other reason, may be suspected of having contained explosives at any time and includes any shot hole, or part of any shot hole, from which all explosives have been extracted;

4.1 Security in respect of explosives

- (1) The employer must take reasonably practicable measures to prevent persons not authorized by the employer to do so, from-
 - (a) gaining access to explosives;
 - (b) being in possession of explosives, or
 - (c) removing or attempting to remove explosives from a mine.

- (2) Only persons authorized by the employer to do so may -
 - (a) gain access to or attempt to gain access to explosives;
 - (b) be in possession of explosives, or
 - (c) remove or attempt to remove explosives from a mine.
- (3) Subject to regulation 4.2(1)(d), no person may bury, hide, submerge or abandon any explosives.

4.2 Receipt, storage, issuing, transportation and destruction of explosives

- (1) The employer must ensure that -
 - (a) explosives that are not being transported or prepared for use are stored in explosive stores, silos or containers which are, as far as reasonably practicable, designed and located so as to facilitate the safe and secure receipt, storage and issuing of explosives by a competent person;
 - (b) a written procedure is prepared and implemented, after consultation with the explosive manufacturer or supplier, to prevent persons from being exposed to the significant risks associated with the receipt, storage, issuing and transportation of explosives, including associated with the inadvertent initiation and the deterioration of explosives;
 - (c) as far as reasonably practicable, explosives are only transported in vehicles or conveyances approved for that purpose by the employer, after consultation with the explosive manufacturer or supplier; and
 - (d) when mine closure is intended, or when a mine is not being worked as contemplated in [section 2\(2\)](#), the Principal Inspector of Mines and the Chief Inspector of Explosives (as defined in the Explosives Act, Act No. 15 of 2003) are notified in writing as soon as reasonably practicable, if any explosives have been left behind in the mine, of -
 - (i) the type, quantities and location of such explosives; and
 - (ii) the measures taken to safeguard persons from any significant risk associated with such explosives.
- (2) The employer must take reasonable measures to ensure that only the competent person contemplated in regulation 4.4(1) destroys explosives.
- (3) In the case of underground coal mines, explosives must be destroyed only on surface, and in accordance with a written procedure prepared for

that purpose by the employer after consultation with the explosives manufacturer or supplier.

- (4) The employer must inform the Chief Inspector of Explosives (as defined in the [Explosives Act, Act No. 15 of 2003](#)) in advance if more than 50kg of explosives are to be destroyed at any one time.
- (5) The employer must take reasonable measures to ensure that accurate records, covering the immediate preceding three years, are kept readily available at the mine of all explosives received, stored, issued, used and destroyed at the mine.

4.3 Approved explosives at mines

- (1) The employer must take reasonable measures to ensure that -
 - (a) only explosives approved by the employer are used at the mine;
 - (b) the explosives are used in accordance with a written procedure prepared and implemented for that purpose after consultation with the explosive manufacturer or supplier;
 - (c) no explosives are initiated where flammable gas or coal dust may be present in sufficient quantities to cause a flammable gas or coal dust explosion or to cause flammable gas to burn;
 - (d) if explosives are manufactured at the mine, it is done in accordance with a written procedure prepared and implemented for that purpose after consultation with the explosive manufacturer or supplier; and
 - (e) explosive powered tools are used and maintained in accordance with a written procedure prepared and implemented for that purpose.

4.4 Primary and Secondary blasting to be performed by competent persons

- (1) The employer must take reasonable measures to ensure, where blasting takes place, that a competent person -
 - (a) exercises control over the explosives to be used for such blasting;
 - (b) prepares primers;
 - (c) tests for flammable gas in accordance with a written procedure prepared and implemented for that purpose by the employer;
 - (d) examines any drilled hole to be deepened to ensure it is safe to deepen;

- (e) examines for and deals with misfires, sockets, old and damaged explosives in accordance with a written procedure prepared for that purpose by the employer;
- (f) marks or indicates shot holes for drilling or sanctions the drilling of shot holes marked or indicated by another person;
- (g) exercises control over any manufacturing at the mine of explosives to be used for such blasting;
- (h) the connecting up of blasting rounds or circuits;
- (i) charges shot holes with explosives or places explosive charges; and
- (j) initiates blasting.

(2) *Blasting Assistants*

A **competent person** may, with the approval of the employer, assist the competent person referred to in regulation 4.4(1) with any of the following activities-

- (a) exercising control over the explosives to be used for such blasting;
- (b) the preparation of primers;
- (c) the charging of shot holes with explosives or the placing of explosive charges;
- (d) the timing of blasting rounds or circuits; and
- (e) initiating any blasting in the actual presence and under the direct supervision of the competent person referred to in regulation 4.4(1).

4.5 Certification of Initiation Apparatus and Blasting Systems

- (1) The employer must ensure that where initiation of explosives charges takes place by means of electricity -
 - (a) apparatus used for the initiation of electronic detonators complies with Part 1 “Electronic Initiation Systems” of SANS 1717 The design and approval of EED initiation systems for use in mining and civil blasting;
 - (b) apparatus used for the initiation of electric detonators complies with Part 2 “Electric Initiation System - Shot Exploder based” of SANS 1717;

- (c) every shot exploder, initiator or electronic delay detonator system is tested and certified by a test laboratory accredited for this purpose by the government endorsed national accreditation body;
 - (d) every inherently safe apparatus used for the testing of a circuit containing an electric detonator, electric or electronic initiator, electronic delay detonator or a similar device is tested and certified for that purpose by a test laboratory accredited for that purpose by the government endorsed national accreditation body; and
 - (e) all aspects pertaining to the use of electrical blasting are executed safely with specific reference to the following SANS Codes of Practice 10325: “The safe application of detonator systems for use in mining and civil blasting applications; Part 1: Electronic Detonator Systems (SABS 10325-1:2000) and Part 2: Electric Detonator Systems – Shot Exploder-based.” (SABS 0325-2:2001).
- (2) The normative references in the SABS Standards referred to in 4.5(1)(e) above are not applicable to the employer.

4.6 General precautionary measures when blasting

The employer must take reasonable measures to ensure that when blasting takes place, air and ground vibrations, shock waves or fly material are limited to such an extent and at such a distance from any building, public thoroughfare, railway, power line or any place where persons congregate to ensure that there is no significant risk to the health or safety of persons.

4.7 Learners

Learners to be assessed competent against any of the qualifications referred to in these regulations may, with the approval of the employer, perform any of the activities listed under these regulations in the actual presence and under the direct supervision of the relevant competent person(-s).

4.8 Prevention of flammable gas and coal dust explosions

The employer must take reasonable measures to ensure that:

- (a) a blow out or ignition of flammable gas or initiation of a coal dust explosion does not occur due to the design and positioning of the blast holes or due to the type of explosives that are used; and
- (b) initiating devices or systems used in blast designs are designed not to cause a methane or coal dust explosion.

4.9 Shot Holes to be Stemmed

The employer must take reasonable measures to ensure that no explosive charge, contained in a shot hole where there is a significant risk of a flammable

gas or coal dust explosion, is initiated, unless the explosives are contained in a shot hole and that the portion of the hole between the explosives and the collar is only filled with sand, clay or non flammable materials, provided that fine coal may not be used for stemming.

[Chapter 4 inserted by GN R1279/2006]

CHAPTER 5

FIRES AND EXPLOSIONS

5.1 Report to Employer

5.1 Report to Employer

- (1) The employer must ensure that a competent person reports to the employer, at appropriate intervals determined in accordance with the mine's risk assessment, on -
 - (a) the effectiveness of the precautionary measures taken to prevent or suppress explosions of coal dust or flammable gas; and
 - (b) the adequacy of measures in place to prevent, detect and combat the start and spread of mine fires.

- (2) Where at any area at a mine, a fire could pose a significant risk to the health and safety of persons, the employer must take reasonable measures to ensure that flammable liquids, gases and materials in use, are transported, stored, deposited, used and disposed of in such a way as to prevent the starting or spreading of a fire.

[Subreg. (2) added by GN R1237/2003]

- (3) The employer at any mine at which a fire occurs must, as soon as practicable, notify the employer of any other mine at which the spread of such fire could constitute a hazard should such fire not be immediately extinguishable, of the existence of that fire

[Subreg. (3) added by GN R1237/2003]

- (4) The employer must take reasonably practicable measures to ensure that any coal, coal debris or bituminous rock is deposited so that it does not pose a significant risk to the health or safety of any person.

[Subreg. (4) added by GN R1237/2003]

- (5) The employer, at any mine where the risk assessment indicates a risk of the presence of flammable gas, must ensure that all flammable gas measuring instruments and flammable gas warning devices used at the mine for the detection of methane or hydrogen or a mixture of both, comply with the South African National Standard Specification SANS 1515- 1: 2006, Edition 2.1 "Gas measuring equipment primarily for use in mines: Part 1: Battery operated portable, flammable gas measuring instruments and warning devices".

[Subreg. (5) added by GN R92/2008]

- (6) Annex A: “Assessment of Compliance with this part of the Specification” contained in South African National Standard Specification SANS 1515-1: 2006, Edition 2.1 shall, for the purpose of regulation 5.1(5), be deemed to be normative.

[Subreg. (6) added by GN R92/2008]

Reference is made to the following Guidelines issued by the Chief Inspector of Mines in terms of section 9(2) of this Act

- (i) Guideline for the Compilation of a Mandatory Code of Practice for the Prevention of Coal Dust and Flammable Gas Explosions: Ref.: DME 16/3/2/1-A1
- (ii) Guideline for the Compilation of a Mandatory Code of Practice for the Prevention of Flammable Gas Explosions in Mines Other than Coal DME 16/3/2/1-A2
[Chapter 5 inserted by GN R904/2002]

CHAPTER 6

HEALTH AND SAFETY REPRESENTATIVES AND COMMITTEES

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- [6.3 Establishment of election committee](#)
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- [6.5 Duties of manager](#)
- [6.6 Nomination of health and safety representatives](#)
- [6.7 Procedures for the election of health and safety representatives](#)
- [6.8 Procedures for the election of full-time health and safety representatives](#)
- [6.9 Appointment of health and safety representatives](#)
- [6.10 Appointment of employee representatives on health and safety committee](#)
- [6.11 Period of office](#)
- [6.12 Vacation of office and filling of vacancies](#)

6.1 Prescribed period for negotiations and consultations

- (1) The owner of a mine required to enter into negotiations in terms of [sections 26](#) (1) and [33](#) (1), must commence negotiations within one month of the obligation to do so arising.
- (2) The manager of a mine required to enter into consultations in terms of [sections 26](#) (6) or (7) and [33](#) (6) or (7), must commence consultations within one month of the obligation to do so arising.
- (3) If no collective agreement is concluded on the number of full-time health and safety representatives within three months of negotiations commencing in terms of regulation 6.1 (1), any party to a dispute in terms of section 26 (8) (a) may refer the dispute to the Commission.

- (4) If no agreement is concluded on the number of full-time health and safety representatives within three months of consultations commencing in terms of regulation 6.1 (2), any party to a dispute in terms of [section 26](#) (8) (b) may refer the dispute to the Commission.

6.2 Application of regulations

If a collective agreement dealing with the election of health and safety representatives, full-time health and safety representatives or employee representatives on health and safety committees is concluded in terms of Chapter 3 of this Act, the regulations in this Chapter dealing with such election do not apply.

6.3 Establishment of election committee

- (1) The manager must establish an election committee.
- (2) The election committee -
 - (a) must include an appropriate number of employee representatives;
and
 - (b) may include a number of management representatives.
- (3) If the election committee includes management representatives, their number must be equal to or less than the number of employee representatives.
- (4) The employee representatives on the election committee must be appointed -
 - (a) by the representative trade union at the mine;
 - (b) if there is no representative trade union at the mine, by the registered trade unions with members at the mine; or
 - (c) if there is no registered trade union with members at the mine, by the employees at the mine.

6.4 Duties of election committee

The election committee must -

- (a) determine fair and reasonable procedures for the nomination and election of health and safety representatives;
- (b) ensure that elections are conducted in terms of such procedures;
- (c) appoint an election officer and one or more counting officers for each election; and

- (d) after consulting the manager, determine the date, time and place of each election.

6.5 Duties of manager

- (1) The manager must -
 - (a) as far as practicable, ensure that every employee is made familiar with the nomination and election procedures;
 - (b) give reasonable and understandable notice to the employees of the date, time and place of each election;
 - (c) provide the facilities and assistance reasonably necessary for the election committee to perform its functions;
 - (d) provide the facilities reasonably necessary for -
 - (i) the election of health and safety representatives; and
 - (ii) the appointment of employee representatives on any health and safety committee; and
 - (e) provide reasonable time off from work, without loss of remuneration, for employees to participate in the elections of health and safety representatives.
- (2) The Chief Inspector may issue guidelines regarding the facilities and assistance to be provided in terms of regulation 6.5 (1).

6.6 Nomination of health and safety representatives

- (1) Every candidate for election as a health and safety representative for a shift and designated working place must be nominated for election by an employee who works on the same shift at the designated working place.
- (2) Every candidate for election as full-time health and safety representative for a mine must be nominated for election by an employee.

6.7 Procedures for the election of health and safety representatives

- (1) (a) If only one candidate is nominated for election as a health and safety representative for a shift at a designated working place, the election officer must declare the candidate elected.

- (b) If two or more candidates are nominated for election as a health and safety representative for a shift at a designated working place, the election officer must hold an election.
- (2) Every election for a health and safety representative -
 - (a) must be under the control of the election officer; and
 - (b) is only valid if 50% or more of the employees who work on the same shift at the designated working place concerned vote in the election.
- (3) (a) If less than 50% of the employees who work on the same shift at the designated working place concerned vote in an election, the election officer must, after consulting the manager, determine a date, time and place for a subsequent election.
 - (b) Regulation 6.7 (2) (b) does not apply to such subsequent election.
- (4) Every employee on a shift at a designated working place has one vote in the election of every health and safety representative for that shift and designated working place.
- (5) The counting officers must, under the supervision of the election officer, count all valid votes.
- (6) The election officer must announce the results of the count to the employees concerned.
- (7) If an election for an alternate health and safety representative is held, it must be conducted in the same manner as an election for a health and safety representative.

6.8 Procedures for the election of full-time health and safety representatives

- (1) If the number of candidates nominated for election as full-time health and safety representatives at a mine is -
 - (a) not more than the number that must be elected, the election officer must declare the candidates elected; or
 - (b) more than the number that must be elected, the election officer must hold an election.
- (2) Every election for a full-time health and safety representative -
 - (a) must be under the control of the election officer; and
 - (b) is only valid if 50% or more of the employees vote in the election.

- (3) (a) If less than 50% of the employees vote in an election, the election officer must after consulting the manager, determine a date, time and place for a subsequent election.

(b) Regulation 6.8 (2) (b) does not apply to the subsequent election.
- (4) Every employee has one vote in the election of every full-time health and safety representative.
- (5) The counting officers must, under the supervision of the election officer, count all valid votes.
- (6) The election officer must announce the results of the count to the employees.

6.9 Appointment of health and safety representatives

The manager must -

- (a) within 7 days of election, appoint in writing every employee elected as a health and safety representative;
- (b) provide every health and safety representative with suitable means of identification as a health and safety representative; and
- (c) prominently and conspicuously display the photograph and name of the health and safety representative at an appropriate place at the mine.

6.10 Appointment of employee representatives on health and safety committee

Every employee representative on a health and safety committee at a mine must be appointed by a majority of the health and safety representatives at the mine.

6.11 Period of office

- (1) The period of office of any health and safety representative or employee representative on a health and safety committee is three years.
- (2) Despite regulation 6.11 (1) the health and safety committee may determine shorter periods of office for -
 - (a) health and safety representatives;
 - (b) full-time health and safety representatives; and
 - (c) employee representatives on a health and safety committee.

- (3) Every health and safety representative and employee representative on a health and safety committee may be reappointed in accordance with the provisions of these regulations after the expiry of their periods of office.

6.12 Vacation of office and filling of vacancies

- (1) A health and safety representative must vacate office on expiry of that representative's period of office or if -
 - (a) the representative -
 - (i) no longer satisfies the qualifications contemplated in [section 28 \(1\)](#); or
 - (ii) resigns as a health and safety representative; or
 - (b) so required in writing on the grounds that the representative has not properly performed the functions of a health and safety representative by -
 - (i) at least 50% of the employee representatives on the health and safety committee; or
 - (ii) at least 50% of the employees who work on the same shift at the designated working place as the health and safety representative.
- (2) A full-time health and safety representative must vacate office on expiry of that representative's period of office or if -
 - (a) the representative -
 - (i) no longer satisfies the qualifications contemplated in [section 28 \(2\)](#); or
 - (ii) resigns as full-time health and safety representative; or
 - (b) so required in writing on the grounds that the representative has not properly performed the functions of a full-time health and safety representative by -
 - (i) at least 50% of the employee representatives on the health and safety committee; or
 - (ii) at least 50% of the employees.
- (3) The manager must within 7 days from the time when a health and safety representative must vacate office in terms of regulation 6.12 (1) or (2), terminate the health and safety representative's appointment and in writing notify the health and safety representative of it.

- (4) A vacancy contemplated in regulation 6.12 (1) or (2) must be filled by a health and safety representative elected in a by-election held in terms of regulation 6.7 or 6.8, as the case may be.
- (5) An employee representative on a health and safety committee must vacate office on the committee on expiry of such representative's period of office of it that representative -
 - (a) is removed from office by a majority vote of employee representatives on the health and safety committee on grounds that the representative has not properly performed the functions of an employee representative on the health and safety committee; or
 - (b) resigns as employee representative on the health and safety committee.
- (6) A vacancy contemplated in regulation 6.12 (5) must be filled by an employee appointed in terms of regulation 6.10.
[Chapter 6 substituted by GN R846/97]

CHAPTER 7

INSPECTORATE OF MINE HEALTH AND SAFETY

[7.1 Qualifications of inspectors](#)

[7.2 Authorisation certificate](#)

7.1 Qualifications of inspectors

An officer must comply with the appointment requirements of the Personnel Administration Standard for the Occupational Class: Inspector: Mines or the Occupational Class: Inspector: Mining Machinery approved by the Public Service Commission read in conjunction with Public Service Staff Code K.II/I to be appointed as an inspector on the establishment of the Mine Health and Safety Inspectorate.

7.2 Authorisation certificate

- (1) (a) The Chief Inspector must issue each inspector appointed in terms of [section 49](#) (1) with a certificate DME 34 signed by the Chief Inspector.
- (b) The certificate which must include the names, identification number and a photograph of the inspector, must indicate -
 - (i) the position in which the inspector is employed; and

- (ii) that the inspector may, in terms of [section 50](#) (1), enter any mine for the purposes of monitoring or enforcing compliance with this Act.
- (2)
 - (a) The Chief Inspector must issue each person authorised under [section 49](#) (4) (b) with a letter of authorisation and a certificate DME 35 signed by the Chief Inspector.
 - (b) The letter of authorisation must include -
 - (i) the names of the person;
 - (ii) the functions to be performed by the person;
 - (iii) the area in which the functions will be performed; and
 - (iv) the period for which the person is authorised.
 - (c) The certificate, which must include the names, identification number and a photograph of the authorised person, must indicate that the person -
 - (i) is appointed to perform the functions of an inspector as indicated in the letter of authorisation; and
 - (ii) may, in terms of [section 50](#), enter any mine to perform such functions.
- (3) Every inspector appointed or person authorised under [section 49](#) (1) or 49 (4) as the case may be, must at all times when entering, or performing any function at any mine -
 - (a) carry on their person, certificates DME 34 or 35 and the letter of authorisation issued in terms of regulation 7.2 (2), as the case maybe; and
 - (b) must show such certificate and letter to the manager of the mine or the person in charge of any working place at the mine, if requested to do so.
- (4)
 - (a) Despite regulations 7.2 (1) to (3) the Principal Inspector of Mines may issue a letter, signed by the Principal Inspector of Mines to any inspector appointed or person authorised under [section 49](#) (1) or 49 (4), as the case may be, who for any reason is not in possession of a certificate DME 34 or 35.

- (b) The letter issued under regulation 7.2 (4) (a) must include the names of the inspector or person and the official stamp of the office of the Principal Inspector of Mines and must state that the inspector or person is duly appointed or authorised under [section 49](#) (1) or 49 (4), as the case may be.
 - (c) Regulation 7.2 (3) is applicable to a letter issued under regulation 7.2 (4).
- (5) A certificate DME 34 or 35 or a letter contemplated in regulation 7.2 (4) is deemed to be adequate proof of an appointment or authorisation under [section 49](#) (1) or 49 (4), as the case may be.
[Chapter 7 substituted by GN R846/97]

CHAPTER 8

MACHINERY AND EQUIPMENT

- [8.1 Air Compressors](#)
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8.1 Air Compressors

- (1) The employer must ensure, in the case of air compressors with a free delivery in excess of 0,15 cubic metres per second and where compression takes place in the presence of lubricating oil, that the compressor is fitted with automatic means of limiting the operating temperature and pressure of the compressor to a safe level.

[Chapter 8 inserted by GN R1579/2002]

8.2 Underground Railbound Transport

The employer must take reasonable measures to ensure that:

- (1) the **braking system** of every **locomotive** or **train** is capable of stopping the **locomotive** or **train** within a safe distance under all operating conditions;
- (2) the **braking system** of every **locomotive** has passed a **dynamic type test** under full load conditions, before being used for the first time and after any brake design modifications;

- (3) the **braking system** of every **locomotive** has passed a **static test** before the **locomotive** is put into use at the commencement of each shift, after repairs and after adjustments;
- (4) a system is in place to alert persons to the presence and direction of travel of any **locomotive** or **train**;
- (5) a system is in place to assist the driver or operator of a **locomotive** or **train** to travel at a safe speed;
- (6) any **rolling stock** used for the transportation of persons is approved, by a competent person and is operated and maintained safely;
- (7) a system is in place that is capable of preventing any **locomotive** or **train** from inadvertently being set in motion.
[Reg. 8.2 added by GN R583/2004]

8.3 No person may board or alight from a **locomotive** or **train** while it is in motion.
[Reg. 8.3 added by GN R583/2004]

8.4 Scraper Winch and Mono-Rope installation

- (1) The employer, at every mine where scraper-winch or mono-rope winches are operated, must take reasonable measures to prevent persons from being injured as a result of -
 - (a) any person coming into contact with any moving part of a scraper winch or mono-rope winch installation or any equipment attached thereto; and
 - (b) the scraper winch or mono-rope winch installation being unsafe.
- (2) The measures to be taken by the employer in terms of regulation 8.4(1) must include measures to ensure that -
 - (a) scraper-winch and mono-rope winches are only operated by competent persons authorized by the employer to do so;
 - (b) the scraper winch or mono-rope winch is not operated until it is examined and declared safe to operate by a person authorised to do so by the employer;
 - (c) means are provided to forewarn persons of the intention to commence operating any scraper-winch or mono-rope winch;
 - (d) means are provided for persons to signal to the operator, from any access point to the installation, to shut down the operation of the scraper-winch or mono-rope winch installation;
 - (e) scraper winch and mono-rope winch ropes, scraper attachments and rope splicing are regularly inspected;

- (f) the scraper winch ropes are always underlay;
- (g) a written procedure is prepared and implemented for the installation of the winch system, covering at least -
 - (i) the requirements of scraper and mono-winch foundations and installations;
 - (ii) the crossover and anti-fouling arrangements of ropes from two or more winches;
 - (iii) illumination of the moving parts of any winch so that they can be identified by persons;
 - (iv) appropriate sheave and return pulley anchor and rigging arrangements, including the use of safety slings;
 - (v) measures to ensure that winch ropes are used within the design capacity;
 - (vi) winch starter box location to ensure ease of operation by the operator; and
 - (vii) the moving and transport of winches from one location to another.

[Reg. 8.4 added by GN R1225/2005]

8.5 Lifting Equipment Regulations

Definitions

For purposes of regulation 8.5, unless the context otherwise indicates -

“Lifting equipment,” means any equipment or machine or arrangement of equipment or machines intended or used for the lifting, lowering, suspension, or moving in suspension of any person or load.

“Lifting tackle,” means any attachment, including anchoring points, used to secure lifting equipment or a load to lifting equipment.

- (1) The employer must take reasonable measures to ensure that no person is injured due to the failure of any lifting equipment or lifting tackle as a result of-
 - (a) incorrect design for the intended application;
 - (b) incorrect installation; or
 - (c) insufficient maintenance.

- (2) The employer must take reasonable measures to ensure that the installation, use (including the transport of persons), maintenance, inspection, testing and keeping of records of lifting equipment and lifting tackle are done in accordance with a written operating procedure prepared and implemented for that purpose.
- (3) The employer must take reasonably practicable measures to ensure that -
- (a) only lifting equipment and lifting tackle with a minimum factor of safety of four (4) is used;
 - (b) lifting equipment and lifting tackle are not used beyond their design capacity; and
 - (c) the safe working load of any lifting equipment and lifting tackle is conspicuously and clearly marked or indicated thereon.
- (4) Notwithstanding regulation 8.5(2), the employer must take reasonably practicable measures to ensure that the following lifting tackle has a minimum factor of safety of -
- (a) ten (10) for natural fiber ropes;
 - (b) six (6) for steel wire ropes, man-made fiber ropes and textile webbing; and
 - (c) four (4) for high tensile steel chains.
- (5) The employer must take reasonable measures to ensure that only persons authorised in writing by the employer to do so, operate lifting equipment and lifting tackle.
- (6) The employer must take reasonably practicable measures to ensure that the lifting equipment used at the mine is designed and manufactured in accordance with an appropriate standard.
[Reg. 8.5(6) amended by GN R90/2008]
- (7) **Repeal**

The following regulations promulgated under Minerals Act, 1991 (Act No, 50 of 1991) in force in terms of item 4 of Schedule 4 of the Act are hereby repealed -

Chapter 6	Chapter 16	Chapter 19
6.1.1	16.98	19.1
6.1.2	16.98.1	19.2.1
6.1.3	16.98.2	19.2.2
6.2.1	16.98.3	19.3.1
6.2.2	16.98.4	19.3.2

6.2.3	16.98.5	19.3.3
6.2.4	16.99	19.3.4
6.2.5	16.100	19.4
6.3.1	16.101	19.5
6.3.2	16.102	19.6
6.3.2.1	16.103	
6.3.2.6	16.103.1	
6.3.2.7	16.103.2	
6.3.2.8	16.104	
6.3.2.12		
6.3.3.1		
6.3.3.2		
6.3.3.3		
6.3.3.4		
6.3.3.5		
6.3.3.6		
6.9		
6.11		

[Reg. 8.5(7) substituted by GN R90/2008]

[Reg. 8.5 added by GN R1225/2005]

8.6 Fans

Definitions

For purposes of regulation 8.6, unless the context otherwise indicates -

“**booster fan**” means a fan installed underground in the main air stream or in a split of the main air stream to assist the main fan to increase airflow and/or overcome resistance through a section of a mine.

“**main fan**” means a fan that controls the entire air flow of a mine, or the airflow of one or more of the major air circuits.

- (1) The employer must take reasonable measures to ensure that combustible materials, explosives or natural vegetation are not located so near to fan installations and its switch-gear used for underground ventilation, that if such combustible materials, explosives or natural vegetation catch fire, there is a significant risk to the supply of clean air to any underground working place as a result of -
 - (a) the fan installation or its switch-gear being damaged; or
 - (b) smoke or fumes being drawn into any working place.
- (2) The employer must ensure, where a significant risk of an explosion of flammable gas or coal dust exists, that measures are in place to ensure that there is always a supply of clean air to all underground working places. Such measures must include:

- (a) installing the main fan on surface;
 - (b) providing an effective means of protecting the main fan against damage caused by explosion;
 - (c) ensuring the main fan is readily accessible to effect emergency repairs; and
 - (d) having a back up system in place to provide clean air should the main fan become inoperative.
- (3) The employer must ensure, as far as reasonably practicable, that every main fan is provided with:
- (a) an automatic means of alerting a responsible person should it stop or cease to operate;
 - (b) an effective means of giving early warning of defective operation;
 - (c) a power supply from two different sources or networks, which can include an emergency supply alternator / generator, for power supply in the event of an interruption to the normal power supply; and
 - (d) an effective means for safe entrance to and exit (escape) from the main fan housing.
- (4) The employer must take reasonable measures to ensure that a competent person examines every main and booster fan for effective operation, internally and externally, together with all appurtenant components that are necessary for the operation of the fan, at intervals not exceeding three months, or any other lesser interval determined by the mine's hazard identification and risk assessment in terms of section 11.
- (5) The employer must keep records of all examinations conducted in terms of regulation 8.6(4), including remedial measures taken, for a period of at least the most recent ten years of the fan installation.
- (6) The employer must take reasonable measures to ensure that all main and booster fans are installed, operated and maintained in accordance with a written procedure prepared and implemented for that purpose.

[Reg. 8.6 added by GN 911/2006]

8.7 Refrigeration and Air-Conditioning Installations

- (1) The employer must take reasonable measures to ensure that all refrigeration or air-conditioning installations at the mine comply with the requirements of the South African Bureau of Standards Code of Practice - SANS 10147, "Refrigerating systems including plants associated with air-

condition systems” (2002: 4th ed) with respect to its safety, construction, erection, operation, inspection and testing.

- (2) The employer must take reasonable measures to ensure that a competent person examines and operationally tests the entire refrigeration system as contemplated in SANS 10147, excluding pressure relief devices, at least once every 3 (three) months.
- (3) Regulation 8.7(1) and 8.7(2) do not apply to any:
 - (a) household refrigerator;
 - (b) water cooler or similar equipment that contains less than 1 kg of refrigerant;
 - (c) unit type display counter or any commercial refrigerator that contains less than 15 kg of a group 1 refrigerant; and
 - (d) refrigeration plant that requires a prime mover of less than 10 kW or less.
- (4) Despite Regulation 8.7(3) the clauses in SANS 10147 that refer to the Montreal Protocol apply to all air-conditioning and refrigeration equipment.
- (5) The normative references in the above standard of SANS 10147 are not applicable to the employer.

Repeal

- (6) The following regulations made under the Minerals Act, 1991 (Act No. 50 of 1991) in force in terms of Schedule 4 of the Act are hereby repealed –

Chapter 10	Chapter 23
10.13	23.15.1
10.13.1	23.15.2
10.13.2	23.15.3
10.13.3	23.15.4
10.13.4	23.15.5
10.14	23.15.6
10.14.1	23.15.7
10.14.2	23.15.8
10.14.3	23.15.9
	23.15.11
	23.15.12
	23.15.13
	23.15.14

	23.15.15
	23.15.16

[Reg. 8.7 added by GN 911/2006]

8.8. General Machinery Regulations

- (1) The employer must take reasonably practicable measures to prevent persons from being injured as a result of them, the clothes being worn by them or any equipment being held by them coming into contact with or being drawn into any moving part of any machine.
- (2) The employer must take reasonably practicable measures to prevent persons from being injured because of any machinery failing as a result of -
 - (a) incorrect design;
 - (b) incorrect installation;
 - (c) poor maintenance; or
 - (d) incorrect use or non-compliance with proper operating or safety procedures.
- (3) The measures to be taken by the employer in terms of regulation 1 must include measures to ensure that -
 - (a) only persons authorized by the employer to do so, start operate and maintain any machine where such starting, operation or maintenance may pose a significant risk to any person;
 - (b) where the moving of machinery may pose a significant risk to any person, such machinery is only moved under the constant supervision of a competent person who is fully aware of the risks attached to such moving of the machinery;
 - (c) only persons authorised by the employer to do so enter any area where machinery is operated, where such operation may pose a significant risk to any person;
 - (d) machinery is only operated if all installed safety devices are operational and functional;
 - (e) persons in close proximity to moving parts of machinery do not wear or are not permitted to wear clothing or anything else that can be caught in such moving parts;
 - (f) where the unexpected moving of any machinery or any part of any machinery could pose a significant risk to any person, appropriate pre-start warning devices, such as audible warning devices, the

delay time must be determined by risk assessment with a minimum of a ten second time delay, are fitted to such machinery and used to warn persons that such machinery is about to be set in motion;

- (g) here there could be a significant risk to any person working on any machinery due to the release from such machine of any mechanical, electrical, hydraulic, chemical or other source of energy, a written lockout procedure is prepared and implemented to ensure that such source of energy is effectively locked out and de-energised before any person works on such machinery;
 - (h) access scaffolding is erected, used, maintained and dismantled safely and in accordance with SANS Standard 10085-1:2004 “The design, erection, use and inspection of access scaffolding”.
 - (i) means are provided, on or in close proximity to any machine, to immediately remove the source of power to that machine in case of an emergency;
 - (j) where the starting of machines are interlocked, no unintended starting of any of those machines can take place;
 - (k) starting devices are so arranged that no accidental starting of machinery can take place; and
 - (l) all electrical, pneumatic and hydraulic portable equipment are operated and maintained in a safe working order;
- (4) The measures to be taken by the employer to prevent any person from coming into contact with any moving part of machinery or any equipment attached thereto, must include -
- (a) effective physical barriers at the machinery such as screening, guarding or fencing; or
 - (b) failsafe electric or electronic barriers interlocked with the machinery in such a way that the machinery would be stopped before persons come into contact with moving machinery or parts thereof; or
 - (c) effective barriers at a safe distance away from any machinery.
- (5) The employer must take reasonably practicable measures to ensure that:
- (a) when a compression ignition engine system is found to have any defect which may cause a significant risk to the safety or health of persons, the use of such engine system is discontinued immediately;
 - (b) all services, maintenance and repairs to diesel-powered equipment are performed by a competent person;

- (c) all areas where diesel fuel is stored and where fuelling is carried out are clearly marked and that measures are in place to prevent spillage, contamination and fire, including that -
 - (i) diesel engine fuel is delivered underground in such a way that no spillage takes place during delivery;
 - (ii) when fuel is piped underground fuel delivery pipes are drained each time after use;
 - (iii) fuel is stored underground only in non-flammable robust containers which do not leak; and
 - (iv) the quantity of fuel stored underground is limited to 3 (three) day's estimated consumption.
- (6) The employer must take reasonably practicable measures to ensure that every mobile diesel engine powered unit, when not in use, is kept at a location that is sufficiently ventilated to prevent a build up of diesel fumes in the air at that location sufficient to cause a significant risk when starting up that engine.
- (7) The employer must take reasonably practicable measures to ensure that all areas where diesel fuel is stored are clearly indicated on the mine's rescue plan contemplated in regulation 17 (19).

[Reg. 8.8 added by GN R93/2008]

8.9 Conveyor Belt

Definitions

For purposes of regulation 8.9, unless the context otherwise indicates -

“conveyor belt installation” means a mechanical system used for the transportation of minerals, material, or persons on a belt.

“power supply” means any energy source feeding the drive motor of a conveyor belt installation

- (1) In compliance with regulation 8.8(1) the employer must ensure that -
 - (a) a conveyer belt installation is not cleaned when any of its parts are in motion;
 - (b) the power supply of a stationary conveyer belt installation is locked-out during repairs, maintenance, routine cleaning and cleaning of spillage;

- (c) the driving machinery of the conveyor belt installation can be stopped by any person from any point, along its length where access to the belt is possible;
 - (d) the driving machinery of the conveyor belt installation is stopped should the belt break, jam or slip excessively;
 - (e) persons are prevented from entering any side of a conveyor belt installation where there is no walk way, unless means has been provided to do so safely;
 - (f) one or more devices are fitted and used to give all persons at any point where access to the conveyor belt installation is possible sufficient prior warning for a period to be determined by the mines risk assessment with a minimum period of 10 seconds that any part of such a conveyor belt installation is about to be put into motion;
 - (g) the take up or belt tensioning device will not move during repairs, routine cleaning, cleaning of spillage, maintenance or belt splicing;
 - (h) where two or more conveyor belt installations are used in series, sequence interlocking is provided which automatically will -
 - (aa) stop all conveyor belt installations feeding a belt conveyor that has stopped; and
 - (bb) prevent a conveyor belt from starting until the conveyor belt onto which it feeds is moving;
 - (i) only persons authorised to do so by the employer operate, maintain, clean and repair a conveyor belt installation;
 - (j) the belt of any conveyor belt installation cannot run away; and
 - (k) the overall structural design of every conveyor belt installation is approved by a competent person.
- (3) The employer must take reasonably practicable measures to prevent persons from being injured by material or mineral falling from a conveyor belt installation, which measures must include the fitting and use of one or more devices to prevent run-back or run-on; when such conveyor belt installation is stopped;
 - (4) The employer must take reasonably practicable measures to prevent persons from being exposed to flames, fumes or smoke arising from a conveyor belt installation catching fire, including instituting measures to prevent, detect and combat such fires.
 - (5) The employer must take reasonably practicable measures to prevent persons from being injured as a result of the breaking, misalignment or

damage of a conveyor belting due to any mineral, material or coal dust accumulating on or around the moving parts of any conveyor belt installation.

- (6) The employer must take reasonably practicable measures to prevent persons at or near conveyor belt installations from being injured due to lightning directly or indirectly striking the installation.
- (7) The employer must take reasonably practicable measures to ensure that the use, operation and inspection of man-riding conveyors comply with SANS 10266: 2006 - Edition 1 'The safe use, operation and inspection of man-riding belt conveyors in mines'.
- (8) The normative references in SANS 10266: 2006 are not applicable to the employer.
- (9) The employer must take reasonable measures to ensure that the functionality of the devices contemplated in regulation 8.9(1)(f) and (g) and of any other safety devices relating to the conveyor belt installation are tested weekly.
- (10) The employer must ensure that a written procedure is prepared and implemented for conveyor belt splicing, joining and repairing and for the safe use of chemicals during such splicing, joining and repairing.
[Reg. 8.9 added by GN R93/2008]

CHAPTER 9

MINE ENVIRONMENTAL ENGINEERING AND OCCUPATIONAL HYGIENE

[9.1 Environmental Engineering](#)

[9.2 Occupational Hygiene](#)

9.1 Environmental Engineering

(1) Use of Compressed Air

No person may use, or permit any person to use, compressed air:

- (a) in such a manner that it might endanger the *health* or *safety* of any person; or
- (b) to clean the body of any person or clothes being worn by any person.

(2) Early Warning Systems

Where the *risk* assessment at the *mine* indicates a significant *risk* of a fire and/or explosion and/or toxic release, that could lead to an irrespirable

atmosphere or an atmosphere immediately dangerous to life or *health*, the *employer* must provide an early warning system or systems at all *working places*.

(3) **Ventilation Control Devices**

The *employer* must ensure that polymer underground ventilation control devices or appliances, which have the potential for electrical static discharge

- (a) comply with the SABS standard specifications 1287: Part I and Part II; and
- (b) are of anti-static characteristics when used in *working places* where there is a *risk* of igniting gas, dust or vapour.
(Subreg. (3) with effect from: 1 September 2002)

(4) **Working places where work has ceased**

The *employer* must take *reasonably practicable* measures to ensure that no *employee* is exposed to any *health hazard* at, or emanating from, any *working place* where work has ceased, either temporarily or permanently.

9.2 Occupational Hygiene

(1) **Occupational exposure to health hazards**

The *employer* must ensure that the occupational exposure to *health hazards* of *employees* is maintained below the limits set out in Schedule 22.9(2)(a) and (b).

(2) **System of Occupational Hygiene Measurements**

The *employer* must establish and maintain a system of *occupational hygiene* measurements, as contemplated in section 12, of all *working places* where the following *hazard* limits prevail:

- (a) airborne pollutants -
 - particulates $\geq 1/10$ of the occupational exposure limit;
 - gases and vapours $\geq 1/2$ of the occupational exposure limit;
- (b) thermal stress - heat $>25,0$ °C wet bulb and/or $>32,0$ °C dry bulb and/or $>32,0$ °C mean radian temperature;
 - cold <10 °C equivalent chill temperature; and
- (c) noise -
 $\geq 82\text{dB}L_{\text{Aeq},8\text{h}}$.

Reference is made to the following Guidelines issued by the Chief Inspector of Mines in terms of section 9(2) of this Act

- (i) Guideline for the Compilation of a Mandatory Code of Practice for an Occupational Health Programme on Personal Exposure to Airborne Pollutants: Ref. No. DME 16/3/2/4-A1
- (ii) Guideline for the Compilation of a Mandatory Code of Practice for an Occupational Health Programme on Personal Exposure to Thermal Stress Ref. No. DME 16/3/2/4-A2

(3) Report to Employer

The competent person engaged by the *employer* in terms of section 12(1) must, as part of the compliance with section 12(2)(b), report to the *employer* on -

- (a) the *occupational hygiene risk* assessment, with specific reference to planning, design, implementation and management of *occupational hygiene* at the *mine*;
- (b) the *occupational hygiene hazards* that may cause illness or adverse *health* effects to persons, assess the results in terms of the implementation of control systems and the management thereof, and recommend remedial actions to the *employer*.

(4) Provision of potable and palatable water

The *employer* must ensure that sufficient potable and palatable water, which comply with the requirements set out in Schedule 22.9(2)(c), is readily available to all *employees* and clearly identified as drinkable.

(5) Provision and maintenance of ablution and change house facilities

The *employer* must provide and maintain suitable and adequate:

- (a) change houses to enable *employees* who perform work involving *hazardous substances* to change into working clothes at the start of their shift and to wash themselves and change their clothes at the end of their shift;
- (b) facilities to enable *employees* who perform work involving *hazardous substances* to wash their hands and faces before eating any meals at work; and
- (c) readily available latrine facilities, within a reasonable distance from each *working place*.

(6) Working Clothes

No *employee* may remove clothes referred to in *regulation* 9.2(5)(a) from the *mine* unless such clothes have been decontaminated.

(7) Report to Regional Principal Inspector

The *employer* must submit to the regional *principal inspector of mines*, on forms [21.9\(2\)\(a\)](#); [21.9\(2\)\(b\)](#); [21.9\(2\)\(c\)](#) and [21.9\(2\)\(d\)](#), [21.9.2 \(e\)](#) and [21.9.2\(f\)](#) *prescribed* in chapter 21, and within 60 days from the end of the relevant reporting period as indicated on each form, reports which contain information on the airborne pollutant, thermal stress and noise aspects of the system of *occupational hygiene* measurements, established and maintained in terms of *regulation* 9.2(2).

[Subreg. (7) substituted by GN R1226/2005]

(Subreg. (7) with effect from: 1 September 2002)

(8) Respiratory Protective Equipment

The *employer* must ensure that all respiratory protective equipment used at a *mine*, other than body-worn self-contained self rescuers, comply with the South African bureau of Standards Code of Practice, Homologation of Respiratory equipment SABS 0338.

(9) Illumination of Working Places

The employer must ensure that the illumination at all working places is sufficient to enable employees, who have conformed with the requirements of the vision tests conducted in terms of the Guideline for the Minimum Standards of Fitness to Perform work at a Mine, to perform their work safely.

[Chapter 9 inserted by GN R904/2002]

CHAPTER 10

MISCELLANEOUS AND GENERAL PROVISIONS

[10.1 Place of an accident to be left undisturbed](#)

[10.2 Right to attend inspection in loco](#)

[10.1](#)

[10.2 Water Storage and Pumping Regulations](#)

[10.3 Draw Points, Tipping Points, Rock Passes and Box Fronts](#)

10.1 Place of an accident to be left undisturbed

- (1) When an accident causes the immediate death of any *employee*, the place where the accident occurred must not, without the consent of the *Principal Inspector of Mines*, be disturbed or altered before such place has been inspected by an *Inspector* or any other person authorised under [section 49\(4\)](#) by the *Chief Inspector of Mines*.

- (2) Regulation 10.1 (1) does not apply if:
- (a) such disturbance or alteration is unavoidable to prevent further accidents, to remove fatalities and injured *employees* or to rescue *employees* from danger; or
 - (b) the discontinuance of work at such place would seriously impede the working of the *mine*.
- (3) Despite regulation 10.1 (1), work may be resumed at the place where the accident occurred if such *inspector* or other person authorised by the *Chief Inspector of Mines* fails to inspect the place within three days after notice of the accident has been given.

10.2 Right to attend inspection in loco

Any *employee* having a material interest in an accident referred to in paragraph 10.1(1) as well as that *employee's* representative may attend any inspection in loco conducted by an *inspector* but such attendance is at their own risk. In case such *employee* is, by reason of death or the severity of his/her injuries, unable to appoint any representative to attend the inspection in loco, the relatives, or in their absence the fellow *employees*, of such *employee* may appoint such representative

[Chapter 10 inserted by GN R134/2001]

Hazardous Location

Definitions

For purposes of regulation 10.1 unless the context indicates otherwise -

“**certified**” means type tested, batch tested or produced under an approved product certification scheme, as described in South African National Standard ARP 0108 “Regulatory requirements for explosion protected apparatus”;

“**double protected**” means a combination of any two independent types of explosion protection in such a way that in the event of failure of one of them, the other independent second means provides the required level of protection;

“**explosion protected apparatus**” means any apparatus used in a hazardous location and selected in accordance with the guidelines as defined in the South African National Standard SANS 10108-2005, “The classification of hazardous locations and the selection of apparatus for use in such locations” and the Aanbevole / Recommended Praktyk/ Practice ARP 0108, “Regulatory requirements for explosion protected apparatus”

“**hazardous location**” means any location, where there may be a significant risk of igniting gas, dust, mist or vapour, including the following-

- (a) for underground coal mines any location where, under normal operating conditions, there is a continuous presence of flammable gas, measured at a concentration of 0,5 % or more by volume in the general body of the air, including:
 - (i) a return airway, and
 - (ii) any location determined by risk assessment but not less than 180m from any working face.
- (b) for underground mines other than coal mines any location where, under normal operating conditions, there is a continuous presence of flammable gas measured at a concentration of 0,5% or more by volume in the air.
- (c) for surface mines and surface locations at all mines including offshore installations any location as identified in accordance with South African National Standard SANS 10108: 2004 (Edition 5), “The classification of hazardous locations and the selection of apparatus for use in such locations”.

“Light-metal” means -

- (a) aluminium;
- (b) magnesium;
- (c) titanium; and
- (d) any alloy containing more than -
 - (i) 15 per cent aluminium by mass of the alloy;
 - (ii) 15 per cent aluminium, magnesium and /or titanium, taken together by mass of the alloy; or
 - (iii) 6 per cent magnesium and /or titanium, taken together or separately, by mass of the alloy.

10.1

- (1) The employer must take reasonable measures to ensure that all electrical reticulation systems used in hazardous locations are designed and selected by a competent person or under the direct supervision of such a competent person.
- (2) The employer must take reasonably practicable measures to prevent persons from being injured in any hazardous location as a result of fire, explosion or the ignition of gas, dust, mist or vapour. Such measures must ensure that -

- (a) all hazardous locations are identified, clearly marked and recorded on a plan or register, which must be kept updated and readily available at the mine;
- (b) only explosion protected apparatus and systems certified for use in a hazardous location in accordance with the South African National Standard ARP 0108: 2005, “Regulatory requirements for explosion protected apparatus”, are used in any hazardous location;
- (c) the selection of explosion protected apparatus used in any hazardous location is done in accordance with SANS 10108:2005 “The classification of hazardous locations and the selection of apparatus for use in such locations”. The normative references as listed in SANS 10108 are not applicable to the employer;
- (d) the installation, inspection and maintenance of explosion protected apparatus used in a hazardous location is carried out in accordance with SANS 10086-1 2005”The installation, inspection and maintenance of equipment used in explosive atmospheres Part 1: Installations including surface installations on mines” and SANS 10086-2 2004”The installation, inspection and maintenance of equipment used in explosive atmospheres Part 2: Electrical equipment installed underground in mines” as appropriate;
- (e) any repair, overhaul or modification to any explosion protected apparatus used in any hazardous location does not alter its design characteristics and is carried out in accordance with SANS 10086-3 2005”.The installation, inspection and maintenance of equipment used in explosive atmospheres Part 3: Repair and overhaul of apparatus used in explosive atmospheres”;
- (f) explosion protected apparatus used in any hazardous location is installed, maintained, repaired, overhauled, inspected and tested by a competent person;
- (g) only double protected or intrinsically safe type Ex ia explosion protected apparatus remains energized where flammable gas is present in concentrations in excess of 1.4% by volume in the air. All other explosion protected apparatus must be de-energized at flammable gas concentrations in excess of 1.4% by volume in air;
- (h) every battery operated self propelled mobile machine used in any hazardous location complies with “SANS 1654: 2005 DC powered machines for use in hazardous areas in mines”;
- (i) any trailing cable used in any hazardous location is -
 - (aa) provided with a pilot circuit of intrinsically safe voltage and current which will prevent power being supplied to the cable unless the earth conductor is continuous;

- (bb) provided with a means (system) to prevent arcing of power contacts of any plug used in conjunction with the cable while such plug is being inserted or withdrawn;
- (cc) provided with a supply of electricity of which the earth fault current is limited to a value so that there is no significant risk of electrocution;
- (dd) individually screened on poly phase and collectively screened on single phase power conductors; and
- (ee) designed for being dragged across the ground;
- (j) measures are in place to verify, as far as reasonably practicable, that electrical circuits and components of such circuits used for explosion protected apparatus have been correctly designed, selected, installed and repaired;
- (k) only internal compression ignition engine system and machines that comply with the South African National Standard . SANS 868-1-1 2005: “Compression-ignition engine systems and machines powered by such engine systems, for use in mines and plants with explosive gas atmospheres or explosive dust atmospheres or both”, Parts 1-1 or 1-2, whichever is applicable, are used in a hazardous location.
- (l) all compression ignition engines used in a hazardous location have a valid Inspection (IA) certificate for the components and the complete machine and test reports issued by an accredited testing laboratory (ATL) that must be available at the mine
- (m) when a compression ignition engine system has any defect which may contaminate the air and cause a significant risk to the safety or health of persons, the use of such engine system is discontinued immediately;
- (n) all maintenance and repairs to diesel-powered equipment is performed by a competent person;
- (o) no apparatus, component or machinery made of a light metal is used in a hazardous location unless such apparatus, component or machinery is:-
 - (ff) covered by a housing, sheath, cover or coating (excluding paint) that will prevent such ignition; or
 - (gg) contained, situated or used in such a manner that does not create a significant risk of such ignition; or

(hh) complies with South African National Standard SANS 10012: 2004 "The use of light metals in hazardous locations at mines".

10.2 Water Storage and Pumping Regulations

- (1) The employer must take reasonable measures to ensure that no person is injured as a result of the failure of any dam wall, plug or barricade keeping back water underground due to inappropriate design, sub-standard construction, or inadequate inspection and maintenance of such dam wall, plug or barricade.
- (2) The measures to be taken by the employer to comply with regulation 10.2(1) above, must include measures to ensure that-
 - (a) any dam wall, plug or other barricade keeping back water underground, where the product of the capacity in cubic meters and the hydraulic head in meters of the dam storing water underground and of which they form part, exceeds 50 000, is designed by and constructed under the supervision of a competent person¹;
 - (b) any dam wall, plug or barricade contemplated in sub-regulation (a) above is maintained by a competent person²;
 - (c) any dam wall, plug or other barricade keeping back water underground, where the product of the capacity in cubic meters and the hydraulic head in meters of the dam storing water underground and of which they form part, does not exceed 50 000, is designed, constructed, inspected and maintained under the supervision of a competent person²; and
 - (d) all design calculations and drawings of dam walls, plugs and barricades and mine plans indicating the exact position of such dam walls, plugs and barricades are stored safely for the life of such dam walls, plugs and barricades and are readily available.
- (3) The employer must:
 - (a) take reasonably practicable measures to prevent persons from being injured by the unintentional release of water and hydraulic pressure from any dam storing water underground; and
 - (b) prepare and implement a procedure to prevent injury to persons involved with the installation, construction, inspection, testing and maintenance of the following hydraulic pressure systems -
 - (i) high pressure water jetting systems;
 - (ii) shaft high pressure cement columns;
 - (iii) shaft water and sludge columns;

- (iv) dam water and sludge systems;
- (v) mine residue discharge pumps;
- (vi) hydraulic water accumulator systems;
- (vii) high pressure pumping installations; or
- (viii) backfill columns and associated equipment.

10.3 Draw Points, Tipping Points, Rock Passes and Box Fronts

Definitions

For purposes of regulation 10.3, unless the context indicates otherwise -

“box front” means a structure installed at an opening of a rock pass to control the flow of rock, and includes bulkheads, chutes, platforms, control mechanisms, cylinders and similar accessories;

“draw point” means a point where rock is loaded out or allowed to flow out from an excavation;

“rock” means any mineral, ore and waste in solid form and coal;

“rock pass” means any inclined excavation in which any rock is transported by the force of gravity; and

“tipping point” means the upper inlet into a rock pass.

- (1) The employer must take reasonably practicable measures to ensure that:
 - (a) the designs, and any modification thereto that can change the design criteria, of structures for draw points, tipping points, rock passes and box fronts are recorded and approved in writing by a competent person; and
 - (b) the approved designs and records of approval are kept readily available at the mine for the life of such installation.
- (2) The employer must take reasonably practicable measures to ensure that:
 - (a) a competent person in writing certifies that the construction, installation and modification of draw points, tipping points, rock passes and box front structures have been done in accordance with their design criteria before they are used; and

- (b) the written certifications contemplated in regulation 10.3(2)(a) are kept readily available at the mine for the life of the particular structure.
- (3) The employer must take reasonably practicable measures to ensure that written procedures are prepared and implemented for:
 - (a) the removal of structures for draw points, tipping points and box fronts;
 - (b) persons entering a rock pass while it contains water, mud, rock or a combination thereof;
 - (c) clearing blocked rock passes; and
 - (d) the lock-out, maintenance and rehabilitation of draw points, tipping points, rock passes and box fronts.

[Chapter 10 re-inserted by GN R94/2008]

Editor's Note: Re-insertion of Regulation 10.1 and 10.2 by GN R94/2008 under investigation. Department of Minerals and Energy notified. Awaiting correction notice/clarification.

CHAPTER 11

OCCUPATIONAL HEALTH

[11.1 Appeal regarding finding of unfitness to perform work](#)

[11.2 Annual Medical Report](#)

[11.3 Exit certificate](#)

[11.4 Noise](#)

[11.5 Asbestos dust](#)

[11.6 Coal dust](#)

[11.7 Crystalline silica dust](#)

11.1 Appeal regarding finding of unfitness to perform work

An appeal under [section 20](#) (1) must be lodged with the Medical Inspector -

- (a) within 30 days of a decision or finding that an employee is unfit to perform any particular category of work;
- (b) within 90 days of the date of issue of an exit medical certificate; or
- (c) within such period as the Medical Inspector may allow on good cause shown.

[Reg. 11.1 inserted by GN R721/99]

11.2 Annual Medical Report

The annual medical report contemplated in [section 16](#) (1) must include details regarding at least the following:

- (a) (i) Name of mine.
- (ii) Name, address and telephone number of the occupational medical practitioner responsible for compiling the annual medical report.
- (b) Type of mine. Commodity or commodities being mined.
- (c) Total number of employees (including contract workers) who were subject to medical surveillance in terms of [section 13](#) during the reporting period and the total number of hours worked by those employees.
- (d) The number of initial, periodical and exit examinations conducted as part of the medical surveillance system.
- (e) An analysis of the employees' health based on the employees' records of medical surveillance, without disclosing the names of the employees.
- (f) Comments on the future direction of the medical surveillance system.
- (g) The number of employees certified for compensation for occupational diseases.

[Reg. 11.2 inserted by GN R1486/99]

11.3 Exit certificate

The exit certificate contemplated in [section 17](#) must include details regarding at least the following:

- (a) ***Particulars of mine:***
 - (i) Name of mine.
 - (ii) Type of mine. Commodity or commodities being mined.
 - (iii) Postal address.
 - (iv) Telephone number.
 - (v) Fax number.
 - (vi) Name of occupational medical practitioner responsible for producing the exit certificates [Section 17(4)].
- (b) ***Particulars of employee:***
 - (i) Name.

- (ii) Date of birth.
- (iii) Any one of the following numbers: Identity number, the Department of Mineral and Energy (DME) number, industry number, company number, or Medical Bureau for Occupational Diseases (MBOD) number.
- (iv) Date of initial medical examination.
- (v) Labour history, specifying occupations, periods in each, occupation and, if available, the number of shifts worked in each occupation.
[Subpara. (v) corrected by GN R303/2000]

(c) ***Exit medical summary:***

- (i) Date of last medical examination.
- (ii) Clinical comments on chest x-ray (CXR).
- (iii) International Labour Organization (ILO) classifications of the chest x-ray (CXR), if applicable.
- (iv) Lung function testing:
 - • Forced Expiratory Volume in 1 second (FEV₁):
 - Actual and predicted percentages.
 - • Forced Vital Capacity (FVC):
 - Actual and predicted percentages.
 - • Ratio of Forced Expiratory Volume in 1 second (FEV₁)/Forced Vital Capacity (FVC) - expressed as a percentage.
- (v) Audiometry (hearing loss average in decibels (dB) at 0.5, 1, 2, 3 kilohertz (kHz).
- (vi) Other *biological monitoring* by the employer of the employee, and if so, comments on the results.
- (vii) The significant hazards/risks the employee was exposed to, such as dust, noise, radiation, chemical or other.
- (viii) Occupational diseases, past or present, including severity.
- (ix) Summary of whether any compensation has been received or if a claim for compensation has been submitted.

- (x) Name and signature of occupational health practitioner completing the exit certificate if such certificate is not completed by the occupational medical practitioner responsible for producing the exit certificate.
- (xi) Signature of employee and date of receipt by employee of a copy of the exit certificate.

[Reg. 11.3 inserted by GN R1486/99]

11.4 Noise

(1) System of Medical Surveillance

The *employer* must establish and maintain a system of *medical surveillance*, as contemplated in [section 13](#), of all *employees* in any *working place* where the equivalent, continuous A-weighted sound pressure level, normalised to an eight hour working day or a forty hour working week, is equal to or exceeds 85 dB(A).

(2) Types of Audiograms

The system of *medical surveillance* contemplated in regulation 11.4 (1) must consist of a baseline ***audiogram***, periodic ***audiograms*** and an exit ***audiogram***.

- (3) A competent person must perform all ***audiograms***.

(4) Baseline Audiogram

A baseline ***audiogram*** must be recorded before an *employee* commences employment or within 30 days of commencement of employment in any *working place* contemplated in regulation 11.4(1).

- (5) Testing for the baseline ***audiogram*** must not be done within 16 hours from when an *employee* has been exposed to an environment in which the noise level was equal to or exceeded 85 dB(A). The use of hearing protection devices to effect this attenuation will not be acceptable.
- (6) The baseline ***audiogram*** is the better of the *employee's* two ***audiograms*** performed on the same day and that do not differ from each other by more than 10 dB for any of the following measured test frequencies, i.e. 0.5, 1, 2, 3, and 4 kilohertz (kHz).
- (7) If it is impossible to obtain two ***audiograms*** that comply with the requirements of regulation 11.4 (6), the *employees* must be referred to a competent person to establish baseline-hearing levels in accordance with regulation 11.4 (6).
- (8) If it is impossible for the competent person to establish baseline-hearing levels as contemplated in regulation 11.4 (7), the competent person may

establish baseline-hearing levels by using other techniques, such as speech reception thresholds.

(9) **Periodic Audiograms**

The *employer* must ensure that a periodic **audiogram** is obtained at least annually for all *employees* subject to *medical surveillance* in terms of regulation 11.4(1).

- (10) The periodic **audiogram** contemplated in regulation 11.4(9) must be performed at least 16 hours after any exposure of the *employees* to a noise level equal to or exceeding 85 dB(A.) Use of appropriate hearing protection devices to reduce exposure will be acceptable.

(11) **Exit Audiogram**

In addition to the exit medical examination for the purposes of [section 17](#), the *employer* must arrange an **audiogram** for every *employees* subject to *medical surveillance* in terms of regulation 11.4 (1) and who is permanently transferred to a *working place* in respect of which *medical surveillance* is not required under regulation 11.4(1).

- (12) An **audiogram** conducted within the preceding six months may be used as an exit **audiogram** for purposes of [section 17](#) or regulation 11.4(11).

[Reg. 11.4 inserted by GN R786/2002]

REGULATIONS FOR MEDICAL SURVEILLANCE FOR ASBESTOS DUST EXPOSURE

11.5 Asbestos dust

(1) **System of Medical Surveillance**

The employer must establish and maintain a system of medical surveillance as contemplated in [section 13](#), for all employees who perform work in any working place where exposure to asbestos dust occurs in excess of 50% of the OEL for asbestos dust as set out in Schedule 22.9(2)(a) and (b).

(2) **Types of Examinations to be Performed**

The system of medical surveillance contemplated in regulation 11.5(1) must consist of an initial examination, periodic examinations and an exit examination.

(3) **Initial Examination**

The employer must ensure that an initial examination is performed before an employee commences employment, or within 30 days of

commencement of employment, in any working place contemplated in regulation 11.5(1). The initial examination must consist of:

- (a) the completion of an appropriate respiratory questionnaire aimed at establishing the employee's medical profile, including current and past cardio-respiratory problems and an occupational history detailing possible exposure to asbestos dust.
- (b) a cardio-respiratory examination, including:
 - (i) a full size chest x-ray; and
 - (ii) a lung function test.

(4) Periodic Examinations

The employer must ensure that the following periodic examinations are conducted on all employees required to undergo medical surveillance in terms of regulation 11.5(1):

- (a) a cardio-respiratory examination, including a lung function test, but excluding a chest x-ray, one year after the initial examination contemplated in regulation 11.5(3); and thereafter
- (b) a cardio-respiratory examination, at three yearly intervals, which includes:
 - (i) a full size chest x-ray; and
 - (ii) a lung function test.

(5) Exit Examination

In addition to the exit medical examination for the purposes of [section 17](#), the employer must arrange a cardio-respiratory examination for every employee subject to medical surveillance in terms of regulation 11.5(1) and who is permanently transferred to a working place in respect of which medical surveillance is not required under regulation 11.5(1).

- (6) A full size chest x-ray conducted within the preceding twelve months may be used as the exit, chest x-ray for the purposes of [section 17](#) and regulation 11.5(5).
- (7) A lung function test conducted within the preceding twelve months may be used as the lung function test for the purposes of [section 17](#) and regulation 11.5(5).

[Reg. 11.5 inserted by GN R1792/2003]

REGULATIONS FOR MEDICAL SURVEILLANCE FOR COAL DUST EXPOSURE

11.6 Coal dust

(1) System of Medical Surveillance

- (a) The employer must establish and maintain a system of medical surveillance as contemplated in [section 13](#), for all employees who perform work in any working place where exposure to coal dust occurs in excess of 50% of the OEL for coal dust with less than 5% crystalline silica content as set out in Schedule 22.9(2)(a) and (b).
- (b) If the crystalline silica content of the coal dust is 5% or more, the employer must establish and maintain a system of medical surveillance as contemplated in regulations 11.7(1) to 11.7(7):

(2) Types of Examinations to be Performed

The system of medical surveillance contemplated in regulation 11.6(1)(a) must consist of an initial examination, periodic examinations and an exit examination.

(3) Initial Examination

The employer must ensure that an initial examination is performed before an employee commences employment, or within 30 days of commencement of employment, in any working place contemplated in regulation 11.6(1)(a). The initial examination must consist of:

- (a) the completion of an appropriate respiratory questionnaire aimed at establishing the employee's medical profile, including current and past cardio-respiratory problems and an occupational history detailing possible exposure to coal dust.
- (b) a cardio-respiratory examination, including:
 - (i) a full size chest x-ray; and
 - (ii) a lung function test.

(4) Periodic Examinations

The employer must ensure that the following periodic examinations are conducted on all employees required to undergo medical surveillance in terms of regulation 11.6(1)(a):

- (a) a cardio-respiratory examination, including a lung function test, but excluding a chest x-ray, one year after the initial examination contemplated in regulation 11.6(3); and thereafter

(b) a cardio-respiratory examination, at three yearly intervals, which includes:

(i) a full size chest x-ray; and

(ii) a lung function test.

(5) Exit Examination

In addition to the exit medical examination for the purposes of [section 17](#), the employer must arrange a cardio-respiratory examination for every employee subject to medical surveillance in terms of regulation 11.6(1)(a) and who is permanently transferred to a working place in respect of which medical surveillance is not required under regulation 11.6(1)(a).

(6) A full size chest x-ray conducted within the preceding twelve months may be used as the exit chest x-ray for the purposes of [section 17](#) and regulation 11.6(5).

(7) A lung function test conducted within the preceding twelve months may be used as the lung function test for the purposes of [section 17](#) and regulation 11.6(5).

[Reg. 11.6 inserted by GN R1792/2003]

REGULATIONS FOR MEDICAL SURVEILLANCE FOR SILICA DUST EXPOSURE

11.7 Crystalline silica dust

(1) System of Medical Surveillance

The employer must establish and maintain a system of medical surveillance as contemplated in [section 13](#), for all employees who perform work in any working place where exposure to crystalline silica dust occurs in excess of 10% of the OEL for crystalline silica dust as set out in Schedule 22.9(2)(a) and (b).

(2) Types of Examinations to be Performed

The system of medical surveillance contemplated in regulation 11.7(1) must consist of an initial examination, periodic examinations and an exit examination.

(3) Initial Examination

The employer must ensure that an initial examination is performed before an employee commences employment, or within 30 days of commencement of employment, in any working place contemplated in regulation 11.7(1) The initial examination must consist of:

- (a) the completion of an appropriate respiratory questionnaire aimed at establishing the employee's medical profile, including current and past cardio-respiratory problems and an occupational history detailing possible exposure to silica dust.
- (b) a cardio-respiratory examination, including:
 - (i) a full size chest x-ray; and
 - (ii) a lung function test.

(4) Periodic Examinations

The employer must ensure that the following periodic examinations are conducted on all employees required to undergo medical surveillance in terms of regulation 11.7(1):

- (a) a cardio-respiratory examination, including a lung function test, but excluding a chest x-ray, one year after the initial examination contemplated in regulation 11.7(3); and thereafter
- (b) a cardio-respiratory examination, at three yearly intervals, which includes:
 - (i) a full size chest x-ray; and
 - (ii) a lung function test.

(5) Exit Examination

In addition to the exit medical examination for the purposes of [section 17](#), the employer must arrange a cardio-respiratory examination for every employee subject to medical surveillance in terms of regulation 11.7(1) and who is permanently transferred to a working place in respect of which medical surveillance is not required under regulation 11.7(1).

- (6) A full size chest x-ray conducted within the preceding twelve months may be used as the exit chest x-ray for the purposes of [section 17](#) and regulation 11.7(5).
- (7) A lung function test conducted within the preceding twelvemonths may be used as the lung function test for the purposes of [section 17](#) and regulation 11.7(5).

[Reg. 11.7 inserted by GN R1792/2003]

CHAPTER 12

OFFSHORE INSTALLATIONS

Regulations not yet promulgated

CHAPTER 13

OUTLETS, LADDERWAYS AND TRAVELLING WAYS

13.1 Outlets

- (1) The employer must prevent employees from being trapped in any underground excavation by providing whenever practicable, from every underground working place, two exits, each of which is connected to separate means of egress to the surface.
- (2) Where it is not practicable to provide two exits as contemplated in regulation 13.1(1) above, the employer must implement other reasonably practicable measures, determined by the mine's risk assessment, to prevent employees from being trapped in any underground excavation.
[Subreg. (2) amended by GN R90/2008]
- (3) Except in the case of emergency no person may enter or leave the underground workings of a mine except by means of ingress or egress especially provided or set apart for that purpose by the employer unless such person is authorised to do so by the employer.
- (4) The following regulations promulgated under Minerals Act, 1991 (Act No. 50 of 1991) in force in terms of item 4 of Schedule 4 of the Act, are hereby repealed –

Chapter 6	Chapter 16	Chapter 19
6.1.1	16.98	19.1
6.1.2	16.98.1	19.2.1
6.1.3	16.98.2	19.2.2
6.2.1	16.98.3	19.3.1
6.2.2	16.98.4	19.3.2
6.2.3	16.98.5	19.3.3
6.2.4	16.99	19.3.4
6.2.5	16.100	19.4
6.3.1	16.101	19.5
6.3.2	16.102	19.6
6.3.2.1	16.103	
6.3.2.6	16.103.1	
6.3.2.7	16.103.2	
6.3.2.8	16.104	
6.3.2.12		
6.3.3.1		
6.3.3.2		
6.3.3.3		
6.3.3.4		
6.3.3.5		
6.3.3.6		

6.9		
6.11		

[Subreg. (4) substituted by GN R90/2008]
[Chapter 13 added by GN R1224/2005]

CHAPTER 14

PROTECTION OF THE SURFACE AND THE WORKINGS

FALL OF GROUND REGULATIONS

[14.1 Entering of working places](#)

[14.2](#)

[14.3](#)

[14\(4\)](#)

[14\(5\)](#)

[14\(6\)](#)

[14\(7\)](#)

14.1 Entering of working places

At every underground mine where a risk of rock bursts, rock falls or roof falls exists, and at every other mine where a significant risk of rock bursts, rock falls or roof falls exists, the employer-

- (1) may not permit any person, other than those persons examining and making safe, to enter any of the following areas at the mine until such areas are declared safe by competent persons:
 - (a) the area between the face and the nearest line of permanent support; and
 - (b) access ways, travelling ways or places where persons need to travel or work;
- (2) must ensure that the examinations for purposes of regulation 14.1(1) are carried out as often as may be required, in terms of the mine's risk assessment, to maintain a safe working environment;
- (3) must ensure that a record of declarations contemplated in regulations 14.1(1) and 14.1(5) is kept for a period of at least three months;
- (4) must ensure that where areas contemplated in regulation 14.1(1) have not been examined, made and declared safe, persons are prevented from inadvertently entering such areas;
- (5) must ensure, if at any time a working place or part thereof becomes unsafe during a shift, that all persons, other than those examining and making safe, are removed from such unsafe area and are not permitted to return thereto until declared safe by a competent person.

- (6) must ensure that a quality, assurance system is in place, which ensures that the support units used at the mine provide the required performance characteristics for the loading conditions expected;
- (7) must ensure that only competent persons install, maintain and remove any support unit;
- (8) must ensure that the input of a competent person is properly and timeously considered and integrated into mine design, planning and operations.

14.2 No person, other than those persons examining and making safe, may enter any of the areas contemplated in regulation 14.1(1) until such areas have been declared safe as contemplated in regulations 14.1(1) and 14.1(5).

14.3 The following regulations made under the Minerals Act, 1991 (Act 50 of 1991) in force in terms of Schedule 4 of the Mine Health and Safety Act, 1996 (Act 29 of 1996) are hereby repealed

7.1	8.4.2(a), (b) and (d)
7.2.2	8.4.3
7.4.5	8.4.4.1
8.1.1	8.4.4.2
8.1.2	8.4.4.3
8.1.3	8.4.5
8.1.5	8.8
8.1.6	8.9.1, 8.9.2
8.2	8.9.6
8.3.1	8.10.11
8.3.2	

14(4) The employer must take reasonable measures to ensure where the condition at any working place pose or might pose a significant risk to the health and safety of persons resulting from an ingress of water or other fluid material likely to cause drowning, asphyxiation, inundation, physical impact, chemical exposure or being trapped, that all working places are adequately protected against such ingress of water or other fluid material.

[Subreg. (4) added by GN R1323/2004]

14(5) The employer must take reasonable measures to ensure that no person is endangered by any significant risks such as falling, drowning, slipping, asphyxiation or being struck by rock or other material associated with subsidences or cavities brought about by mining operations.

[Subreg. (5) added by GN R1323/2004]

14(6) The employer must take reasonable measures to ensure that no person is endangered by any significant risks such as the collapse of surface buildings and structures thereon associated with structural failure as a result of the removal of any type of support provided for the protection of the surface of a mine or structures or objects thereon.

[Subreg. (6) added by GN R1323/2004]

14(7) The following regulations made under the Minerals Act, 1991 (Act 5r of 1991), in force in terms of Schedule 4 of the Mine Health and Safety Act, 1996 (Act 29 of 1996) are hereby repealed: -

5.1.1
5.1.2
5.2
5.3.3
5.3.4
5.4.5
5.4.6
5.5
5.6.1
5.6.2
5.6.3
5.7
5.10

[Subreg. (7) added by GN R1323/2004]
[Chapter 14 inserted by GN R959/2002 and amended by GN R1323/2004]

CHAPTER 15

QUALIFICATIONS AND COMPETENCIES

Regulations not yet promulgated

CHAPTER 16

RESCUE, FIRST AID AND EMERGENCY PREPAREDNESS AND RESPONSE

[16.1 Report to Employer Relating to Explosions, Fires and Flooding](#)
[16.2 Issuing of Self-Contained Self-Rescuers](#)
[16.3 No Defective Self-Contained Self-Rescuer is Issued](#)
[16.4 Monitoring Programme](#)
[16.5 Emergency Preparedness and Response Definitions](#)

16.1 Report to Employer Relating to Explosions, Fires and Flooding

- (1) The *employer* must ensure that a competent person reports to the *employer*, at appropriate intervals determined in accordance with the *mine's risk* assessment, on the adequacy of escape and rescue procedures at the *mine* relating to explosions, fires and flooding.

[Reg. 16.1 inserted by GN R904/2002]

16.2 Issuing of Self-Contained Self-Rescuers

- (1) **Coal Mines**

The *employer* of every coal *mine* must ensure that no person goes underground at the *mine* without a body-worn self-contained self-rescuer, which complies with the South African Bureau of Standards specification SAGS 1737.

(2) **Mines other than Coal Mines**

If at any *mine* other than a coal *mine*, the *risk* assessment in terms of section 11 shows that there is a significant *risk* that *employee's* may be exposed to irrespirable atmospheres at any area at the *mine*, the *employer* must ensure that no person goes into such area without a body-worn self-contained self-rescuer, which complies with the South African Bureau of Standards specification SABS 1737.

(3) **Sole Allocation of a Self-Contained Self-Rescuer**

Any body-worn self-contained self-rescuer supplied to any *employee*; employed in a full time capacity at the *mine*, in terms of sub *regulations* 16.2(1) and 16.2(2), must be allocated to the *employee* for that *employee's* sole use for the duration of the deployment of that self-contained self-rescuer at the *mine* or until that self-contained self-rescuer becomes defective and the *employee* is issued with another self-contained self-rescuer as required by these *regulations*.

[Reg. 16.2 inserted by GN R569/2002 w.e.f.1/9/2002]

16.3 No Defective Self-Contained Self-Rescuer is Issued

(1) **Employer to ensure no defective self-contained self-rescuer is issued**

The *employer* must ensure that no defective self-contained self-rescuer is issued for use to any *employee* at a *mine*.

[Reg. 16.3 inserted by GN R569/2002 w.e.f.1/9/2002]

16.4 Monitoring Programme

(1) **Annual testing of a Self-Contained Self-Rescuer**

The *employer* must annually have a representative sample of the self-contained self-rescuers at the *mine* tested by an organisation accredited to do so in terms of the South African National Accreditation System for assessment of the structural integrity and functional performance.

Such representative sample must not be less than 1 % of the self-contained self-rescuers at the *mine* and must be representative of the age and deployment of the self-contained self-rescuers.

(2) **Record keeping**

The *employer* must keep the following information, on self-contained self-rescuers at the *mine*, covering the preceding 24 months: -

- (a) total number and makes of self-contained self-rescuers in service at the *mine*;
- (b) number and make of self-contained self-rescuers purchased by the *mine* in that period;
- (c) number and make of self-contained self-rescuers withdrawn from use by the *mine* in that period;
- (d) the number of shifts worked per day (1, 2 or 3);
- (e) number of self-contained self-rescuers in daily use (average for each month);
- (f) number of *employees* underground (average per shift);
- (g) number of spare self-contained self-rescuers available (average per month);
- (h) a tabulation of the type of defects found;
- (i) number of self-contained self-rescuers repaired/refurbished; and;
- (j) number of self-contained self-rescuers tested in terms of *regulation* 16.4(1).

[Reg. 16.4 inserted by GN R569/2002 w.e.f.1/9/2002]

16.5 Emergency Preparedness and Response Definitions

For purposes of regulation 16.5, unless the context indicates otherwise -

“emergency” means a situation, event or set of circumstances at a mine that could threaten the health or safety of persons at or off the mine, and which requires immediate remedial action, such as the evacuation, rescue or recovery of persons, to prevent serious injury or harm, or further serious injury or harm, to persons;

“breathing apparatus” means an apparatus, which renders the user independent from breathing from the atmosphere for a minimum of two (2) hours.

- (1) The employer at every underground mine must -
 - (a) provide and maintain, readily available at the mine, mine rescue teams, consisting of at least five competent persons, per mine rescue team, in the following minimum proportions determined by the maximum number of persons who could be underground at any one time -

- (i) where there could be between 100 and 1 100 persons underground, at least 1 mine rescue team;
- (ii) where there could be between 1101 and 3600 persons underground at least 2 mine rescue teams;
- (iii) where there could be between 3601 and 8100 persons underground at least 3 mine rescue teams; and
- (iv) where there could be more than 8100 persons underground at least 3 mine rescue teams and at least 1 additional mine rescue team for every additional 6300 persons who could be underground;

Side note: Reference is made to the Guidelin for the Compilation of a Code of Practice on Emergency Preparedness and Response. Reference 16/3/2/1-A5, as issued by the Chief Inspector of Mines, in terms of section 9.2 of the Mine Health and Safety Act.

- (b) have readily available, at the mine for use by the rescue team members contemplated in regulation 16.5(1)(a), sufficient breathing apparatus that may be required in any emergency and which breathing apparatus must continually comply with SANS 50145:1997/EN 145:1997 “Respiratory protective devices - Self-contained closed-circuit breathing apparatus - Compressed oxygen or compressed oxygen-nitrogen type -Requirements, testing, marking”;
 - (c) enter into a contract with a mines rescue service provider to coordinate and facilitate the provision of mines rescue teams and other services, relating to an emergency, on a cooperative basis; and
 - (d) immediately notify such mines rescue service provider should any emergency occur at the mine that may require the use of rescue team members, contemplated in 16.5(1)(a), or the use of the services of such mines rescue service provider.
- (2) For the purposes of regulation 16.5(1)(c) and (d), a mines rescue service provider must -
- (a) be an organisation/institution which has personnel with specialist knowledge and experience in mines rescue and emergencies and which has access to rescue equipment and training facilities, including facilities for Heat Tolerance Testing, Workload Testing and Simulated Training;
 - (b) render an emergency rescue service on a co-operative basis;
 - (c) provide mines rescue services with emphasis on mobilisation of mine rescue teams, quantity or access to rescue teams, emergency communication, additional emergency resources, back up facilities and transport;

- (d) ensure that any breathing apparatus that may be used by mine rescue teams continually complies with SANS 50145:1997/EN 145:1997 “Respiratory protective devices - Self-contained closed-circuit breathing apparatus - Compressed oxygen or compressed oxygen-nitrogen type - Requirements, testing, marking”;
 - (e) ensure that their personnel is competent to check and maintain any rescue equipment used by it in accordance with the Original Equipment Manufacturer’s specifications;
 - (f) test and maintain the functional performance of any other rescue equipment used by it in accordance with the Original Equipment Manufacturer’s specifications; and
 - (g) ensure that the rescue team members used by them to provide mines rescue services meet the qualification requirements as prescribed in Chapter 22.
- (3) Every mines rescue service provider, referred to in regulation 16.5(2), must -
- (a) keep a register of all persons who have been found competent to practice as a rescue team member by that mines rescue service provider;
 - (b) implement and maintain a system to issue licences to practice to persons contemplated in 16.5(3)(a) and who meet such criteria as determined by the rescue service provider, which criteria must include at least the following -
 - (i) the person has not attained the age of 46 years;
 - (ii) the person has been declared medically fit in terms of the requirements of the mine’s “Code of Practice on Minimum Standards of Fitness to Perform Work at the Mine” as may be amended from time to time, prepared in accordance with the : Guideline for the Compilation of a Mandatory Code of Practice on Minimum Standards of Fitness to Perform Work at a Mine;
 - (iii) the person has undergone and passed the Heat Tolerance Test, conducted in terms of Chamber of Mines of South Africa Research Organization Research Report No. 29/87 -“A guide to the selection and classification of rescue brigadesmen on the basis of Heat tolerance”, initially and thereafter at intervals not exceeding 24 months;
 - (iv) the person has undergone refresher-training sessions as determined by the mines rescue service provider at intervals of

not more than 3 months. At least 2 of these trainings per annum must be in a mine or simulated mine, in an atmosphere filled with smoke, whilst using a breathing apparatus; and

- (v) the person has undergone and passed the Work Load Test, conducted in terms of the Chamber of Mines of South Africa S and TS Circular No. 39/93 dated 5 April 1993, initially and thereafter at intervals not exceeding 12 months.
- (c) monitor compliance by persons, issued with a licence to practice by it, with the requirements contemplated in regulation 16.5(3)(b) and suspend or revoke any such licence if the person no longer meets any of those requirements, and re-issue a licence when the person again meets the requirements.
- (4) Whenever an emergency occurs at a mine that requires the deployment of mine rescue teams, the employer and any mines rescue service provider notified in terms of regulation 16.5(1)(d) and whose assistance has been requested, must take reasonable measures to ensure that the required mine rescue teams are deployed as soon as possible.
- (5) No employer or mines rescue service provider may allow any rescue team member contemplated in regulation 16.5(1)(a) to be deployed as a member of a mine rescue team during an emergency unless such rescue team member is in possession of a valid licence to practice , as contemplated in regulation 16.5(3) and has passed a pre-operational medical examination, determined by the mines rescue service provider, to ensure that the rescue team member is medically fit at the time to be so deployed.

[Reg. 16.5 added by GN 86/2008]

CHAPTER 17

SURVEYING, MAPPING AND MINE PLANS

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17. (1) Definitions

In this Chapter, unless the context indicates otherwise -

“bedded mineral deposit” means any reef, coal seam, lode, mineral bed or fissure, which occurs conformably within it’s country rock and is not of a massive nature;

“chart datum” means the height referencing datum as determined by the Hydrographer of the South African Navy;

“competent person” means:

- (a) in the case of an underground mine or an opencast mine where blasting takes place, a person in possession of a Mine Surveyor’s Certificate of Competency issued by the Department of Minerals and Energy; or

a person in possession of at least a Level 6 qualification in mine surveying and mapping registered on the National Qualifications Framework and which qualification includes appropriate and relevant legal knowledge;
- (b) in the case of an opencast mine where blasting does not take place, a person in possession of a Mine Surveyor’s Certificate of Competency issued by the Department of Minerals and Energy; or

a person who has passed the examination for legal knowledge as is required for the Department’s Mine Surveyor’s Certificate of Competency and who is in possession of either :-

- (i) an advanced Certificate in Mine Surveying issued by the Chamber of Mines of South Africa and who has at least three (3) years practical experience in mine surveying; or
- (ii) National Diploma in Mine Surveying issued by a tertiary institution accredited by the Department of Education; or

a person in possession of at least a Level 5 qualification in mine surveying and mapping registered on the National Qualifications Framework and which qualification includes appropriate and relevant legal knowledge;

- (c) in the case of mining at sea, a person in possession of a Mine Surveyor's Certificate of Competency related to sea mining issued by the Department of Minerals and Energy; or

a person who has passed the examination for legal knowledge as required for the Department's Mine Surveyor's Certificate of Competency and who is in the possession of either :-

- (i) a National Diploma in Hydrographic Surveying issued by a tertiary institution accredited by the Department of Education; or
- (ii) an equivalent qualification in hydrographic surveying recognized by the Council for Professional and Technical Surveyors of South Africa; or

a person in possession of at least a Level 5 qualification in hydrographic surveying registered on the National Qualifications Framework and which qualification includes appropriate and relevant legal knowledge.

“fixed position” means any point other than a **survey station** which is fixed within the relevant accuracy requirements for the class of survey concerned, and which is used for the purpose of locating details to be shown on **plans**;

“fluid material” means any substance, excluding gas, that has a potential to flow, including water, slimes and mud;

“hazardous service” means any object, structure or installation rendering a service with a potential risk to health or safety;

“plan(s)” means any plan, section or projection required to be prepared by these regulations;

“reserve” means any piece of land over which a servitude is registered or reserved for possible registration of a servitude in respect of roads, railways, power lines, pipe lines, conveyor lines, canals, etc.;

“restricted area” means any area where mining is restricted due to significant risk;

“risk assessment” means the hazard identification and risk assessment required in terms of section 11 of the Act;

“safety pillar” means every portion of a reef, mineral deposit or ground left in situ for the support and protection of the surface, objects thereon or underground workings;

“sea” means the sea as defined in the Sea Shores Act, Act No. 21 of 1935

“survey point” means any easily identifiable point located by localised surveying, other than a **survey station**;

“survey station” means any point that has been surveyed within the prescribed standards of accuracy; and

“workings” means any excavation made or being made for the purpose of searching for or winning minerals or for any purpose connected therewith.

GENERAL REQUIREMENTS AT SEA AND ON LAND

Responsibility for Surveying, Mapping and Mine Plans

- (2) The employer must engage the part-time or full-time services of a **competent person** to be in charge of surveying, mapping and mine plans at the mine, and if the services of more than one **competent person** are engaged, ensure that their functions do not overlap.
- (3) No person may withhold from the employer any survey records or **plans** prepared in terms of these regulations.
- (4) The employer must take reasonable measures to ensure, in all surveying and mapping done and all plans prepared for purposes of these regulations by the **competent person** referred to in regulation 17(2), that -

Units of Measure

- (a) all units of measure conform to the metric system, except angular measurements which must conform to the sexagesimal system;

Survey System

- (b) all mine surveys conform to the National Control Survey System as determined by the Chief Director: Surveys and Mapping as contemplated in the Land Survey Act, Act No. 8 of 1997. The projection origin may however be changed to reduce the numerical values of the co-ordinates. Survey systems established on a mine

prior to 1 January 1999 may be retained provided that a tabulation of the co-ordinates of at least 3 (three) **survey stations**, in both the existing and the national control survey system, are shown on every sheet comprising a **plan**;

Datum Plane

- (c) elevations determined above and below ground on a mine refer to mean **sea level**, based on the South African Land Levelling Datum as determined by the Chief Director: Surveys and Mapping as contemplated in the Land Survey Act, Act No. 8 of 1997. In the case of prospecting and mining at **sea**, all elevations determined and soundings taken must refer to **chart datum**;

Chart Datum

- (d) elevations determined at sea for all offshore mine surveying and mapping must refer to **chart datum** unless otherwise specified by the Chief Inspector of Mines. The relationship of **chart datum** to the South African Land Levelling Datum must be noted in the title block of all **plans** of prospecting and mining operations;

Colours and Sign Conventions

- (e) all **plans** conform to the conventional signs and colours provided by the Director: Mine Surveying; and

Back up of Electronic Information

- (f) if survey records required in terms of these regulations are kept electronically, they are adequately backed up.

SAFETY PRECAUTIONS

Responsibilities regarding safety precautions

- (5) The employer must take reasonable measures to ensure that the **competent person** referred to in regulation 17(2) is at all times aware of -
 - (a) **workings** which are being advanced;
 - (b) surface structures or objects which may be affected by mining;
 - (c) **workings** being abandoned or closed down, in order to allow the final surveying thereof;
 - (d) faces of **workings** being advanced within 50 (fifty) metres or any lesser distance determined by **risk assessment** from any excavation, mining, **restricted area** or any place where there is, or is likely to be,

a dangerous accumulation of **fluid material**, noxious or flammable gas; and

- (e) **safety pillars** that are being, or have been, removed.
- (6) The employer must ensure that -
- (a) no mining operations are carried out under or within a horizontal distance of 100 (one hundred) metres from buildings, roads, railways, **reserves**, mine boundaries, any structure whatsoever or any surface, which it may be necessary to protect, unless a shorter distance has been determined safe by **risk assessment** and all restrictions and conditions determined in terms of the **risk assessment** are complied with;
 - (b) where ground movement, as a result of mining operations, poses significant risk, an effective ground movement monitoring system is in place.
- (7) No person may erect or construct any buildings, roads, railways, or any structure within a horizontal distance of 100 metres from the **workings** of a mine, or such lesser distance and at such positions and subject to such restrictions and conditions, determined by -
- (a) **risk assessment**; or
 - (b) the Chief Inspector of Mines.
- (8) The person(s) responsible for activities in terms of regulations 17(6)(a) and 17(7)(a) must -
- (a) in the case of an employer, provide the Chief Inspector of Mines with the distance and accompanying restrictions and conditions for comment, prior to commencement of such activity;
 - (b) in the case of other persons, provide the Chief Inspector of Mines with the distance and accompanying restrictions and conditions for approval, prior to commencement of such activity.
- (9) The employer must take reasonable measures to ensure that the relevant survey records and **plans** resulting from conditions described in regulation 17(5)(a) to 17(5)(e) are updated by the **competent person** referred to in regulation 17(2) at intervals not exceeding 3 (three) months.

Boundary Pillars

- (10) The employer must ensure that on the inside of every mine boundary, continuous pillars are left standing (in situ) the width of which, measured horizontally and at right angles to the boundary line, must not be less than -

- (a) for underground coal mines, 15 (fifteen) metres;
 - (b) for all other mines, 9 (nine) metres.
- (11) The employer must take reasonable measures to ensure that no boundary pillars are worked or cut through unless written permission has been obtained from all relevant adjacent employers and the Principal Inspector of Mines.
- (12) In the absence of any adjacent employer, permission need only be obtained from the Principal Inspector of Mines to work or cut through such boundary pillars.

Check Survey

- (13) Should the Director: Mine Surveying be of the view that there may be errors in any survey or ***plans*** constructed there from or where they do not conform to the standards of accuracy required by these regulations, such Director may cause a check survey to be carried out. The cost of such check survey must be borne by the employer if it is proved that there are errors in any survey or ***plans*** constructed therefrom, or that they do not conform to the standards of accuracy required by these regulations.

SURVEY PRACTICE ON LAND (SURFACE AND UNDERGROUND) AND AT SEA

- (14) The employer must take reasonable measures to ensure that in all surveying and mapping done and all plans prepared for purposes of these regulations by the competent person referred to in regulation 17(2):

Survey Stations

- (a) sufficient ***survey stations*** are established, so that all surface objects and all *workings* can be accurately surveyed. Each survey station must be clearly marked with a unique number and recorded in a register;

Standards of Accuracy: Surface and Underground

- (b) the minimum standard of accuracy and class of survey for the fixing of ***survey stations*** on both horizontal and vertical planes are in accordance with the following formula:

$$A = 0,015 + \frac{S}{30\,000}$$

where S is the distance in metres between the known and the unknown ***survey station***; provided that in the case of a traverse, after

a check survey has been completed, the error in direction of a line between any two consecutive **survey stations** must not exceed 2 (two) minutes of arc, provided that the horizontal and vertical displacement between the measured position and final position of a survey station does not exceed 0,1 (zero comma one) metres;

- (i) the allowable error for a Primary Survey (Class A) is not greater than A metres. Primary Survey means any survey carried out for the purpose of fixing shaft positions, shaft stations, underground connections, upgrading of secondary surveys to primary surveys and establishing primary surface survey control;
- (ii) the allowable error for a Secondary Survey (Class B) is not greater than 1,5A metres. Secondary Survey means any survey carried out for the purpose of fixing main or access development, mine boundaries and establishing secondary surface survey control;
- (iii) the allowable error for a Tertiary Survey (Class C) is not greater than 3A metres. Tertiary Survey includes **survey stations** established from secondary **survey stations** for localised survey purposes;
- (iv) the allowable error for a Localised Survey is not greater than 0,2 (zero comma two) metres in addition to the allowable error at the nearest **survey station**. Localised Survey means measurements taken from a survey network to locate surface or underground **workings**, structures and features. This includes normal tape triangulation for month-end measurements, plugging, offsetting and tacheometric work;

Accurate Representation on Plan

- (v) errors in representation on **plan** do not exceed 0,1% (zero comma one per cent) of the denominator of the scale of the **plan**, in addition to the allowable survey error at the nearest **survey station** or fixed position. Where the surveying cannot be accurately done due to significant risks, the estimated position of affected **workings** or objects must be indicated by broken lines. An explanatory note must be written giving reasons why accurate measurements could not be made;

Standards of Accuracy at Sea

- (c) all **fixed positions** determined at **sea** for the purpose of locating detail to be shown on **plans**, are verified to within a horizontal accuracy of 30 (thirty) metres. In determining bathymetric data, soundings based on **chart datum** must be established to within 0,30 (zero comma three zero) metres for water depths of 0,0 (zero) to 30

(thirty) metres and to within 1 % (one percent) of water depths of 30 (thirty) metres and more;

Details required on Plans

- (d) the following detail is depicted on all ***plans*** where applicable -
 - (i) date of measurement of ***workings***;
 - (ii) surface contours;
 - (iii) planes of sections or planes of ***plans***;
 - (iv) a subject heading indicating the name of the mine and the name of the ***plan***;
 - (v) name and signature of the ***competent person*** referred to in regulation 17(2) against relevant date of updating;
 - (vi) identification number allotted by authorities;
 - (vii) the survey system and co-ordinates of origin used;
 - (viii) a north point;
 - (ix) the scale of the ***plan***;
 - (x) a legend illustrating colours and conventional signs not provided for by the Director: Mine Surveying;
 - (xi) co-ordinate lines sufficient in number for the scale of the ***plan*** to be verified;
 - (xii) in the case of mining at ***sea***, the centre position of the sheet must be indicated in geographic co-ordinates (longitude and latitude);

Material and Size of the Plans

- (e) all ***plans*** are drawn on durable transparent draughting material on sheets of a size not greater than A0 as defined by the International Organisation for Standardisation. The Director: Mine Surveying may request in the case of ***plans*** produced by means of computer aided draughting (CAD), that such ***plans*** be produced on suitable draughting material;

Scale of Plans - Land

- (f) all ***plans*** are drawn to a scale of 1:1 500 in the case of a coal mine, and 1:1000 in the case of any other mine;

Scale of Plans - Sea

- (g) in the case of mining at *sea*, the general ***plan*** referred to in regulation 17(27) is drawn to a legible scale;

Plans to be Kept Up to Date

- (h) ***plans*** are at all times correct to within 12 (twelve) months, except for the ***plans*** showing the ***workings*** which must at all times be correct to within 3 (three) months. In the case of offshore prospecting and mining, ***plans*** must at all times be correct to within 6 (six) months;

Inventory of Plans

- (i) inventory of all ***plans*** and all copies called for in terms of regulation 17(28) is kept, showing the following details -
 - (A) name of the mine;
 - (B) name and number of the ***plan***;
 - (C) date of the last updating of the plan and the name of the ***competent person*** referred to in regulation 17(2);
 - (D) relevant details where a ***plan*** has been superseded; and

Superseded Plans

- (j) when a ***plan*** or sheet is superseded by another ***plan*** or sheet, the old and the new ***plan*** are referenced accordingly.

MINE PLANS

- (15) The employer must take reasonable measures to ensure that the ***competent person*** referred to in regulation 17(2) constructs accurate plans, as contemplated in regulations 17(16) to 17(27), which are readily available to the employer. Such ***plans*** must cover at least all ***restricted*** areas and the areas where the surface infrastructure or ***workings*** occur.

Index Key Plan

- (16) A legible index key ***plan***, showing the areas covered by the relevant ***plan*** sheets, the mine boundaries and the farm names and boundaries within and adjacent to the mine, or this detail may be shown on every ***plan*** sheet as an inset key ***plan*** drawn to a legible scale.

Surface Plan

- (17) A **plan** of the surface showing the boundaries of the mining area, names of adjacent mining areas, the primary surface **survey stations**, outcrops and dips of the mineral deposits, perimeters of all surface mining, shafts, openings, rescue boreholes, subsidence or cavities, areas of restricted mining affecting the surface, any **hazardous services** whether on surface or buried and every surface object, structure or **reserve** which requires protection against mining.

Surface Contour Plan

- (18) A surface contour **plan** showing relevant mine and farm boundaries, original surface contours, boreholes and watercourses.

Mine Ventilation and Rescue Plan

- (19) At every underground mine, a ventilation and rescue **plan** of the **workings**, taking into consideration the requirements of regulation 17(23), drawn to a legible scale depicting the ventilation districts, the direction of air currents, the quantity of air circulating in such ventilation district and the position of each fan, door, regulator, crossing, stopping and telephone, the position of each refuge bay, rope-aided or normal escape route, safe place, first aid room, main water valve, fire fighting equipment site and any area sealed off for fire or spontaneous combustion.
- (a) A square grid, lettered horizontally and numbered vertically, drawn to a suitable scale must be shown on the **plan** contemplated in regulation 17(19).
- (b) An updated hard copy of the **plan** contemplated in regulation 17(19) must be immediately available at the mine for rescue operation purposes. In the case of a coal mine, an updated hard copy must be submitted to the Principal Inspector of Mines at intervals not exceeding 3 (three) months.

Rehabilitation Plan

- (20) A rehabilitation **plan** showing the final surface contours and established water courses.

Mine Residue Deposit Plans

- (21) Separate **plans** and sections of mine residue deposits containing **fluid material**.

Geological Plan

- (22) A **plan**, drawn to a legible scale, depicting geological features that could affect mining, or these features may be shown on the plan(s) referred to in regulation 17(23).

Plans of the Workings

(23) ***Plans*** of the ***workings*** showing the following: boundaries of the mining area; names of adjacent mining areas; outlines and dips of the ***workings***; heights representative of ***workings***, ***survey stations***; relevant ***survey points***; areas in which mining has been restricted or prohibited; dams; explosives magazines; lines indicating the planes of sections; faults; dykes and water plugs.

(a) In the case of underground mines:

- (i) Where a ***bedded mineral deposit*** has an average inclination to the horizontal of more than 60° (sixty degrees), a ***plan*** showing the projection of the ***workings*** onto a vertical plane parallel to the average strike.
- (ii) Where multiple ***bedded mineral deposits*** overlie each other, the ***workings*** thereof must be shown on separate ***plans***.
- (iii) Where a massive or irregular ore body is worked, level ***plans*** and vertical sections through the ***workings*** must be kept.

(b) In the case of surface mines:

- (i) Where ***bedded mineral deposits*** are worked by surface mining methods, there must be shown on the surface ***plan*** sufficient data regarding the thickness and elevation of every mineral deposit worked in a suitable grid pattern. As an alternative to the grid pattern data, vertical sections may be kept, the lines of which must be indicated on the surface ***plan***.
- (ii) where massive or irregular mineral deposits are worked, level ***plans*** or vertical sections or a composite ***plan*** showing all the bench outlines, must be kept.

[Subpara. (ii) corrected by GN R89/2008]

Level Plans and Vertical Sections

(24) Level ***plans*** must show the outline of all ***workings*** at suitably chosen elevations. In the case of underground mines, the detail required in regulation 17(23) must be shown.

(25) Vertical sections must be drawn through the ***workings*** shown on the ***plans*** contemplated in regulations 17(23)(a)(iii) and 17(23)(b) to show the appropriate detail required for level ***plans***.

General Plan - Mining on Land

(26) A general ***plan*** must be constructed, showing the detail required in regulations 17(17), 17(18) and 17(23) on one ***plan*** instead of on three

separate **plans**, or a general surface **plan** showing the detail required in regulations 17(17) and 17(18) on one **plan** instead of on two separate **plans**.

General Plan - Mining at Sea

- (27) A general **plan** must be constructed showing the boundaries of the mining area, the names of adjacent mining areas and the locality of semipermanent production rigs and platforms.

Departmental copies of plans

- (28) The employer must provide the Principal Inspector of Mines annually with updated copies of the **plans**. In the case of computer aided draughting (CAD), legible **plans** in book form (approximately A3 size) or a copy of the index key **plan** referred to in regulation 17(16), indicating additionally the outlines of the **workings** as well as the surface infrastructure, and a copy of the back-up referred to in regulation 17(4)(f) must be provided.

Unsatisfactory Plans

- (29) Where **plans** are deficient, the Director: Mine Surveying may have the mine surveyed and new **plans** prepared at the expense of the employer.

Plans Confidential

- (30) The Principal Inspector of Mines and the Director: Mine Surveying must keep information contained in any **plan** confidential and may only release such information in accordance with the Promotion of Access to Information Act (Act 2 of 2000).

MINE CLOSURE

Plans brought Up to Date

- (31) The employer must take reasonable measures to ensure that, before a mine is abandoned, closed or rendered inaccessible, the **plans** and departmental copies thereof referred to in regulation 17(28) are brought up to date by the **competent person** referred to in regulation 17(2) and that the Director: Mine Surveying is notified to inspect such **plans** for approval.

Plans and Books to be Handed In

- (32) The employer must take reasonable measures to ensure that updated hard copies of the **plans**, copies referred to in regulation 17(28) and inventories thereof on durable draughting material, together with the **survey station** register are handed in at the office of the Director: Mine Surveying, following the inspection and approval of the **plans** as contemplated in regulation 17(31).

Certificate of compliance

- (33) The Director: Mine Surveying must issue a certificate of compliance with the requirements of regulations 17(31) and 17(32) to the employer within 60 (sixty) calendar days of compliance in respect of the said regulations.

[Chapter 17 inserted by GN R1304/2004]

CHAPTER 18

TRIPARTITE INSTITUTIONS

- [18.1 Nomination of members to represent employees and owners](#)
- [18.2 Appointment of members representing employees](#)
- [18.3 Appointment of members representing owners](#)
- [18.4 Appointment of members representing departments of State](#)
- [18.5 Term of office of members](#)
- [18.6 Filling of casual vacancies](#)
- [18.7 Publication of names of members](#)

18.1 Nomination of members to represent employees and owners

- (1) Nominations for the appointment of members of every tripartite institution are invited by notice in the *Gazette* from -
- (a) every registered trade union with employees as members to represent employees; and
 - (b) every employers' organisation with owners as members to represent owners.
- (2) Every nomination must be submitted in writing within 30 days of the notice referred to in subregulation (1) and must contain -
- (a) the name, address and a short curriculum vitae of the nominee;
 - (b) the tripartite institution for which the person is nominated;
 - (c) if submitted by -
 - (i) a registered trade union, a statement of the number of employees who are members of the union; or
 - (ii) an employer's organisation, a statement of the number of employees employed by the members of the organisation; and
 - (d) any other information or documentation required in the notice.
- (3) Any registered trade union or employer's organisation that has submitted a nomination must, within 15 days of receiving a request from the

Minister, provide such further information or documentation as the Minister may reasonably request regarding such nomination, including but not limited to information or documentation necessary to verify a statement contemplated in subregulation (2).

- (4) The nomination period referred to in subregulation (2) may be extended.

18.2 Appointment of members representing employees

The Minister must appoint persons, nominated under regulation 18.1 (2) to represent employees as members of tripartite institutions so that -

- (a) the members are all nominated by agreement between registered trade unions representing at least 75% of employees belonging to such trade unions in the mining industry; or
- (b) failing agreement in terms of paragraph (a) -
 - (i) at least half the members are persons nominated by a registered trade union or unions representing the majority of employees belonging to registered trade unions in the mining industry; and
 - (ii) the rest are persons nominated by registered trade unions with members employed in the mining industry and appointed in accordance with the significance in the mining industry of the trade unions concerned.

18.3 Appointment of members representing owners

The Minister must appoint persons, nominated under regulation 18.1 (2) to represent owners in the mining industry, as members of tripartite institutions so that -

- (a) the members are all nominated by agreement between employers' organisations whose members employ at least 75% of employees in the mining industry; or
- (b) failing agreement in terms of paragraph (a) -
 - (i) at least half the members are persons nominated by an employers' organisation or organisations whose members employ the majority of the employees in the mining industry; and
 - (ii) the rest are persons nominated by employers' organisations and appointed in accordance with the significance in the mining industry of the organisations concerned.

18.4 Appointment of members representing departments of State

The Minister, after consulting the Chief Inspector, must appoint the members representing departments of the State on every tripartite institution.

18.5 Term of office of members

- (1) A member of a tripartite institution is appointed for a period of three years.
- (2) Despite subregulation (1), a person appointed to replace a member of a tripartite institution who has vacated office before the expiry of such member's term of office, is appointed for the remainder of that member's term of office.
- (3) Every member of a tripartite institution is eligible for reappointment after the expiry of such member's term of office.
- (4) If for any reason a person to replace a member of a tripartite institution is not appointed at the expiry of the period of office of such member, the Minister may extend the period of office of such member for a period not exceeding six months.

18.6 Filling of casual vacancies

- (1) If a member vacates office in terms of the constitution of the tripartite institution before the expiry of such member's terms of office, subject to subregulation (2) -
 - (a) the party that nominated the member is invited to nominate a replacement; and
 - (b) the Minister must appoint the person nominated as a member of the tripartite institution concerned.
- (2) If the party contemplated in subregulation (1) (a) no longer satisfies the representative requirements of regulation 18.2 or 18.3 -
 - (a) nominations of persons to fill the vacancy are invited in terms of regulation 18.1; and
 - (b) the Minister must appoint a person to fill the vacancy in terms of regulation 18.2 or 18.3.
- (3) If a member representing a department of the State on a tripartite institution vacates office before the expiry of such member's term of office, a person must be appointed to fill the vacancy in terms of regulation 18.4.

18.7 Publication of names of members

The names of persons appointed in terms of these regulations, their period of office and the parties who they represent are published by notice in the *Gazette*.

CHAPTER 19

UNDERWATER MINING

Regulations not yet promulgated

CHAPTER 20

DEFINITIONS

20.1 In these regulations a word or phrase to which a meaning has been assigned in this Act has that meaning and, unless the context otherwise indicates -

“Audiogram” means a chart, graph or table indicating the hearing threshold levels of an individual as a function of frequency (viz. 0.5,1,2,3,4,6 and 8 kilohertz), as determined during a measurement of a person’s hearing threshold levels by means of monaural, pure-tone, air-conduction threshold tests;

[Definition of “Audiogram” inserted by GN R786/2002]

“braking system” means a device or combination of devices capable of reducing the speed of a locomotive or train to a standstill including emergency brake, park brake and service brake;

[Definition of “braking system” inserted by GN R583/2004]

“Cardio-respiratory examination” means a clinical examination of the cardio-respiratory system including a full size chest x-ray and a lung function test.

[Definition of “cardio-respiratory examination” inserted by GN R1792/2003]

“dynamic type test” means the test conducted on a train to determine the deceleration rate and braking efficiency;

[Definition of “dynamic type test” inserted by GN R583/2004]

“Full size chest x-ray” means a chest x-ray using a photographic plate measuring 35cm x 35 cm or 35 cm x 42 cm or the digital equivalent;

[Definition of “full size chest x-ray” inserted by GN R1792/2003]

“locomotive” means a self-propelled railbound machine which requires either a driver for manual operation or an operator for automatic operation;

[Definition of “locomotive” inserted by GN R583/2004]

“Lung function test” means the measurement of the inspired and expired volume of air by means of a spirometry;

[Definition of “lung function test” inserted by GN R1792/2003]

“Principal Inspector of Mines” means the officer appointed by the Chief Inspector to be in charge of health and safety in any region established by Government Notice No. R. 92 of 15 January 1997; and

“rolling stock” means any railbound equipment that is not self-propelled;

[Definition of “rolling stock” inserted by GN R583/2004]

“**static test**” means the test carried out to determine the compliance of the brake holding power of a locomotive braking system measured against the design specification or an appropriate safety standard;

[Definition of “static test” inserted by GN R583/2004]

“**train**” means one or more locomotives and rolling stock, all attached.

[Definition of “train” inserted by GN R583/2004]

“**tripartite institution**” means the Council and its permanent committees and the Mining Qualifications Authority.

[Chapter 20 substituted by GN R846/97]

CHAPTER 21

FORMS

[Form SAMRASS 1 \(DME 132\) – Accident and Dangerous Occurrence Report](#)

[Form SAMRASS 2 \(DME 200\) – Injury Report Form](#)

[Form SAMRASS 3 \(DME 136\) – Rockburst and Fall of Ground Accident](#)

[Form SAMRASS 4 \(DME 201\) – 1-13 Day Injuries](#)

[Form SAMRASS 5 \(DME 133\) - Explosives](#)

[Form SAMRASS 6 \(DME 134\) - Fire](#)

[Form SAMRASS 7 \(DME 135\) – Subsidence \(Coal Mines\)](#)

[Form SAMRASS 8 \(DME 137\) – Heat Stroke / Heat Exhaustion Questionnaire](#)

[Form SAMRASS 9 \(DME 202\) – Report on Date Resumed Work](#)

[Report Form 21.9\(2\)\(a\) – Airborne Pollutants – Particulates Personal Exposure Report Form](#)

[Report Form 21.9\(2\)\(b\) – Gases and Vapours Personal Exposure Report Form](#)

[Report Form 21.9\(2\)\(c\) – Heat Stress Exposure Report Form](#)

[Report Form 21.9\(2\)\(d\) – Cold Stress Exposure Report Form](#)

[Report Form 21.9\(2\)\(e\) – Personal Noise Exposure Report Form](#)

[Form 21.9(2)(e) added by GN R1226/2005]

[Report Form 21.9\(2\)\(f\) – Operations Details Report Form](#)

[Form 21.9(2)(f) added by GN R1226/2005]

[Chapter 21 inserted by GN R134/2001 and amended by GN R904/2002 and GN R1226/2005]

CHAPTER 22

SCHEDULES

COMPETENT PERSON FOR PRIMARY BLASTING, SECONDARY BLASTING AND BLASTING ASSISTANTS

[22.4 EXPLOSIVES](#)

[22.8 Machinery and Equipment](#)

[22.9 OCCUPATIONAL HYGIENE](#)

[22.10.2 Water Storage and Pumping](#)

[22.10.3 Draw Points, Tipping Points, Rock Passes and Box Fronts](#)

[22.14](#)

[22.15](#)

22.4 EXPLOSIVES

22.4.1 (1) For purposes of Regulations 4.4(1) and 4.4(2), the competent person must have the relevant competencies as indicated below -

1. Underground hard rock tabular mine-

(a) Primary blasting

A person in possession of a valid blasting certificate for scheduled mines issued by the Department; or

A person assessed and found competent against a qualification recognised by the MQA for this purpose.

(b) Secondary blasting

A person in possession of a blasting certificate for scheduled mines issued by the Department, or

A person assessed and found competent against a skills programme recognised by the MQA for this purpose.

(c) Blasting assistant

A person assessed and found competent against a skills programme recognised by the MQA for this purpose.

2. Underground coal mines -

(a) Primary blasting

A person in possession of a blasting certificate for fiery mines issued by the Department, or

A person assessed and found competent against a qualification for the type of mining to be undertaken recognised by the MQA for this purpose.

(b) Secondary blasting

A person in possession of a blasting certificate for fiery mines issued by the Department, or

A person assessed and found competent against a qualification recognised by the MQA for this purpose.

(c) Blasting assistant

A person assessed and found competent against a skills programme recognised by the MQA for this purpose.

3. Underground hard rock massive mine -

(a) Primary blasting

A person in possession of a blasting certificate for scheduled mines issued by the Department, or

A person assessed and found competent against a qualification recognised by the MQA for this purpose.

(b) Secondary blasting

A person in possession of a blasting certificate for scheduled mines issued by the Department, or.

A person assessed and found competent against a skills programme recognised by the MQA for this purpose.

(c) Blasting assistant

A person assessed and found competent against a skills programme recognised by the MQA for this purpose.

4. Quarries other than dimension stone quarries

(a) Primary blasting

A person in possession of a blasting certificate for opencast mines issued by the Department, or

A person assessed and found competent against a qualification recognised by the MQA for this purpose.

(b) Secondary blasting

A person in possession of a blasting certificate for opencast mines issued by the Department, or

A person assessed and found competent against a qualification recognised by the MQA for this purpose.

(c) Blasting assistant

A person assessed and found competent against a skills programme recognised by the MQA for this purpose.

5. Openpit/strip mine

(a) Primary blasting

A person in possession of a blasting certificate for opencast mines issued by the Department.

A person assessed and found competent against a qualification recognised by the MQA for this purpose.

(b) Secondary blasting

A person in possession of a blasting certificate for opencast mines issued by the Department, or

A person assessed and found competent against a qualification recognised by the MQA for this purpose.

(c) Blasting assistant

A person assessed and found competent against a skills programme recognised by the MQA for this purpose.

6. Dimension stone quarries

(a) Primary blasting

A person in possession of a blasting certificate for opencast mines issued by the Department, or

A person assessed and found competent against a qualification recognised by the MQA for this purpose.

(a) Secondary blasting

A person in possession of a blasting certificate for opencast mines issued by the Department, or

A person assessed and found competent against a qualification recognised by the MQA for this purpose.

(b) Blasting assistant

A person assessed and found competent against a skills programme recognised by the MQA for this purpose.

[Reg. 22.4

22.8.6

- (4) For purposes of regulation 8.6(4) the competent person means a person who is a certificated electrical or mechanical engineer or has an appropriate qualification registered on the National Qualifications Framework and recognised by the Mining Qualifications Authority for this purpose.

22.8.7

- (2) The competent person referred to in regulation 8.7(2) means a person who -
- (i) is a certificated electrical or mechanical engineer or has an appropriate qualification registered on the National Qualifications Framework and which is recognized by the MQA for this purpose;
 - (ii) is familiar with the type of refrigeration and air conditioning plants used at the mine in so far as it concerns aspects of safety, construction, erection, operation, inspection and testing of such plants, and
 - (iii) is familiar with any relevant national or international Standards, Codes of Practice and specifications related to the type of refrigeration, and air conditioning plants used at the mine.

[Reg. 22.8 inserted by GN 911/2006]

22.9

- (2) OCCUPATIONAL HYGIENE
- (a) OCCUPATIONAL EXPOSURE LIMITS FOR AIRBORNE POLLUTANTS

In this Schedule the following terms/abbreviations have the meanings as set out below.

TERMS

“Asbestos” means any of the following minerals: - Crocidolite, Amosite, Chrysotile, Fibrous actinolite, Fibrous anthophyllite, Fibrous tremolite, and any mixture containing any of these minerals.

“Occupational exposure limit” (OEL) means the time weighted average concentration for a 8 hour work day and a 40 hour work week to which nearly all workers may be repeatedly exposed without adverse health effects.

“Occupational exposure limit - Ceiling limit” (OEL - C) means an instantaneous value which must never be exceeded during any part of the working exposure.

“Occupational exposure limit - Short term exposure limit” (OEL-STEL) means a 15 minute TWA exposure which should not be exceeded at any time during a workday even if the 8-hour TWA is within the OEL-TWA. Exposures above the OEL-TWA up to the STEL should not be longer than 15 minutes and should not occur more than four times per day. There should be at least 60 minutes between successive exposures in this range. An averaging period other than 15 minutes may be recommended when this is warranted by observed biological effects.

For those substances for which no OEL-STEL have been specified, excluding airborne particulates, a figure of three times the occupational exposure limit is to be used when controlling short-term excursions in exposure.

“Respirable particulates” means the respirable fraction of airborne particulates.

“Inhalable particulates” means airborne particulates as collected by a personal gravimetric sampler without particle size selection.

ABBREVIATIONS

CAS = Chemical Abstracts Service is an organisation under the American Chemical Society. CAS Numbers are used to identify specific chemicals or mixtures.

PPM = parts per million

mg/m³ = milligrams per cubic metre

Sk = Skin absorption

Sen = Capable of causing respiratory sensitisation

f/ml = fibres per millilitre

OCCUPATIONAL EXPOSURE LIMITS FOR AIRBORNE POLLUTANTS

[Click here to see Table](#)

[Table substituted by GN R989/2006]

(b) OCCUPATIONAL EXPOSURE LIMITS FOR PHYSICAL AGENTS

(i) **NOISE**

(1) Noise Exposure
: 85 dBL_{Aeq,8h}

(2) Peak Sound Level
: 135 dB(A)

(ii) **THERMAL STRESSES**

(1) Wet Bulb (°C)
: 32.5

(2) Dry Bulb (°C)
: 37

(3) Mean Radiant Temperature (°C) : 37

(4) Equivalent Chill Temperature (°C) : 4

(c) **POTABLE WATER**

(i) **QUALITY**

[Click here to see Table](#)

(ii) **Macro, Micro Determinants and Bacteriological Limits**

[Click here to see Table](#)

(iii) **Other Constituents**

The water shall not contain any other constituents in concentrations, which may render it unsuitable for use as drinking water.

[Reg. 22.9(2) inserted by GN R904/2002 and amended by GN R989/2006]

22.10.2 Water Storage and Pumping

(2) (a) Competent Person ¹

For purposes of regulation 10.2(2)(a) the competent person¹ means a person who is registered as a professional engineer with the Engineering Council of South Africa and is competent in the design of underground dam walls, plugs and barricades.

(b) Competent Person ²

For the purpose of regulation 10.2(2)(b) and (c) competent person² means a person who-

- (a) is the holder of a Certificate of Competency for mechanical or electrical engineering issued by the Chief inspector of Mines and has knowledge and experience in the design, construction and maintenance of dams and plugs; or

- (b) has been assessed competent against a qualification recognised by the MQA for this purpose.
[Reg. 22.10.2 inserted by GN R94/2008]

22.10.3 Draw Points, Tipping Points, Rock Passes and Box Fronts

- (1) (a) The competent person referred to in regulation 10.3(1)(a) means a person who is registered with the Engineering Council of South Africa as a professional engineer or professional technologist or who has been assessed competent against a qualification recognised by the Mining Qualification Authority for this purpose.
- (2) (a) The competent person referred to in regulation 10.3(2)(a) means a person who is the holder of a Certificate of Competency for Mechanical or Electrical Engineers (Mines and Works) issued by the Department or who has been assessed competent against a qualification recognised
[Reg. 22.10.3 inserted by GN R94/2008]

22.14.1

- (1) For the purpose of regulations 14.1.1, 14.1.5 and 14.1.7. a competent person means a person who -
 - (a) is in possession of a valid certificate of competency, recognised for this purpose by the Mining Qualifications Authority; or
 - (b) has been assessed competent against a unit standard, skills programme or qualification, recognised for this purpose by the Mining Qualifications Authority.
[Subreg. (1) substituted by GN R886/2003 and GN 34/2007]
- (7)
[Subreg. (7) substituted by GN R886/2003 and deleted by GN 34/2007]
- (8) For purposes of Regulation 14.1(8) competent person means a person who is at least in possession of either the Chamber of Mines Certificate in Rock Mechanics (Metalliferous Mines), or the Chamber of Mines Certificate in Rock Mechanics (Coal Mines), whichever is appropriate for the type of mine concerned.
[Reg. 22.14.1 inserted by GN R959/2002]

22.15

- (5) (a) The competent person referred to in regulations 5.1(1) must be in possession of the following -

- (i) Where the competent person performs the obligations underground:
 - (1) Certificate in Mine Environmental Control, issued by the Chamber of Mines of South Africa.
 - (ii) Where the competent person performs the obligations on surface:
 - (1) Intermediate Certificate in Mine Environmental Control, issued by the Chamber of Mines of South Africa, and be certified as an Occupational Hygienist by the Southern African Institute for Occupational Hygiene; or
 - (2) Certificate in Mine Environmental Control, issued by the Chamber of Mines of South Africa.
[Reg. 22.15(5) inserted by GN R904/2002]
- (8) (a) The competent person referred to in regulation 8.2 (6) must be in possession of the following:
- (i) An Electrical or Mechanical Certificate of Competency for Mines and Works issued by the Chief Inspector of Mines;
 - (ii) A B degree in Electrical or Mechanical Engineering.
[Reg. 22.15(8) inserted by GN R583/2004]
- (9) (a) The competent person referred to in regulations 9.2(3) must be in possession of the following -
- (i) Where the competent person performs the obligations underground:
 - (1) Certificate in Mine Environmental Control, issued by the Chamber of Mines of South Africa.
 - (ii) Where the competent person performs the obligations on surface:
 - (1) Intermediate Certificate in Mine Environmental Control, issued by the Chamber of Mines of South Africa, and be certified as an Occupational Hygienist by the Southern African Institute for Occupational Hygiene;
 - (2) Certificate in Mine Environmental Control, issued by the Chamber of Mines of South Africa.
[Reg. 22.15(9) inserted by GN R904/2002]

- (11) (a) **“Competent person”** for purposes of sub-regulation 11.4(3) means:
- (i) A person registered with the Health Professions Council in any of the following three categories:
 - (a) as an ear, nose and throat specialist;
 - (b) in speech therapy and audiology; or
 - (c) as an occupational medical practitioner; or
 - (ii) A person qualified in audiometric techniques from an institution registered with the relevant Education and Training Quality Assurer (ETQA) registered in terms of the South African Qualifications Authority Act (Act No. 58 of 1995).
- (b) **“Competent person”** for purposes of sub-regulations 11.4(7) and 11.4(8) means
- (i) A person registered as an audiologist with the Health Professions Council.
[Reg. 22.15 (11) inserted by GN R786/2002]
- (16) (a) The competent person referred to in regulations 16.1(1) must be in possession of the following -
- (i) Where the competent person performs the obligations underground.
 - (1) Certificate in Mine Environmental Control, issued by the Chamber of Mines of South Africa.
 - (ii) Where the competent person performs the obligations on surface:
 - (1) Intermediate Certificate in Mine Environmental Control, issued by the Chamber of Mines of South Africa, and be certified as an Occupational Hygienist by the Southern African Institute for Occupational Hygiene;
 - (2) Certificate in Mine Environmental Control, issued by the Chamber of Mines of South Africa.
[Reg. 22.15(16) inserted by GN R904/2002]
- (16) (a) For purposes of Regulation 16.5(1)(a), competent person means a person who -
- (i) has passed a course of training approved for this purpose by the Chief Inspector of Mines;

OR

- (ii) has been assessed and found competent against applicable unit standards, skills programme and/or a qualification recognised for this purpose by the Mining Qualifications Authority (MQA).

[Reg. 22.15(16) inserted by GN 86/2008]

Editor's Note: Re-insertion of Regulation 22.15(16)(a) by GN 86/2008 under investigation. Department of Minerals and Energy notified. Awaiting correction notice/clarification.

CHAPTER 23

REPORTING OF ACCIDENTS AND DANGEROUS OCCURENCES

[Heading substituted by GN R787/2002]

[23.1 Accidents to be reported](#)

[23.2](#)

[23.3](#)

[23.4 Dangerous occurrences to be reported](#)

[23.5](#)

[23.6](#)

[23.7](#)

23.1 Accidents to be reported

The employer must report to the Principal Inspector of Mines in the manner prescribed in this chapter any accident at the mine that results in:

- (a) the death of any employee;
- (b) an injury, to any employee, likely to be fatal;
- (c) unconsciousness, incapacitation from heatstroke or heat exhaustion, oxygen deficiency, the inhalation of fumes or poisonous gas, or electric shock or electric bum accidents of or by any employee and which is not reportable in terms of paragraph (d).
- (d) an injury which either incapacitates the injured employee from performing that employee's normal or a similar occupation for a period totaling 14 days or more, or which causes the injured employee to suffer the loss of a joint, or a part of a joint, or sustain a permanent disability,
- (e) an injury, other than injuries referred to in paragraph (d), which incapacitates the injured employee from performing that employee's tiormal or a similar occupation on the next calendar day.

23.2 (1) An accident referred to in paragraph (a), (b) or (c) of regulation 23.1 must be reported

immediately by the quickest means available and must be confirmed without delay on [Forms SAMRASS 1](#) and [2](#) prescribed in Chapter 21.

- (2) An accident referred to in paragraph (d) of regulation 23.1 must, after the accident becomes reportable, be reported within three days on [Forms SAMRASS 1](#) and [2](#) prescribed in Chapter 21.
- (3) The Form [SAMRASS 9](#) must be submitted on a monthly basis for all persons not having returned to work at the time of submitting [SAMRASS 2](#) on a monthly basis.
- (4) An accident referred to in paragraph (e) of regulation 23.1 must be reported without delay on a monthly basis, on Form [SAMRASS 4](#) prescribed in Chapter 21

- 23.3** (1) Where the death of an *employee*, referred to in regulation 23.1(a) is related to a rockburst or fall of ground, the duly completed Form [SAMRASS 3](#), prescribed in Chapter 21, for such rockburst or fall of ground must be forwarded by the *employer* to the *Principal Inspector of Mines* within 14 days of such death.
- (2) When an injury results in the death of the injured *employee* after the report in terms of regulation 23.1 (b), (c), (d) or (e) has been given or when a slight injury, which was not reportable, results in the death of the injured *employee*, or when general sepsis or tetanus develops as a result of an injury, the *employer* must immediately report it to the *Principal Inspector of Mines* and without delay submit amended Form [SAMRASS 1](#) prescribed in Chapter 21.
 - (3) Where the injury of a person referred to in regulation 23 (1) or a dangerous occurrence referred to in regulation 23.4 (o), is related to the use of explosives, in addition to Form [SAMRASS 1](#), the duly completed Form [SAMRASS 5](#), prescribed in Chapter 21, must be forwarded by the *employer* to the *Principal Inspector of Mines* within 14 days of such occurrence.
 - (4) Where the injury of a person referred to in regulation 23 (1) or a dangerous occurrence referred to in regulation 23.4 (f) is related to fires, in addition to Form [SAMRASS 1](#), the duly completed Form [SAMRASS 6](#), prescribed in Chapter 21, must be forwarded by the *employer* to the *Principal Inspector of Mines* within 14 days of such occurrence.
 - (5) Where the injury of a person referred to in regulation 23 (1) or a dangerous occurrence referred to in regulation 23.4 (b) is related to a subsidence in a coal mine, in addition to Form [SAMRASS 1](#), the duly completed Form [SAMRASS 7](#), prescribed in Chapter 21, must be forwarded by the *employer* to the *Principal Inspector of Mines* within 14 days of such occurrence.

- (6) Where the injury of a person referred to in regulation 23 (1) is related to heat stroke or heat exhaustion, in addition to Form [SAMRASS 1](#), the duly completed Form [SAMRASS 8](#), prescribed in Chapter 21, must be forwarded by the *employer* to the *Principal Inspector of Mines* within 14 days of such occurrence.

23.4 Dangerous occurrences to be reported

The *employer* must report to the *Principal Inspector of Mines* in the manner prescribed in this Chapter any of the following dangerous occurrences at the *mine*

(a) ROCKBURSTS AND FALLS OF GROUND

An extensive rockburst or fall of ground causing the following damage underground -

- (i) At least 10 linear metres of working face has been severely damaged and choked and will require re-establishment and re-supporting, or be abandoned;
- (ii) At least 25m² of working area has been severely damaged and choked rendering support units ineffectual and will have to be re-established and re-supported or be abandoned;
- (iii) At least 10 linear metres of gully has been restricted with rock clearly recently displaced from the hanging wall and gully sidewalls;
- (iv) At least 10 linear metres continuous or 30 linear metres cumulative of access ways of tunnel or travelling way has been severely damaged and will require rehabilitation or be abandoned;
- (v) At least 10 m² of roof or 5m³ of rock has been displaced from the roof of the mining cavity or excavation;
- (vi) At least 10m³ of rock has been freshly displaced from pillars or tunnel sidewalls.

(b) CAVING

Any unplanned or uncontrolled caving, side wall or slope failure or subsidence in the ground or workings, causing damage to the surface, which may pose a significant risk to the safety of persons at a *mine*.

(c) FLOW OF WATER, BROKEN ROCK, MUD OR SLIMES

Any unplanned or uncontrolled flow of water, broken rock, mud or slimes at the *mine* which may pose a significant risk to the safety of persons.

[Para. (c) substituted by GN 783/2004]

(d) **BREAKDOWN OF MAIN VENTILATION FAN**

Breakdown of any main ventilation fan.

(e) **POWER FAILURE**

Any power failure occurring in the underground workings of a *mine*, which poses a significant risk to the health, or safety of persons at a *mine*.

(f) **FIRES AND EXPLOSIONS**

Any ignition or explosion of gas or dust, or any fire related to mining activities or any indication or recrudescence of fire or spontaneous combustion at or in a *mine*.

(g) **FLAMMABLE GAS**

The presence of flammable gas exceeding one comma four parts per hundred by volume in the general atmosphere at a *mine*, or any portion of a *mine*:

- (i) if such flammable gas is detected for the first time; or
- (ii) the first time such flammable gas is again detected after not having been detected therein for a continuous period of three months.

(h) **WINDING PLANTS**

- (i) Running out of control of winding-engine, winding drum or conveyance;
- (ii) Fracture or failure of any essential part of the winding-engine, fracture or failure of any safety device used in connection with the winding equipment;
- (iii) Fracture, failure or serious distortion of winding rope, fracture, failure or serious distortion of any connection between the winding rope and the drum or between the winding rope and the conveyance and any other load suspended from or attached to such rope; fracture, failure or failure or serious distortion of any connection between conveyances or between a conveyance and any suspended or attached load, fracture of guide rope or its connections, fracture of balance or tail rope or its connections;
[Subpara. (iii) amended by GN R787/2002]
- (iv) Fracture or failure of winding or balance sheave; fracture or failure of any essential part of the headgear or other sheave support;

- (v) Jamming or accidental overturning of conveyance; conveyance or its load fouling shaft equipment; jamming of crosshead;
- (vi) Derailing of conveyance;
- (vii) Conveyance, bridle, frame or crosshead accidentally leaving guides;
- (viii) Fracture or failure of the braking system or of any critical parts thereof;
- (ix) Failure to activate when required of any safety catches and/or arresting devices or activation of any safety catches and/or arresting devices when not required;
- (x) Failure to activate when required of any overwinding prevention device or activation of such device when not required;
- (xi) Any overwind or over-run of the conveyance to an extent which may have endangered persons or may have caused damage to the winding equipment;
- (xii) Failure of depth indicator.

(i) **LIFTS AND ELEVATORS**

- (i) Fracture or failure of any essential part of the driving or operating machinery, fracture or failure of any safety device used in connection with lifts or elevators.
- (ii) Fracture or distortion of the lift or elevator rope, fracture or failure of attachments of such rope.
- (iii) Fracture or failure of any sheave or of the shaft or shaft bearing of such sheave.
- (iv) Jamming of car or counterpoise.
- (v) Fracture or failure of braking system or of any critical parts thereof
- (vi) Failure to activate when required of any safety catches and/or arresting devices or activation of any safety catches and/or arresting devices when not required.

(j) **OBJECTS FALLING DOWN SHAFTS**

Any object falling down the shaft or any other incident which necessitates the inspection of the shaft.

(k) **EMERGENCY OR RESCUE PROCEDURES**

- (i) Any failure of breathing apparatus whilst deployed.
- (ii) The use of emergency escape apparatus, procedures or rescue mechanisms, or the rescue from entrapment, associated with mining or related activities, of any *employee*.

(l) **SELF PROPELLED MOBILE MACHINERY**

Any self-propelled mobile machine running out of control which may pose significant risk to the safety of persons at a *mine*.

(m) **BOILERS AND PRESSURE VESSELS**

Fracture or failure of any part of a boiler or safety device of a boiler or pressure vessel which may have endangered persons.

(n) **CHAIRLIFTS**

- (i) Fracture or failure of any part or safety device of a chairlift installation which may have endangered persons or may have caused damage to such chairlift installation.
- (ii) Fracture or failure of any essential part of the driving machinery.
- (iii) Fracture failure or serious distortion of any rope or chain forming part of a chairlift installation.

(o) **EXPLOSIVES**

- (i) Any unauthorised or accidental ignition or detonation of explosives.
- (ii) Any exposure of persons to blasting fumes which is not reportable in terms of regulation 23.1.
- (iii) Any detonation of explosives which may pose a significant risk to the safety of persons.

23.5 A dangerous occurrence referred to in regulation 23.4 must be reported immediately by the quickest means available and must be confirmed without delay on Form [SAMRASS 1](#) prescribed in Chapter 21.

23.6 Every employer must ensure that a system is in place whereby the employer is informed, as soon as is practicable after its occurrence, of any accident or dangerous occurrence, which is reportable in terms of this Chapter.

23.7 (i) Every employer must keep and maintain a record in which the particulars of all

accidents and dangerous occurrences, which are required to be reported in terms of this Chapter, must be recorded without delay.

- (ii) The record contemplated in Regulation 23.7(i) in respect of all accidents or dangerous occurrences must be kept and maintained for two years from the time that the accident or dangerous occurrence becomes reportable.

[Para. (iii) renumbered to (ii) by GN R787/2002]

[Chapter 23 inserted by GN R134/2001]