Eskom	Specification	Medupi Power Station Project

Title: **Hydrogen Plant and Nitrogen Plant (H2N2) Safety, Health and Environmental (SHE) Specification**

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Content

1. Introduction

Eskom Medupi Power Station Project is committed to achieving and demonstrating sound Safety, Health and Environmental (SHE) management by controlling SHE risks/impacts consistent with its SHEQ policy and objectives.

Zero harm is one of ESKOM values, the aim of Eskom's adoption of Zero Harm as one of its values is to strive to, and achieve world class safety, health and environmental performance, where all Guardians (employees, consultants, and contractors) return home safely every day and without harm done to the environment we operate in.

The Medupi Safety, Health and Environmental (SHE) specification is to provide Contractor/s, Principal Contractors 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 Principal Contractor.

- The mandatory high level project & scope of work specific SHE requirements that the Contractor needs to adhere to in order to align & demonstrate commitment towards the zero harm of persons and the environment for the duration of the contract.

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 Eskom 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 Eskom.

Eskom 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:

- Eskom'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 all works at Medupi Power Station 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.

All Contractors are required to execute their works in accordance with this document as well as other applicable legal documents.

2.3 Applicability

This specification is applicable to all Principal Contractors, Contractors, Service Providers and Suppliers in all the activities and processes carried out for and on behalf of Medupi Power Station Project.

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.

This document shall apply throughout Medupi Power Station Project.

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 Eskom Document Centre website has passed, the document is still current, irrespective of its revision date having passed.

3.1 Normative

[1] Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) and its Regulations

[2] Construction Regulations of 2014 or latest edition as per government gazette.

[3] Mine Health and Safety Act, 1996 (Act No. 29 of 1996) and Regulations

[4] The Constitution of the Republic of South Africa (particularly Section 24 of the Bill of Rights)

[5] Civil and Building Work Act

[6] Compensation for Occupational Injuries and Diseases Act

[7] National Environmental Management Act 107 of 1998 as amended

[8] National Water Act 36 of 1998

[9] Minerals and Petroleum Resources Development Act, 2002 (Act 28 of 2002)

[10] Animals Protection Act, 1962 (Act No. 71 of 1962)

[11] National Road Traffic Act, 1996 (Act No. 93 of 1996)

[12] National Heritage Resources Act No. 25 of 1999

[13] Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983)

[14] National Veld and Forest Fires Act, 1998 (Act No. 101 of 1998)

[15] Fertilizers, Farm Feeds, Agricultural Remedies and Stock Remedies Act, 1947 (Act No. 36 of 1947)

[16] Disaster Management Act 57 of 2002: Consolidated COVID-19 Direction on Health and Safety in the Workplace – (GG 43400 - GN 639 – 4 June 2020)

[17] All relevant South African legislation-provincial, municipal by-laws

3.2 Informative

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

[1] ISO 45001:2018, Occupational Health and Safety Management systems-Requirements (Contractor shall use as guideline)

[2] ISO 9001: 2015 Quality Management Systems- Requirements

[3] ISO 14001:2015, Environmental Management Systems Specification with guidance for use

[4] 32-727: Safety, Health, Environment and Quality Policy

[5] 240-62196227: Life-saving Rules Standard

[6] 32-95 Eskom Occupational Health and Safety Incident Management procedure

[7] 240-133087117 – Eskom Environmental Incident Management Procedure

[8] 240-62946386 The Vehicle and Driver Safety Management Procedure

[9] 32-345 Eskom Vehicle Safety Specification.

[10] 32-136 Contractor health and safety requirements.

[11] 32-37 Substance Abuse Procedure

[12] 200-93129 Occupational Hygiene Management Programme

[13] 200-38430 Operational Control Procedure

[14] 200 220597 Occupational Health and Safety Audit Procedure

[15] 200-161023 Handling of HS non-conformities and corrective and preventive actions

[16] 32-245: Waste Management Standard

[17] 240-43848327 Employees' right of refusal to work in an unsafe situation

[18] 32-418: Working from Heights Procedure

[19] 240-100979499: Personal Protective Equipment for work at Heights Specification

[20] 32-520: Procedure Manual for Performing Occupational Health and Safety Management and Environmental Management: Conducting EH&S Risk Assessment

[21] 32-123: Emergency Planning

[22] 32-407 Behaviour Safety Observation Procedure

[23] 39-98: Safe use of Lifting Machines

[24] 32-1126 Eskom Smoking Policy

[25] 240-44175132 Eskom Personal Protective Equipment Specification (PPE)

[26] 240-13307117 Environmental Incident Management Procedure

[27] 200-73977 Medupi Environmental Policy Statement

[28] 200-73975 Environmental Legal and Other Requirements

[29] 200-73975 Identification and Assessment of Aspects and Impacts

[30] 200-38430 Identification and Application of Environmental Operational Controls

[31] 200-38428 Environmental Audits

[32] 200-10506 Environmental Incident Management Procedure

[33] 200-38426 Handling of HSE Non-conformities and Corrective and Preventative Action

[34] 348-77837 Rehabilitation Strategy and Implementation Plan for Medupi

[35] 200-73768 Waste Management Work Instruction

[36] Applicable South African National Standards (SANS) for the scope of work/Project.

4. Definitions

Definition	Explanation
Agent	Means a competent person who acts as a representative for a client.
Aspect	An element of an organisation's activity, product and service that can have a beneficial or adverse impact on the environment.
Appointed Person	Means a person who has been authorised in terms of plant safety regulations to be responsible for: (i) Determining appropriate and effective isolations for the anticipated work to be carried out safely. (ii) Ensuring that the isolation and de-isolation on the plant covered by a permit to work is effectively carried out taking health and safety precautions into account. (iii) Issuing of prepared permits once all the associated test certificates are available and the required risk assessments have been presented to the appointed person by the responsible person for review in terms of these regulations.
Baseline risk assessment	Baseline operational risks refer to the health and safety risks associated with all standard processes and routine activities in the business. (32-520)
Client	Any person for whom construction work is being performed.

Definition	Explanation
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 Health and Safety Agent (CHSA)	Means a competent person who acts as a representative for a client as per the Construction Regulations (CR) of the Occupational Health & safety Act, No.85 of 1993, CR 5(6)(7) and the South African Council for the Project and Construction Management Professions (SACPCMP).
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.
Contract	Is an agreement with conditions between the Client and a Contractor where an adjudication authority has approved a scope of work to be completed in a specific time frame and within a specified value
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 seven 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.

Definition	Explanation
Designer	Means any of the following persons: A competent person who: • Prepares a design • Checks and approves a design • 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, • Is an architect or engineer contributing to, or having overall responsibility for, the design • 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.
Environmental Risk Assessment	Means a systematic process of evaluating the potential risks that may be involved in projected activity or undertaking.
Eskom Requirements	Eskom 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.
Impacts	Any changes to the environment whether adverse or beneficial, wholly or partial resulting from environmental aspects.
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 sequence of operations.
On Site/Site	Any workplace where the contractor or his employees performs contract related work.

Definition	Explanation
Permit to work	Means a written declaration on the permit to work form, signed by the appointed person and issued to the responsible person in charge of the work, informing the latter that the plant to be worked on has been isolated as detailed.
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.
Responsible Person	Means a person who has been authorised in terms of plant safety regulations to be responsible for ensuring that the work on the plant covered by a permit to work can be carried out and executed taking health and safety precautions into account and within the terms of these regulations.
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.
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
AIA	Approved Inspection Authority

Abbreviation	Explanation
AP	Authorised Person
CHSA	Construction Health and Safety Agent
COID Act	Compensation for Occupational Injuries and Diseases Act
CR	Construction Regulations 2014
DEL	Department of Employment and Labour
DMR	Driven Machinery Regulations
DSTI	Daily Safety Task Instruction
EA	Environmental Authorisation
ECO	Environmental Control Officer
EMP	Environmental Management Plan
EMS	Environmental Management System
EO	Environmental Officer
EPC	Engineering, Procurement and Construction
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 107 of 1998
NQF	National Qualifications Framework
NWA	National Water Act (Act No. 36 of 1996), as amended
OHNP	Occupational Health Nursing Practitioner
OHS Act	Occupational Health and Safety Act No. 83 of 1993
OHS	Occupational Health and Safety
ORHVS	Operating Regulations for High Voltage Systems
PPE	Personal Protective Equipment
PTO	Planned Task Observations
RoD	Record of Decision
RP	Responsible Person
RPO	Radiation Protection Officer
SACPCMP	South African Council for the Project & Construction Management Professions
SAQA	South African Qualifications Authority.
SHE	Safety, Health and Environment

6. Roles and Responsibilities

Visible and felt commitment is essential in providing a healthy and safe work environment. Management, employees, Principal Contractors and contractors at all levels must demonstrate their commitment by being proactively involved in the day to day operations, in particular SHE aspects of Medupi Power Station Project. Legislation requires that each employee must take reasonable care of themselves and their fellow workers. Senior Management must provide strategic direction and demonstrate commitment in terms of SHE issues both on strategic level and operational level.

6.1 Designers: Details, Accountabilities and Responsibilities

The Designer is the person responsible for the overall management of the project design as well as ensuring the management of the compliance of the completed works to the design during and after construction on site.

Designers should ensure compliance with the Occupational Health and Safety Act in terms of Construction Regulations of 2014, Regulations 6 and all other applicable Regulations, Standards and legislations.

The designer shall take into account the hazards associated with the future maintenance of the designed structure (s), and make provision in the design(s) for the necessary maintenance work to be performed such that the associated risks are minimised.

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.

Inform the Construction Health and Safety Agent in writing of any known or anticipated dangers or hazards relating to construction work, and make available all relevant information required for the safe execution of the work upon being designed or when the design is subsequently altered.

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.

Make available in a report to Client/ Construction Health and Safety Agent all relevant health and safety information about the design of the relevant structure, geotechnical science aspects where appropriate and the loading structure is designed to withstand.

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.

Take into consideration and ensure compliance of health and safety specification.

In cases where Eskom uses overseas designers, the appointed designers must indicate and submit to Eskom 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.

6.2 Client Details: Details, Accountabilities and Responsibilities

6.2.1 Eskom General Manager:

The General Manager is responsible for the overall management of the project, including assurance that all duties of the employer as per OHS Act 85 of 1993 are properly discharged.

6.2.2 Eskom Contract Manager:

The discipline/contract manager is responsible for managing the contract with the Principal Contractor and ensures that the SHE specifications are developed and issued with tender enquiries and that the Principal Contractor's SHE plan is approved prior to commencement of work. He must ensure that all the statutory requirements, Eskom and SHE specification and SHE plan requirements are adhered to by Principal Contractor and (if applicable) their contractors at all times.

6.2.3 Eskom Engineering Manager:

The Project Engineer is the person responsible for ensuring that the designer fulfils his professional and legal obligations with respect to the implementation of his design.

6.2.4 Eskom Health and Safety Manager/ Practitioner:

The responsibility of the Health and Safety Manager/Practitioner is to provide assurance, as well as advice, assist and support to the Project /Site Manager in the management of the health and safety issues on the project which includes ensuring proper co-ordination amongst the various Contractors. The SHE Manager/Practitioner will also be responsible for assisting in the development of site and project specific SHE Specifications, and ensuring that SHE specification are issued with enquiry documents and that the Contractors SHE plans are submitted; evaluated and approved. She/he will be responsible for auditing and ensuring compliance to legal requirements.

6.2.5 Eskom Environmental Manager/Officer:

Note: This position may be a permanent position on the Project Organogram or it might be a service rendered by a line Division (which may be managed by a Service Level Agreement).

The responsibility of the Environmental Manager/Officer is to provide assurance, advice, assist and support to the Eskom Site/Project Manager in the management of the environmental issues on the

project which includes ensuring compliance to the Record of Decision (RoD), the Environmental Management Plan (EMP) and Environmental Management Systems.

6.2.6 Independent Environmental Control Officer:

The Lead Environmental Control Officer (ECO) is appointed by the Environmental Monitoring Committee (EMC), in conjunction with Eskom, and acts on their behalf to monitor environmental compliance and performance. The Project is answerable to the ECO for non-compliance with National Legislation, the Record of Decision, the Environmental Management Plan (EMP), and Environmental Performance Specifications.

6.3 Principal Contractor: Details, Accountabilities and Responsibilities

6.3.1 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 suppliers, with the SHE plan. All organograms' shall be updated timeously when appointments are changed and filed in the project SHE file.

6.3.2 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 No. 85 of 1993 and Regulations as well as all the Environmental Management requirements as per NEMA 107, of 1998 and related legislation. 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 employer (Eskom) on the awarding of the contract and shall be responsible and accountable for all legislative and Eskom 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.

6.3.3 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 Principal Contractor and contractor shall ensure that the performance of all specified work is supervised throughout the duration of the contract by a sufficient number of competent appointed representatives of the Contractor, who have experience in the type of work specified.

No work shall commence and / or continue without the presence of an appointed Construction Manager, Construction Health & Safety Manager & Officer, Construction Supervisor or appointed Construction Supervisor Assistants as per Construction Regulation requirements during execution of the work. These supervisors shall be fluent in the language for communications as defined under the Contract.

The Principal Contractor and contractor must ensure that resourcing is in accordance with Project Plan and Schedule for life of work. An estimation of key activities is required to be identified for the life cycle of the project and resource plan requires aligning accordingly. The number of appointed persons shall be determined by the size and the risk of the project.

All work to be supervised (regardless of permit to work applicable or not) Employees to be aware of the where about of their Supervisors at all times.

Recommended ratio of a supervisor versus employees is 1:15/20.

6.3.4 Construction Health and Safety Manager/s and Officer/s

The Principal Contractor and contractor shall appoint a 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 (5 & 6). The Construction Health and Safety Officers shall be registered with the SACPCMP and have a minimum qualification of a National Diploma in Safety/environmental

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.

6.3.5 Construction Environmental Personnel

The Principal Contractor and contractor shall appoint relevant Environmental personnel as per EMP /ROD requirements considering the nature and the scope of work being conducted.

6.3.6 Principal Contractor's accountability 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.
- 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.
  - No generic hazard and risks will be accepted on DSTI's. DSTI'S need to be amended once the work activity has changed as planned for the day.
  - DSTI's to be compiled and conducted at the work place and not in offices, same applies to records thereof.

- Ensure the DSTI's are discussed with the workforce. Supervisors to strongly enforce expected safety behaviours to the workforce. Supervisors and Safety Officers (Eskom and Principal Contractors) to sign and acknowledge that the DSTI was checked for quality and correctness.
- Supervisors and Safety Officers (Principal Contractor's and Eskom) shall monitor to ensure compliance and where applicable Safety Officer's to coach supervision accordingly.
- No work to be done unless daily safety task instructions has been presented and signed by all team members. All employees have a right to stop any work or refuse to work if the risks and hazards was not properly identified and/or controlled effectively.
- Use the protective clothing and equipment prescribed for your job, in a proper manner. This should be addressed during the daily safety task instruction.
- Follow the instructions given by your Supervisor/Manager or inform him/her of the reason if it is not possible to do so.
- Before attempting something new or different discuss it with your Supervisor/Manager to avoid causing an incident.
- Maintain the tools in safe condition and turn in defective tools to the Supervisor/manager.
- If you have to climb, ensure that the ladder you use is not broken and has (non-slip) safety feet and also that it is not used when working on electricity installation due to the very high risk of electrocution. Make sure that one person is holding the ladder for you. Apply three-point-contact at all times.
- Refrain from cleaning up or performing any work on, or close to unguarded machinery until you have properly locked the electrical switches or know that your Supervisor has done so. (Refer to the Permit to work).
- Refrain from stepping onto a stopped conveyer belt or attempt to work in any place where you could be injured if the machinery started up. You will first make sure that the machinery is locked-out.
- Refrain from attempting to operate any vehicle or other machinery that you have not been trained for or been authorized to operate by your Supervisor/manager.
- Refrain from running or hurrying down stairs or jump off a high place - knowing the high injury risk.
- Refrain from engaging in teasing, jostling, mock sparring or throwing objects, even playful as such actions could lead to injury to you and/or others.
- Use compressed air only for work purposes, knowing that playful use or blowing off work clothes can cause very serious injury.
- Keep the work area reasonably clean and orderly and immediately clean up any spills or tripping hazards

- Familiarize yourself with the Safe Work Procedures and Method Statements prior to starting with a task.
- Place waste in the waste receptacles provided for it.
- Report any pollution or spillage to your supervisor – including leaking water taps.
- Refrain from wasting energy or any resources in order to promote environmental sound practices
- Support all health and safety programs, and safety and environmental policy including the lifesaving rules.

  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. Employees must be trained an proof of training to be included into site induction

- Employees are responsible for their own health and safety and that of their co-workers in their respective areas of work on the project.

  Employees 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
  - 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.

  - If an employee has a reasonable belief that the work to be undertaken is likely to endanger him/her or any other person/s due to sub-standard acts or conditions, inadequate precautions or a lack of protective equipment or clothing, he/she has the right to refuse to work and shall report such situation to the employer.
  - An employee does have the right not to work in any area or perform any task where that employee has reasonable justification to believe that the work situation presents a serious danger to his/her health and safety, organizational assets or the environment.

- 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 Eskom Site/Project Manager and the Principal Contractor Supervisor immediately.

Note: 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 legislative requirements (SACPCMP.)

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.

7. Document Content

7.1 Note to the Principal Contractor and its Contractors

The contractor is expected to develop a SHE plan which meets these requirements as well as all the relevant applicable legislation in accordance with the requirements of the Medupi Power Station ISO 45001:2018 Safety Management System as well as the ISO 14001:2015 Medupi Environmental Management System requirements. Eskom 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 as well as compliance to environmental legal and other requirements. This SHE specification reflects minimum requirements and should not be construed as all encompassing. In addition, all requirements contained in the Environmental Impact Assessment (EIA) and Final Environmental Impact Report (FEIR) read together with the specialist reports, and the specific conditions of all Environmental Authorisations, Permits and Licences as well as the various Environmental Management Plans must be understood and accounted for in any submitted tender submissions.

Compliance and Approval of Contractor SHE Plan

The Contractor's SHE Plan will be audited against a compliance checklist to confirm compliance to the requirements in the Eskom SHE specifications. Once compliance is confirmed, only then will the contractors SHE plans be approved by the Client. Prior arrangement must be made with Team Medupi Health and Safety and Environmental departments for review and approval.

The implementation of the SHE Plan shall be assessed by conducting systems and physical conditions evaluation.

8. 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. SHE Specification

9.1 Project and Scope of Work Details

Location: Medupi Power Station Project, Lephalale, Limpopo Province.

Project description/detailed scope of work: Medupi Power Station Project is a construction site for a coal-fired power station with six units which will generate a total capacity of 4800MW of electricity. The scope of work for this package entails the design, supply, testing, commissioning and handover of the complete Hydrogen plant and Nitrogen plant.

Hydrogen Plant

Hydrogen gas is used as a cooling medium in the turbine generators. The gas is used because of its thermal conductivity and very low density properties. In order to meet the hydrogen requirements at Medupi Power Station, hydrogen shall be produced and stored on site. The gas produced shall be of high purity to ensure safety and generator long term plant health.

In order to meet the hydrogen requirements at Medupi Power Station, hydrogen shall be produced and stored on site. Hydrogen can be produced by any alternative means provided it meets the quality, quantity and safe operation required by the employer. Use of alternative methods shall be subject to approval by the employer.

The Works comprise the complete design, supply of mechanical, electrical, C&I, civil and structural work for the Hydrogen Generating and Storage Plant. The Contractor shall be responsible for the design, engineering, manufacture, supply, shipment to South Africa, transport from ship or local works to Site, unloading from road or rail, transport at site, erection, quality assurance, on and off Site testing, painting, finishing, commissioning, handover and hazardous zone classification of entire Hydrogen Generating and associated equipment.

The Contractor shall test and submit all performance data as proof that the installed works meet the Employer's requirements standards and specifications. The Works include all matters which, although not expressly provided for, can be reasonably inferred from the contract. The only exclusion being items or services excluded or specifically stated to be free issued or to be provided by the Employer or by others.

The Contractor shall train the operators and provide the technical assistance when required. As part of the Contractors design, a hazardous zone classification must be done and the classification report submitted to Engineer for approval. All electrical and C&I equipment selected for the classified areas must comply with the area classification requirements and applicable standards. The design must cater for minimising the electrical and C&I equipment in hazardous zones by locating this equipment in less hazardous zones.

Nitrogen Plant

Medupi Power Station requires Nitrogen gas for the blanketing of the five Demin water containing tanks, Demineralised Water Storage Tanks (DWST) and the Polished Demin Feed Tanks (PDFT) and the Condensate reserve tanks (CRT). Blanketing prevents the carbon dioxide ingress into stored water due to exposure to the atmosphere. This is achieved when nitrogen gases displaces the air volume in the tank and form a blanket on the surface of the water. The blanket is maintained above the water surface inside the tanks (condensate reserve tanks and demineralise storage tanks), and this fills the air space in the storage vessels.

The Works comprise the complete evaluation of the existing design of the mechanical, electrical, C&I, civil and structural work for the Nitrogen Generating Plant. The Contractor shall be responsible for the evaluation, engineering, manufacture, supply, shipment to South Africa, transport from ship or local works to Site, unloading from road or rail, transport at site, erection, quality assurance, on and off Site testing, painting, finishing, complete in working order and commissioning of the Nitrogen Generating Plant, together with auxiliary and ancillary plant services and works.

Integrated works

The Hydrogen plant and Nitrogen plants share common infrastructure in terms of road access, paving, fencing, drainage, piping servitudes and electrical servitudes. The arrangement design of the Hydrogen and Nitrogen plant is to be integrated to avoid clashes and duplications and optimise the use of available space to improve the maintainability of the plant.

The Contractor shall design, supply and construct an integrated area with all required services around the Hydrogen and Nitrogen plants, complete with the following:

- Road access and internal roads
- Road crossings, trenches for pipes, sleeves and cable servitudes
- Surface drainage and interface to Medupi station drains (clean and dirty)
- Safety Fencing
- Access control
- Landscaping
- Power supply and Mini-substation

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 in the interest of Health and safety or in the event that legislation require to do.

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 Eskom Procedures and Standards.

10. Legal (OHS Act 85 of 1993 and Regulations) 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
- COID Act
- Any other applicable South African legislation
- Applicable South African National Standards (SANS)
- Applicable international standards
- Eskom Operating Regulations for High Voltage Systems
- Eskom Plant Safety Regulations (Low Voltage Regulations)
- Relevant Eskom Procedures and standards
- ISO 45001, ISO 9001 and ISO 14001-Contractor shall use as guidelines.
- Disaster Management Act 57 of 2002: Consolidated COVID-19 Direction on Health and Safety in the Workplace – (GG 43400 - GN 639 – 4 June 2020)
- 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 or as when required.

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 (GAR 4).

When there is an amendment to the Acts and/or to the Regulations, the SHE plan must be reviewed, updated accordingly and send through to the client. Changes must be communicated to all relevant employees.

11. Section 37 (2) Mandatory Agreement

A section 37(2) agreement must be signed between Eskom 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 Eskom responsible manager.

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

12. 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.

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

13. Construction Work Permit

Client shall be responsible for applying for construction work permit to as per requirements of construction regulation 3. The Principal Contractor shall keep the copy of construction work permit and avail it upon request during inspections.

14. Notification of Construction Work

The Principal Contractor shall notify the relevant Provincial Director of the Department of Employment and 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 DOEL shall be forwarded to the project manager on the same day as sent to the DOEL. A copy of the letter and their approval must be kept in the SHE file. When the DOEL provide a letter of approval, a copy of the approval must be sent to the Eskom project manager and a copy filed in the SHE file.

15. OHS Act No. 85 of 1993 and Regulations

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.

16. 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.

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.

17. SHE/Q Policy

Eskom has a SHEQ Policy (32-727, Appendix A) that clearly states the policy principles by which Eskom operates and the commitment to SHEQ excellence and is authorised by the Chief Executive.

Principal Contractor and the contractors shall support Eskom SHEQ policy.

The Principal Contractor and the contractor companies shall each have a SHE/Q Policy duly signed and 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. It should also include the description of the organisation scope and the arrangements for carrying out and reviewing such policy.

18. 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, Occupational Health programmes and Occupational hygiene surveys etc.

19. Appointment of a Principal Contractor

The Principal Contractor will be appointed by Eskom responsible Manager on the awarding of the contract and shall be responsible and accountable for all legislative and Eskom 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 Eskom responsible Manager.

Construction Regulation 5(1) (k) appointment shall be kept in the safety file.

20. 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 Eskom. 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.

21. 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 advice and assist these appointees in the execution of their duties.

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

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

The Principal Contractor shall provide and keep up to date an outline organogram and a list of names and contact telephone numbers of all appointments as required from the table below.

Reference	Description
Sec. 16(2)	Persons assigned functions to assist the Chief Executive Officer (if required)
Sec. 17	Health and Safety Representative
Sec. 19	Health and Safety Committee Member (if there are 2 or more H&S reps there will be a H&S committee)
GSR 3	First Aiders
GSR 5(1)	Person that pronounces & certifies a confined space safe for the duration of work being conducted (applicable for confined spaces)
DMR 17(2)	Goods Hoist Inspector
GAR 9(2)	Incident / Accident Investigator
DMR18(11)	Lifting Machinery Operator (Appointment or Permit)
DMR18(5)	Lifting Machinery Inspector
DMR18(10)(e)	Lifting Tackle Inspector
EMR 9	Portable Electrical Equipment Inspector
VUP 10	Portable Gas Container Inspector
VUP 13(1)(b)	Pressure Vessels Inspector
HCS 3(3)	Hazardous Chemical Substances Co-coordinator
Asbestos Regulation 21	Person registered as an Asbestos Contractor (Asbestos AIA) by the Department of Labour
CR 5(1)(k)	Appointment of the Contractor by the Employer
CR 7(1)(c)(v)	Subcontractors Appointment by the Contractor
CR 8(5)	Construction Health and Safety Officer
CR 8(7)	Construction Supervisor appointed by the Contractor's OH&S Act Section 16(2) assignee
CR 8(8)	Assistant Construction Supervisor appointed by the Contractor's OH&S Act Section 16(2) assignee
CR 8(1)	Construction manager

Reference	Description
CR 8 (2)	Assistant Construction Manager
CR 9(1)	Person to Compile Risk Assessments
CR 10(1)(a)	Competent Person to compile Fall Protection Plan
CR 12(1)	Person to supervise temporary works
CR 13(1)	Person to supervise Excavation Work
CR 21	Competent Person in the use of Explosives & Development of the Method Statements
CR 17(1)	Competent Person as Suspended Platform Supervisor
CR 17(8)(b)	Competent Person to Conduct Performance Test of Suspended Platforms
CR 16(1)	Competent Person as Scaffolding Supervisor
CR 18(1)(a)	Rope Access Supervisor
CR 19(8)(a)	Material Hoist Inspector
CR 20(1)	Competent Person as Bulk Mixing Plant Supervisor
CR 21(2)(b)	Competent Person as Explosive Powered Tool Inspector
CR 21(2)(g)(i)	Appointed Person responsible for issuing & collection of Explosive Powered Tools cartridges & nails or studs
CR 23(1)(k)	Construction Vehicle and Mobile Plant Inspector
CR 24(e)	Competent Person for Temporary Electrical Installation Inspections
CR 28(a)	Competent Person for Stacking and Storage Supervisor
CR 29(h)	Competent Person as Fire Fighting Equipment Inspector
Eskom Requirement	Emergency Planning Co-coordinator
Eskom Requirement	Fire Official
Sans 12480-1&3	Crane coordinator – Tower crane operations /Appointed Person Mobile Crane operations

Notes to the appointments listed above:

Section 16(1) creates a legal presumption, and therefore no appointment is required. The Contractor shall provide the full names, contact telephone number and business address of the Chief Executive Officer.

21.1 Health & Safety Representative Required Competencies

- General Health and Safety Training
- Health and Safety Representative Training
- Hazard Identification and Risk Assessment Training
- Incident Investigation and Root Cause Analysis Technique Training

21.2 Construction Supervisor & Assistant Construction Supervisor Required Competencies

- Three years applicable experience in construction management
- General Health and Safety course
- OH&S Act and Regulations or Mine Health and Safety Act and Regulations course, as applicable (latest version of the Act and Regulations)
- Incident Investigation and Root Cause Analysis Technique Training
- Hazard Identification and Risk Assessment Training
- Job Observations Training
- Attended an accredited supervisor's safety course.

Where the Works are carried out on areas governed by the Mine Health and Safety Act 29 of 1996 or other Law applicable to mining activities, the appropriate equivalent appointments and assignments shall be made as required.

22. Training

The Principal Contractor and Contractor need to ensure that the resources to work on the project have the required related training, knowledge and experience specific to the scope of work/services.

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 ensure that the training providers are accredited and registered with SETA according to the relevant unit standards. The contractor must have proof of this on site for verification.

The contractor must develop a training matrix for all their employees.

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

23. Site Induction

On annual basis or as when required, the Client shall provide Principal Contractors with Site Induction which the Principal Contractor shall ensure communication to his employees and visitors as well as contractor employees/visitors.

23.1 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.

The employer shall provide to each employee a proof of induction, which he/she shall carry and produce when required.

The Contractor shall maintain comprehensive records of all employees under his control (including all employees of the contractor) attending induction training. Acknowledgement of Life Saving Rules, receiving and understanding the induction must be signed by all persons receiving the induction respectively.

23.2 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.

24. Access and Security Control

Access and Security control shall be done according to the Eskom Access Control Policy (32-1134)

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

It may be required that prior to access being granted that person(s) complete the required training e.g. plant access training, employee training, occupational health and safety training or any other prescribed training.

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

- Firearms and ammunition (excludes Eskom official firearms/ ammunition and firearms/ ammunition issued to the South African Security Forces)
- Liquor/ Alcohol
- Dangerous weapons
- Drugs (excludes items/ substances authorised for use and possession of medical centres or in possession under doctor's prescription)
- Any other items that may be declared prohibited

25. 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 Areas
- Temporary Site Services
- Waste Storage Facilities & Receptacles
- Designated smoking areas

The Principal Contractor must develop their site establishment procedure and this must be in line with the EMP, RoD, environmental authorisations and other permits and licenses.

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

25.1 Site logistics and layout

The Enquiry Drawings included with the tender documentation indicate:

- **Access points to the site**
- **Areas for construction of the project works**

25.2 Fence lines

The Principal Contractor shall give details of the way he intends to set up the site, the location of his site offices, the lay down area and the way he will control ingress and egress to and from the site and also the control of the site traffic. In particular, traffic and pedestrian routes within the site shall be identified, subsequently marked out on the ground and kept free from obstruction at all times.

Possible locations for the Employer and the Principal Contractor's site establishment are detailed in the Works Information document.

25.3 Notice boards/Name boards

The Principal Contractor shall supply and erect name boards as per SANS 1200 AB: 3.1 at all his office sites and work areas.

25.4 Electric Power

The Principal Contractor shall arrange for electrical power supply for the execution of the works. The Employer will not be liable for any delays arising from any interruption of the electricity supply or for any inadequacies in the supply.

Generators used on the site to supply electricity for execution of the work shall be installed and used in accordance with the OHS Act, Electrical Installation regulations, relevant national standards, by-laws and regulations of the supplier concerned. Attention shall be given to the positioning of such equipment in order to minimise pollution caused by noise and fumes. Every portable generator shall be issued with a drip tray and refuelling of these generators shall be done in such a way to prevent any spillage.

26. Traffic Management Plan

The Principal Contractor shall develop and implement an adequate traffic management plan, taking into account the safe access and egress of all anticipated traffic, plant movement, pedestrians and vehicles to all working areas of the site including the core construction area, the lay down areas and site offices. Such traffic safety measures shall include the separation of vehicle and pedestrian traffic to prevent injuries. All vehicles shall be operated by competent and authorized personnel

The Principal Contractor shall enforce the principles of road safety both on and off the site. This shall include the control of vehicles on site, road worthiness, vehicle/plant maintenance programmes, signage, speed limits, flagmen, warning lights and high level flags if required.

Where access roads pass underneath overhead power lines, the Principal Contractor shall provide suitable height limitation barriers (goalposts) as agreed upon with the Client.

Key issues in dealing with traffic management on site will include but not limited to:

- Management of vehicle movement e.g. movement systems, speed limits, vehicle parking, markings, signalling, loading and unloading procedures.
- Keeping pedestrians and vehicles apart as far as is reasonably practicable by means of demarcation, signage and dedicated vehicle / pedestrian routes or other suitable means
- Improving visibility of vehicles and pedestrians.
- Signs and instructions.
- Public interface.
- Project road maintenance.
- Operator and driver competency and medical fitness.
- Proper fatigue management plan.

The Principal Contractor shall enforce the principles of road safety both on and off the site. The Principal Contractor shall submit a Road Safety Method statement to the Employer within 28 days after the starting date and shall conduct road safety audits on a regular basis. This shall include the control of vehicles on site, road worthiness, vehicle maintenance programmes, signage, speed limits, flagmen, warning lights, high-level flags and disciplinary procedures.

Detailed traffic management risk assessment should accompany the traffic management plan. And continuous assessments should be done on on-going basis.

26.1 Private Vehicles and on-site driving Rules

All vehicles required to enter on site will only be allowed on site, once a permit application has been made and approved.

- Privately owned vehicles will be limited on site.
- Drive professionally
- Keep to the speed limits (taking weather conditions into consideration)
- Reverse parking is mandatory
- Drive with your head lights switched on
- Obey road signs
- Always wear your seatbelt
- Drive 10 km/h in all parking areas
- Refrain from talking on cell phones or two way radios whilst driving
- Eskom reserves the right to search any vehicle on the premises or when entering or leaving the premises.
- The following speed limits are applicable on site: 20km/h on Nicholas road, 10km/h at the parking areas and 40km/h will apply at all other roads on site. All vehicles and mobile plant driving inside the plant should maintain a speed limit of 10km/h and be always accompanied by a spotter with flag.
- Speed limit of 40km/h should be maintained at all haulage roads and when driving around site by both mobile plant/construction vehicles and private vehicles.
- Flagmen should be positioned to control traffic.

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.

Ensure that no employees, including contractor employees, when performing work for Eskom, will be transported in the back of open vehicles. This applies both on and off-site.

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).

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

28. Safety Culture

Eskom drive a safety culture of Zero harm.

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. Visible field leadership is an essential requirement during the project execution on all levels.

Principal Contractors shall demonstrate in health and safety plan compliance to Eskom drive to Zero harm.

The following safety culture interventions are implemented across site and it is required that all contractors participate in:

- Safety stand downs
- Management Plant Walk about (VFL)
- SHE campaigns
- Rewards and discipline strategies and procedures to encourage appropriate SHE behaviours.

29. 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 Eskom and relevant legislation which will ensure zero harm to persons and the environment. These rules will be specific to the project and site.

Eskom Life Saving Rules

Five Life Saving rules have been developed that will apply to all Eskom 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 Eskom.

Eskom Life-saving Rules are non-negotiable health and safety rules which must not be broken under any circumstances. It must be highlighted that Eskom takes a ZERO TOLERANCE stance to violation of these rules. These rules are applicable to any person entering Eskom sites.

The rules are as follows:

Rule 1	**Open, Isolate, Test, Earth, Bond and/or Insulate before Touch** Any person who performs work on an electrical installation shall ensure that it is isolated, tested and earthed before starting any work.
Rule 2	**Hook Up at Heights** Before working on heights workers must be competent, and also authorized and certified, to perform the task at hand. Hazard identification and risk assessment must be completed and controls implemented before commencing work. Fall protection plan for specific area must be adhered to at all times No employee will be allowed to work without a fall arrest system if there is any potential risk of falling.
Rule 3	**Buckle Up** Seatbelts shall be used at all times whilst driving. No person may drive any vehicle on Eskom business and/or on Eskom 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	**Ensure that you have a Permit to Work** Where an authorisation limitation dictates, no person shall work without the required Permit to Work (PTW).

Eskom 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.

This is to ensure that every person who works on or visits Medupi 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.

Consequence of violating a Lifesaving Rules:

In terms of General Health and Safety in Eskom if any of the lifesaving rules is not adhered to, it will result in a contractual/ disciplinary process, which will have the power of dismissal and or request by the client to the Principal Contractor for employee to leave Medupi project. This will also apply to a manager who has not enforced a lifesaving rule and failure to care.

It must be highlighted that ESKOM takes a ZERO TOLERANCE stance to violation of these rules and will therefore push for a sanction of dismissal during a disciplinary hearing. If a lifesaving rule is broken the consequences needs to be applied consistently and uniformly.

- **Smoking**

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

- **Cellular Phones**

A contractor shall develop and implement a risk based cell phone policy for their works areas. All cell phone users on site, will be authorised and proof of authorisation to be carried by employees at all times. Disciplinary action shall be followed in case of any non-compliance.

Do not use Cellular phones in areas where cell phone usage is prohibited. Texting and talking on the cell phone whilst driving and walking is prohibited.

- **Fire Extinguishers**

All fire extinguishers shall be:

- Conspicuously numbered and identifiable on the inventory
- Inspected monthly by a competent person
- Tested and serviced at recommended intervals by an accredited supplier
- Company name displayed on
- Results shall be entered in the register and signed by competent person.
- No open or unattended fires are allowed within the construction site.
- Removed off construction site when hot work activity is done or end of shift.

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, while travelling in a motor vehicle. No vehicle/plant without safety belts will be allowed on site.

The following speed limits are applicable on site: 20km/h on Nicholas road, 10km/h at the parking areas and 40km/h will apply at all other roads on site. All vehicles and mobile plant driving inside the plant should maintain a speed limit of 10km/h and be always accompanied by a spotter with flag. Headlights shall be switched on at all times whilst driving on site. Flagmen should be positioned to control traffic when work is performed next to area with traffic flow.

- **Substance and Drug Abuse Management**

The Principal Contractor shall provide a Substance Abuse management policy which is in line with the Eskom Procedure (Eskom Substance Abuse Procedure 32-37). Where Contractors do not have the policy, or the policy is below Eskom standard; they will be required to adhere to this Procedure

30. 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.

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 could be indicated on the report and actions to be taken to correct the deviation.

31. Hazard Identification and Risk Assessment

The Principal Contractor shall develop a Baseline Risk Assessment in line with Construction Regulation 9 (1) (a-e) and in alignment to Eskom 32-520 procedure.

The contractor should develop a task specific risk assessment which must be communicated to all employees and signed as proof of communication. Contractor must at all times keep a copy of the task specific risk assessment on site where the activity is conducted.

Baseline risk assessment shall be reviewed at least every six months, or as when required (i.e. changes to scope, incidents occurring, legislation etc.).

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.

Risk assessment shall be developed by the cross-functional team. The following role players must be involved when compiling the risk assessment as minimum:

- **Project manager**
- **Supervisors**
- **Specialists**
- **SHE officers**
- **SHE Reps**
- **Employees with experience of the task.**
- **Union representative if available.**

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.

32. 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 a risk assessment is conducted for all high risk activities.
- Ensure that safe working procedure is communicated to all employees and safe work practices are enforced.

- Ensure that permanent and adequate on site supervision is available for the 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
- Provide any temporary protective shielding required for protecting nearby operations from the construction activities.
- Height restriction barriers/cross-bars must be erected on both sides of the overhead power lines, communication lines or other overhead obstructions. Establish the permitted safe clearances in consultation with the owner of the line.

33. 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 Pre-task risk assessment must at all times be available where the work is performed. 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.

34. Method Statements, Safe Work Procedures and Practices

The Principal Contractor shall compile project / site specific method statements and safe work procedures for all the tasks as identified in the risk assessment and scope of work, which will be accepted by the Engineer or Client.

Note: The acceptance will be qualified with the statement: "Acceptance does not relieve the contractor of his responsibility for ensuring safe working procedures in terms of the Construction Regulations. No work shall be carried out without a Principal Contractor approved method statement, safe work procedure and task specific risk assessment.

Commencement of any work activity does not take place unless a method statement and risk assessment has been produced and submitted to the Project Manager's Site Safety Officer, five working days in advance of any proposed specific activity starting.

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**.** Approved method statements and safe work procedures together with records of training/ awareness shall be kept on site at all times where work is conducted.

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.)

35. 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.

36. Occupational Health, Rehabilitation 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.
- 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 Employment and Labour on the occupational hygiene milestones (e.g. crystalline silica). Evidence of reporting to the department of Employment and labour and copies of such reports shall be made available to Eskom Health and Safety Manager / Occupational Hygiene Practitioners.

Copies of all occupational hygiene surveys conducted by the Principal Contractor and contractor must be submitted to the Eskom Health and Safety manager and Occupational Hygiene 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 in annexure 3 format 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 Eskom will not give those employees site induction which will result in refusal to site access.

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: *Eskom 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 must be displayed at notice boards and public areas for ease of access to all employees and visitors. The Contractor shall ensure that his employees are familiar with the emergency numbers. Emergency numbers will also be part of the OHS induction.

Contractor shall have one first aid box for the first five (5) persons and thereafter one for every 50 or team of workers on site or part thereof. There should be a trained and appointed person to render first aid service when required. The first aider(s) shall be in possession of a first aid level two (2) training as minimum requirement as per Eskom Emergency planning procedure 32-123.

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 content check list must be available with all boxes and boxes shall be checked on a regular basis, kept clean and dust free.

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.

Contractors to take note of the following:

- The requirements of the OHS Act GSR 3 must be observed.
- First aid appointments must be made to meet the requirements, this includes construction sites. Appointees must be trained to level 2. It is good practice for all employees to be trained to at least level 1.
- When appointing employees for work sites, cognisance must be taken into account the type of work performed, the distance teams are working apart and the terrain to be covered if an emergency should arise.

- For offices, signs 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 shall be erected.
- The Principal Contractor and appointed contractor shall ensure that alternative arrangements be made for incidents occurring after working hours.

36.5 Employee Assistance Programs (EAP)

Where Principal Contractors and contractors do not have EAP Principal Contractors, then Eskom's EAP Service Provider is available to provide assistance. All costs shall be borne by the Principal Contractor.

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.

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.

36.8 COVID-19: Health and Pandemic

The Contractor shall ensure proper management and control of any disaster and or pandemics that may come forth during the course of the contract. Contractor to develop a health pandemic and disaster Management plan/procedure and conduct risk assessment to ensure that appropriate measures are in place.

Note: Contractors shall be audited by the Client on regular basis to ensure and enforce implementation of their management strategies.

37. Emergency Preparedness and Response

The Principal Contractor shall provide a site specific emergency response plan.

Using the Eskom site specific emergency plan, the Principal Contractor, together with his contractors, shall develop their own emergency response plan (as a guideline) for both site and offices and submit this plan to the Eskom Emergency Preparedness Manager for review. It may be decided that one site specific emergency response plan be used for all contractors. The Principal Contractor will ensure that his employees and his contractor employees are trained on this plan.

Periodic emergency drills shall be undertaken by Eskom; however, the Principal Contractor shall initiate his own emergency drills with permission from the Eskom 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 Eskom Emergency Department will supplement.

37.1 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.

37.2 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.

38. Construction Vehicles and Mobile Plant

All construction vehicles and equipment shall meet the legislative requirements pertaining to the OHS Act No. 85 of 1993, Construction Regulations 23, the National Road Traffic Act, the Mine Health and Safety Act, National Environmental Act and Eskom Vehicle Safety Specification Procedure 240-62946386.

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.
- 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.
- Note in the case of plant (ADT Dumper trucks) being used and the vehicles are traveling on any road other than hall roads - designated operators need to be in possession of valid driver's licences.

- All construction vehicle operators, flagmen, banksmen, signalmen, or points men are to wear illuminated reflector vests at identified high-risk sites and construction projects. All flagmen, banksmen, 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).
- Drivers or operators and construction vehicles at identified high-risk sites and construction projects should have a permit system for operating in that particular area.
- 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 banksman.
- A vehicle and pedestrian management plan must be developed by the contractor to be in line with the client's plan.
    - Ensure that all traffic signs are displayed.
    - Reverse beepers shall be fitted on all construction vehicles.
    - No tolls or equipment to be transported in any load bin of front end loaders or graders
- 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.
- All drivers and operators to have a file with appointment letter, medical fitness certificate and proof of competency at all times in the plant or vehicle.
- The speed limit within the bounds of the construction site is 40 km/h and 20 km/h on Nicolas Road and Power Island.
- 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, crane 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.

- Eskom 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.
- 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)
- 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

39. 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.
- Whenever there is any potential of falling either from or into, a fall protection plan and work at heights 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, PPE for working at heights specification (240/100979499) and Eskom Procedure 32-418 (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
    - Current Legal appointments and authorisation
    - 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 when there is incident, change of scope of work, emerging risks and hazards or at least every 3 months.
- The Contractors shall stop all persons working in elevated positions during periods of inclement weather.
- Safety belts are not allowed to be used. An appropriate full body safety harness shall be worn when working at an elevated position, refer to SANS 50361.
- 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 and other recognised international standards.
- 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).

Note: Employer to assess as far as reasonably practicable whether the activity can be done on the ground, only then can the fall protection plan be implemented.

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.

Scaffolding

- All scaffolding used shall comply with the requirements of OHS Act and Regulations as well as SANS 10085 and SANS 51004 (Aluminium and tower scaffold).
- Scaffold to be only erected by competent and appointed person in writing. The scaffold erectors, team leaders and inspectors must be competent to carry out their work.
- Scaffolding erectors: Training is specified in SANS 10085. The scaffold erector, the team leader and the inspector shall be trained by an accredited training provider. Appointment letters and proof of competency to be in the file at all times. All appointments to be current and updated timeously.
- 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. The use of cracked sole plates, base jack sitting on the edge and skew uprights are not acceptable.
- Scaffolds that provide access to areas where personnel can fall into a hazard or where there is a risk of falling from a height 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 Contractor name, Scaffold location, note of hazards associated with the particular scaffold, inspector's details, signature, and 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 in accordance with SANS 10085.
- A Team leader shall be appointed in writing for the erecting and dismantling of all scaffolding.

Ladders (Portable)

- The inspection for step ladder shall be done by a competent step ladder inspector appointed in writing.
- All ladders shall be inspected upon arrival on site and thereafter weekly inspections to be conducted. A step ladder inspection registers to be kept on site at all times.
- 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.

40. Housekeeping

The Principal Contractor and his contractors shall maintain a high standard of housekeeping within the site. Prompt disposal of waste materials, scrap and rubbish is essential.

The Client requires the contractor to conduct housekeeping on a daily basis and perform 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.

Housekeeping must be done before and after every shift. After completion of every task, each contractor must conduct a proper housekeeping and keep evidence of housekeeping in that area

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

In cases where an inadequate standard of housekeeping has developed, compromising the health, safety and cleanliness, all employees has the responsibility to bring it to the attention of the Client. The Client will have the authority to instruct the suspension of relevant works until the area has been tidied up and made safe. Neither additional cost nor extension of time to the Contract shall be allowed as a result of work stoppage.

Emphasis on housekeeping and general safe guarding on construction site CR 27 and stacking and storage on construction site CR 28 is mandatory and must be complied with at all times.

40.1 Walk-ways

Walk-ways must be clear and unobstructed without posing a risk of trip and fall.

41. 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.

42. 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.

43. 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 Eskom Project Manager. The volumes of fuel allowed to be stored will depend on site conditions and Statutory Regulations.

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

44. Explosives

Explosives shall not be brought onto the site or be used without the express permission of the relevant Eskom 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.

45. 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.

46. 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 SANS 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.

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.

Note: Certain areas will be subjected to specific/extra PPE requirement.

46.1 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. PPE inspector must be appointed in writing.

47. 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.
- 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 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.

48. 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 indicates the name, number of the machine or tool and the number of guards.
- The register shall be kept in a safe place for record purposes.

49. 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 on a relevant checklist

All hand tools must be fitted with lanyards when performing work at heights. Hand tools inspectors must be appointed in writing. Proper storage of all tools should be maintained during execution of task and tools be taken back to the storeroom at the end of the task or shift. No tools should be allowed scattered on the floor where work is carried out or when employees goes for lunch break.

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

50. Boilers, Pressurised Systems and Pressure Equipment

The Principal Contractor shall ensure that all pressure equipment's are 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
- Registration certificate of an Approved Inspection – ensuring that all certificates are current, updated and available on request from the Client.

51. Explosive Actuated Fastening Device

- Written permission to use these tools on site must be obtained by the Eskom responsible person.
- 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.

52. 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 Eskom Procedure 39-98 (Safe use of Lifting machines and lifting tackle), Crane Access and Inspection Plant (200-169237) and Critical Lift Procedure (200-170572,).
- 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 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 Eskom responsible persons 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.
- 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 Principal Contractor 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 the Principal 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 possession of a valid 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 off such examination, such lifting tackle shall be stored or protected to prevent damage or deterioration when not in use.
- Refer to the requirements of the Driven Machinery Regulation 18 and Construction Regulation 19, 22 and 23 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 operate 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:
- 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 straight loads of up to 5 tons can be lifted by a person with basic rigging, depending on the complexity of the load. Should it be a critical lift or above 5 tons only a competent rigger will do such lifts. Should a lift become critical, a critical lift procedure, rigging study and risk assessments must be completed.
- 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.
- 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

- Service record books and test certificates of lifting machines and tackle should be kept in a file on site.
- A copy of the Site and Task specific risk assessment should be kept in the safety file
- The Principal Contractor shall provide maintenance records of all Cranes (Mobile, Tower, Crawler and Overhead Gantry) to Eskom before the equipment is allowed to operate on the site.
- A certificate of approval for man cages and mobile working platforms shall be obtained from the Department of Labour Inspector.
- Registers of all lifting machines and tackle on site must be available for inspection purposes.
- Training certificates and valid 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 Eskom for all tower cranes and man-cages.

53. 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 of the Eskom Plant Safety Regulations, Eskom 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.

53.1 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 and emergency procedures
- The control of fire hazards in and around the building.
- Maintenance of firefighting facilities.

53.2 Fire Alarm Shut Downs

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

53.3 Alternate Procedures

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

a) Occupied Buildings and/or portion

In the event that fire systems are removed from service a trained and qualified person will stand at the fire alarm panel and be in communication with the person(s) doing the work and capable of reinitiating the system in the event a fire alarm device is activated.

Or

Alternate warning device(s) will be used with procedures posted on all floors by elevators and entrances, stating that the fire alarm is out of service, the building/area affected, duration of shutdown, how to activate the alternate warning device(s), call Fire Department and call Security. Fire Panels must be tagged when being removed from service and the Fire Department and Monitoring Station notified. Fire Watch personnel must be stationed in the building to patrol the affected area(s) and be in communication with each other.

In the event where smoke detectors and/or heat detectors or sprinkler systems are removed from service the fire panel must be tagged when removed from service.

Fire Watch personnel must be stationed in the affected area(s) and to check the fire panel once per hour when the affected area is not occupied.

b) Unoccupied Buildings

In the event that fire systems are removed from service, alternative warning devices will be used with procedures posted at each entrance, stating authorize personnel only, how to activate the warning device(s), call Fire Department and call Security. Fire Panels must be tagged when removed from service. Fire Watch personnel will patrol the affected area(s) and check fire panel(s) once per hour.

In the event smoke detectors and/or heat detectors or sprinkler systems are removed from service, the fire panel must be tagged when removed from service. Fire Watch personnel will patrol the affected area(s) and check the fire panel(s) once per hour.

53.4 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 electrics concealed in the slab or walls. Signage shall be posted to ensure no one enters the affected area during X-raying.

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 clamps to separate it in an emergency.

53.5 Eskom Fire Safety Guidelines

(a) Fire Systems

Fire systems must not be impaired in an occupied building unless by a trained and SAQCC registered person, capable of reinstating the system after it has been inspected, tested or maintained. Alternative procedures may be taken to ensure that all persons in the building can be informed promptly should a fire occur, and the Fire Department including Eskom Security is notified.

Installation of fire systems should be carried out by an ASIB (Automatic Sprinkler Inspection Bureau) certified person.

(b) Fire Watch

Except where the building is provided with a fire alarm system or similar equipment acceptable to the Manager, Occupational Health and Safety, fire watch patrols with tours at intervals of not more than one hour apart shall be provided while the fire alarm system is not in operation.

(c) 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 and be readily available at the location.
- 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.
- Fire Watch: fire watch (with tours at intervals of not more than one hour apart) shall be provided when a portion of a building is occupied while construction operations are taking place, with provision for the fire watch to sound the alarm, notify the Fire Department and Eskom Security, (except where the building and construction sites are provided with a fire alarm system or similar equipment acceptable to the Manager, Occupational Health and Safety)
- Smoking Restrictions: Smoking is not permitted indoors, at entrances to buildings or near air intake systems in accordance with Eskom Policy and legislation requirements.
- All sites shall be fitted with an alarm system.

54. Offices and Camp sites/Laydown Areas

- 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 Eskom Policy and legislation requirements.

55. Fire Protection System Shutdown Procedures

A risk assessment must be conducted prior to a fire system being impaired; the following persons must be informed of such impairment namely the project/site manager, the person responsible for fire safety on site as well as the local fire department.

In the event of any shutdown of fire protection equipment, or parts thereof, the Eskom responsible manager must be informed immediately.

Confirmation of the schedule should follow within 2 days of the original notice. Manager' of Security and Occupational Health and Safety should be given 3 days' notice via email for fire watch requests. The building occupants should be given 3 days' notice via email (all notes) of any shutdown of fire protection equipment or parts thereof.

An attempt to minimize the impact of inoperative equipment must be made (i.e. where portions of a fire alarm system, sprinklers, and standpipe system are taken out of service, the remaining portions will be maintained). Assistance and direction for specific situations should be sought from the Manager of Maintenance and Operations and Electrical Foreman, and should be in accordance with the accepted Eskom Fire Safety Guidelines and the Fire Safety Plan for the building.

In the event of bells and pull stations being removed from service in an occupied building, Facilities Management Staff (person in charge of the work) will be responsible to post procedures at affected pull stations, elevators and entrances. Assistance and direction for specific situations should be sought from the Manager of Occupational Health and Safety, and should be in accordance with the accepted Eskom Fire Safety Guidelines and the Fire Safety Plan for the building.

Procedures to be followed in the event of shutdown of any part of a fire protection system are as follows:

- Upon request, Electrical Staff shall verify in person that the work has been completed, contact the monitoring station if necessary, restore the fire protection system, remove the information tag and inform the Electrical Foreman that the system has been restored;
- Electrical Foreman will notify Security Supervisor to begin fire watch;
- Security Staff or other reliable person will patrol the affected area(s) at least once per hour;
- Upon request, Electrical Staff will verify in person work has been completed, contact the monitoring station if necessary, restore the fire protection system, remove the information tag and inform the Electrical Foreman system has been restored;
- Electrical Foreman will notify Security Supervisor to end fire watch.

56. 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 then 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” (which needs to be maintained and only as a temporary solution) will be allowed.
- Ballard’s (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.

No danger tapes are allowed for barricading purposes.

The contractors barricading standard must accompany to the SHE plan.

57. 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 is kept on the construction site; and

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.

58. Permit to Work

Contractors must adhere to the approved Eskom Permit to Work System to control identified high risk activities. There will be only one Permit to Work system (Eskom) 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 Eskom regulations e.g.

- Operating Regulations for High Voltage Systems.
- Plant Safety Regulations.
- Pulverised Fuel firing regulations.
- Hot work.
- Radiation.
- Confined space work.

Note: Once any plant is safety cleared a permit to work is required to do any work activities on the plant.

Principal Contractors and contractors must send employees (Supervisors) on responsible person course to enable them to take out permit to 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.

58.1 Working under a Live Plant

Authorisation of personnel working on a plant which is electrically connected to a power source and/or electrically charged will be required at all times. Certificate of authorisation must be available for the appointed person (AP), responsible person (RP) and the authorised supervisor.

Authorisation certificate must have the following details:

- Have a unique reference number;
- State the authorisation and expiry date;
- State the person's full name, designation, and Eskom unique number and/or ID number;
- State the plant and duties to which it applies;
- Bear the signature of the employer (in terms of the Act).

Permit to work Application.

The application for a permit to work must be completed by a responsible person (RP) or a person who has passed the theory section of the Plant Safety Regulations course, on behalf of a responsible person in charge of the work, detailing in full the work to be carried out. Any special requirements such as hot work, radiological work or work in a confined space must be stated.

Risk Assessments and pre-work checklists must be completed for all work under any Permit to Work.

The responsible person (RP) or a person acting on his behalf must complete the permit to work application section stating:

- The plant requiring isolation, in detail;
- The scope of the work to be carried out in detail;
- Any special requirements including identified dangers and hazards that require continued assessments during the period of work.
- The time and date on which the work is to be commenced;
- Risk assessment number must be entered during the application stage i.e. prior to PTW printing.

The appointed person (AP) must verify that a risk assessment number is reflected on the permit to work form, before he proceeds to isolate the plant after determining the required isolations.

The responsible person must physically sign the application section of the permit to work, satisfying himself of the correctness of the plant detail, the work detail, those hazards and dangers requiring continuous risk assessment have been stipulated before he proceeds to verify that the plant has been isolated as requested.

Accountability for the permit to work and its associated supervision will remain with the responsible person at all times. Without derogating from his accountability and responsibility, the responsible person may delegate his responsibility for supervision to an authorised supervisor, who will be required to supervise the work as per the scope of the permit to work. Should supervision be delegated, the authorised supervisor shall be fully responsible for supervision of the work to ensure its safe execution in accordance with the permit to work. The delegation to the authorised supervisor shall not relieve the responsible person from his/her accountability for the permit to work and its associated supervision. Once the authorised supervisor is appointed, the responsible person should be allowed to leave site but remain contactable at all times.

Isolations

The appointed person must determine and then carry out the required isolations necessary to ensure that work can proceed without danger, ensuring that the correct plant is isolated, using safety locks and prohibitory signs according to the requirements of these regulations, applying general good safety practice, and adhering to any local procedures which may be in force regarding the isolation of that particular plant.

Note: The "test before touch" principle must be adhered to.

In addition, prohibitory signs must also be affixed, where practicable, to all remote control stations associated with the isolated plant.
Any special requests, conditions, dangers and hazards must be stipulated on the permit to work.

No alterations to the work scope and or isolations shall be allowed on an issued permit to work. A new permit to work must be issued if the original scope of work changes.

Security and Integrity of points of isolation

- Before a permit to work is issued, all points of plant isolation must be immobilised and a prohibitory sign must be attached.
- The integrity of isolations is ensured by the application, of at least one safety lock at each point of isolation by the appointed person. Circumstances may necessitate the application of additional safety locks at a point of isolation.

If it becomes necessary to suspend a permit to work the responsible person or the authorised supervisor must make the work area safe, inform all the workers that it is no longer safe to carry on working, withdraw them from the plant and complete the withdrawal section of the workers' register.

59. 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.

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:

- Eskom Standard: Radioactive sources for non-nuclear stations
- 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.

60. Excavations, Trenches and Floor Openings

- All contractors shall ensure that all excavation work is done in accordance with the requirement of CR 13 of OHS Act as well as Site Excavation Procedure Requirements. 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. The Contractor shall first submit a completed Excavation Permit to the client. The request shall be submitted far enough in advance to allow the Client to review Contractor's submittal. After reviewing the information, the client shall sign the notice indicating that it has been approved and return a copy of it to the contractor. The contractor may commence work after receiving signed notice. For all trenches or excavations over 7 meters deep, contractor must have the sloping, shoring or shielding method reviewed by Professional Engineer of discipline. The design must be submitted to the Client as an attachment to the excavation permit.
- For all excavation works, Eskom Medupi power Station excavation procedure (latest revision) should be complied with.
- 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.
- Barricading must be placed as close as practicable to the excavation.
- 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, blasting in open cast mining 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 load, material, plant or equipment shall be placed or moved near the edge of any excavation where it may cause it to collapse and consequently endangers the safety of any person, unless precautions are taken.
- 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.
- 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.

61. 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 must be notified prior to the blasting activities on site.
- 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 appropriate Client before charges are placed.
- Only a licensed operator is allowed to blast.

- For all blasting operations, a blasting mat (e.g. conveyor belts) shall be used to cover the blasting area so as to reduce the amount of flying debris.
- Inform all people in the area where the blasting is going to take place

62. Incident Management - 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, property damage, lost time incidents (lost time injuries and fatalities); Section 24 and 25 incidents; electrical contact; major equipment damage; chemical spillage and other environmental incidents within 24 hours or before the end of the work shift. All incidents shall be logged on Eskom Wispa system. Contractor to identify personnel and arrange the Wispa training with the Client to gain login access to use the system.
- All incident reporting, recording, classification and investigation will be done according to the requirements set out in the Eskom document 32-95 (latest revision).
- The Eskom responsible manager 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 contracting company. 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 Eskom Lifesaving Rules must be presented by the relevant Business Unit 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 Eskom project manager within 7 days after the incident.
- Any lost time incident, (LTI) section 24 or major environmental incident. Principle contractor Chief executive officer will be asked to do a presentation to Eskom project director on site. Note this is not for site manager to present. (CEO of Principal Contractor will also on behalf of his contractor do presentations.
- All Incidents shall be presented to Eskom Management within seven days (counting from the day incident occurred).

- The Principal Contractor shall ensure that all accidents/incidents are investigated by the contractor and are discussed at the monthly Principal Contractors health and safety 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 the Medicals, lost time incidents and fatalities. The Principal Contractor shall compile case studies and lessons learnt for the Medicals, lost time incidents and fatalities and forward such documents to the Client for sharing across site.
- Lesson learnt should be compiled for all incidents (Fatalities, LTI's, Medicals, First Aids, Near Misses and Property damage)
- 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, no later than the 3rd of the new month. (Refer to Annexure C : Form 75 contractor register)
- Eskom reserves the right to conduct an independent investigation in to any incident.
- In addition to the Principal Contractor and his contractor investigations, Eskom will also, separately, conduct its own separate investigation. The Principal Contractor and contractor would be required to co-operate with the Eskom investigation committee. No joint investigations would be held, i.e.: with Eskom and Principal Contractor. Eskom Project team shall define Parties to be involved in the investigations.
- All investigation teams must include at least 1 person (from both the Eskom 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 Eskom responsible Manager, within 7 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 reports to Eskom responsible Manager.
- The Contractor shall investigate all incidents immediately and give the Eskom responsible Manager/HS Officers 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 (Full names, ID numbers, Duration on Project);
    - Names of witness/s;
    - Corrective actions
    - Lessons learnt
- It is required that all corrective actions are closed out within 30 days and proof submitted to the Client. If this is not practicable within the time frame, then it is to be submitted at a later date agreed to by the Eskom responsible 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 COID Act.
- It is essential that the Principal Contractor demonstrate that corrective action has been taken and that correction action is communicated by a predetermined means to all Contractors staff affected. All corrective actions must be closed within 30 days from the date of issuing of investigation report.
- 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.
- ***Note:*** Principal Contractor shall be required to make use of an electronic system which shall be defined by the client during execution phase for reporting and recording of incidents.

63. Behavioural Based Safety Observation (BBSO)/Visible Felt Leadership (VFL)

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. (Refer to Eskom Behavioural Safety Observations procedure 32-407).

64. 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.

65. Inspection Colour Codes

The below table should be used for colour coding on site for monthly and quarterly inspections on tools and equipment. Material to be used on colour coding should be cable ties. The colour coding should be implemented as soon as on the first day of the respective month. Previous month colour coding should be removed and replaced with new ones for the present month. Wrong colour coding on tools and equipment shall be deemed as proof that inspection was not conducted for the month on that particular item. Colour coding does not replace the need of daily inspection checklist being conducted daily and kept in the file on site.

Monthly Inspection Colour lode			**Quarterly Inspection Colour Code**	
January	Blue	Blue	January	Green
February		White	February	
March		Black	March	
April	Grey	Grey	April	Red
May		White	May	
June		Black	June	
July	Pink	Pink	July	Blue
August		White	August	

September		Black	September	
October	Brown	Brown	October	Yellow
November		White	November	
December		Black	December	

66. 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 Eskom management: All work of a similar nature may be stopped as the result of an occurrence of a serious incident. The relevant 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 Eskom responsible 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 is 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 Eskom responsible 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 Eskom responsible 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 contractors shall ensure:
    - The area is re-inspected by Contractor Safety Practitioner and supervisor and note corrective actions taken;
    - Declare the area safe for work by signing off on the “work stoppage” notice issued by the Eskom responsible 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 Eskom*.

Further note Eskom do have two compulsory work stoppages per annum. Safety discussions will be held on those days and no financial compensation claim lodged against Eskom. This is in line to support our safety culture of Zero Harm.

67. Work Co-ordination/ interface Process

Work coordination process is the Client’s mechanism designed for monitoring and coordination of activities for contractors working within the same area. It allows work to proceed without risk to the health and safety of contractor personnel, visitors, Principal Contractors and client personnel. The following is required:

- The responsible manager must ensure that work interfacing is avoided during the planning stage of activities;
- If work interface cannot be avoided, both Contractors must conduct a joint risk assessment and must be accepted by Eskom representative before work commences;
- All emerging hazards and risk must be identified on the DSTI/risk assessment and communicated by both contractors working in the same area;
- All Principal Contractors working inside the Gas air heater (GAH) must develop a work procedure to address work interface issues and ensure that compliance by all employees. One Principal Contractor will be given the responsibility for the works inside the GAH and will manage the interfacing of works with all other contractors who have a scope to work inside the GAH;
- Attendance of morning interface meetings/ pre task meeting: - Responsible Construction Manager, Supervisor and SHE Personnel meet on daily basis to discuss how they will be interfacing to accommodate each other’s activities to meet project milestones.

68. ISO 45001:2018 – OHS Management System and ISO 14001:2015 – Environmental Management System

Medupi Project has been certified to ISO 45001:2018 and ISO 14001:2015. Principal Contractor shall be required to comply with system procedures and shall further be requested to participate on applicable audits to ensure compliance to the system requirements.

Principal Contractor should provide copy of certificate for the OHS Management/Environmental management systems they are certified on or should provide a plan on how they would establish these Systems for the duration of the project.

Contractor shall attach Environmental Management system documentation that is aligned to ISO 14001

69. SHE Audits

Eskom will conduct a planned yearly audit schedule on contractors. Non-compliance raised during these audits shall be closed by the Contractor within 30 days. Audit will be conducted on specific audit criteria and sampling of different site areas.

There will be monthly audits conducted by Eskom on the Principal Contractor/s and/or contractors. These audits shall be attended by the contractor's site safety manager/officer.

The Safety manager and Safety Officer shall be available at all times when these audits are conducted.

Ad hoc audits will be conducted when a need arises and the Contractor's safety manager and safety officer to avail themselves for such audits.

Note: Eskom reserves the right to conduct unannounced audits on contractors.

70. Compliance and Approval of Contractor SHE Plan

The Contractor's SHE Plan will be audited against a compliance checklist to confirm compliance to the requirements in the Eskom SHE specifications. Once compliance is confirmed, only then will the contractor's SHE plan be approved by the Client.

71. Contractor SHE Performance Evaluation

Eskom shall evaluate contractor SHE performance on an ongoing basis against the Eskom requirements.

72. 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 Eskom responsible Manager on the last day of the audit. The report shall be submitted within one week after completion of the audit

73. 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 Eskom responsible Manager. The written report shall be submitted within one week after the completion of the audit.

74. Environmental Management

Contractors shall comply with the Projects' Environmental Management Plan (EMP) and ROD requirements.

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.
- 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.
- Ensure compliance with the environmental requirements, relating to the provision of adequate resources for 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.
- 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).

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.
- 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.

74.1 Construction Environmental Personnel

The Principal Contractor and contractor shall appoint relevant Environmental personnel as per EMP /ROD requirements considering the nature and the scope of work being conducted.

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;
- 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.

75. 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.

76. 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.

Domestic and hazardous waste generated shall not be burned, buried, or disposed of on Eskom 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

77. 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

78. 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.

79. 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.

All environmental incidents occurring on site shall be recorded according to Eskom 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.

80. Water Management

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.

The Principal Contractor shall arrange water supply connections required by him. The Employer will not be liable for any delays arising from any interruption of the water supply or for any inadequacies in the supply. The Principal Contractor shall make his own arrangements for distribution of the water supplies from the terminal point. The Principal Contractor shall adhere to all conditions as per the Project EMP and other environmental requirements.

For construction purposes shall only be sourced from existing sources within the power station. When obtaining water for construction purposes the Principal Contractor shall at all times comply with the permitting and license requirements of the DWS.

81. Reporting and SHE governance

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.

Eskom 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.

Attendance registers shall be kept for all the health and safety meetings.

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 Eskom requirements shall be established.

81.1 SHE Statistical and Non-Statistical Reports

The aim of this section is to outline the reporting requirements by Contractors to Eskom.

81.1.1 Weekly Reporting

Principal Contractor shall report on a weekly basis Health and Safety statistics

Week refers to: (Monday to Sunday) as per Weekly HS Stats Template, (Annexure Z and AA of Appendix B). Report should be submitted in before or on close of business on Tuesday.

81.1.2 Monthly Reporting

Health & Safety Monthly reports must not be submitted later than the 2nd of every month, Environmental Management reports to be submitted as per timelines determined and agreed upon by TM Environmental department. The reporting format for Health and Safety monthly reports is indicated on Form 75 :(Refer to Annexure C, Appendix A)

- Incidents: Lost time, medical; first aid, near misses and property damage 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.

- Eskom project team shall define and provide a reporting template.
- Health and safety trainings, campaigns, stand downs

81.2 Forums for SHE Governance and Communication

Effective governance and communication structures have been established on site where project SHE matters are discussed. Below is an outline of the different forums, where Project Site Management shall engage with the Contractor(s) on SHE issues. This also includes the frequency of the different forums as well as the mediums to be employed.

81.2.1 Principal Contractors Construction Managers Walk-down

The Project SHE Walk Down will commence on a weekly basis and shall be attended by the contractor representatives, Safety Practitioners and Eskom Management Representative.

81.2.2 SHE Representative Meeting

The Project Site Management will host on a monthly basis a meeting in which all Contractor SHE Representatives will be invited to attend. The meeting will consists of rotating topics on Safety, Health, and Environmental issues currently applicable to the site.

81.2.3 Crane Coordination Meeting

The Project Site Management conducts on a bi-weekly basis a Crane Coordination Meeting. This meeting will serve as a platform for the Contractor to co-ordinate the movements and planned lifting activities of their cranes with their respective counter-parts and other Contractor(s) on the site.

81.2.4 GMR 2's Meeting and Plant Walk

The Project Site Management conducts monthly meeting and quarterly plant walk with Principal Contractors GMR 2.1 OR Person in charge of compliance. This is compulsory to all contractors onsite.

81.2.5 Emergency Coordinators Meeting

The Project Emergency coordinators meet on quarterly basis to discuss emergency activities, changes on the acts and bylaws and any other feedback from activities conducted by the Employer on various Contractors as well as lessons learnt.

81.2.6 SHE Managers (Eskom and contractors) Meeting

The Project Site Management will host on a monthly basis a SHE Managers meeting in which all Contractors are invited to attend. The meeting discusses SHE performance, progress and improvement initiatives etc.

81.2.7 Contractors Environmental Meetings

Contractors Environmental Meetings are held at intervals as determined by TM Environmental Department, such meetings are chaired by the TM Environmental Manager and attended by the ECO, TM Environmental Practitioners as well as designated environmental resources of all contractors.

82. Contractors SHE Plan

All Contractors must use the applicable SHE information 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 accepted.

When a Principal Contractor intends appointing a contractor, the Principal Contractor shall ensure that his SHE Plan is based on the Eskom 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.

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 Eskom 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 Eskom 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 Eskom of such issues when submitting the tender.

Should Eskom not have addressed all SHE Aspects pertaining to work that is tendered for, the contractor needs to ensure that all applicable SHE requirements are identified and included in their management system.

84. 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 Eskom responsible 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 from the Department of Employment and Labour.

84.1 Night Work

When night work is to be performed; contractors shall provide sufficient lighting to enable the entire work site to be illuminated to a degree that employees will not work in dark (un-illuminated) or dimly lit areas. Care must be exercised as not to use few lights with high light intensives as this will cause night blindness.

If work is continuing from day light into night, a tool box talk must be held where all employees will be advised of the hazards of night work and the extra precautions which require to be taken, i.e. poor housekeeping, stepping on uneven ground, stepping into holes etc.

The Principal Contractor will notify their Eskom Project Manager/Health and Safety Manager of any work that needs to be performed after hours according to the agreed arrangements. Where applicable, the notification should include proof of application, for overtime, to the Department of Employment and Labour and /or the letter of approval from the Department of Employment and Labour

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.

85. 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 person's health and safety at work and to cooperate with the employer, carry out lawful orders, including reporting unsafe situations and incidents.

Refer to Eskom Procedure 240-43848327- Employees' right of refusal to work in an unsafe situation. The aim of the procedure is to ensure that an environment is created that promotes zero harm by empowering employees and contractors to take responsibility for their own safety and that of others.

86. 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 shall be submitted by the contractor and accepted by the Client before commencement of works.

- 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
    - 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.

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 Eskom Project Manager. All required documentation shall be submitted and handed over using relevant medium as per the procedure (Project Closeout and H&S documentation, 348-9942695). A checklist shall accompany the submission to verify that all documents are submitted/or handed in to the client.

No project shall be signed off before Business Unit or Department 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.

88. Acceptance

This document has been seen and accepted by:

Name	Designation
Philip Steyn	Project Manager
B Mgidlana	Project Quality Manager
Z Shange	General Manager (Acting)

89. Revisions

Date	Rev.	Compiler	Remarks
09 March 2021	0	Phathutshedzo Sumbana	New SHE specification draft document.
10 March 2021	0	Prince Lepota	Technical Review
03 May 2021	1	Emile Marell	Documentation control and Quality review done on the document.

90. Development Team

The following people were involved in the development of this document:

- Emile Marell – Safety Manager (Acting)
- Pauline Malindi – Officer Safety and Assurance
- Prince Lepota – GMR 2.1
- Bongani Sibisi – Senior Advisor project
- Phathutshedzo Sumbana – Officer Safety Health and Environmental
- Dovhani Mudzielwana – Senior Advisor Environmental Management

91. Acknowledgements

Numerous persons were consulted in an informal manner. They made valuable contributions to the content of this SHE Specification.

- Choene Komape
- Raymond Tshotheli

Appendix A – Eskom Document Hierarchy

Annexure A: 32 - 727 Eskom SHEQ Policy 05 July 2	**Annexure B:** Vehicle and Driver Safety Management I	**Annexure C:** Form 75 Contractor register.doc
Annexure D: Smoking Policy 32-1126.pdf	**Annexure E:** Access control 32-1134.pdf	**Annexure F:** Risk assessment template 240-700446
Annexure G: Life Saving Rules Standard 240-621962	**Annexure H:** Substance Abuse Procedure 32-37.pdf	**Annexure I:** OHS Incident Management Procedu
Annexure J: Behaviour Safety Observation 32-407.p	**Annexure k:** OHS Risk Assessment Procedur	**Annexure L:** Employees Right of Refusal to Work 240-
Annexure M: Env Incident Management Procedu	**Annexure N:** Contractor Health and Safety Req 32-1	**Annexure O:** Working From Heights 32-418.pdf
Annexure P: PPE for Work at Heights 240-1009794	**Annexure Q:** Emergency Planning 32-123.pdf	**Annexure R:** Safe Use of Lifting Machines and Tackle
Annexure S: Plant Safety Regulations 36-681.p	**Annexure T:** 240-77471499 Annexure B Acknowle	**Annexure U:** Contractor SHE File or Plan Evaluation.pd

Appendix B– Medupi Document Hierarchy

Annexure V Occupational Hygiene Program 200	**Annexure W** Operational Control Procedure 200-3843(	**Annexure X** Emergency Preparedness and Re
Annexure Y OHS Audit Procedure 200-220597 Rev 01.p	**Annexure Z** Handling of HS Non-Conformities and	**Annexure AA** Critical Lift Procedure 200-170572 Rev 01.p
Annexure AB Crane Access and Inspection Plan 200-1	**Annexure AC** Contractors Weekly Health and Safety Re	**Annexure AD** Perimeter Access and Egress Control 2(
Annexure AE COVID-19 Health and Safety managem	**Annexure AF** 348-9942695 - Project Closeout and	