



**SAFETY, HEALTH AND
ENVIRONMENTAL (SHE)
SPECIFICATION FORM**

Group Capital Division

**Title: SAFETY, HEALTH AND
ENVIRONMENTAL (SHE)
SPECIFICATION FOR
MAJUBA RAIL PROJECT**

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1. Introduction

The aim of the Safety, Health and Environmental (SHE) specification is to provide Contractor/s and suppliers/national contracts with

- The overarching framework within which the Contractor is required to demonstrate compliance with certain requirements for SHE.
- Establishes the manner in which the Contractor is to manage SHE risks in the execution of the contract, and
- Establishes the manner in which the Employer's Health and Safety Agent will interact with the contractor.

This also provides the contractor with awareness of the risks relating to the scope of work, the project site as well as the project specific SHE and the Majuba Rail Project requirements that they need to adhere to in order to demonstrate their commitment towards the zero harm of the environment and persons working on site and/or visiting the site and during the manufacturing/transporting of equipment's related to Majuba Rail Project.

Majuba Rail Project strives to exceed the minimal SHE standards prevailing throughout construction projects and requires full commitment from all parties to be pro-active and actively achieve best SHE business practice.

The SHE Specification shall be included with the tender enquiry documentation to ensure that the tenderer is timeously made aware of:

- Majuba Rail Project's requirements, including
- Information that might affect the health and safety of any person at work whether directly or indirectly;
- Activities that may have an impact on the direct and surrounding environment.

The Principal Contractor and their contractors are expected to develop a SHE plan which meets these requirements as well as the relevant applicable legislation.

This specification may not thoroughly address all hazards and aspects associated with any specialised activity or operation. In such situations, contractors shall be responsible for developing their own health and safety plans/procedures/manuals/work instructions to adequately address their specialised activities and scope of operation.

2. Supporting Clauses

2.1 Scope

This specification sets out the minimum legislative and organisational requirements for construction work that is specific to the scope of work, site and type of project.

2.2 Purpose

Indicate to all potential types of contractors the SHE requirements on the project, upon which their planning for the management of SHE will be based on and thus produce their SHE plan.

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2.3 Applicability

This specification is applicable to all Principal Contractors, Contractors, Service Providers, Suppliers and all the activities and processes carried out for and on behalf of Group Capital Division where construction work is performed.

For best practice reasons, where the work scope does not fall within the definition of Construction Regulations 2014 this specification shall also apply as a minimum.

2.4 Effective date

This specification shall be implemented from date of approval.

3. Normative/Informative References

Parties using this specification shall apply the most recent edition of the documents listed below.

Note: Where the date for revision of a document on the Majuba Rail Project Document Centre website has passed, the document is still current, irrespective of its revision date having passed.

3.1 Normative

- [1] 32-727: Safety, Health, Environment and Quality Policy
- [2] 240-62196227: Life-saving Rules Standard
- [3] 32-245: Waste Management Procedure
- [4] 240-62946386 Vehicle & Driver Safety Management Procedure
- [5] 32-37 Substance Abuse
- [6] 32-124 Majuba Rail Project Fire Risk Management
- [7] 32-136 Contractor Health and Safety Requirements
- [8] 32-95 Majuba Rail Project Environmental, Occupational Health and Safety Incident Management procedure
- [9] 32-93 Majuba Rail Project Vehicle and Driver Safety Management
- [10] 240-43848327 Employees' right of refusal to work in an unsafe situation
- [11] 32-418: Working from Heights Procedure
- [12] 240-100979499: Personal Protective Equipment for work at Heights Specification
- [13] 32-520: Procedure Manual for Performing Occupational Health and Safety Management and Environmental Management: Conducting EH&S Risk Assessment
- [14] 32-123: Emergency Planning
- [15] 32-407 Behaviour Safety Observation Procedure
- [16] Occupational Health and Safety Act and Regulations No 85 of 1993
- [17] Construction Regulations of 2014 or latest edition as per government gazette.

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- [18] Mine Health and Safety Act, Act 29 of 1996
- [19] 32-726: SHE Requirements for the Majuba Rail Project Commercial Process
- [20] 39-98: Safe use of Lifting Machines
- [21] 32-524 Manual, Developing a SHE Specification
- [22] 32-1126 Majuba Rail Project Smoking Policy
- [23] National Environmental Management Act No 107 of 1998
- [24] National Environmental Management Waste Act 59 of 2008
- [25] 32-1134 Access Control at Majuba Rail Project Premises
- [26] 240-86652484 Majuba Rail Project Personal Protective Equipment Specification (PPE)
- [27] All relevant South African legislation-provincial, municipal by-laws
- [28] 240-77697535 - Hazard identification, risk assessment and determining controls
- [29] 240-77697589 - Legal and other requirements
- [30] 240-77697597 - Objectives and programmes
- [31] 240-77697605 - Resources, Roles and Responsibilities
- [32] 240-77697477 - Competency, Training and Awareness
- [33] 240-77697465 - Communication, Consultation and Participation
- [34] 240-77697483 - Control of documents
- [35] 240-77697615 - Operational control
- [36] 240-77697495 - Emergency preparedness and response
- [37] 240-77697519 - H&S Monitoring and Measurement
- [38] 240-77697501 - Internal audit standard
- [39] 240-77697477 - Health and safety training and awareness
- [40] 240-77697573 - Legal and Other Requirements Compliance Evaluation
- [41] 240-77697563 - Incident Investigation, Non-conformity, Corrective and Preventive Action
- [42] 240-77697485 - Control of Records
- [43] QUA-MRP-003 - Document management requirements
- [44] 240-77697549 - Health and Safety Management review

3.2 Informative

Note: The following is a list of documents that can be used as a guide in order to meet legal and Majuba Rail Project requirements

- [1] OHSAS 18001:2007, Occupational Health and Safety Management systems-Requirements
- [2] ISO 9001: 2015 Quality Management Systems- Requirements
- [3] ISO 14001:2004, Environmental Management Systems Specification with guidance for use

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[4] Relevant South African National Standards for the task/Project.

4. Definitions

Agent: means a competent person who acts as a representative for a client.

Baseline risk assessment: baseline operational risks refer to the health and safety risks associated with all standard processes and routine activities in the business.

Client: any person for whom construction work is being performed.

Competent Person: means: a person who has in respect of the work or task to be performed the required knowledge, training and experience and, where applicable, qualifications, specific to that work or task: Provided that where appropriate qualifications and training are registered in terms of the provisions of the National Qualification Framework Act, 2000 (Act No.67 of 2000), those qualifications and that training must be regarded as the required qualifications and training; and is familiar with the Act and with the applicable regulations made under the Act;

Construction Manager: means a competent person responsible for the management of the physical construction processes and the co-ordination, administration and management of resources on a construction site.

Construction site: means a work place where construction work is being performed

Construction Work: means any work in connection with:

- The construction, erection, alteration, renovation, repair, demolition or dismantling of, or addition to, Building or any similar structure;
- The construction, erection, maintenance, demolition or dismantling of any bridge, dam, canal, road, railway, runaway, sewer or water reticulation system, or the moving of earth, clearing of land, the making of excavation, piling or any similar civil engineering structure or type of work.

Contractor: means an employer as defined in section 1 of the Act who performs construction work and includes principal contractors. In relation to this document, where the word "contractor" is used, it will mean all or some of the following: principal contractors, appointed contractors, suppliers, vendors, service providers and consultants

Critical Lifts: There are five categories for which a lift can be defined as a Critical Lift; (1) any lift weighing in excess of 20 tons, (2) any lift involving a crane suspended work platform (man cage), (3) any lift over critical operating and/or process equipment and (4) any lift that exceeds 85 % of the crane's load chart (5) any lift that utilises more than one lifting device (Tandem Lift).(6) Load transfers.(7) night lifting.

Designer: means any of the following persons:

A competent person who:

- Person who prepares a design
- Person who checks and approves a design
- Person who arranges for any person at work under his/her control to prepare a design, including an employee of that person where he or she is the employer, or designs temporary work, including its components,
- An architect or engineer contributing to, or having overall responsibility for, the design

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- A Building services engineer designing details for fixed plant
- A Surveyor specifying articles or drawing up specifications
- A Contractor carrying out design work as part of a design and building project, or an interior designer, shop-fitter or landscape architect.

Majuba Rail Project Requirements: Majuba Rail Project requirements which evolve from directives, policies, standards, procedures, specifications, work instructions, guidelines or manuals

Fall Protection Plan: means a documented plan which includes and provides for:

All risks relating to working from a fall risk position, considering the nature of work undertaken, the procedures and methods to be applied in order to eliminate the risk of falling, and a rescue plan and procedures.

Hazard: means a source of, or exposure to danger

Hazard identification: means the identification and documenting of existing or expected hazards to the health and safety of persons, which are normally associated with the type of construction work being executed or to be executed

Medical surveillance: means a planned programme or periodic examination (which may include clinical examinations, biological monitoring, or medical tests) of employees by an occupational health practitioner or, in prescribed cases, by an occupational medicine practitioner

Method Statement: is a written document detailing work procedures and sequences of operations.

On Site/Site: Any workplace where the contractor or his employees performs contract related work.

Planned Task Observation: is an independent observation made during the planned period in which the task is being executed.

Pre-Task Risk Assessment (DSTI): a meeting which is held prior to the commencement of the day's work with all relevant personnel associated with the work task in attendance.

Risk: the probability that injury or damage will occur.

Risk Assessment: means a programme to determine any risk associated with any hazard at a construction site in order to identify the steps needed to be taken to remove, reduce, or control such hazard.

Safety Health and Environmental file: means a file or other record in permanent form, containing the information on the SHE management system during construction including all information relating to construction phase after the handover to Client.

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Safety, Health and Environmental Plan: means a written plan that addresses hazards identified during the risk assessment process as well as the identified impacts in the SHE specification. This would typically include safe work procedures to mitigate, reduce or control the hazards identified and is specific to each construction project undertaken. This is usually compiled by the Principal Contractor or contractor and approved by the Client/Agent for which contracting work will be performed.

Safety, Health and Environmental (SHE) Specification: including the base line risk assessment: means a documented specification of significant residual SHE requirements for a construction site, which a competent and resourced Principal Contractor or sub-contractor would not have been aware of. This is to ensure the health and safety of employees and the direct and indirect communities, as well as duty of care for the environment. The Client/Agent compiles the SHE specification which shall be specific to each construction project.

Safe Work Procedures: Safe work procedures are a series of specific steps that guide a worker through a task from start to finish in a chronological order. Safe work procedures are designed to reduce the risk by minimizing potential exposure.

5. Abbreviations

Abbreviation	Explanation
COID Act	Compensation for Occupational Injuries and Diseases Act
CR	Construction Regulations 2014
DMR	Driven Machinery Regulations
DOL	Department of Labour
DSTI	Daily Safety Task Instruction
ECO	Environmental Control Officer
EMP	Environmental Management Plan
GCD	Group Capital Division
GSR	General Safety Regulations
HCS	Hazardous Chemical Substances
HIRA	Hazard identification and risk assessment
HV	High Voltage
JSA	Job Safety Analysis
LTIR	Lost Time Incident Rate
LV	Low Voltage
MHS Act	Mine Health and Safety Act (Act No. 29 of 1996)
NEC	New Engineering Contract
NEMA	National Environmental Management Act
NWA	National Water Act (Act No. 36 of 1996), as amended
NQF	National Qualifications Framework
OHNP	Occupational Health Nursing Practitioner
OHS Act	Occupational Health and Safety Act No. 83 of 1993
OHS	Occupational Health and Safety

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Abbreviation	Explanation
ORHVS	Operating Regulations for High Voltage Systems
PPE	Personal Protective Equipment
PTO	Planned Task Observations
RoD	Record of Decision
SACPCMP	South African Council for the Project & Construction Management Professions
SAQA	South African Qualifications Authority.
SHE	Safety, health, and environment
TETA	Transport Education Training Authority

6. Roles and Responsibilities

6.1 Commitment

Visible commitment is essential in providing a safe work environment. Managers, supervisors and employees at all levels must demonstrate their commitment by being proactively involved in the day to day operations, in particular SHE aspects of any project / contract. Legislation requires that each employee must take reasonable care of themselves and their fellow workers, being it management down to the lowest level employee.

6.2 Designers

Designers should ensure that when they design for construction work, they consider foreseeable health and safety risks during construction and eventual maintenance and cleaning of the structure in the balance with other design considerations, such as aesthetics and cost.

They should apply the hierarchy of risk control. This means designers need to identify the hazards inherent in carrying out the construction work and where possible alter the design to avoid them. If the hazards cannot be removed by design changes, the designer should minimize the risks and provide information about the risks that remain.

They should describe any matters that require particular attention by a contractor. Enough information should be provided to alert contractors and others to matters which they could not be reasonably expected to know about.

In cases where Majuba Rail Project uses overseas designers, the appointed designers must indicate and submit to Majuba Rail Project the legislative requirements/documentation with which they comply in order to verify whether they meet the South African SHE legislative requirements.

An overseas designer can appoint a local designer to conduct the inspections required by the construction regulations.

6.3 Principal Contractor's accountabilities for their Contractors

- In the event that the Principal Contractor needs to introduce a new contractor, the Principal Contractor must first inform the Client. Such contractors must, in every respect, meet the Client's SHE requirements.

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- Should the Principal Contractor appoint a contractor, the principal contractor would then have the same role and responsibility in relation to the contractors, in a similar way as the Client has in relation to the principal contractor.
- The Principal Contractor is directly accountable for the actions of his contractors. The Principal Contractor will also be responsible for initiating any remedial action (recovery plan) that may be necessary to ensure that the contractor complies with all requirements.
- The Principal Contractor shall ensure that the contractors appointed have the necessary competencies and resources to perform the work safely.
- The Principal Contractor shall provide any contractor who is making a bid or appointed to perform construction work, with the relevant sections of the documented SHE specification, who would in turn provide the client/agent with a SHE plan for review.
- The Principal Contractor shall carry out audits on the contractor at least monthly to ensure that their SHE plan is being implemented and maintained.
- The Client/Agent and/or the Principal Contractor shall stop any contractor from executing construction work which poses a threat to the safety and health of persons or the environment or if it does not comply with the approved SHE plan.
- The Principal Contractor shall have a disciplinary process and an organisational structured procedure to deal with employees who have transgressed organisational and legal requirements.
- The Principal contractor's Construction Manager/Supervisor shall provide a list of names and contact telephone numbers of all his employees as well as the contractor employees on site. This list shall be updated as and when new contractors commence on site.
- The Principal Contractor's Construction Manager/Supervisor shall keep a record of all employees including the contractor employees, including date of induction, relevant skills and licenses, and be able to produce this list at the request of the relevant officials. These records shall be filed in the SHE File.
- The Principal Contractor shall ensure that his managers and supervisors give clear and unambiguous instructions for the work in hand to the personnel for whom they are responsible for. The instructions shall include, but not necessarily be limited to:
 - description of the objective/scope of work
 - sequence of work/method statements
 - hazard identification and risk assessment (prior to commencement of work)
 - Precautionary/preventative measures that are to be taken.
 - Identification of sensitive features that may be impacted upon by the project.
- Employees are responsible for their own health and safety and that of their co-workers in their respective areas of work on the project. They must be made aware of their responsibilities during induction and awareness sessions some of which are:
 - Familiarising themselves with their workplaces and health and safety procedures.
 - Working in a manner that does not endanger them or cause harm to others.
 - Keeping their work area tidy.
 - Reporting all incidents/accidents and near misses

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- Protecting fellow workers from injury.
- Reporting unsafe acts and unsafe conditions.
- Reporting any situation that may become dangerous.
- Carrying out lawful orders and obeying health and safety rules.
- Declaring to the employer if taking medication which may have intoxicating effects.
- Every employee must undergo site induction provided by the Client before commencement of the contracted work. Only once this induction has been received, will each employee receive a site access permit.
- It must be highlighted to all employees, that anyone who becomes aware of any person disregarding a health & safety notice, instruction or regulation shall immediately report this to the person concerned. If the person persists, stop the person from working and report the matter to the Majuba Rail Project Site/Project Manager and the Principal Contractor Supervisor immediately.

7. Management and Supervision of Construction Work

The Principal Contractor shall ensure that the performance of all specified work is managed and supervised in accordance with the requirement of OHS Act CR 8 throughout the contract period.

The number of appointed persons shall be determined by the size and the risk of the project.

8. Construction Health and Safety Manager/s and Officer/s

The Principal Contractor and contractor shall appoint a full-time Construction Health and Safety Manager and officers considering the nature and the scope of work being performed in accordance with the requirement of CR 8 (6). The Construction Health and Safety Officers shall be registered with the SACPCMP.

In cases where a Construction Health and Safety Manager is appointed, it would be desirable if he/she is also registered with SACPCMP even though it is not a legal requirement.

9. Process for Monitoring

This document is subject to document control procedures and will be updated when it is due for revision or when conditions dictate.

9.1 Related/Supporting Documents

Majuba Rail Project OHS Act section 37 (2) agreement (to be completed by the Project Manager)

Annexure A – SHEQ Policy

Annexure B - List of appointments and Competencies

Annexure C - Contractor Monthly Statistical Report

Annexure D – Minimum elements of the SHE Plan

Annexure E - Safe Work Procedure and Job Observation Template

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Annexure F - HIRA Template

Annexure G – Site Organogram

Annexure H – Majuba Rail Project OHSAS 18001 standards and procedures

10. Document Content

10.1 NOTE TO PRINCIPAL CONTRACTOR AND ITS CONTRACTORS

The SHE specifications are Majuba Rail Project's minimum requirements. The contractor is expected to develop a SHE plan which meets these requirements as well as all the relevant applicable legislation. Majuba Rail Project in no way assumes the Contractors legal responsibilities. The Contractor is and remains accountable for the quality and the execution of his health and safety program for his employees and contractor employees. This SHE specification reflects minimum requirements and should not be construed as all encompassing.

11. SHE Specification

11.1 Project and Scope of Work Details

Location: Majuba Rail, Bergvliet mine Amersfoort district

Project description/detailed scope of work:

In general, the construction of the railway line from Ermelo to Majuba Power Station consists of:

Civil Engineering construction

- Concrete structures, earthworks and ancillaries.

Per way Construction

- Construction of approximately 67 km of ballasted track on concrete sleepers complete (1067 mm gauge, 26t axle loading).
- Tie-in to the Ermelo –Richards Bay Main Coal line.
- Rails, turnouts and ancillaries

Overhead Traction Equipment

- Supply and installation of the 25 kV AC Overhead Traction Equipment.
- Tie-in to the Ermelo –Richards Bay Main Coal line

Substation Electrical Equipment

- Design, supply, installation and commissioning of four 25 kV AC traction substations

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88kV Bulk power supply

- Supply, installation, testing and commissioning of the 88 kV bulk power line to seven substations.

Train Traffic Control System (TTCS)

- Design, supply, installation, testing and commissioning of the TTCS which is controlled from TFR's Centralised Traffic Control (CTC) centre at Ermelo.
- Design, supply, installation, testing and commissioning of five new inter-locking in relay-rooms and associated work

Security services

- Access control at the access points
- Random Alcohol testing
- Monitoring Eskom assets during and after working hours

Yard optimisation

- Design, modifications and additions of the railway yard and coal offloading facility at Majuba Power Station.

Switch gear

- Design, manufacture, delivery, installation and commissioning of the Coal Stockyard 6.6kV MV Switchgear boards 1,2,3,4 and Sub-East boards 1&2 at Majuba Power Station.

Program details:

- Submission of final SHE Plan must be before site establishment/access to site.
- Anticipated date for the commencement of work on site: 2013
- Project completion date or project duration: 2021
- Site Details:

12. Client and Principal Contractor: Details, Accountabilities and Responsibilities:

12.1 The Majuba Rail Project Organogram:

See Annexure G for the site organogram

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12.2 Principal Contractor Organogram

The Principal Contractor shall provide an organisational organogram related to this project, listing all the levels of responsibility from the Chief Executive down to the supervisors responsible for the project. The diagram must list the names of appointees and their roles and responsibilities. The Principal Contractor is responsible for keeping copies of all of the organograms' as well as submitting those of their appointed contractors, with the SHE plan. All organograms' shall be updated timeously when appointments are changed and filed in the project SHE file.

12.3 Principal Contractors

The Principal Contractor carries primary accountability and responsibility for the health and safety of his/her employees and his/her contractors within his/her working area, as contemplated by Section 37(2) of the OHS Act. None of the additional safety requirements specified by the Client reduces the Principal Contractor's accountability and responsibility for the health and safety of his employees and contractor employees within his working area.

The Principal Contractor shall be appointed by Majuba Rail Project on the awarding of the contract and shall be responsible and accountable for all legislative and Majuba Rail Project requirements for the duration of the contract.

The Principal Contractor may appoint contractors to assist in the contract. All appointments shall be done in writing.

12.4 Compliance and Non-Conformances

As legislation forms part of any country's legal system, the Client requires all of its Contractors to comply with legislation as part of the contract. All expenses to the Contractor, which result from compliance with this legislation as well as special requirements specific to the site, will be for the Contractors account.

Should the Principal Contractor appoint a contractor, the Principal Contractor would then have the same role and responsibility in relation to the contractors, in a similar way as the Client has in relation to the Principal Contractor.

The Client/Agent's representative reserves the right to stop work and issue a non-conformance report whenever safety, health or environmental violations are observed for both Principal Contractors and/or their contractors after engaging and making both aware of such. Expenses incurred as a result of such work stoppage and standing time shall be for the Principal Contractors account. Any non-conformances/findings/observations found in these audits/inspections on contractors shall be raised and discussed with the relevant Principal Contractor (with whom the contractor is contracted with).

The requirements within this specification should not be considered to be exhaustive and the Client reserves the right to add, delete or modify conditions where it is considered to be appropriate.

No claim will be accepted as a result of any costs or delays being incurred due to the Principal Contractor or his contractors not complying with legislation, applicable Majuba Rail Project Procedures and Standards.

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12.5 Legal and Other Requirements

It is required that all Contractors on site comply with the relevant applicable legislation, specifications and standards in accordance with the scope of the project:

As a minimum but not limited to the following:

- The Constitution of the Republic of South Africa (particularly Section 24 of the Bill of Rights)
- Occupational Health and Safety Act 1993 (Act 85 of 1993) and its Regulations
- National Environmental Management Act 1998 (Act 107 of 1998)
- Environment Conservation Act 1989 (Act 73 of 1989)
- National Water Act 1998 (Act 36 of 1998)
- Conservation of Agricultural Resources Act 1983 (Act 43 of 1983)
- Civil and Building Work Act
- Mine Health and Safety Act, 1996 and its regulations
- COLD Act
- Any other applicable South African legislation
- Applicable South African National Standards (SANS)
- Applicable international standards
- Majuba Rail Project Operating Regulations for High Voltage Systems
- Majuba Rail Project Plant Safety Regulations (Low Voltage Regulations)
- Relevant Majuba Rail Project Procedures and standards
- OHSAS 18001, ISO 9001 and ISO 14001-Contractor shall use as guidelines.
- Local Authority By Laws

It is the duty of the Principal Contractor and contractor to ensure that they are familiar with the necessary SHE legislation required.

The Principal Contractor shall compile a legal register listing all applicable legislation and standards that may have an impact on the scope of work that they are performing on the construction project. The register shall be updated biannually.

13. Section 37 (2) (Legal) Agreement

A section 37(2) agreement must be signed between Majuba Rail Project and the principal contractor at the time of awarding the contract.

The principal contractor must ensure that a section 37(2) agreement is compiled between the principal contractor and all their appointed contractors for the contract.

The original copy of the section 37(2) agreement must be retained by the contractor and a copy retained by the Majuba Rail Project responsible manager.

Copies of all agreements must form part of the respective contractor's SHE file.

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14. Hazardous Work by Children (Child Labour)

The constitution of the Republic of South Africa, in the "Bill of Rights" is clear on the rights of children, especially when it comes to:

- a) *being protected from exploitative labour practices;*
- b) *not to be required or permitted to perform work or provide services that*
 - *are inappropriate for a person of that child's age; or*
 - *place at risk the child's well-being, education, physical or mental health or spiritual, moral or social development; and the Basic Conditions of Employment Act, Chapter six Section 43 "Prohibition of employment of children".*
 - *Before resorting to the use of child labour, due consideration must be given to the rights of the child in terms of the constitution.*

Where work is being performed which is not prohibited in terms of the constitution, then such work must be conducted in terms of the OHS Act "Regulations on Hazardous Work by Children in South Africa" with emphasis on paragraph 2 Purpose and Interpretation.

Majuba Rail Project does not condone the use of child labour and therefore all efforts must be exercised to avoid it.

15. Notification of Construction Work

The Principal Contractor shall notify the relevant Provincial Director of the Department of Labour of the intention to carry out any construction work as defined in the Construction Regulation 4 of the OHS Act, at least 7 days before construction work is to be carried out.

The notification form of construction work is listed as an annexure 2 to the Construction Regulations of the OHS Act.

A copy of the notification letter sent to the DOL shall be forwarded to the project manager on the same day as sent to the DOL. A copy of the letter and their approval must be kept in the SHE file. When the DOL provide a letter of approval, a copy of the approval must be sent to the Majuba Rail Project manager and a copy filed in the SHE file.

16. OHS Act

All contractors shall have an up to date copy of the OHS Act and Regulations at all work sites which will be available to all employees. (Reference GAR 4).

17. Construction Professional Registration

The Principal Contractor and all his/her appointed contractors shall be registered in their respective levels as professionals in terms of the requirements of the SACPCMP.

The SACPCMP web address is <http://www.sacpcmp.org.za>

SHE professionals (which include Construction Safety Officers) are required to register as professionals with the SACPCMP.

Construction Managers are required to register as professionals with the SACPCMP.

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Notwithstanding the provision in the Government Gazette dated 7 February 2014 regulation 34 (2) advising that the registration of Agents with the SACPCMP has an 18 month delay from 7 February 2014, agents are encouraged to register as a professional.

18. SHE/Q Policy

The Principal Contractor and the contractor companies shall each have a SHE/Q Policy authorised by their Chief Executive (OHS Act Section 16(1) appointee) that clearly states overall SHE/Q objectives and commitment to improving Safety, Health, Environment and Quality performance and must be displayed and shared with all stakeholders.

Majuba Rail Project has a SHEQ Policy that clearly states the policy principles by which Majuba Rail Project operates and the commitment to SHEQ excellence and is authorised by the Chief Executive. (See Annexure A)

19. Costing for SHE

The Principal Contractor/contractor shall ensure that the submitted tender adequately made provision for the cost of Health, Safety and Environmental measures.

Note: the costing for SHE must be itemised based on the overall scope of the project (i.e.) Training, provision of PPE, safety equipment purchases etc.

20. Appointment of a Principal Contractor

The Principal Contractor will be appointed by Majuba Rail Project Manager on the awarding of the contract and shall be responsible and accountable for all legislative and Majuba Rail Project requirements for the duration of the contract.

Contractors shall not commence with the project work until such times as he/she has been appointed in writing in terms of OHS Act Construction Regulation 5(1) (k), by Majuba Rail Project Manager.

21. Appointment of Contractors

The Principal Contractor may appoint contractors to assist in the contract. All appointments shall be done in writing and will form part of the SHE plan that is required to be submitted to Majuba Rail Project. Adequate training and instruction must be given to the appointees and the principal contractor must ensure that all appointed contractors understand their roles and responsibilities.

The Principal Contractor shall when selecting contractors to assist on this project carry out a selection process, and vet potential contractors. Once the selection process is completed, then such contractors shall be appointed in writing for the relevant period as required.

22. Appointments and Competencies

The Principal Contractor shall ensure that all their appointees are made aware of their accountabilities and responsibilities in terms of their appointment, and advise and assist these appointees in the execution of their duties.

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The Principal Contractor shall ensure that competent persons are appointed in writing in accordance with the applicable appointments. (See Annexure B)

Copies of all the appointments shall be kept in the SHE File.

23. Training

The aim of this section is to outline Majuba Rail Project's expectations with respect to the scope of the training which the Principal Contractor and contractor employees receive.

- The scope of the training includes but is not limited to the type of work being performed and the relevant procedures.
- In addition to the requirements, the Principal Contractor and contractor employees would require the appropriate qualifications, certificates and tickets, and be under competent supervision.
- Records of all training and qualifications of all contractor employees must be kept.
- The Contractor shall maintain comprehensive records of all employees under his control (including all employees of the contractor) attending induction training.
- Acknowledgement of receiving and understanding the induction must be signed by all persons receiving the induction respectively.
- The contractor must develop a training matrix for all their employees.

NOTE: When there is an amendment to the Acts and/or to the regulations, a SHE plan must be reviewed, updated accordingly and changes must be communicated to all relevant employees.

24. Site Induction

24.1 General construction site induction carried out by the Principal Contractor

The Principal Contractor shall ensure that all his employees and contractor employees undergo their company induction with regard to the approved SHE plan, general hazards prevalent on the construction site, construction risk assessment, rules and regulations, and other related aspects.

Proof of client site specific induction signed by Inductor and trainee must be submitted to the Safety department before an access permit will be issued.

Refresher client induction as well as contractor induction shall be done after 12 months service. Records shall be forwarded to the client as proof.

24.2 Visitors to Site

A contractor shall ensure that all visitors to a construction site undergo health and safety induction in accordance with Construction Regulations 7 (6) and 7 (7).

All visitors must remain in the care and custody of a person (host) who has been properly inducted. No visitors are permitted to undertake any construction work, of any nature.

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25. Access and Security Control

Access and Security control shall be done.

Employees, contractors and visitors shall be subjected to induction training and substance abuse tests when entering Majuba Rail Project sites, or as and when required whilst on Majuba Rail Project sites.

It may be required that prior to access being granted that person(s) complete the required training e.g. Induction training or any other prescribed training.

The following are prohibited items and shall not be allowed on Majuba Rail Project sites unless the necessary authorisation for possession has been obtained:

- Firearms and ammunition (excludes Majuba Rail Project officially appointed security officials)
- Liquor/ Alcohol
- Dangerous weapons
- Drugs
- Any other items that may be declared prohibited

26. Contractor's Site Facilities

Site facilities shall be established and maintained by the contractor or be maintained as agreed with the Site Manager and/or in accordance with the contractual agreement. The facilities include, but are not limited to the following: (refer to OHS Act Construction Regulation 30)

- Temporary Facility Layout Plan
- Sheltered eating facilities
- Change rooms
- Ablution facilities
- Site Sheds, Offices and Amenities
- Lay down and Storage
- Temporary Site Services

Reasonable and suitable living accommodation may be provided for employees who are far removed from their homes and where adequate transportation between the site and their homes, or other suitable living accommodation, is not available

The Principal Contractor must develop their site establishment procedure and this must be in line with the EMP and ROD.

27. Public Safety

Legislation requires that employers shall be responsible, as far as reasonably practicable, for safeguarding persons other than those in their employment who may be directly affected by their activities so that they are not exposed to hazards to their health and safety (Section 9 of the OHS Act).

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Contractors shall define in their safety plan how they intend safeguarding/ controlling any members of the public against their activities during the project.

28. Project and Site Rules (Zero Harm to People and the Environment)

The objective of this section is to define the rules that are over and above the internal regulations and procedures of Majuba Rail Project and relevant legislation which will ensure zero harm to persons and the environment. These rules will be specific to the project and site.

Majuba Rail Project Life Saving Rules

Five Life Saving rules have been developed that will apply to all Majuba Rail Project Employees, agents, consultants, contractors and visitors. Failure to adhere to these rules will be considered a serious transgression. These rules are being implemented to prevent serious injury or death of any employee, labour broker or contractor working in any area within Majuba Rail Project.

The rules are:

RULE	DESCRIPTION OF RULE
Rule 1	OPEN, ISOLATE, TEST, EARTH, BOND, AND/OR INSULATE BEFORE TOUCH (That is plant, any plant operating above 1000 V)
Rule 2	HOOK UP AT HEIGHTS Working at height is defined as any work performed above a stable work surface or where a person puts himself/herself in a position where he/she exposes himself/herself to a fall from or into.
Rule 3	BUCKLE UP No person may drive any vehicle on Majuba Rail Project business and/or on Majuba Rail Project premises: Unless the driver and all passengers are wearing seat belts.
Rule 4	BE SOBER No person is allowed to be under the influence of intoxicating liquor or drugs while on duty
Rule 5	PERMIT TO WORK Where an authorisation limitation exists, no person shall work without the required permit to work.

Majuba Rail Project will take a stance of zero tolerance on these rules

- Any non-compliance to any health and safety requirement in this SHE specification is subject to discipline/removal of person from the project site.
- Non-compliance to a Life Saving rule will be considered serious misconduct and will lead to serious disciplinary action, which may include dismissal.

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- This is to ensure that every person who works on or visits Majuba Rail Project work site returns home safely to his or her family
- No person shall damage, alter, remove, render ineffective, or interfere with anything that has been provided for the protection of the site, or for the health and safety of persons.
- No person under the influence of alcohol, drugs or medication (in a state of intoxication) or any other condition that may render him incapable of controlling himself or of other persons under his charge shall be allowed to enter the site.
- All safety and warning signs shall be obeyed at all times.
- Entering or leaving the Site will only take place at official access control points and may only be done via the official designated walkways.
- All employees shall adhere to the SHE and other site specific rules.
- The Principal Contractor must have a process in place to address employees that have contravened Health and Safety Requirements.

- **Smoking**

Smoking is only permitted at designated areas in accordance with the requirements of the Eskom smoking policy (32-1126).

- **Cellular Phones**

Do not use Cellular phones in areas where cell phone usage is prohibited.

A contractor shall develop and implement a risk based cell phone policy for a particular construction site.

- **Fire Extinguishers**

All fire extinguishers shall be:

- Clearly labelled
- Conspicuously numbered
- Entered in a register
- Inspected monthly by a competent person
- Tested and serviced at recommended intervals by an accredited supplier
- Results shall be entered in the register and signed by competent person.
- No open or unattended fires are allowed within the construction site.

A Principal Contractor shall have a layout plan of a site indicating where all his firefighting equipment is located.

- **Vehicles and Traffic Rules**

Ensure that all drivers and passengers wear seatbelts, where fitted, while travelling in a motor vehicle. Vehicles not fitted with seatbelts must be retrofitted according to the vehicle manufacturer's specifications.

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Ensure that no employees, including contractor employees, when performing work for Majuba Rail Project, will be transported in the back of open vehicles

- **Substance and Drug Abuse Management**

The Principal Contractor shall provide a Substance Abuse management policy which is in line with the Majuba Rail Project Procedure

29. Disciplinary Process

The Principal Contractor shall have a disciplinary process and an organisational structured procedure to deal with employees who have transgressed organisational and legal requirements.

30. Hazard Identification and Risk Assessment

The client shall prepare and provide a Baseline Risk Assessment for an intended construction work project to the contractor as part of the contract package.

The Principal Contractor shall develop a Risk Assessment in line with Construction Regulation 9 (1) (a-e), in alignment to Majuba Rail Project procedure.

Emerging risks and hazards must be managed during construction work. This means that if there are significant changes to a process or activity, or any new process, then these should also be subjected to risk assessment.

All risks must be rated.

Activity based risk assessments shall be conducted by an appointed competent risk assessor of the Principal Contractor. Risk assessment shall be developed by the team and outcome shall be shared with employees.

The principle of no task without a risk assessment shall be applicable

The baseline risk assessment shall be developed by the cross-functional team.

Attendance registers must be kept of all the employees involved in compiling the risk assessment

Please refer to Annexure F (Risk assessment Template) as a minimum guideline.

31. High Risk Activities

When the Principal Contractor and/or his contractors are working in an area where a high health and safety hazard exists, the Principal Contractor shall:

- Ensure that permanent and adequate on site supervision is available for the entire duration of the work that is being conducted.
- Ensure the use of safety standbys in areas of high risk activities, and activities that fall within the scope of the permit to work system.
- Provide, erect and maintain all the required barricading, lighting, flags, flashing lights, or other safety control equipment to enable operations to proceed in a safe manner;
- Maintain, at all times, defined access ways, which are clear of objects or obstructions, so as to allow for emergency vehicle entry ;and

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- Provide any temporary protective shielding required for protecting nearby operations from the construction activities, at his own cost.

32. Pre-Task Risk Assessment (DSTI)

The Contractor shall on a daily basis and for every task to be performed, conduct a pre-task risk assessment with all employees involved with the task(s). The pre-task risk assessment will form the basis of the daily pre-job brief/toolbox talks prior to the start of work. This will highlight critical steps from the safe work procedure to ensure that work is performed in a safe manner. Proof of communication as well as confirmation that it was received and understood by all will be noted on a standard form, which will be kept at the job site during the job execution. The completed signed pre-task risk assessment form shall be filed in the Principal Contractor's safety file.

33. Safe Work Procedures and Practices

There must be approved method statements and written safe work procedures for all the high risk activities as identified in the risk assessment. No work shall be carried out without an approved method statement and written safe work procedure.

The supervisor / team leader shall ensure that all employees are trained on all applicable safe work procedures. Records of training/ awareness shall be kept on site.

Safe work procedures shall be compiled and documented for applicable activities (arising out of the Job Safety Analysis (JSA) and Hazard Identification & Risk Assessment (HIRA.))

Please refer to Annexure E (Safe Work Procedure and Job Observation Template) as a guideline.

34. Planned Task Observations (PTO)

The Principal Contractor shall provide the planned task observation procedure or process covering but not limited to the following:

- Persons responsible for monitoring the task and carrying out the Planned Job Observation must be the supervisor;
- Planned job observations should be conducted in such a way that the employee is observed against the actual steps (of the written safe work procedure) to be followed when performing a task and be marked against compliance with each step. This will assist in determining employee competence and compliance. Record should be kept at all times.
- The supervisor who conducts the PTO must have a copy of the PTO to ensure that the employee is following the steps.
- Where the employee did not comply or did not follow the required steps, this should be indicated on the report and actions be taken to correct the deviation.

Please refer to Annexure E (Safe Work Procedure and Job Observation Template) as a guideline.

35. Work at Elevated Positions and Roof Work

- All employees working above ground level shall use the appropriate fall protection equipment unless working from a solid platform protected by suitable barricading.

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- Whenever there is any potential of falling either from or into, a fall protection plan and risk assessment (which includes fall prevention) shall be compiled, implemented and reviewed and every possible and practicable means shall be adopted to provide such persons with effective training and safeguards.
- The Principal Contractor shall ensure that all work performed at elevated positions shall conform to the requirements of the OHS Act, the relevant SANS standards and Majuba Rail Project Procedure 240-86652518 (Working at Height Procedure)
- A fall protection Plan will be compiled, implemented , reviewed, communicated to all employees working at heights and shall include but not limited to the following:
 - A site and task specific risk assessment covering all work at elevated heights shall be carried out and appropriate mitigation measures to be put in place and communicated to all relevant employees.
 - Appropriate training programme (according to the relevant SAQA NQF unit standards) of all employees working at height and records thereof
 - Legal appointments
 - The process of evaluation of the employees' medical fitness for each employee working at height.
 - The procedure addressing the inspection, testing and maintenance of all fall protection equipment, the withdrawal process of damaged PPE and up to date inspection records.
 - A rescue plan detailing the necessary procedure, personnel, and suitable equipment required to affect a rescue of a person in the event of a fall.
 - Emergency drills on all developed rescue plans shall be held at least once a year, under the supervision of a competent person.
 - Emergency preparedness procedures.
- The Principal contractor shall review their risk assessment and fall protection plan at least every 3 months.
- Working in elevated positions shall only be carried out under the supervision of a competent person in accordance with SANS 229995.
- Fall arrest/protection plan and equipment shall be implemented where fall prevention is not possible.
- All fall protection equipment shall comply with SANS Standards, other recognised international standards and Majuba Rail Project requirements
- Safety belts are not allowed to be used in Majuba Rail Project. An appropriate full body safety harness shall be worn when working at an elevated position, refer to SANS 50361 and Majuba Rail Project Procedure for work at Heights specification.
- The Principal Contractor and/or his contractor shall compile a fall protection equipment, inspection, testing and maintenance procedure (Refer to SANS 50365 and manufactures requirements for safe use and for inspections).

Provision must be made to prevent objects and or material from falling from elevated areas and the protection of persons working below. A drop zone shall be established with barricading and necessary signs.

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The contractor shall determine the risk pertaining to adverse weather conditions and take the necessary precautionary measures.

Working at height training

- All employees working at height must have completed a formal working at height training (Unit standards 229998 and 229995). Once these employees have been declared competent by the training provider, each employee must be trained on every task which is going to take place when working at height. These people need to be declared competent and fit to perform each task.
 - The employee must work at least 40 hours with a mentor who has the knowledge and the experience (at least 1 year) to perform that specific task.
 - The employee must keep a logbook of his work for the 40 hours with a mentor. The logbook will be signed of each day of mentorship, by his mentor.
 - After completion of the 40 hours and the mentor is satisfied with the employee's progress, the Supervisor must conduct a planned task observation (PTO) on the employee. The Supervisor must indicate on the PTO that the employee is now fit to work on his own.
 - The logbook and the planned task observation must be kept on the employee's file for the duration of the project, to prove his competency.

This process must be followed even when an employee conducted the same work in a company A and moved to a company B he/she must follow the same process to declare him/her fit to do that specific task.

Scaffolding

- All scaffolding used shall comply with the OHS Act and Regulations as well as SANS 10085 and SANS 51004 (Aluminium and tower scaffold).
- Scaffolding erectors: Training is specified in SANS 10085.
- All complicated scaffolding and scaffolding higher than 3 meters must be built by a scaffold supplier.
- All scaffolding shall be inspected by a competent person weekly before use and also before use following weather conditions that could have made the scaffold unsafe e.g. which could make ground conditions unstable, after a storm, mishaps, before dismantling and after alterations.
- Users of scaffolding shall carry out a visual inspection on a daily basis before use. If unsafe conditions are found or suspected, the scaffold shall be isolated until a thorough inspection has been made.
- The footing or anchorage points for scaffolds shall be sound, rigid, and capable of carrying the maximum intended load without settling or displacement. Unstable objects such as barrels, boxes, loose brick, or concrete blocks shall not be used to support scaffolds or planks.

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- Scaffolds that provide access to areas where personnel can fall into a hazard or from a height of greater than 2m shall install a gate at the access point of the hazard that is affixed with a warning sign stating that 100% tie off required past this point.
- The Contractor must give preference to using scaffold stairs instead of ladders for all scaffolds. These scaffolds must be fitted with a kick plate at the bottom of each stair section. The kick plate shall be able to prevent a member of contractors' personnel slipping down the staircase and sliding between the floor and the mid-rail.
- An appropriate scaffolding tagging system shall be used to confirm the status of scaffolding for use or not to be used, the inspectors name and surname, signature, date and telephone number must be written on the tag
- Scaffolding access stairs shall be fitted with toe boards at all landings to prevent a person slipping through.
- When employees are working on a scaffold provided with trap doors it must be closed to prevent a person from falling.
- A **design and calculations** shall be done for all scaffolding in excess of 2 meter.
- A Team leader shall be appointed in writing for the erecting and dismantling of all scaffolding.
- Only use steel boards on scaffolding when working in the open.

Ladders (Portable)

- All ladders used on the site shall comply with the OHS Act and Regulations.
- All ladders shall conform to the relevant SANS standards or other recognised international standards.
- Damaged ladders shall be marked as "DAMAGED" and removed from the project site.
- Prior to work being performed, an adequate risk assessment shall be conducted, and work shall be conducted in accordance with General Safety Regulation 6 and 13A and Construction Regulation 10 of the OHS Act

36. Occupational Health and Hygiene

All contractors are required to develop an Occupational Health and Hygiene program. The program is intended to ensure that the risks to health are identified and controlled.

36.1 Occupational Hygiene Management Program

Principal Contractors and contractors shall develop, implement and maintain an occupational hygiene management programme to ensure that the occupational hygiene stressors are identified assessed (monitored) and controlled. The occupational hygiene should include, but not be limited to the following elements:

- Occupational health risk assessment as a background.
- Occupational health risk exposure profiles
- Occupational hygiene monitoring program and ensure that monitoring is performed by an approved Inspection Authority.

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- Communication of occupational hygiene results and requirements
- Proof of awareness training.
- Documentation and control of records (Records to be kept for 40 years)

Where there are occupational hygiene stressors, Principal Contractors and contractors shall ensure that programs are developed and in place to address the said stressors. These programs may include but not be limited to:

- Hearing Conservation Program;
- Respiratory Protective Program
- Hazardous Chemical Substances Program
- Procedure for the use and management of radioactive sources
- Heat Stress Management Program

Principal Contractors and contractors shall report to the Department of Labour and Department of Minerals Resources on the occupational hygiene milestones (e.g. crystalline silica). Evidence of reporting to the department of labour and department of mineral resources and copies of such reports shall be made available to SHE Manager / Practitioners.

Copies of all occupational hygiene surveys conducted by the Principal Contractor and contractor must be submitted to the Majuba Rail Project SHE manager and practitioners. The SHE Manager / Practitioner shall establish a database of contractor occupational hygiene surveys and corrective plans

36.2 Employee Health and Wellness Programme

Principal Contractor shall submit details of their Employee Health and Wellness Programme as part of their Health and Safety Plan which should include a Medical Surveillance Program and an Employee Assistance Program as detailed below.

36.3 Medical Surveillance Programme

The Principal Contractor shall ensure that his employees and contractor employees are registered on a medical surveillance programme and are in possession of a valid medical fitness certificate. The certificate of fitness should be relevant to the type of work (risk based) that the employee will be exposed to. This will require each employee to have a risk based person job specification that will be used as a basis for medical examination.

The Principal Contractor must ensure that his employees and contractor employees have undergone pre-entry medical examination before starting work on site, ***no employee will access site without a valid medical fitness certificate.***

The fitness certificate and a copy of the risk based person job specification shall be issued before commencement of work and shall be presented at induction. If the Principal Contractor does not provide proof of valid certificates of fitness and person job specifications for his employees and contractor employees, then Majuba Rail Project will not give those employees site induction which will result in refusal to site access.

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The certificate shall be renewed as required by the risk profile. On completion of the project an exit medical examination shall be conducted, unless otherwise advised by the Occupational Health Practitioner.

All employees shall be issued with the required medical records to prove medical status at the time of exiting the construction project.

The Principal Contractor shall provide a documented process for managing those employees who are issued with a conditional certificate of fitness.

In instances where sick leave is taken for a period of one week or more, the contractor shall institute an arrangement that employees need to sign a declaration indicating that they did not suffer any illness or injuries which occurred in the period of absence, which may affect their ability to work on site.

Note: *Majuba Rail Project will only accept medical surveillances conducted by an Occupational Health Practitioner who holds a qualification in occupational health.*

36.4 Emergency Care

A list of emergency numbers is available to all emergency personnel. The Principal Contractor shall ensure that his supervisors are familiar with the emergency procedure requirements regarding actions in case of an emergency.

Contractors shall have one first aid box for the first 5 persons and thereafter one for every 50 or team of workers on site or part thereof.

More first aid boxes shall be provided if the risks, distance between work teams or workplace requirements require it (it should be available and accessible for the treatment of injured persons at that workplace).

Minimum contents of a first aid box: (Refer to GSR 3 Annexure of the OHS Act)

A prominent notice or sign shall be erected in a conspicuous place at a workplace (SANS1186 approved signs to indicate location of first aid boxes), indicating where the first aid box or boxes are kept as well as the name and contact details of the First Aider of such first aid box or boxes.

The Principal Contractor and contractor shall ensure that alternative arrangements shall be made for possible incidents occurring after normal working hours.

36.5 Employee Assistance Programs (EAP)

All contractors shall establish an EAP and detailed it in the SHE Plan.

36.6 Rehabilitation

Where any contractor's employee is injured at work to the extent that they require rehabilitation, then this must be given, using the services of an appointed rehabilitation organisation.

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36.7 Compensation of Occupational Injuries and Diseases Act (COIDA)

The Principal Contractor shall submit proof of registration and letter of good standing with the compensation fund or with a licensed compensation insurer for his company and each of his contractors'. This must remain valid for the duration of the contract. The Letter of Good Standing shall reflect the name of the Principal Contractor and/or Contractor Company.

37. Emergency Preparedness and Response

The Principal Contractor shall provide a site specific emergency response plan which shall be compiled in relation to the site emergency procedure.

The Majuba Rail Project site specific emergency plan shall be utilised by all contractors. The Principal Contractor will ensure that his employees and his contractor employees are trained on this plan.

Emergency drills shall be undertaken twice a year by Majuba Rail Project; however, the Principal Contractor shall initiate his own emergency drills with permission from the Majuba Rail Project Manager. This must be recorded and provided on request.

When doing a task that requires standby emergency response, the contractor shall provide for this and Majuba Rail Project Safety Department will supplement.

38. Offices

The Emergency Preparedness plans must accommodate how to react to emergency situations such as, fires, work injuries, bomb threats, building evacuation, political unrest, the contacting of the various emergency services etc.

39. Site plans

When preparing worksite Emergency Preparedness plans, cognisance must be made as to the locality of the site and the response time for the emergency services. Where sites are remote, contractor management shall ensure that a sufficient number of employees are trained in the various disciplines to be able to afford prompt response attention.

40. Environmental Management.

Refer to the Project Environmental Management Plan (EMP) and the Environmental authorization where applicable.

Minimum requirements for compliance by contractors:

- Ensuring adherence to the environmental specifications;
- Ensuring that Method Statements are submitted to the ECO for approval before any work is undertaken. Any lack of adherence to this will be considered as non-compliance to the specifications.
- Ensuring that any instructions issued by the Engineer, on the advice of the ECO, are adhered to.

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- Ensuring that there must be communication tabled in the form of a report at each site meeting, which will document all incidents that have occurred during the period before the site meeting;
- Ensuring that a register is kept at the site office, which lists all the transgressions issued by the ECO;
- Ensuring that a register of all public complaints is maintained.
- Ensure that all employees, including those of sub-contractors receive training before the commencement of construction in order that they can constructively contribute towards the successful implementation of the environmental requirements of the Contract.
- The most important actions by the Contractor to ensure compliance with the environmental requirements, relates to the establishment of an adequate and appropriate organizational structure for ensuring the implementation and monitoring of the requisite environmental controls.
- Compile an Environmental monitoring plan outlining all the construction activities, associated environmental impacts and how they will be mitigated;
- Appoint an environmental officer for the project and provide the site environmental profile;
- Ensure that the project pricing makes provision for environmental costs.
- Contractor shall attach a company waste management plan including the typical waste inventory and templates used for keeping waste records.
- Contractor shall attach Environmental Management system documentation that is aligned to ISO 14001
- Include environmental considerations as an item on the agenda of the monthly site meetings
- Compile and implement the necessary Method Statements; and
- Undertake environmental awareness training of all site staff during the commencement of each Contract, with regular refreshers for the duration of the Contract.

Ensure that the environmental authorizations required in terms of National Environmental Management Act, 1998 (section 24) are sought prior to storage of dangerous goods, including petrol, diesel, liquid petroleum gas or paraffin, in containers with a combined capacity of:

- More than 30m³ (30 000L) but less than 1000m³ (1ML) at any one location or site, GNR 386 (7)
- More than 1000m³ (1 000 000 L or 1ML) at any one location or site, including the storage of one or more dangerous goods in a tank farm, GNR 387 {1(c)}.

Spillage of Hazardous Chemical Substances

- Any spillages that occur shall be treated in accordance with the requirements indicated on the MSDS
- Identify appropriate storage areas for stockpiling of materials, storage of hydrocarbons and storage of hazardous substances and ensure that these areas are appropriately prepared for their purpose;
- Disposal of hazardous substances shall be done in terms of the relevant legal requirements;

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- Limit spillage of hazardous substances or substances with the potential to cause contamination of the environment;
- Develop emergency protocols for dealing with spillages particularly where these pose a pollution risk or involve hazardous substances;
- Compile and implement the necessary Method Statements ; and undertake environmental awareness training of all staff;

Herbicide usage

- Only registered pest control operators may apply herbicides on a commercial basis. All staff applying herbicides shall be trained in the application thereof, and shall be provided with suitable PPE.
- The application of herbicides shall be in accordance with the Fertilizers, Farm Feeds, Agricultural Remedies and Stock Remedies Act No. 36 of 1947. Only approved and tested herbicides with a low environmental risk shall be used.
- An herbicide register for usage shall be compiled and maintained, and a copy handed to the project leader / environmental advisor on completion of the project / contract.

41. Fire hazard

The Contractor shall develop emergency protocols for dealing with fires, which may include a Fire Management Plan in accordance with the National Veld and Forest Fire Act (No 101 of 1998) and ensure that all staff is educated in fire prevention and will be held responsible to avoid the risk of fire.

- No area is to be denuded of vegetation to create firebreaks, to prevent or make fires.
- No open fires are allowed on site.
- The contractor shall ensure that operations are in compliance with statutory requirements at all times.
- The Contractor Environmental Officer shall ensure that in areas with a high fire danger rating, staff are made aware thereof.
- Smoking shall be restricted to designated areas or shall not be allowed, particularly in areas that have a high fire danger rating.
- Contractor shall ensure that adequate Fire Fighting equipment is available on site, particularly near hot work.

42. Waste

All waste generated shall be disposed of at a registered landfill site. A register of both hazardous and general waste shall be kept. A waste management plan shall be compiled before commencement of work. Records of waste disposal shall be kept and updated all the time. No waste, be it biodegradable or not, shall be left on site once work has ended.

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Domestic and hazardous waste generated shall not be burned, buried, or disposed of on Majuba Rail Project or Landowner property, but will be controlled and removed to a registered waste site on a regular basis (Daily / Weekly). The Principal Contractor and contractor working on site shall ensure that oil, fuel, and chemicals are confined to specific and secure areas throughout the construction period. These materials shall be stored in a bunded area with adequate containment for potential spills and leaks.

Waste may be collected by the relevant Municipality or alternatively taken by the Contractor to a registered landfill site. Where the Municipality does not have a weighbridge, the Contractor is responsible for obtaining a formal notification to this effect.

Contractors shall ensure that sufficient waste bins / containers, with lids are made available for waste control. The contractor shall comply with the requirements of NEM: Waste Act 59 of 2008.

Quantities of disposed waste shall be recorded and reported on a monthly basis. Set up system for regular waste removal to an approved facility and minimize waste by sorting wastes into recyclable and non-recyclable wastes;

Equipment maintenance and storage:

- Ensure that all plant is in good working order;
- Undertake maintenance within specified area (workshop); and use drip trays for all stationary or parked plant and when servicing equipment away from designated areas

43. Material requirement

The use of any material or property belonging to any landowner shall not be permitted prior to arrangements with the relevant landowner. Written proof of such agreement shall be handed to project leader / co-coordinator for record keeping

44. Dust and Noise

The Contractor shall monitor dust and noise caused by mobile equipment, generators and other equipment during construction. Factors such as wind can often affect the intensity to which these impacts are experienced.

To ensure that noise does not constitute a disturbance during construction activities, all construction works shall occur between specific working hours. This shall be stipulated in the contract.

Mitigation measures to be implemented as required / agreed upon with the project leader / environmental advisor.

Dust suppression measures shall be in place to reduce the dust caused by the movement of heavy vehicles and other contractor activities.

45. Environmental Incidents

All environmental incidents such as pollution (air, water, land, noise, etc.), bird kills, animals killed, plants destroyed, public complaints etc. shall be reported to project leader and / or environmental advisor within 24 hours of its occurrence.

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All environmental incidents occurring on site shall be recorded according to Majuba Rail Project Procedure 32-95, detailing how each incident was dealt with. Proof thereof must be kept in an incident register.

The Contractor shall be held liable for any infringement of statutory requirements of the Environmental Conservation Act, No 73 of 1989, or any other relevant legislation.

46. Water

No construction shall be allowed within the 1:100 year flood lines. Should any pollution of the watercourse occur, the Department of Water Affairs and Forestry must be notified immediately.

Water usage on site shall be verified with the substations/power stations responsible person, the project leader / environmental advisor to ensure compliance with legislation. Borehole water shall be verified as suitable for human consumption. All incidents related to water contamination shall be reported within 24 hours. Records of water quantities abstracted should be kept.

Chemical toilets shall not be within close proximity of the drainage lines / ways.

47. Signing off of the contract

No project shall be signed off before Majuba Rail Project has given assurance that no environmental liabilities exist. The responsible person, project leader or environmental advisor shall carry out a physical inspection before acceptance of work done.

No invoice shall be processed before work done is accepted.

The Contractor shall be conversant and in the course of carrying out the Works. The Contractor shall comply with the provisions of all Acts, regulations, ordinances, by-laws, Standards, Codes, Rules and requirements of public, municipal and other authorities.

The Project Team may, at any time, without notice to the Contractor, examine and investigate the Contractors' compliance with all Applicable Legislation and the environmental management conditions.

At all times during the execution of the Works, the Contractor shall preserve and protect the natural environment in the general area of the site and the external areas that may be affected by his operations.

Environmental protection shall include, but not be limited to, the following issues:

- Noise pollution, gaseous emissions, noxious and/or offensive odours, liquid waste collection and solid waste separation and collection
- In the event of any perceived conflict between the "environmental laws" and the contract documents, the contractor shall, prior to commencing the work, refer such conflict to the project management team for clarification. Without limiting the contractor's responsibilities under the applicable legislation, the work shall be conducted in such a manner as to ensure that:
- No substance that can harm or is likely to harm the environment is allowed to leak, spill or escape from any container or storage area.
- No oil or other effluent is permitted to escape into the drainage system and/or local storm water system.

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- No oil or other effluent is permitted to escape into the ground and cause soil contamination.
- All powdered pollutants generated during execution of the Work are contained to prevent air pollution.
- No sediment generated is permitted to escape into the drainage system and/or local storm water system.
- No harmful solids or liquids are permitted to spill from containers whilst in transit on the premises.
- All oil-based waste material shall be kept segregated and placed in sealed 200 liter drums. This material shall be disposed of through a recognized oil recycling company.
- All water-based waste material shall be kept apart. Small amounts shall be collected and stored in 200 liter containers. Large amounts shall be pumped into a bulk tanker for disposal. Prior to disposal, all water-based material shall be sampled to allow analyses to be carried out.

48. Forums for SHE Governance and Communication

Effective governance and communication structures shall be established on each project site where project SHE matters shall be discussed. Attendance registers shall be kept for all the health and safety meetings. The terms of reference shall be established for each governance structure on the project.

Majuba Rail Project team shall define the project SHE governance and communication structures.

The Principal Contractor/s and their Contractor/s shall provide a communication plan outlining the discussions and decisions to their staff, the mediums they will employ and how they will measure the effectiveness of their SHE communication.

Every meeting conducted on site shall include SHE as a standing agenda point and minutes of these meetings shall be available on site at all times.

NOTE: *These meetings do not replace or act as a substitute for the required SHE statutory meetings.*

Statutory SHE Committees in terms of Section 19 and 20 and General Administrative Regulations 5 of the OHS Act and Majuba Rail Project requirements shall be established.

49. Construction Vehicles and Mobile Plant

All construction vehicles and equipment shall meet the legislative requirements pertaining to the OHS Act Construction Regulations 23, the National Road Traffic Act, the Mine Health and Safety Act, National Environmental Act and Majuba Rail Project Vehicle Safety Specification Procedure

The following requirements are applicable to the use and operation of construction vehicles:

- A Principal Contractor/ contractor shall ensure that all construction vehicles and mobile plant are operated by a person who has received appropriate training, is certified competent and in possession of proof of competency and is authorised in writing to operate those construction vehicles and mobile plant.

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- Designated drivers shall be in possession of an appropriate valid driver's licence, valid for the class of vehicle and authorised in writing to operate the Construction vehicles and mobile plants. The driver's license shall be kept by the person so authorised and shall produce such card on request.
- All construction vehicle operators, flagmen, banks men, signalmen, or points men are to wear LED-illuminated reflector vests at identified high-risk sites and construction projects. All flagmen, banks men, signalmen, or points men at identified high-risk sites and construction projects are to be positioned with warning flashing lights and warning signs in such a way that they are visible to the operators at all times (during the day and night).
- Heavy construction vehicle parking sites, driveways, or any site should be designed in such a way that no reversing is required. Where reversing is unavoidable, it shall only be done with the presence of a flagman or a banks man.
- A vehicle and pedestrian management plan must be developed by the contractor to be in line with the clients plan.
- Ensure that all traffic signs are displayed.
- Reverse beepers shall be fitted on all construction vehicles.
- All drivers of construction vehicles and mobile plant shall have medical certificates of fitness to operate those construction vehicle and mobile plant, issued by an occupational health practitioner in the form of Annexure 3 of the Construction Regulations.
- The speed limit within the bounds of the construction site is 40 km/h.
- No drivers or operator may text, talk on cell phones or two way radios whilst driving.
- It is the responsibility of the driver to ensure that:
 - He/she and their passengers wear seat belts whilst the vehicle is in motion.
 - Comply with all traffic road rules, safety, direction and speed signs.
 - Ensure that vehicle loads are properly secured and loaded onto vehicles; and
 - Ensure that vehicles are not overloaded.

The Principal Contractor shall ensure that his employees and those of his contractors do not:

- Ride on back of bakkie, cranes or other mobile plant equipment.
 - Leave vehicles unattended with the engine running.
 - All vehicles shall be locked chock blocks fitted and keys removed; and
 - Park vehicles in unauthorised zones/areas.
- Majuba Rail Project reserves the right to search any vehicle on the premises or when entering or leaving the premises.
 - The Contractor shall be solely responsible for the safety and security of any of his vehicles (including private vehicles) on the premises.
 - The Contractor shall attach identification markers on all of their vehicles that are permitted to enter the site.

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- A current maintenance logbook is required for all cranes and large plant equipment, and shall be available for inspection at any time. The logbook shall be located in the cabin of the crane or plant equipment.
- Principal contractor is to ensure that visibility (e.g.: switching on of lights, reflectors, barricades equipped with lights, etc.) is enhanced on all Construction Vehicles and Mobile plants in order to identify the location of the vehicles or plant.
- The Contractor shall maintain his vehicles in roadworthy condition and a valid license. These vehicles shall be subject to inspection by the Client representative. Vehicles which are not roadworthy will not be allowed onto the site.
- In the event where the Principal Contractor and his contractor do not own the equipment, the Principal Contractor is still responsible for ensuring all conditions are complied with by all of his contractors or hire companies.
- Precautions shall be taken to lash all loads properly. Loads projecting from vehicles shall be securely loaded and in daytime a red flag and during darkness a red light or red reflective material shall be attached to the extreme end of such projecting material.
- Ensure that all construction vehicles and plant are maintained according to the manufactures specifications. All servicing and repairs must be carried out by the Contractor in a designated area.
- Records of maintenance must be kept on site
- All waste from servicing must be disposed of in accordance with the environmental legislation.
- Every mobile machine whose vision is impaired when reversing must have a siren/hooter, which beeps, when the machine is reversing. This includes trucks, cranes, loaders, etc.
- Display construction vehicle signs on all vehicles entering a construction site.

The use of amber, rotating or flashing lights on construction vehicles:

- The use of amber, rotating or flashing lights shall only be used in accordance with the requirements of the National Road Traffic Act ,1996 (Act no 93 of 1996)
(Reference: Regulation 176 substituted by regulation 48 of Government Notice R846 in Government Gazette 38142 dated 31 October 2014 – See Annexure G (Requirements for identification lamps)
- No construction vehicle is allowed to use the amber light whilst driving on a public road.
- The construction vehicles fitted with amber rotating lights must have a manual operated switch. The amber rotating lights must be switched off when the construction vehicle enters a public road

50. Housekeeping

The Principal Contractor and his contractor shall maintain a high standard of housekeeping within the site. Prompt disposal of waste materials, scrap and rubbish is essential. Waste disposal shall be done by every contractor to a designated waste site

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The Principal Contractor shall carry out regular safety/housekeeping inspections (at least weekly) to ensure maintenance of satisfactory standards. The Principal Contractor shall document the results of each inspection and shall maintain records for viewing.

Note: Nails protruding through timber shall be bent over or removed so as not to cause injury.

51. Signage

All symbolic safety signs that the Principal Contractor or his /her Contractors are to use/display shall comply with the requirements of SANS 1186.

The display of the following signage is mandatory:

- For Contractors with Site Establishment: The Contractor Company sign must be posted at their site offices to reflect the name and contact details of the: Construction Supervisor; Health and Safety Manager/Practitioner; First Aider; Health and Safety Representative and Evacuation warden.
- The Contractors shall provide the signage where work is conducted and where unauthorised entry is prohibited and/or where alerting and cautioning passers-by to be aware of potential dangers
- The Contractors shall provide the signage in accordance with the scope and work area.

52. Hazardous Materials/Chemicals Management

HCS shall be managed in accordance with HCS Regulations of the OHS Act 85 OF 1993.

Prior to any HCS being brought onto the site or produced on the site, the Principal Contractor/contractor shall supply the client with the following:

- Material Safety Data Sheets (MSDS) in accordance with the requirements of the OHS Act –
- Regulations for Hazardous Chemical Substances;
- Proposed arrangements for safe storage;
- Proposed methods for handling/usage;
- Proposed method of disposal;
- Hazard communication / training plan.

The information is to be provided at least two (2) working days prior to the expected delivery on site. The client representative shall approve the use of any hazardous substance after receiving the above information. No HCS are to be brought onto the site until the client representative approval is received.

53. Flammable and Combustible Liquids

Use and temporary storage of flammable and combustible liquids shall be managed in accordance with Construction Regulations (CR 25) and GSR 4 of the OHS Act 85 OF 1993.

Proposals to store fuel on site must have written approval from the Majuba Rail Project Manager. The volumes of fuel allowed to be stored will depend on site conditions and Statutory Regulations.

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Proper bund walls and signage indicating the volume it can take +/- 10%

54. Explosives

Explosives shall not be brought onto the site or be used without the express permission of the relevant Majuba Rail Project Project/Site Manager. Explosives or detonators shall not be stored on the site.

Detonators and other explosives shall never be carried in the same box.

The provisions of all relevant Acts and Regulations shall be strictly observed.

55. Compressed Gas Cylinders

Use and temporary storage of Compressed Gas Cylinders shall be managed in accordance with the General Safety Regulation 9 of the OHS Act 85 of 1993 and SABS 1548

56. Personal Protective Equipment (PPE)

In terms of Section 8 of the OHS Act, the duty of the employer is to take steps to eliminate or mitigate (hierarchy of control measures) any hazard or potential hazard to the safety or health of employees before resorting to PPE.

Principal Contractor's employees and his contractor employees at the construction site, including visitors, shall use the relevant internationally recognised authority approved risk based PPE at all times, as a minimum:

- Head protection hard hat (with chin straps)
- Steel toe capped safety boots.
- Eye protection. Wearing of impact Safety Spectacles with side shields. Prescription glasses must comply with the same standard or cover impact safety spectacles must be worn over them.
- Long sleeved and long pants protective clothing.
- High visibility vests.
- Refer to General Safety Regulation 2 of the OHS Act.
- Refer to Majuba Rail Project Personal Protective Equipment Specification. This specification applies to all activities where PPE is required. It sets out Majuba Rail Project's minimum PPE requirement to be met by contractors with the exclusion of the requirements stipulated with regard to the Majuba Rail Project Corporate Identity.
- The Contractor shall ensure that his employees understand why the personal protective equipment is necessary and that they use them correctly.
- Strict non-compliance measures must be administered to any employee not complying with the use of PPE and that employee shall be removed from the Site.

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56.1 Issue, Replacement and Control of PPE

The Principal Contractor must provide a detailed procedure with a matrix on the issuing, maintenance and replacement of PPE for all his employees and contractors on site.

The Principal Contractor is required to keep an updated register of all PPE issued, including that of his employees and contractors.

57. Machinery, Tools and Equipment

- The Contractor shall ensure that all machinery, tools and equipment are identified, safe to be used and are maintained in a good condition.
- All machines driven by means of belts, gear wheels, chains and couplings shall be adequately guarded. A machine is guarded when persons cannot gain inadvertent access to the moving parts.
- The Principal Contractor shall ensure that all machinery, tools and equipment shall be listed on an inventory list and handed to security with a copy kept on site.
- Tools intended for use above ground level shall be equipped with a lanyard to ensure no dropping of tools.
- All machinery, tools and equipment to be regularly inspected at least monthly or as required by legislation and risk assessments, registers of tools shall be kept on the safety file. The equipment should be numbered or tagged so that it can be properly monitored and inspected.
- All machinery, tools and equipment shall have the necessary approved test or calibration documentation where applicable prior to being brought onto the premises and the records shall form part of the SHE plan.
- All fuel driven equipment shall be inspected by the Majuba Rail Project SHE Practitioners prior to mobilizing it onto site.
- All fuel driven equipment shall be properly maintained in accordance with the manufacturer's recommendations and legal requirements.
- The Client reserves the right to inspect items of plant or equipment brought to site by the Contractor for use on this Contract. Should the Client find that any item is inadequate, faulty, unsafe or in any other way unsuitable for the safe and satisfactory execution of the work for which it is intended, the Client/Agent shall advise the Principal Contractor in writing and the Principal Contractor shall forthwith remove the item from the site and replace it with a safe and adequate substitute. In such cases, the Principal Contractor shall not be entitled to extra payments or extensions of time in respect of delay caused by the Client's instructions.
- The Principal Contractor/contractor shall ensure that he has all the necessary registers to record all tools and equipment.
- All employees operating or using machines and tools shall:
 - Be competent.
 - Have a valid certificate.
 - Have proof of any form of task related training.

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58. Machine Guarding

An assessment should be conducted in writing to ensure that all machines and tools are fitted with a guard and the assessment should be kept in the safety file.

Machine guards shall be painted on the outside in the same colour as the machine or tool.

Inside of guards and moving or rotating parts shall be painted orange

All guards shall be inspected by a competent person on a monthly basis as well as by users prior to use. These inspections and proof of corrective action taken must be recorded and kept on site.

Record keeping

- A register shall be used which indicate the name, number of the machine or tool and the number of guards.
- The register shall be kept in the safety file.

59. Hand Tools and Pneumatic Tools

All pneumatic tools shall be numbered, recorded and inspected at least monthly as well as by users prior to use. The revolutions per minute measured shall be in accordance with the manufacturer specifications.

All hand tools should be inspected at least weekly as well as by users prior to use.

Tools with sharp points in tool boxes must be protected with a cover.

All files and similar tools must be fitted with handles.

The Principal Contractor shall have a policy on makeshift tools on site.

Records

- Check list for hand tools
- Check list for air tools including records of the measurement of revolutions on grinders
- Gas cylinder trolley checklist Register

60. Pressurised Systems and Pressure Equipment

The Principal Contractor shall ensure that all pressure equipment is inspected by an Approved Inspection Authority in accordance with the Pressure Equipment Regulations 7.

All pressure equipment shall be provided with at least one safety valve and such safety valve should be kept locked or sealed in accordance with the Pressure Equipment Regulations 10.

The pressure equipment shall be provided with a manufacturer's plate in accordance with the Pressure Equipment Regulations 9.

The pressure equipment should be fitted with a pressure gauge in Pascal and the maximum permissible operation pressure marked with a red line on the dial.

Records

- Inspection registers for pressure vessel
- The certificate from the manufacturers

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- Registration certificate of an Approved Inspection Authority.

61. Explosive Actuated Fastening Device

- Written permission to use these tools on site must be obtained by the Majuba Rail Project Project/Site Manager.
- Only certified, competent, appointed personnel (CR. Reg. 21 (1) (b)) are allowed to operate explosive powered tools on site.
- A valid permit must be obtained before commencement of work.
- Safety signs and barriers must be erected before explosive power tools are used.
- A protective guard around the muzzle shall be provided.
- Cartridges and explosive power tools to be stored separately and properly controlled by an appointed competent person.
- Refer to the requirements of the Construction Regulation 21 of the OHS Act.

Records

- Register for the issue and return of cartridges.

62. Lifting Machines and Lifting Tackle

(Mobile Cranes, Crawler Cranes, Tower Cranes, Chain Blocks and Lever Hoists)

- The Principal Contractor shall ensure that the use of lifting machines and tackles conform to the requirements of the OHS Act, the relevant SANS standards and Majuba Rail Project Procedure
- A risk assessment shall be conducted prior to commencing with the task to identify the risk involved and appropriate mitigation measures must be put in place, and a method statement shall accompany the risk assessment detailing the lifting or rigging procedure.
- If it is the Principal Contractor's intention is to use lifting machines on site, it should be indicated in the Principal Contractor's SHE plan as well as the inspection so that the Majuba Rail Project Project/Site Manager can conduct an inspection when equipment is brought onto site. If his/her intention is to use a contractor he shall enter the name of the contractor into the notification letter to the Department of Labour. When equipment is brought onto site it shall be inspected by the contractor crane coordinator as appointed according to SANS 12840-3 clause 4.1 and clause 5.9.

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- The Principal Contractor shall ensure that every lifting machine as listed in the National Code of Practice is operated by an operator specifically trained for a particular type of lifting machine and the operator shall be in possession of a valid permit (although the code of Practice has been withdrawn, contractors shall use it as a guideline). The user shall not require or permit any person to operate such a lifting machine unless the operator is in possession of a certificate of training, issued by a service provider registered by the Department of Labour and TETA.
- The facilitator and the assessor must be registered with the TETA.
- Whenever making use of an external contractor to do lifting work the Principal Contractor shall ensure that the operator is competent and if the Principal Contractor is satisfied with the operator's competency after looking at his portfolio he/she should issue a temporary permit to the operator, and contractors are required to conduct audits to ensure that the contractor complies with all safety and legal requirements.
- The Principal Contractor should verify if all ropes, chains, hooks and other attaching devices, sheaves, brakes and safety devices forming an integral part of lifting machines have been thoroughly examined, as prescribed by the standard to which the lifting machine was manufactured. This must be carried out by a registered LMI (Lifting Machine Inspector), appointed by a registered Lifting Machine Entity who has knowledge of the erection and maintenance of the type of lifting machine involved at intervals not exceeding six months.
- All the lifting machine and lifting tackle operators should be in a possession of a medical certificate of fitness.
- Before using any lifting machines or tackle the operator should inspect it daily, refer to the requirements of the Driven Machinery Regulations 18 of the OHS Act 85 of 1993.
- All lifting machines shall be examined and subjected to a performance test by an accredited person/company at intervals not exceeding 12 months, in accordance with SANS 19.
- All lifting tackle should be examined at intervals not exceeding 3 months by a competent lifting tackle inspector, who shall record and sign of such examination, such lifting tackle shall be stored or protected so as to prevent damage or deterioration when not in use.
- Refer to the requirements of the Driven Machinery Regulation 18 and Construction Regulation 19 and 22 of the OHS Act, SANS and ISO standards.
- All lifting tackle should be recorded on a register, refer to the requirements of the Driven Machinery Regulations 18 of the OHS Act 85 of 1993.
- All hooks shall be fitted with a safety latch/catch, and be in a good operational condition.
- A lock out system should be implemented to ensure that only an operator that is competent can draw lifting machines and fork lifts.
- All lifting tackle should be conspicuously and clearly marked with identification particulars and the maximum mass load which it is designed for.
- No person shall be moved or supported by means of a lifting machine unless such a machine is fitted with a cradle approved for that purpose by an inspector of the Department of Labour.
- A risk assessment should be conducted prior to starting the task:

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- Account should be taken of wind forces. Lifting machines are erected taking into account a safe distance from excavations, and with the erection of tower cranes, a tower crane application accompanied by a method statement, risk assessment and geotechnical study shall be given to the engineer for approval.
- When working in close proximity to power lines, the contractor must apply for a permit. Refer to Eskom Plant Safety Regulations and/or Operating Regulations for High Voltage Systems and Electrical Machinery Regulation 15 of the OHS Act.
- Every employer shall ensure that the employee is adequately and comprehensively informed of the hazards when working in close proximity to overhead power lines and electrical installations
- Account should be taken of the bearing capacity of the ground, on which the tower crane is to stand, and the tower crane should be erected at a distance from excavations.
- Rigging study should be conducted for all critical lifts.
- Principal Contractors and their employees shall keep out from under suspended loads, including excavators, and between a load and a solid object where they might be crushed if the load should swing or fall. They shall not pass or work under the boom or any crane or excavator or barricading.
- Guide ropes to be used to prevent loads from swinging. (Manila ropes)
- Only loads of up to 5ton can be lifted by a person with basic rigging, depending on the complexity of the load. Should it be a tandem lift or a complicated lift only a qualified rigger will do such lifts. Above 5Ton a qualified Rigger with a red seal will conduct all the lifts, and should the lift become critical a critical lift procedure will be completed accompanied by a rigging study and risk assessments.
- Hand signals will be displayed and visible on all cranes and the SANS 1029 standard must be used to ensure uniformity. All the crane operators, riggers shall be trained according to the SANS 1029.
- Permits shall be issued by an authorised appointed person when conducting maintenance and inspections.
- An illumination survey should be conducted prior to the start of work where lifting is performed at night.
- Tower Cranes should be earthed in accordance with SANS12480 and this includes crawler cranes.
- All truck mounted cranes and stringing machines shall be fitted with Equal Potential Foot plates when working in close proximity of power lines.

Record keeping

- Record books and test certificates of lifting machined and tackle should be kept on the safety file on site.
- A copy of the Site and Task specific risk assessment should be kept on the safety file
- The Principal Contractor shall provide maintenance records of all Cranes (Mobile, Tower, Crawler and Overhead Gantry) to Majuba Rail Project before the equipment is allowed to operate on the site.

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- A certificate of approval for man cages and mobile working platforms shall be obtained from the Department of Labour Inspector.
- Register of all lifting machines and tackle on site (For inspection purposes).
- Training certificates and certificates of fitness for operators of the equipment.
- Legal appointments for riggers, supervisors, crane co-ordinators and operators.
- The Principal Contractor shall provide an emergency rescue plan to Majuba Rail Project for all tower cranes and man-cages.

63. Fire Safety

The Principal Contractor/Contractor shall develop a fire safety procedure for the specific construction site prior to commencing work. The procedure must take into consideration the size of the site, type of work being done (e.g. cutting, welding, grinding, etc.) and amount of combustible materials. It must be developed in accordance with the hot work permit, Majuba Rail Project Fire Risk Management requirements and all other applicable Regulations. All workers entering and working in the construction site need to be trained in fire safety and any duties they are required to perform. Pre-existing fire systems in buildings shall be maintained during construction whenever possible. Any changes must be approved by the Client.

63.1 Fire Safety Plan

The fire safety plan shall include:

- The designation and organization of site personnel to carry out fire safety duties, including fire watch
- Service if applicable.
- The emergency procedures to be used in the case of fire, including.
- Sounding the fire alarm.
- Notifying the fire department
- Instructing site personnel
- Firefighting procedures
- And integrating with existing emergency procedures.
- The control of fire hazards in and around the building.
- Maintenance of firefighting facilities.

63.2 Fire Alarm Systems Shut Downs

Contractors must inform the Client in writing 7 days prior to any part of a fire system being shut down.

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63.3 Alternate Procedures

When required by the Client, contractors will develop alternative procedures to follow during a fire alarm shutdown.

Alternate warning device(s) will be used with procedures posted stating fire alarm is out of service, the building/area affected, duration of shutdown and how to activate the alternate warning device(s).

63.4 Cutting, Welding, and Hot Work

Prior to cutting or coring of concrete suspended slabs, cast in place or pre-cast walls, slab on grade the contractor must either X-ray the slab or if X-ray is not feasible provide other approved alternate method for determining live electrical concealed in slab or walls. Signage shall be posted to ensure no one enters the affected area during X-raying.

In all cases where cutting or grinding is done outside a workshop, screens to prevent veld fires shall be in place to contain sparks from the process. The same principle will apply where rail welding is in progress.

When welding or cutting work is performed, an adequate number of approved fire extinguishers shall be provided by the contractor. The contractor shall provide a thirty minute fire watch after the operations has ended to ensure that no fire starts.

- Hot work permit must be displayed.
- Employee must be competent.
- All oxy-acetylene welding equipment shall be fitted with a flash back arrestor
- All oxy-acetylene pipes must be clamped with the correct parallel hose clamps to separate it in an emergency.

63.5 Majuba Rail Project Fire Safety Guidelines

(a) Fire Systems

Fire systems must never be removed from service in an occupied building unless a trained and qualified person, capable of reinitiating the system and in communication with persons performing the work, is standing at the fire alarm panel; or alternative procedures are taken to ensure that all persons in the building can be informed promptly should a fire occur, and the Fire Department including Majuba Rail Project Security is notified.

(b) Construction Sites

- **Fire Safety Plan:** Prior to the commencement of construction or building alterations, a fire safety plan and risk assessment shall be prepared for the construction site.
- **Fire Warning:** A suitable means of alerting site personnel to a fire shall be provided, and capable of being heard in all areas of the building.
- **Portable Extinguishers:** suitable extinguishers must be available on the construction site and in cases of hot work, be readily available at the location.

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- **Combustible Liquid and Flammable Liquid Storage:** storage of combustible and flammable liquid on the construction site is not permitted unless stored in approved flammable cabinets or outdoors away from the buildings.
- **Smoking Restrictions:** Smoking is not permitted indoors, at entrances to buildings or near air intake systems in accordance with Majuba Rail Project Policy and legislation requirements.
- All sites shall be fitted with an alarm system.

64. Offices and Camp sites

- Contractors must develop a fire safety procedure for the office / camp site buildings, which must meet the requirements of the local authority fire department and the OHS Act Environmental regulations for workplaces, regulation 9.
- The fire plan must include emergency escape routes, supply of appropriate fire extinguishing equipment, appropriate signage, maintenance of the extinguishing equipment, location of the equipment, appointments of fire officials.
- The storage of flammable substances within offices / camp site is prohibited. Such storage shall be done in the appropriate flammable liquid storage facilities located away from buildings.
- A suitable fire warning system for alerting office personnel to a fire shall be provided, and capable of being heard in all areas of the building.
- Smoking is not permitted indoors, at entrances to buildings or near air intake systems in accordance with the Tobacco Control Act and Majuba Rail Project Policy and legislation requirements.

65. Barricading (Guarding of Excavations, Trenches and Floor Openings)

In areas where the restriction or prevention of unauthorised persons/members of public/passers-by is required, barricading requirements shall be adhered to.

Requirements for Barricading (if risk assessments require more stringent mitigation measures than those stringent measures shall apply): -

- Name and contact detail of person and Contractor Company that is responsible for the barricading shall be posted on the actual barricading.
- All barricading shall be of the rigid type.
- All openings and edges must be barricaded with solid barricading to withstand an impact of at least 200 kg.
- Only solid (scaffolding or stand-alone) barricading with Orange "Snow Netting" will be allowed.
- Bollards (containers filled with liquid) can be used as solid barricading (exempted for use inside power plant units).
- Physical barriers to prevent persons falling into openings in floors, stairwells, staircases, open-sided buildings and any structure in the course of erection, where dangerous openings exist.
- Contractors must pre-plan the delivery of floor grating, stair treads, landings and handrails to ensure safe access and protection for persons working on structures.

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No danger tapes are allowed for barricading purposes.

The contractors barricading standard must accompany the SHE plan.

66. Electrical Installations and Machinery on Construction sites

- The Principal Contractor shall ensure that electrical installations and machinery on construction sites conform to the requirements of the OHS Act and the relevant SANS standards.
- Before construction commences and during the progress thereof, adequate steps are taken to ascertain the presence of, and guard against, danger to workers from any electrical cable or apparatus which is under, over or on the site;
- The Principal Contractor shall ensure that all parts of electrical installations and machinery are of adequate strength to withstand the working conditions on construction sites;
- The control of all temporary electrical installations on the construction site is designated to a competent person who has been appointed in writing for that purpose;
- All temporary electrical installations used by the contractor are inspected at least once a week. This must be done by a competent person and the inspection findings must be recorded in a register that's kept on the construction site.
- A Certificate of Compliance (CoC) must be issued by a competent person for each installation.
- All electrical machinery is inspected by the authorised operator or user on a daily basis.
- The person inspecting the electrical machinery must use the relevant checklist when conducting the inspection. He must also record the findings and keep the register on the construction site.

67. Permit to Work

Contractors must adhere to the approved Permit to Work System to control identified high risk activities. There will be only one Permit to Work system on the construction site.

If the type of work requires a permit, then contractors must be trained, competence assessed and authorised in writing to perform the duties of an authorised or responsible person as contemplated in the applicable Majuba Rail Project regulations e.g.

- Operating Regulations for High Voltage Systems.
- Project Safety Requirements.
- Hot work.
- Radiation.
- Confined space work.

The Client is to provide more details on the permit to work system for the specific work to be conducted by the Principal Contractor.

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68. Radiography, Ultrasonic, Non-Destructive Testing (NDT)

The Contractor carrying out radiography, ultrasonic or other non-destructive testing (NDT) on the site must comply with the requirements of the relevant legislations, codes of practice and any specific Client procedures. In particular, the Contractor shall ensure that:

- No radioactive sources may be brought onto site without prior written consent of the Client.
- Where a statutory appointment exists, the contractor shall appoint in writing, a suitably qualified and experienced Radiation Protection Officer to provide advice on the observance of the law and other relevant health and safety matters.
- Radiography areas are clearly identified by the erection of suitable barriers, sirens, warning notices and / or flashing lights. Vehicles transporting radioactive materials/isotopes shall be clearly identified.
- Radiation operators must submit proof of certification.
- Sources must be stored according to legal requirements.
- All contractors must be informed of X-ray activities.
- X-ray work may only commence with a valid permit to work.

Refer to requirements in:

- SANS code of practice: 100228: "Code of Practice for the Identification and Classification of Dangerous Substances and Goods". Published by the South African Bureau of Standards.

69. Excavations, Trenches and Floor Openings

- Requirements in Construction Regulation 13 of the OHS Act, shall apply.
- Digging, excavation, or driving a peg, pile or spike into the ground operations by the Contractor may not commence without the written authorisation from the Client.
- Prior to commencing work on any excavation or trench, utility owners shall be contacted and advised of the proposed work and to determine the location of all underground installations; i.e., sewer, telephone, water, fuel, electrical, etc.
- Overhead hazards shall be assessed and dealt with prior to commencement of work.
- Adequate precautions shall be taken by the Contractor to prevent slumping of excavations, as well as to prevent rocks and loose material falling onto workers.
- All excavations done by the Contractor are to be clearly demarcated and barricaded to prevent accidental access.
- Only solid barricading will be used at areas where a fall hazard is present. Solid barricading and / or hole covers shall be provided around all holes or openings to prevent any person being injured as a result of a fall. Danger tape may only be used as a pre-warning to make the solid barricading more visible and to prevent persons from coming close to the danger area.
- Barricading must be placed as close (500mm from the edge) as possible to the excavation.

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- If an excavation or trench endangers the stability of buildings or walls, shoring, bracing, or underpinning will be provided. Excavations and trenches that are adjacent to backfilled excavations or trenches, or which are subject to vibrations from railroad traffic, road traffic, or the operation of machinery (e.g., shovels, cranes, trucks), must be secured by a support system, shield system or other protective systems (i.e., sheet pile shoring, bracing).
- Where it is impracticable to provide fixed guard railing, effective removable barriers shall be provided at all unguarded openings in guard railing or floors, and shall be maintained in position at all times until the hazard no longer exists.
- Warning signs and flashing warning lights at night shall be displayed in suitable positions to warn any persons approaching the area of the location and extent of any excavation.
- No material shall be placed within 3m of the excavation edges.
- All excavations must be on the register and inspected daily and declared safe by the contractor's appointed competent person before work commences and after inclement weather, and findings shall be noted in the said register.
- Client to review the said register on a pre-determined frequency not exceeding seven (7) days.
- There shall be a supervisor present at all times while work is being performed in an excavation
- There shall be an escape ladder every twelve meters in all excavations
- No work shall commence in an excavation unless the excavation has been declared safe in writing by the appointed competent person.

70. Blasting

- Requirements of the Explosives Regulation of the OHS Act shall be adhered to.
- A copy of the written permission from the Chief Inspector of Department of Labour shall be obtained before use of any explosive material – refer to requirement in Explosives Regulation 13 of the OHS Act.
- Requirements for the transporting and storage of explosives to be in accordance to Explosives Regulation 13.4 of the OSH Act and SANS 100228 "Code of Practice for the Identification and Classification of Dangerous Substances and Goods" as published by the South African Bureau of Standards.
- Should blasting be necessary during the construction phase, the necessary authorisation must be secured from the relevant local municipality. Adjacent land owners and the client must be notified prior to the blasting activities on site via a "Blasting Notification".
- The Construction operations may necessitate that ground and rock be blasted. A siren shall be sounded prior to a blast. Warning flags shall be displayed at the entrance to the area of the blast and guards will be placed at strategic points.
- Should the Contractor be required to carry out blasting operations, he is to fully acquaint himself with, and adhere to the blasting procedures and legislation. Every blast must be cleared with the Client before charges are placed.
- Only a licensed operator is allowed to blast.
- Inform all people in the area where the blasting is going to take place

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71. Working near Public Roads

- The Principal Contractor, his employees and contractors required to work on or nearby roadways shall wear high visibility vests, and be protected by red cones or flags during daylight and by red or amber flashing lamps at night.
- Work areas must be adequately barricaded so as to prevent unauthorised access.
- Road traffic warning signs shall be placed well ahead of the work area.

72. Work Stoppage

The aim of the section is to outline the conditions under which work will be stopped and the process to be followed to ensure that the worksite is rendered safe.

The temporary stoppage of an activity/activities or task(s) may be due to SHE concerns, including the following circumstances which shall not warrant any financial compensation:

- Ad hoc safety intervention by Majuba Rail Project management: All work of a similar nature may be stopped as the result of an occurrence of a serious incident. The relevant contractor/supplier shall be required to comply with, and/or verify, the conditions stipulated in the work stoppage instruction pack.
- Ad hoc safety intervention by any person, especially SHE functionaries, may be due to unsafe work or unsafe behaviour by the contractor. The conditions that gave rise to the work stoppage will determine the corrective measures to be taken urgently to protect the health and safety of employees and protect the environment and plant or equipment, etc.

The process to be followed is:

- The relevant activity must be stopped;
- The Majuba Rail Project Site/Project Manager and/or Principal Contractor and his contractors shall immediately remove the workforce from the work area and correct the health and safety deficiencies by allowing only the people in the area that are competent to make the area safe.
- The Principal Contractor and his contractors shall ensure that no other work is being performed during this time. Should the estimated time from the outset to make the area safe where life threatening/imminent danger situations exist, then the area will be barricaded and a sign placed with the wording "Unsafe Area – Authorized Access Only".
- The Majuba Rail Project Construction/Project Manager shall review the affected parts/sections of the SHE specification with the purpose of providing sufficient SHE information to the Principal Contractor.
- The Principal Contractor shall then revise the relevant sections in the SHE plan to accommodate the changes.
- The Majuba Rail Project construction/project manager must ensure that the revised provisions in the SHE plan are adequate and must approve it before the work activity commences.
- Before the workforce is allowed back in the area, Principal Contractor and his subcontractors shall ensure:
 - The area is re-inspected by Contractor Safety Practitioner and supervisor and note corrective actions taken;

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- Declare the area safe for work by signing off on the "work stoppage" notice issued by the Majuba Rail Project construction/Project Manager.

Refer to requirements of Construction Regulation 4(q) of the OHS Act.

NOTE: *Work stoppages that are initiated due to SHE related incidents shall not warrant any financial compensation claim lodged against Majuba Rail Project.*

73. SHE Audits

Majuba Rail Project reserves the right to conduct unannounced audits on contractors

74. Compliance and Approval of Contractor SHE Plan

The Contractor's SHE Plan will be audited against a compliance checklist so as to confirm compliance to the requirements in the Majuba Rail Project SHE specifications. Once compliance is confirmed, only then will the contractors SHE plan be approved by the Client.

75. Contractor SHE Performance Evaluation

Majuba Rail Project shall evaluate contractor SHE performance on an ongoing basis against the Majuba Rail Project requirements.

76. Internal Audits

Contractors are required to conduct internal audits on both their employees and their contractors on the implementation of their SHE Plan on a monthly basis or when the scope of work changes. A summary of the findings and the proposed corrective actions shall be submitted to the Majuba Rail Project Project/Site Manager on the last day of the audit. The report shall be submitted within one week after completion of the audit

77. Third Party Legal Compliance Verification Audits

If Contractors have a third party legal compliance verification audit that is to be conducted on the site activities, then a copy of the summary of the findings and the proposed corrective actions shall be submitted to Majuba Rail Project Project/Construction Manager. The written report shall be submitted within one week after the completion of the audit.

78. SHE Plan Audits

There will be monthly audits conducted by Majuba Rail Project on the Principal Contractor/s and/or contractors. These audits shall be attended by the contractor's site manager or his representative. Findings shall be addressed as soon as possible

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79. Investigation of Fatalities / Injuries / Diseases / Near Misses (Principal Contractor and Contractors)

- The Principal Contractor shall report all incidents/accidents as required in terms of legislation including near miss incidents, first aid, medical treatment, lost time incidents (lost time injuries and fatalities); Section 24 and 25 incidents; electrical contact; major equipment damage; chemical spillage and other environmental incidents immediately to the emergency co-ordinator.
- All incident reporting, recording, classification and investigation will be done according to the requirements set out in the Majuba Rail Project Standard.
- The Chairperson of the SHE Steering Committee shall determine which employee and contractor Loss Time Incidents, Environmental Sustainability Index Incidents, Repeat Incidents and Near-miss Incidents must be presented by the relevant Managing Director of the contracting company. If the relevant Managing Director of the contracting company is not in attendance the incident presentation will not be allowed. The purpose of these presentations are to confirm that all the root causes were identified, addressed and closed out and furthermore it serves as an opportunity for sharing the lessons that were learnt from each of those incidents.
- All fatal incidents, employee and contractor incidents, shall be reviewed by the committee within one week after the incident. Preliminary investigation information shall be shared.
- All employee and contractor incidents that were in contravention of any one of the Majuba Rail Project Lifesaving Rules must be presented by the relevant Manager or the Managing Director of the contracting company.
- If it is found that the Principal Contractor or his contractor are hiding/not reporting incidents then steps (which may include disciplinary action) shall be taken against the Line Management of the Principal Contractor and contractor.
- A comprehensive and detailed investigation report shall be submitted to the Majuba Rail Project manager.
- The Principal Contractor shall ensure that all accidents/incidents are investigated by him/her and are discussed at the Project SHE committee meeting held on site.
- Accidents/incidents shall be investigated and recorded in terms of the requirements of the Occupational Health and Safety Act, the Mine Health and Safety Act, the National Environmental Management Act and National Water Act as applicable.
- The Client/Agent shall be allowed to participate in any accident/incident investigation if the accident/incident is directly linked to any activity within the scope of the construction project.
- Case studies will be compiled for all near misses, lost time incidents and fatalities.
- The Principal Contractor shall keep on site/workplace a record of all accidents and incidents reported in the form of the OHS Act Annexure 1 investigation form as referenced in the OHS Act. (Incident Investigation Report)
- The Principal Contractor shall provide SHE related statistics to the Client at the end of each month.
- Majuba Rail Project reserves the right to conduct an independent investigation in any incident.

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- In addition to the Principal Contractor and his contractor investigations, Majuba Rail Project will also, separately, conduct its own separate investigation. The Principal Contractor and contractor would be required to co-operate with the Majuba Rail Project investigation committee. No joint investigations would be held, i.e.: with Majuba Rail Project and Principal Contractor. Majuba Rail Project team shall define Parties to be involved in the investigations.
- All investigation teams must include at least 1 person (from both the Majuba Rail Project and Principal Contractor) that is competent in Root Cause Analysis Technique.
- Contractors shall ensure the incident/accident scene is not disturbed to preserve evidence for investigation purposes unless it is done to prevent further injury or for rescue purposes (OHS Act, Section. 24(2) applies). Investigation shall begin promptly after the incident/accident. Where applicable and with proper authorization, photographs may be taken of the scene of the incident as well as any equipment involved in the incident. The results of the investigation together with the Root Cause Analysis of the incident and the committee's recommendations for preventative action(s) shall be submitted to Majuba Rail Project Manager, within 3 days after the incident occurred unless proof can be given that due to technical or other difficulties, more time is needed.
- Contractors shall also review and analyse all incidents; to establish trends that may indicate deviations from established work standards and safe working procedures/practices. The Contractor shall take appropriate corrective action and submit report to Majuba Rail Project Manager.
- The Contractor shall investigate all incidents immediately and give the Majuba Rail Project Manager a report within the specified time frame, which shall include:
 - Date, time and place of incident;
 - Description of incident;
 - Root cause of incident/accident;
 - Type of injury (if any);
 - Medical treatment provided (if any);
 - Persons involved;
 - Names of witness/s;
- It is required that all corrective actions are closed out within 3 months. If this is not practicable within the time frame, then it is to be submitted at a later date agreed to by the Majuba Rail Project Manager).
- Please note that providing the Accident/incident investigation report does not exempt the Principal Contractor from providing accident reports required by Statutory Authorities, in particular, the Contractors' responsibility for reporting accidents in accordance with the requirements of the OHS Act and COIDA Act.
- It is essential that the Principal Contractor demonstrate that corrective action has been taken and that corrective action is communicated by a predetermined means to all Contractors staff affected. All corrective actions must be closed within 3 months from the date of issuing of investigation report.

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- Feedback on the status of close out of corrective actions must be communicated at the relevant forums.
- The Contractor shall compile and implement procedure for:
 - Reporting and investigation of incidents – This document sets out the procedures to be followed when reporting, recording and investigating incidents that occur on a construction site.
 - Workplace Injury and Disease Recording – The purpose of this document should be a guide to the Principal Contractor on how to accurately evaluate, define and categorise fatalities, injuries and occupational diseases in a data format for the calculation of performance indicators for health and safety.

80. Health and Safety Behaviour Observations and Inspections

The objective of behavioural safety observations is to assess and address the actual safe and unsafe behaviours of people in the workplace; as well as workplace conditions - which are caused by the actions or non-actions of employees, contractors or their supervisors.

81. SHE Statistical and Non-Statistical Reports

The aim of this section is to outline all the incidents the Contractors must report to Majuba Rail Project. Reporting must not be later than 08:00 of every Thursday. :

- Incidents: Lost time, medical; first aid, near misses reported
- Manpower numbers per Principal Contractor and Contractor Company
- Actual man-hours worked
- Status on incidents investigated and recommendations closed out
- Status on audits conducted and findings closed out.
- Majuba Rail Project team shall define and provide a reporting template.

82. Contractors SHE Plan

All Contractors must use the applicable SHE information herein to develop a suitable and sufficient SHE plan, submitted with tender documents, which will indicate to the Client/Agent the level of compliance to the SHE requirements. The safety, health and environment plan shall identify each construction activity to be undertaken by the Contractor, the foreseeable internal and external hazards, the specific precautions and controls that shall be necessary to ensure that the works proceeds safely and without risks to health or adjacent operations.

Upon discussions with the Principal Contractor, a final accepted SHE plan would be signed and approved. The Principal Contractor is thereafter required to do the same when procuring other contractors. The Principal Contractor will not be allowed to commence work on site until the SHE plan has been approved.

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When a Principal Contractor intends appointing a contractor, the Principal Contractor shall ensure that his SHE Plan is based on the Majuba Rail Project SHE Specification that was issued for the project and he shall further more ensure that the activities of the contractor are included in the SHE Plan to be submitted for approval.

The plan shall demonstrate management's commitment to SHE and shall, as a minimum include the elements as specified in Annexure D

The safety plan shall be reviewed to ensure that it fully addresses all the issues and complies with the requirements of the SHE Specifications and contract. If necessary the Contractor shall amend the SHE Plan as required by the Client.

83. Omissions of this SHE Specification

By drawing up this SHE specification Majuba Rail Project has endeavoured to address the most critical aspects relating to SHE issues in order to assist the contractor in adequately providing for the health and safety of employees on site.

Should Majuba Rail Project not have addressed all SHE aspects pertaining to the work that is tendered for, the contractor needs to include it in the SHE plan and inform Majuba Rail Project of such issues when submitting the tender.

84. SHE File

The Contractor must have a SHE file in which records of this specification and the SHE plan are kept. All information required in the specification and plan, for the duration of the Principal Contractor and contractors contract, is to be recorded in the file.

- The SHE file that will be maintained will be per construction site.
- The Principal Contractor must also record on the file:
 - Information about removal or dismantling of installed plant and equipment
 - Hands information about equipment needing cleaning and maintenance, for future purposes
 - Nature, location and markings of services
 - As-built drawings

The file must be kept on site and must be available on request for audit and inspection purposes.

The SHE file shall be handed over to the Client at the end of the Principal Contractor's contract.

85. Hours of Work

All work conducted on site shall fall within the legal requirements in accordance with the Basic Conditions of Employment Act.

The Principal Contractor will notify their Majuba Rail Project Manager/Supervisor of any work that needs to be performed after hours according to the agreed arrangements. (The application needs to be submitted timeously). Where applicable, the notification should include proof of application, for overtime, to the Department of Labour and /or the letter of approval form the Department of Labour

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85.1 Night Work

No night work shall be performed without approval and the required documents approved by the client. Relevant documents required will include the following as a minimum:

- Risk assessment to address actions during the night
- Fatigue management plan
- Safe work procedure and method statement
- Lighting plan
- Traffic management plan

86.2 Overtime

The Principal Contractor will notify their Majuba Rail Project Manager/Supervisor of any work that needs to be performed after hours according to the agreed arrangements. (The application needs to be submitted timeously). Contractors shall be aware of the effects of human fatigue and regulate overtime accordingly. The baseline risk assessment must be reviewed to include the management of overtime work.

86. Employees' right of refusal to work in an unsafe situation

Employees have a duty to take reasonable care of their own as well as other persons health and safety at work and to cooperate with the employer, carry out lawful orders, including reporting unsafe situations and incidents.

87. Contract Sign Off

On completion of the project, all appointed contractors shall close out their project documentation and SHE Files and submit such to the Principal Contractor. The Principal Contractor shall likewise close out his/her project documentation and SHE files and handover it to the Majuba Rail Project Manager.

88. Compulsory Work Stoppage

Majuba Rail Project will initiate compulsory work stoppage(s) each year to promote Health and Safety on site. The target audience for these interventions will be employees as well as contractors. The intent of these engagements will be to focus on factors such as the proactive reviews of site-specific project risk registers, Housekeeping, SHEQ operational plans and their implementation, and audit findings and their associated action plans.

Topics based on risks and incidents shall be distributed as discussion topics and responsible for it happening on site will be the construction manager.

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89. Revision history

Date	Rev.	Compiler	Remarks
11/10/2016	7	J H Deysel	Review specification to be in line with Level 2 specification 39-29
17/8/2017	8	J H Deysel	Added: 35. Wind speed limitation
14/01/2020	9	MJ Ramoleko	New Revision
20/02/2020	10	MJ Ramoleko	Added 11.1 Project and Scope of Work Details Reviewed 72. Work stoppage 88. Compulsory work stoppage

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**Annexure A
SHEQ policy**

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Eskom's Safety, Health, Environment and Quality (SHEQ) Policy Poster (32-727) Rev 5

Eskom will integrate and/or incorporate safety, health, environment and quality requirements through the plan-do-check-act (PDCA) quality cycle in its activities so that decisions made ensure the consideration of economic development, environmental duty of care, and social equity to continually improve performance and achieve stakeholder requirements.

Eskom's commitment to safety, health, environment, and quality management is achieved through:

1. implementation of management systems in accordance with, but not limited to ISO 9001, ISO 14001, and OHSAS 18001 requirements;
2. fulfilling conformance and compliance obligations to which Eskom subscribes and sets to meet the intent of this policy;
3. addressing the needs and expectations of Eskom's customers and stakeholders;
4. setting safety, health, environment and quality intended outcomes and measuring performance against these to ensure continual improvement;
5. applying risk-based methodology by conducting hazard identification, environmental risk and opportunity assessments, fitness for duty assessments and medical surveillances;
6. safety, health, environment and quality training and awareness for employees;
7. engaging stakeholders by promoting open communication and engagement that is safety, health, environment and purpose-driven;
8. ensuring that Eskom's contractors meet Eskom's safety, health, environment and quality requirements;
9. ensuring that adequate resources are available for safety, health, environment and quality management;
10. proactively managing Eskom's environmental footprint, prevention of pollution and environmental degradation, pursuing a low-carbon future, and prioritising energy and water efficiency and conservation within and outside Eskom by transitioning to a cleaner energy mix;
11. engaging, directing and supporting persons to contribute to the effective management of SHEQ requirements;
12. ensuring the sustainable use of resources, climate change mitigation and adaptation, and protection of biodiversity and ecosystems.

Eskom's principles and rules that underpin the way in which it approaches safety, health, environment and quality are as follows

1. Poor quality performance and occupational health, safety and environmental incidents are preventable.
2. SHEQ performance is achieved through a Zero Harm culture.
3. Management is accountable for safety, health, environment and quality and each employee is responsible for implementation and compliance.
4. Conducting business with respect and care for people, the environment and assets.
5. Eskom strives to ensure that Zero Harm befalls its employees, contractors, the public and the environment:
 - Zero fatalities
 - Zero injuries
 - Zero environmental incidents
 - Zero tolerance
 - Zero defects
6. Eskom's Life-saving Rules apply to all employees, contractors and visitors:
 - Open, isolate, test, earth, bond, and/or insulate before touch
 - Hook up at heights
 - Buckle up
 - Be sober
 - Permit to work
7. **No operating condition, or urgency of service, justifies exposing anyone to negative risks arising out of Eskom's business, causing an incident with health, safety, environmental and quality consequences.**
8. Governance, decision-making processes and plans are based on safety, health, environment and quality intended outcomes and criteria.


Mr Phakamani Hadebe
GROUP CHIEF EXECUTIVE

Issued by Risk & Sustainability Division June 2018 SHEQ Policy Poster Rev 5 (Review date: August 2021)

Annexure B List of appointments and Competencies

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The Principal Contractor shall ensure that competent persons are appointed in writing in accordance with the following applicable appointments.

Copies of all the appointments shall be kept in the SHE File

Legal Appointments	Competencies/ Training
<ul style="list-style-type: none"> OHS Act, Section 16(2) – Assistant to Chief Executive Officer. 	
<ul style="list-style-type: none"> OHS Act, Section 17 – Health and Safety Representative. 	<ul style="list-style-type: none"> General Health and Safety Training Health and Safety Representative Training Hazard Identification and Risk Assessment Training Incident Investigation and Root Cause Analysis Training
<ul style="list-style-type: none"> OHS Act, Section 19 – Health and Safety Committee Member (if there are 2 or more Health and Safety Representatives then there will be a Health and Safety committee) 	
<ul style="list-style-type: none"> OHS Act, GSR 3 (4) – First Aiders (One first-aid trained per team (as per project risk profile of workers 	<ul style="list-style-type: none"> In possession of a valid first aid certificate issued by any one of the following: The SA Red Cross Society; the St John's Ambulance; the SA First Aid League; or a person or organisation approved by the Chief Inspector for this purpose.
<ul style="list-style-type: none"> OHS Act, GSR 5(1) – Person that pronounces and certifies a confined space safe for the duration of work being conducted (applicable for confined spaces). 	
<ul style="list-style-type: none"> OHS Act, DMR 17(2) Goods Hoist Inspector 	
<ul style="list-style-type: none"> OHS Act, GAR 9 (2) Incident/Accident Investigator 	<ul style="list-style-type: none"> Incident Investigation course by an accredited Service Provider.
<ul style="list-style-type: none"> OHS Act, DMR18 (11) Lifting Machinery Operator (Appointment or Permit) 	
<ul style="list-style-type: none"> OHS Act, DMR18 (5) Lifting Machinery Inspector 	

Legal Appointments	Competencies /Training
<ul style="list-style-type: none"> OHS Act, DMR 18 (10) (e) Lifting Tackle Inspector 	
<ul style="list-style-type: none"> OHS Act, EMR 9 Portable Electrical Equipment Inspector 	
<ul style="list-style-type: none"> OHS Act, HCS Regulations 3 (3) Hazardous Chemical Substances Co-coordinator 	

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<ul style="list-style-type: none"> OHS Act, CR 5(1) (k) Appointment of the Principal Contractor by the Eskom Client/Agent (to be done when contract is awarded) 	
<ul style="list-style-type: none"> OHS Act, CR 7 (1) (c) (v) Sub-Contractor Appointment by the Principal Contractor (If appointing Sub-Contractors) 	
<ul style="list-style-type: none"> OHS Act, CR 8 (1) Construction Manager (appointed by the Contractor OHS Act Section 16(2) Appointee) 	<ul style="list-style-type: none"> General and Health and Safety course Legal Liability course OHS Act and Regulations course (latest version of the Act and regulations) Incident Investigation and Root Cause Analysis Training Hazard Identification and Risk Assessment Training Job Observations Training An accredited supervisors safety course Register with the relevant council as a professional (see the SACPCMP website http://www.sacpcmp.org.za for further information)
<ul style="list-style-type: none"> OHS Act, CR 8 (2) Assistant Construction Manager (appointed by the Contractor OHS Act Section 16(2) appointee) 	<ul style="list-style-type: none"> General and Health and Safety course Legal Liability course OHS Act and Regulations course (latest version of the Act and regulations) Incident Investigation and Root Cause Analysis Training Hazard Identification and Risk Assessment Training Job Observations Training An accredited supervisors safety course Register with the relevant council as a professional (see the SACPCMP website http://www.sacpcmp.org.za for further information)

Legal Appointments	Competencies/ Training
<ul style="list-style-type: none"> OHS Act, CR 8 (7) Construction Supervisors (appointed by the Contractor OHS Act CR 8(1) appointee) 	<ul style="list-style-type: none"> General and Health and Safety course Legal Liability course OHS Act and Regulations course (latest version of the Act and regulations) Incident Investigation and Root Cause Analysis Training Hazard Identification and Risk Assessment Training Job Observations Training An accredited supervisors safety course
<ul style="list-style-type: none"> OHS Act, CR 8 (8) Assistant Construction 	<ul style="list-style-type: none"> General and Health and Safety course

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Supervisors (appointed by the Contractor)	<ul style="list-style-type: none"> • Legal Liability course • OHS Act and Regulations course (latest version of the Act and regulations) • Incident Investigation and Root Cause Analysis Training • Hazard Identification and Risk Assessment Training • Job Observations Training • An accredited supervisors safety course
<ul style="list-style-type: none"> • OHS Act, CR 8 (5) Construction Health and Safety Officer 	<ul style="list-style-type: none"> • Registered with a statutory body approved by the Chief Inspector (SACPCMP)
<ul style="list-style-type: none"> • Based on the scope and size of the project, a full-time or part-time SAIOH registered occupational hygienist must be appointed in writing. 	<ul style="list-style-type: none"> • National Diploma in Environmental Health / Bsc in Occupational Hygiene • Intermediate certificate in mine environmental control for open cast and advance certificate in mine environmental control for underground mining • Registration and accreditation from a recognised Health and safety professional body • OHS Act and Regulations (latest version of the Act and regulations) • Mine Health and Safety Act, 1996 and its Regulations • COID Act (latest version of the Act) • Incident Investigation and Root Cause Analysis • Hazard Identification and Risk Assessment Training • Emergency Preparedness co-ordination training
<ul style="list-style-type: none"> • Environmental practitioners to the project 	<ul style="list-style-type: none"> • National Diploma in Environmental Management or Environmental Science or Nature Conservation plus minimum 3 years' experience in Construction Management supported by the following short courses: <ul style="list-style-type: none"> • Environmental legislation • Waste Management • Environmental Auditing and risk assessment • Implementation of Environmental Management Systems (ISO 14001) • Handling & Storage of Hazardous Substances.
NON STATUTORY APPOINTMENTS	

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(ESKOM REQUIREMENTS)	
<ul style="list-style-type: none">• Emergency Planning Co-ordinator• Fire Official• Chairperson of Health and Safety Committee• Environmental control officer – each contractor shall appoint and provide a full-time suitably qualified and competent environmental officer (EO) for the duration of the work, with a minimum average ratio of one EO per 500 employees.	

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Annexure C Contractor Weekly Statistics

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Contractors Weekly Health and Safety Report

Date:

Contractor Name	
------------------------	--

Week No		Week Ending	
----------------	--	--------------------	--

**TARGET SET AT DAY WITHOUT LTI INCIDENT
DAYS WORKED WITHOUT LTI :**

Employee break-down for the week:							
	Thu	Fri	Sat	Sun	Mon	Tue	Wed
Number of employees/day							
Hours worked for the day							

Total actual hours worked on the Project in the week	
Total actual hours worked on the Project in the calendar month	
Total actual hours worked on the Project	

Incidents Statistics	Week	Month	Project
No of Near Miss			
No of First Aid			
No of Medical			
No of LTI			
No of Fatality			
No of Property/Equipment Damage			
No of NIHL			

Date of last LTI	
Days since last LTI	
Hours since last LTI	

Lost Time Incident Rate (No of INC x 200,000 / Project Hrs)	
12 Months Rolling Average	
Project to Date Hrs	

Key Issues: (open LTIs/MED's, trends/interventions/successes, etc.)
Leading indicators identified for the week: (Trend analysis on BBS/VFL Observations, etc.)

Majuba Rail Project Monthly Nomination for Awards:	
Name and Surname:	
Reason for nomination:	

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**Annexure D
Minimum elements of the SHE Plan**

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The SHE plan shall demonstrate management's commitment to SHE and shall, as a minimum include the following elements.

<ul style="list-style-type: none"> • The Principal Contractor/s and their contractor/s' SHE/Q Policy • Management structure and legal appointments (company organogram, Resources, Roles, Responsibility and Authority) and their competencies. • SHE COMPETENCIES: <ul style="list-style-type: none"> ➢ SHE competencies for SHE Personnel and Registration of OHS Professionals in cases where the legislation dictates a need for such professionals ➢ SHE competencies for supervisors (personnel in charge of supervising/managing workers) • Letter of good standing with a compensation insurer. • Selection, placement and training procedures, including induction and ongoing training in 'Basic Safe Work' and Occupational Health and Safety training for newly hired or promoted supervisors • Occupational Health and Safety communications and meetings, including daily safe task instructions and project safety meetings. • Safety awareness promotions • Observations/inspections/audits arrangements • Contractor senior management involvement with Company's staff in consultative processes and daily management Safety walkabouts. • Occupational Health and Safety Workplace Environment, including provision for monitoring employee exposures to noise, dust, etc. • Personal Protective Equipment arrangements and Personal protective equipment rules. • Control of dangerous and hazardous substances • Hazard Identification Risk Assessment and controls and communication • Accident incident reporting, recording, investigation and analysis, which ensure that corrective action, are taken and this action is communicated to report initiators • Audits to ensure compliance with safety plans. • Daily site safety inspections. • Inspection of plant, tools and equipment prior to introduction to site and regularly thereafter • Medical and first aid arrangements • Emergency preparedness and response procedures • Substance abuse management • Record keeping, including details of what is kept and for how long. • Detailed financial allocation for health and safety. • Selection, procurement and management of other contractors • Maintenance arrangements of machinery and equipment • Workers welfare facilities • Induction and toolbox talk arrangements • Training arrangements • Letter of good standing with a compensation insurer. • Housekeeping programs • Traffic management plan (vehicles and pedestrians) • Medical Surveillance program • Performance Review and improvements on the Project • Past health and Safety performance statistics of the company (at least two years) • •

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Annexure E Safe Work Procedures and Planned Task Observations

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WRITTEN SAFE WORK PROCEDURES AND JOB OBSERVATION

TASK:

B.U. _____ DEPARTMENT _____ SECTION _____
TASK _____

DATE _____

PERSON BEING OBSERVED _____

NO	STEPS	SAFETY STEPS	CRITICAL STEPS	JOB OBSERVATION		COMMENTS
				YES	NO	
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						

COMMENTS:

Describe any practices that deserve compliment or correction:

SIGNATURE OF PERSON OBSERVING: _____

SIGNATURE OF PERSON BEING OBSERVED: _____

FOLLOW-UP ACTION:

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Annexure F HIRA Template

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**Annexure G
MRP Site Organogram**

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Annexure H OHSAS 18001 Standards and Procedures

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MAJUBA RAIL PROJECT OHSAS 18001 STANDARDS AND PROCEDURES

- 240-77697535 - Hazard identification, risk assessment and determining controls
- 240-77697589 - Legal and other requirements
- 240-77697597 - Objectives and programmes
- 240-77697605 - Resources, Roles and Responsibilities
- 240-77697477 - Competency, Training and Awareness
- 240-77697465 - Communication, Consultation and Participation
- 240-77697483 - Control of documents
- 240-77697615 - Operational control
- 240-77697495 - Emergency preparedness and response
- 240-77697519 - H&S Monitoring and Measurement
- 240-77697501 - Internal audit standard
- 240-77697477 - Health and safety training and awareness
- 240-77697573 - Legal and Other Requirements Compliance Evaluation
- 240-77697563 - Incident Investigation, Non-conformity, Corrective and Preventive Action
- 240-77697485 - Control of Records
- QUA-MRP-003 - Document management requirements
- 240-77697549 - Health and Safety Management review
- 240-86652562 – Lifting Equipment
- 240-86652484 – Personal Protective Equipment
- 240-103180138 - Excavation
- 240-74800162 – Traffic management
- 240-86652506 – Driver management
- 240-96794192 – Occupational Hygiene Programme
- 240-86652518 – Working at heights
- 240-86652494 – Substance abuse
- 240-86652264 – Behaviour Based safety
- 240-117301830 – Close out procedure

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