

REPUBLIC OF SOUTH AFRICA

MINE HEALTH AND SAFETY ACT

REGULATIONS

DETAILED SUMMARY

Prepared for Contractors Operating on South African Mines

Mine Health & Safety Compliance Series

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INTRODUCTION TO THE MHSA REGULATIONS

The Regulations issued under the Mine Health and Safety Act 29 of 1996 provide the detailed, operational requirements that give effect to the broad obligations set out in the Act. While the Act establishes the legal framework and principles, the Regulations prescribe the specific technical, procedural and administrative standards that employers, contractors and employees must meet.

The Regulations are divided into 18 numbered Chapters (with certain chapters yet to be promulgated). They have been updated and added to over time through a series of Government Notices. Contractors must be familiar with all chapters relevant to their scope of work and must ensure their Codes of Practice, Risk Assessments and Operational Procedures align with these Regulations.

Note: The Regulations use the standard 'reasonably practicable' throughout, which means practicable having regard to: (a) the severity and scope of the hazard or risk; (b) the state of knowledge available; (c) the availability and suitability of means to remove or mitigate the hazard or risk; and (d) the costs and benefits of removing or mitigating the hazard or risk.

CHAPTER 1: APPOINTMENTS AND ADMINISTRATION

Chapter 1 establishes the foundational administrative and appointment framework that contractors must follow when commencing operations on a mine. All appointments required under the Act and Regulations must be made in writing and must identify the person appointed, their functions, and the scope of their authority.

Key Administrative Obligations

- All statutory appointments under the MHSA must be in writing and must specify the appointee's functions, scope of authority, and the persons reporting to or supervised by the appointee.
- Appointment letters/certificates must be accessible at the mine at all times and must be produced on request to an inspector.
- Changes to any statutory appointment must be notified to the Chief Inspector of Mines within 7 days.
- Contractors must maintain an up-to-date appointment register covering all appointments required under the Act and Regulations.

✓ **CONTRACTOR REQUIREMENT:** Prepare a comprehensive appointments register covering all statutory positions including: Safety Officer, First Aider, Fire Warden, HSR, Risk Assessor, OMP (if applicable), and all competent person appointments required by the specific chapters below.

CHAPTER 3: ELECTRICITY (Regulations 3.1–3.39)

Chapter 3 sets out comprehensive electrical safety requirements. Only the regulations directly relevant to contractors using electrical equipment on mines are summarised below.

3.1 Design, Control and Competency

- All electrical apparatus and electrical reticulation systems must be designed, installed, repaired and maintained by a competent person.
- All electrical apparatus must be under the control of a competent person.
- No person other than a competent person authorised in writing by the employer may enter a place where electrical apparatus is installed unless all live conductors are adequately insulated or protected.

3.2 Protection Against Electrical Hazards

Employers must take reasonably practicable measures to ensure no person suffers electrical shock, arc flash or electrocution due to:

- Exposure to electrical current flow or contact with live exposed parts.
- Electrical apparatus failing due to incorrect design, installation, operation or maintenance.
- Electromagnetic interference from other equipment.
- Blasts, fires or arc flashes resulting from electrical faults.
- Incorrect design, installation, operation or maintenance of any electrical apparatus.

3.3 Switchgear, Energising and Isolation

- Only competent persons may energise, de-energise or isolate electrical apparatus where the operation poses a significant risk, and such apparatus must be protected against unauthorised access.
- Only competent persons authorised in writing by the employer may carry out switching procedures on MV (medium voltage) or HV (high voltage) equipment.
- A written procedure must be drawn up and implemented for all energising, de-energising and isolation of MV and HV electrical apparatus (Reg 3.21).
- Where interruption of electrical supply could result in a significant risk, an alternative or emergency power source must be available.

3.4 Substations and Switchrooms

- Any place where electrical apparatus is installed and which may constitute a danger must be: of adequate size for safe working; properly ventilated; protected against vermin and water ingress; adequately illuminated; equipped with effective means to disconnect the energy source; and equipped with an effective fire extinguishing system.
- Every substation must display a legible, up-to-date single-line drawing of the reticulation system.
- Substation areas must be clearly demarcated, with notices at every entry point prohibiting unauthorised access, stating procedures for fire, first aid for electric shock, and emergency contact.

3.5 Work on Electrical Apparatus

- No examination, adjustment, testing, repair or other work necessitating dangerous approach to electrical apparatus shall be carried out unless such apparatus is dead (isolated). If the equipment must be live, work may only be done by or under the direct supervision of a competent person (Reg 3.13).
- When working on isolated electrical apparatus, effective precautions must be taken by: discharging stored energy; testing for dead including ring feeds; and earthing on both sides (Reg 3.15).

- No metal ladder or metal-reinforced-stile ladder may be used for examination, repair or other work near electrical apparatus (Reg 3.18).
- All accessible metallic portions of electrical plant/apparatus that could accidentally become live must be earthed by an adequately sized conductor or protected by insulating material (Reg 3.16, 3.19).

3.6 Cables and Flexible/Trailing Cables

- Buried cables or cables at risk of mechanical damage must be armoured (Reg 3.22).
- Flexible/trailing cables may only be used with self-propelled mobile machines, movable electric apparatus or portable electric apparatus (Reg 3.23).
- All flexible/trailing cables must be screened and earthed (individual screening required in hazardous areas) (Reg 3.24).
- No flexible/trailing cable may have more than 15 joint repairs per 200 metres, with no joint closer than 5 metres to another joint, and no joint within 3 metres of a cable plug (Reg 3.25).
- No electrical cable trench or duct may be left open or unprotected except when persons are working in it or precautions are in place (Reg 3.27).

3.7 Standards Compliance

Regulation	Requirement
Reg 3.30	Surface residential/commercial buildings wired per SANS 10142-1:2006 (wiring of premises not exceeding 1 kV)
Reg 3.31	Overhead power lines designed per SANS 10280:1995
Reg 3.32	Electrical security fencing per SANS 10222:2002 Part 3
Reg 3.33	Underground helmet light assemblies compliant with SANS 1438:2013
Reg 3.35	Portable lamp operating voltage not exceeding 32 volts
Reg 3.37	All electrical apparatus in hazardous areas must be explosion-protected and certified by an inspection authority (IA) certificate from an accredited test laboratory

CHAPTER 4: EXPLOSIVES (Regulations 4.1–4.17)

Chapter 4 (substituted by GN R953 of 14 September 2018) governs all aspects of explosives use at mines. This chapter is relevant to contractors performing blasting operations.

4.1 Security and Access Control

- Only persons authorised by the employer may gain access to, possess, or remove explosives from the mine.
- Reasonably practicable measures must be taken to prevent unauthorised persons from gaining access to, possessing, or removing explosives.
- No person may bury, hide, submerge or abandon any explosives.

4.2 Receipt, Storage, Issuing and Transportation

- Explosives not being transported or prepared for use must be stored in securely locked stores, silos or containers designed and located for safe receipt, storage and issuing.
- A written procedure must be prepared after consulting the explosive manufacturer/supplier covering: storage of explosives in robust, lockable, clearly marked containers; storage of old explosives; prevention of non-explosive materials in explosive containers; keeping primers separate; and transportation only in approved vehicles or locked containers.
- Issued quantities must not exceed storage capacity of intended storage facilities.
- When mine closure is intended, the Principal Inspector of Mines and Chief Inspector of Explosives must be notified of any explosives left behind, including type, quantities, location, and safeguard measures.
- A written procedure for the safe destruction of explosives must be prepared and implemented.

4.3 Approved Explosives and Usage Procedures

- Only explosives approved in writing by the employer may be used at the mine.
- A written procedure for the use of explosives must be prepared in consultation with the explosive manufacturer/supplier.
- Only permitted explosives may be used in fiery mines.

4.4 Competent Person for Primary and Secondary Blasting

A competent person (blaster) must be appointed in writing to:

- Exercise control over all explosives at their working places.
- Prepare primers and examine shot holes to be deepened.
- Deal with misfires and sockets per the written procedure.
- Mark or authorise the marking of shot holes for drilling.
- Connect blasting rounds or circuits.
- Charge shot holes with explosives.
- Make safe all hot holes.
- Report any discrepancy in explosives delivery.

4.5–4.9 Initiation, Precautions and Post-Blast Procedures

- All initiation apparatus must comply with relevant SANS standards (SANS 1717-1, 1717-2, 1717-3, 551).
- Underground coal mines: specific two-free-face and moisture requirements before initiation.
- At underground mines: explosives must not be brought to the face until drilling is completed and shot holes are ready; all persons must be removed; all entrances guarded; and due warning given in every direction before initiation.

- At surface mines: no person within 15 metres of a shot hole being charged; guards stationed at a safe distance; at least 3 minutes warning before initiation.
- After initiation, no person may approach until the competent person is satisfied all charges have exploded or 30 minutes have elapsed.

4.11 Misfires, Sockets and Old Explosives

- A written procedure for dealing with misfires, sockets and old explosives must be prepared in consultation with the explosive manufacturer/supplier.
- No person may inadvertently access a misfired hole – it must be clearly marked and barricaded until dealt with, and all subsequent shifts must be informed at the start of each shift.
- Explosives may only be extracted from a misfired hole using a means determined after consulting the manufacturer/supplier.

4.16 Hot Holes (Coal Mines)

- Shot holes with an in-hole ambient temperature of 40°C or above, or an increase of 3°C, are classified as hot holes.
- A written procedure for making safe all hot holes must be prepared and implemented.

✓ CONTRACTOR REQUIREMENT: All contractors performing blasting must have: (1) A Code of Practice for Explosives Management; (2) Written procedures for storage, issuing, transportation, use, misfires, and destruction of explosives; (3) Appointed competent persons (blasters) with current certificates; (4) Compliance with all relevant SANS standards for initiation systems.

CHAPTER 5: FIRES AND EXPLOSIONS (Regulations 5.1–5.x)

Chapter 5 addresses fire and explosion prevention and preparedness, primarily relevant to underground mines and any contractor operations with significant combustion, storage of flammables, or use of electrical equipment underground.

- Employers must take reasonably practicable measures to prevent fires and explosions at the mine and to mitigate their effects if they occur.
- Written procedures must address: fire prevention, fire detection, firefighting, and evacuation/escape in the event of fire.
- All firefighting equipment must be maintained in a serviceable condition and inspected regularly.
- All employees must be trained in fire prevention, use of fire extinguishers, emergency procedures, and evacuation routes.
- Materials with combustion potential must not be stored near electrical apparatus, fan installations or other ignition sources.
- Underground coal mines are subject to particularly stringent requirements regarding coal dust, methane, and fire suppression systems.

✓ **CONTRACTOR REQUIREMENT:** Fire Risk Assessment, Fire Prevention Code of Practice, firefighting equipment inspection records, and emergency evacuation procedures are mandatory for all contractors.

CHAPTER 6: HEALTH AND SAFETY REPRESENTATIVES AND COMMITTEES

Chapter 6 provides the detailed procedural requirements for implementing the HSR and health and safety committee provisions of sections 25–40 of the Act.

6.1–6.6 Negotiation and Election Procedures

- The employer must within 14 days of a mine becoming subject to section 25 meet with the representative trade union (or, if none, consult with registered trade unions or employees) to negotiate on the matters listed in section 26 of the Act.
- Before the election, the employer must: designate an election officer (not an HSR or management representative); make a list of employees in each designated working place available; provide suitable facilities; and announce the election date/time/place with at least 2 days notice.
- Every employee in the designated working place has one vote for each HSR position.

6.7–6.8 Election Procedures

- If only one candidate is nominated, the election officer must declare them elected.
- An election is only valid if 50% or more of employees who work on the same shift vote. If less than 50% vote, a subsequent election must be held (without the 50% requirement).
- For full-time HSR elections, the same 50% quorum applies.

6.9 Appointment and Identification

- The manager must within 7 days of election appoint in writing every elected HSR.
- Every HSR must be provided with suitable means of identification as an HSR.
- The HSR's photograph and name must be prominently and conspicuously displayed at an appropriate place at the mine.

6.10–6.12 Committee Members, Terms of Office and Vacancies

- Employee representatives on the health and safety committee must be appointed by a majority of the HSRs at the mine.
- The period of office for any HSR or employee representative on the committee is 3 years (the committee may determine shorter periods).
- Representatives and members may be re-appointed after the expiry of their period of office.
- An HSR must vacate office if they no longer satisfy qualifications, resign, or are required to do so in writing by at least 50% of the health and safety committee employee representatives or 50% of employees on the same shift on grounds of improper performance of functions.
- Vacancies must be filled by a by-election within 7 days.

✓ **CONTRACTOR REQUIREMENT:** Maintain a formal HSR register showing: election dates, appointment letters, identification provided, training completed, term of office, and photograph displayed. This register will be scrutinised during mine audits.

CHAPTER 7: INSPECTORATE OF MINE HEALTH AND SAFETY

7.1 Inspector Qualifications

Inspectors must comply with the appointment requirements of the Personnel Administration Standard for the Occupational Class: Inspector: Mines or Inspector: Mining Machinery, approved by the Public Service Commission, to be appointed on the establishment of the Mine Health and Safety Inspectorate.

7.2 Inspector Authorisation Certificates

- The Chief Inspector must issue each inspector with a certificate (DME 34) including name, ID number and photograph.
- Persons authorised under section 49(4)(b) receive both a letter of authorisation and certificate (DME 35).
- Every inspector must carry their certificate at all times when performing functions at a mine, and must present it to the manager or person in charge if requested.
- A letter from the Principal Inspector may serve as temporary proof of appointment if the certificate is not available.

⚠ **CONTRACTOR OBLIGATION:** When an inspector arrives at your worksite, they must present their certificate (DME 34/35). You are entitled to verify their identity. However, you must provide every facility the inspector reasonably requires and all employees must answer questions to the best of their ability (except self-incriminating answers).

CHAPTER 8: MACHINERY AND EQUIPMENT (Regulations 8.1–8.13)

Chapter 8 is one of the most critical chapters for contractors, as it covers all mechanical and plant safety requirements. Key sections include:

8.1 Air Compressors

- Air compressors with free delivery exceeding 0.15 cubic metres per second (where compression takes place in the presence of lubricating oil) must be fitted with automatic means of limiting operating temperature and pressure to a safe level.

8.2–8.3 Underground Railbound Transport

- Braking systems must be capable of stopping within a safe distance under all operating conditions.
- Braking systems must pass a dynamic type test under full load before first use and after design modifications.
- A static test must be passed before use at the commencement of each shift, after repairs, and after adjustments.
- Systems must alert persons to the presence and direction of travel of locomotives.
- No person may board or alight from a moving locomotive or train.

8.4 Scraper Winch and Mono-Rope Installations

- Written operating procedures must be prepared and implemented covering installation, safety devices, rope inspection, and signalling.
- Scraper/mono-rope winches must only be operated by competent persons authorised by the employer.
- A means to forewarn persons of the intention to commence operating must be provided.
- A means for persons to signal the operator to shut down from any access point must be provided.

8.5 Lifting Equipment – Critical Requirements

- All lifting equipment and lifting tackle must have a minimum factor of safety of FOUR (4).
- Specific minimum factors of safety: natural fibre ropes = 10; steel wire ropes, man-made fibre ropes, textile webbing = 6; high tensile steel chains = 4.
- Lifting equipment and lifting tackle must not exceed their design capacity.
- The safe working load must be conspicuously and clearly marked on all lifting equipment and lifting tackle.
- Only persons authorised in writing by the employer may operate lifting equipment and lifting tackle.
- A written operating procedure covering installation, use (including transport of persons), maintenance, inspection, testing and record-keeping must be prepared and implemented.
- Lifting equipment must be designed and manufactured in accordance with an appropriate standard.

⚠ CRITICAL FOR CONTRACTORS: All lifting equipment and lifting tackle used on mine sites must be inspected, certified, and marked with safe working loads. Inspection records must be maintained and available for inspection. This is one of the most frequently audited items.

8.6 Main and Booster Fans

- Combustible materials, explosives or natural vegetation must not be located near fan installations where they could damage the fan or draw smoke/fumes into working places.

- Every main fan must be provided with: automatic means of alerting a responsible person if it stops; an effective early warning of defective operation; a power supply from two different sources; and means for safe entrance and exit.
- A competent person must examine every main and booster fan for effective operation (internally and externally) at intervals not exceeding 3 months.
- Records of all fan examinations must be kept for at least the most recent 10 years.

8.7 Refrigeration and Air-Conditioning

- All refrigeration and air-conditioning installations must comply with SANS 10147 'Refrigerating systems including plants associated with air-conditioning systems' (2002: 4th ed.).
- A competent person must examine and operationally test the entire refrigeration system at least once every 3 months.

8.10 Trackless Mobile Machines (TMMs) – Extensive Requirements

Regulation 8.10 (inserted by GNR.125 in Government Gazette 38493, commenced 27 May 2015) contains the most comprehensive requirements in Chapter 8. Key obligations include:

Design and Safety Systems

- TMMs must be designed with an Automatic Braking System (ABS), operator fatigue/alertness monitoring (proximity detection), fire suppression systems, and FOPS (Falling Object Protective Structures)/ROPS (Rollover Protective Structures) as applicable.
- Proximity detection/collision avoidance systems must be installed where there is a significant risk of collision between persons and TMMs.
- Braking systems must be capable of stopping the TMM within a safe distance under all operating conditions.

Operator Licensing

- A training programme for TMM operators must be implemented covering: theoretical training; practical training; and on-the-job training.
- Only operators assessed as competent by a competent person may be authorised in writing by the responsible engineer to operate TMMs.
- Every operator must carry a licence (with photograph, TMM types authorised, date of issue and expiry) at all times while operating a TMM.
- If an operator has not operated a TMM for 2 years, they must be re-assessed before receiving a new licence.

Pre-Use Inspections

- Operators must physically inspect brakes, lights and all defined safety features before setting the TMM in motion.
- Pre-use check lists must be completed by all operators at the beginning of each shift. These lists must clearly identify all components to be inspected and criteria for when the TMM may or may not be put in motion.

Other TMM Requirements

- Written procedures for: isolation and lockout; safe operation; maintenance; recovery and towing; selection/training/licensing of operators.
- Diesel refuelling facilities must have adequate ventilation, fire suppression, spillage management, and appropriate lighting.
- Surface diesel refuelling must comply with SANS 10089-1, -2 and -3.
- TMMs must be designed so persons can get on and off safely.
- TMMs must be visible to persons in their vicinity.
- Roadway design, construction and maintenance must be appropriate for the type and category of TMM.
- Measures must prevent inadvertent movement of parked TMMs and reversing over edges of stockpiles or dumps.

✓ **CONTRACTOR REQUIREMENT:** Every contractor operating TMMs must have: (1) A comprehensive TMM Code of Practice; (2) Operator training records and licences; (3) Pre-use inspection checklists; (4) Maintenance records; (5) Proximity detection/collision avoidance systems (where required); (6) Procedures for all TMM operations. TMM management is one of the highest scrutiny areas in mine contractor audits.

8.11 Lifts

- Lifts must be installed, modified, operated and maintained under the supervision of a competent person.
- The Principal Inspector of Mines must be notified on Form DMR 298 before commencement of installation, major modifications or decommissioning.
- Lifts must be constructed, installed and commissioned in accordance with applicable SANS 1545 series standards.
- A competent person must examine the entire lift installation at least once a month, and inspect the installation, well, guides, ropes and all safety devices at least once a week.
- All maintenance, repairs, testing, inspections and examinations must be captured in a recoverable recordable system within 24 hours.
- If any examination reveals a weakness or defect posing a risk, the lift must not be used until the defect is rectified.
- An emergency preparedness procedure for rescuing persons trapped in a lift must be developed.

8.12 Chairlifts

- Chairlifts must be constructed, installed, maintained and tested in accordance with SANS 273:2007 'The design, construction, maintenance and safe operation of chairlifts in mines'.
- The Principal Inspector must be notified on Form DMR 299 before installation, major modifications or recommissioning.
- A competent person must examine and test the entire chairlift installation at least once a month and functionally test and examine it at least once a week.
- Only competent persons may operate chairlifts.

CHAPTER 9: MINE ENVIRONMENTAL ENGINEERING AND OCCUPATIONAL HYGIENE

9.1 Environmental Engineering

- Compressed air must not be used in a manner that endangers health or safety and must never be used to clean a person's body or clothes.
- Where the risk assessment indicates a significant risk of fire, explosion or toxic release that could create an irrespirable or IDLH (Immediately Dangerous to Life or Health) atmosphere, an early warning system must be provided at all working places.
- Underground ventilation control devices made of polymer that have potential for electrostatic discharge must comply with SABS 1287 Parts I and II and must be anti-static in areas with risk of igniting gas, dust or vapour.
- No employee may be exposed to any health hazard at or emanating from any working place where work has ceased (temporarily or permanently).

9.2 Occupational Hygiene – Exposure Limits

- Occupational exposure to health hazards must be maintained below the Occupational Exposure Limits (OELs) set out in Schedule 22.9(2)(a) and (b) of the Regulations.
- A system of occupational hygiene measurements must be established and maintained where required by regulation or where the risk assessment indicates it is necessary.
- Occupational hygiene measurement records must be kept and linked to individual medical surveillance records where practicable.
- Key OELs of importance to contractors include: crystalline silica dust (silica), coal dust, asbestos, diesel particulate matter, noise, and temperature stress – all governed by the applicable OEL schedules.

⚠ KEY OEL REQUIREMENTS FOR CONTRACTORS:

- Dust: Baseline dust measurements must be conducted. Silica-exposed workers require medical surveillance.
- Noise: Noise measurements required where noise levels may exceed 85 dB(A). Hearing conservation programme required.
- Thermal Stress (Heat): Wet Bulb Globe Temperature (WBGT) monitoring required where thermal stress is a risk.
- Diesel Particulate Matter: Monitoring required in enclosed or underground diesel-powered equipment areas.
- All measurements must be conducted by a qualified occupational hygienist.

CHAPTER 10: MISCELLANEOUS AND GENERAL PROVISIONS

Chapter 10 contains a number of important general provisions and the critical accident/incident reporting requirements.

10.1 Accident and Incident Reporting

Employers must report the following to the Principal Inspector of Mines:

Report Type	Requirement
Fatality	Report immediately to the Principal Inspector of Mines. The site must not be disturbed without consent of the Principal Inspector (except to prevent further harm, remove injured/dead, or rescue persons).
Serious Injury	Report as soon as possible. 'Serious injury' means any injury reportable under the Act.
Dangerous Occurrence	Report as soon as reasonably practicable. A dangerous occurrence is any unplanned event with potential for serious harm.
Occupational Disease	Report within 30 days of diagnosis on prescribed form DMR 231 (see Chapter 11).
Accident Investigation Report	Submit investigation report (identifying causes and recommendations) to the Principal Inspector within 30 days. Commence investigation within 10 days.

10.2 General Administrative Requirements

- All records and registers required under the Act and Regulations must be maintained in a legible and durable format and must be accessible for inspection at the mine at all times.
- Records that are required to be kept for specified periods must not be destroyed before those periods have elapsed.
- Electronic records must comply with the requirements of the Electronic Communications and Transactions Act.
- Plain language must be used in all documents required to be published, displayed or distributed under the Act.

✓ **CONTRACTOR REQUIREMENT:** Maintain a complete incident/accident register. All incidents, near-misses, and dangerous occurrences must be recorded and investigated. Copies of all investigation reports must be filed and submitted to the Principal Inspector within the required timeframes.

CHAPTER 11: OCCUPATIONAL HEALTH (Regulations 11.1–11.9)

Chapter 11 provides detailed requirements for the medical surveillance programmes required by section 13 of the Act.

11.1–11.5 Initial Requirements

- Medical surveillance must be established and maintained for employees exposed to specified health hazards including noise, whole body vibration, hand-arm vibration, heat stress, chemical substances, and other hazards identified in the risk assessment.
- The OMP must be engaged by the employer on a part-time or full-time basis and must be appropriately qualified.
- Medical records must be kept for each employee for 40 years from the last date of medical surveillance.

11.6 Coal Dust Exposure – Medical Surveillance

- Medical surveillance is required where coal dust exposure exceeds 10% of the OEL. If crystalline silica content is 5% or more, the more stringent silica surveillance requirements apply.
- The surveillance system must include: an initial examination (before or within 30 days of commencement); periodic examinations (lung function test 1 year after initial, then cardio-respiratory examination with chest X-ray and lung function every 3 years); and an exit examination when the employee is permanently transferred to a non-coal-dust area.

11.7 Crystalline Silica Dust – Medical Surveillance

- Medical surveillance is required where exposure to crystalline silica dust exceeds 10% of the OEL.
- The surveillance system must include: initial examination (before or within 30 days of commencement) including respiratory questionnaire, full-size chest X-ray and lung function test; periodic examinations (lung function 1 year after initial, then full cardio-respiratory with chest X-ray and lung function every 3 years); and exit examination.

⚠ CRITICAL FOR MOST CONTRACTORS: Silica dust exposure is one of the most serious and pervasive health hazards at South African mines. Any contractor involved in rock drilling, blasting, cutting, grinding or crushing of rock with silica content must implement a silica dust monitoring and medical surveillance programme. Failure to do so constitutes a serious regulatory breach.

11.8 Reporting of Occupational Diseases

The employer must report to the Principal Inspector of Mines the following occupational diseases within 30 days of diagnosis:

- Occupational lung diseases: silicosis and coal workers' pneumoconiosis (CWP) – based on radiological diagnosis with exposure history and chest X-ray consistent with diagnosis.
- Cardio-respiratory tuberculosis: where contracted while performing risk work at a mine, or within 12 months after leaving employment.
- Other occupational lung diseases: those compensable under ODMWA or COIDA.
- Noise Induced Hearing Loss (NIHL): where Percentage Loss of Hearing (PLH) shift is 5% or more from baseline audiometry.
- Other illnesses as determined by the Chief Inspector of Mines.

All reportable occupational diseases must be reported on prescribed Form DMR 231 (Health Incident Report).

11.9 Record of Hazardous Work

- An up-to-date copy of each employee's Record of Hazardous Work (Form DMR 276) must be delivered to the Medical Inspector and attached to the exit certificate when the employee leaves the mine.

CHAPTER 13: OUTLETS (Regulation 13.1)

Chapter 13 governs access to and egress from underground workings, critical for all contractors working underground.

- Employers must prevent employees from being trapped in any underground excavation by providing – wherever practicable – two exits from every underground working place, each connected to separate means of egress to surface.
- Where two exits are not practicable, other reasonably practicable measures determined by the mine's risk assessment must be implemented to prevent persons being trapped.
- Except in an emergency, no person may enter or leave underground workings except by means of ingress/egress especially provided or set apart for that purpose, unless authorised by the employer.

✓ **CONTRACTOR REQUIREMENT:** Before commencing underground work, contractors must verify (and document): (1) That two exit routes exist from their working area; (2) The locations of all emergency exits; (3) Emergency evacuation procedures for their specific working area.

CHAPTER 14: PROTECTION OF THE SURFACE AND THE WORKINGS

Chapter 14 governs rock mechanics, geotechnical safety and surface protection, relevant to all underground contractors and surface contractors near underground workings.

14.1–14.2 Safe Entering of Working Places

At every underground mine with risk of rock bursts, rock falls or roof falls (and at other mines with significant such risk):

- No person (other than those examining and making safe) may enter the area between the face and nearest permanent support, or any access/travelling way, until declared safe by a competent person.
- Examinations must be carried out as often as required by the risk assessment to maintain a safe working environment.
- Records of safety declarations must be kept for at least 3 months.
- Areas not examined or declared safe must be physically barricaded to prevent inadvertent entry.
- If a working place becomes unsafe during a shift, all persons (other than those examining/making safe) must be removed and not allowed to return until declared safe.
- A quality assurance system must be in place to ensure support units meet the required performance characteristics for the loading conditions.
- Only competent persons may install, maintain and remove support units.
- Input from a competent geotechnical person must be timeously considered and integrated into mine design, planning and operations.

14.4–14.6 Protection Against Water, Subsidence and Structural Failure

- All working places must be adequately protected against ingress of water or other fluid material likely to cause drowning, asphyxiation, inundation, physical impact, chemical exposure or being trapped.
- No person may be endangered by significant risks such as falling, drowning, slipping, asphyxiation or being struck by rock or material associated with subsidences or cavities caused by mining operations.
- No person may be endangered by collapse of surface buildings/structures resulting from structural failure due to removal of support for the surface of a mine.

Surveying Safety Requirements (Regulation 17)

- No mining operations may be carried out within 100 metres of reserve land, buildings, roads, railways, dams, waste dumps or any other structure – unless a lesser distance has been determined safe by risk assessment.
- Workings may not come within 50 metres of other excavations, workings, or restricted areas with dangerous accumulations of fluid, noxious or flammable gas – except subject to restrictions and stopping positions determined by risk assessment.
- Boundary pillars must be left standing: 15 metres wide for underground coal mines; 9 metres wide for all other mines.
- Boundary pillars may not be worked or cut through without written permission from adjacent employers and the Principal Inspector.

CHAPTER 16: RESCUE, FIRST AID AND EMERGENCY PREPAREDNESS AND RESPONSE

16.1 Report on Escape and Rescue Adequacy

- A competent person must report to the employer at appropriate intervals (determined by risk assessment) on the adequacy of escape and rescue procedures relating to explosions, fires and flooding.

16.2–16.4 Self-Contained Self-Rescuers (SCSRs)

- At underground coal mines: no person may go underground without a body-worn SCSR complying with SABS 1737.
- At other underground mines: if the risk assessment shows significant risk of irrespirable atmospheres, no person may enter such areas without an SCSR complying with SABS 1737.
- SCSRs supplied to full-time employees must be allocated for that employee's sole use.
- No defective SCSR may be issued for use.
- A representative sample (not less than 1%) of SCSRs must be annually tested by an accredited organisation for structural integrity and functional performance.
- Records of SCSRs at the mine (total number, purchases, withdrawals, daily use, defects, repairs, tests) must be maintained for the preceding 24 months.

16.5 Emergency Preparedness and Response – Key Requirements

Every underground mine employer must:

- Provide and maintain mine rescue teams consisting of at least 5 competent persons, in the following minimum proportions: 1 team for 100–1,100 persons underground; 2 teams for 1,101–3,600 persons; 3 teams for 3,601–8,100 persons; 3 teams plus 1 additional team for every additional 6,300 persons.
- Have readily available sufficient breathing apparatus (complying with SANS 50145:1997/EN 145:1997) for use by rescue team members.
- Enter into a contract with a mines rescue service provider to co-ordinate and facilitate provision of rescue teams and other services on a co-operative basis.
- Immediately notify the mines rescue service provider of any emergency requiring rescue team deployment.

A comprehensive Emergency Preparedness and Response Plan must be developed and implemented for the mine, covering:

- All credible emergency scenarios identified in the risk assessment (fire, explosion, flooding, collapse, dangerous substance release, etc.).
- Evacuation routes, assembly points, and mustering procedures.
- Roles and responsibilities for all emergency response personnel.
- Communication systems and procedures during emergencies.
- Liaison with external emergency services (South African Police Service, emergency medical services, mines rescue service).
- Training and regular practise drills for all employees.
- Review and update procedures following any emergency or drill.

✓ CONTRACTOR EMERGENCY REQUIREMENTS:

- Written Emergency Preparedness and Response Plan for contractor activities
- First Aid facilities and trained First Aiders (1 per 50 employees minimum)
- SCSRs for underground workers (where required by risk assessment)
- Fire extinguishers and fire suppression equipment on all applicable equipment

- Emergency contact numbers displayed at all work areas
- All employees trained in emergency procedures and evacuation routes
- Participation in mine-wide emergency drills

CHAPTER 17: SURVEYING, MAPPING AND MINE PLANS

Chapter 17 (substituted by GN R447 of 27 May 2011) governs the surveying, mapping and mine plan requirements. While the detailed technical surveying obligations fall primarily on the mine owner/operator, contractors must be aware of the following:

- A competent person (mine surveyor) must be appointed by the employer to be in charge of surveying, mapping and mine plans.
- All mine survey systems must conform to the National Control Survey System.
- No mining operations may take place within 100 metres of reserve land, buildings, roads, railways, dams, waste dumps or other structures (or within 50 metres of other excavations/dangerous gas accumulations) unless risk-assessed safe distances have been established and written comment/approval obtained from the Chief Inspector.
- Boundary pillars of prescribed width (15m for coal, 9m for other mines) must be maintained.
- Any ground movement monitoring system must be in place where ground movement from mining poses significant risk.
- Contractors must liaise with the mine's appointed surveyor before commencing operations to ensure their activities do not inadvertently violate surveying safety zones.

CHAPTER 18: TRIPARTITE INSTITUTIONS

Chapter 18 deals with the administrative arrangements for the Mine Health and Safety Council (MHSC) and the Mining Qualifications Authority (MQA), primarily relevant for institutional governance rather than contractor operations. Key contractor obligations:

- All contractors and employers at mines must ensure that their employees are registered with and levies paid to the MQA as a SETA (Sector Education and Training Authority).
- Workplace skills plans must be submitted to the MQA annually.
- Annual training reports must be submitted to the MQA.
- MQA levies are used to fund skills development in the mining industry, and contractors may apply for mandatory and discretionary grant funding for qualifying training programmes.

MASTER REGULATIONS COMPLIANCE CHECKLIST FOR CONTRACTORS

The following checklist summarises key regulatory obligations arising from the MHSA Regulations:

No.	Compliance Requirement	Regulation Ref
1	All statutory appointments documented in writing and on site	Reg 1
2	Electrical apparatus under control of a competent person	Reg 3.1
3	Written MV/HV isolation and switching procedures in place	Reg 3.21
4	All lifting equipment marked with safe working load	Reg 8.5
5	Lifting equipment factor of safety of at least 4 (6 for wire ropes)	Reg 8.5
6	Lifting equipment inspection records maintained	Reg 8.5
7	Written explosives procedures (storage, use, misfires, destruction)	Reg 4.2, 4.3
8	Competent blasters appointed in writing	Reg 4.4
9	Pre-use TMM inspection checklists completed every shift	Reg 8.10
10	TMM operator licences current and carried at all times	Reg 8.10
11	TMM proximity detection/collision avoidance systems installed	Reg 8.10
12	Main/booster fan examinations done at ≤3-month intervals	Reg 8.6
13	Fan examination records kept for 10 years	Reg 8.6
14	Occupational exposure to health hazards maintained below OELs	Reg 9.2
15	Occupational hygiene measurements programme in place	Reg 9.2
16	Early warning systems at working places (where required)	Reg 9.1
17	Medical surveillance for coal dust / silica dust exposure	Reg 11.6, 11.7
18	Occupational diseases reported within 30 days (Form DMR 231)	Reg 11.8
19	Record of Hazardous Work (DMR 276) maintained	Reg 11.9
20	All accidents/incidents reported and investigated	Reg 10 / S11
21	Two exits provided from all underground working areas	Reg 13.1
22	Rock/roof examination before entry into underground working places	Reg 14.1
23	Safety declarations recorded and kept for 3 months	Reg 14.1
24	Self-contained self-rescuers issued to underground workers (where required)	Reg 16.2
25	SCSRs tested annually by accredited organisation	Reg 16.4
26	Mine rescue team contract in place with accredited provider	Reg 16.5
27	Written Emergency Preparedness and Response Plan	Reg 16.5
28	All employees trained in emergency procedures	Reg 16.5
29	No mining within 100m of protected structures (unless risk-assessed)	Reg 17.7
30	MQA registration, levy payment, and workplace skills plan submitted	Reg 18
31	HSRs photographed and name displayed prominently	Reg 6.9

32	HSR appointment register maintained	Reg 6.9
33	Health and safety committee meeting minutes maintained	Act S34

UNDERSTANDING 'REASONABLY PRACTICABLE'

The standard 'reasonably practicable' appears throughout the Regulations and is the key legal test applied to employer obligations. Understanding this standard is critical for contractors:

DEFINITION (Section 102 of the Act):

'Reasonably practicable' means practicable having regard to:

- (a) the severity and scope of the hazard or risk concerned;
- (b) the state of knowledge reasonably available concerning that hazard or risk and of any means of removing or mitigating that hazard or risk;
- (c) the availability and suitability of means to remove or mitigate that hazard or risk; and
- (d) the costs and the benefits of removing or mitigating that hazard or risk.

KEY LEGAL PRINCIPLES:

- The EMPLOYER bears the burden of proving that it was not reasonably practicable to do more than was done. The onus is on the employer, not the inspector or court, to prove the standard was met.
- 'Cost' is only relevant AFTER the risk has been assessed – high cost alone does not justify leaving a high-severity risk uncontrolled.
- 'State of knowledge' means what was reasonably available at the time – contractors cannot plead ignorance of well-known industry hazards and control measures.
- 'Availability of means' relates to whether suitable control measures exist in the industry, not just whether the employer specifically has them – if others can acquire the means, so can the contractor.
- The standard does NOT permit contractors to balance cost against risk for catastrophic/irreversible harms (death, permanent disability) – the courts have consistently held that these must be eliminated or controlled regardless of cost.

PRACTICAL GUIDANCE FOR CONTRACTORS:

- Document all risk assessments thoroughly, showing why each control measure was chosen (or why a more rigorous measure was not reasonably practicable in the circumstances).
- Maintain records showing that the chosen controls were implemented, monitored and reviewed.
- Keep abreast of industry best practices and new control technologies – a measure that was not reasonably practicable five years ago may now be both available and affordable.
- Where full compliance is genuinely not achievable, document the steps taken, interim controls in place, and the timeline for achieving full compliance.