Eskom	Specification	Camden Power Station

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1. Introduction

This procedure contains the statutory requirements as well as the minimum safety, health and environmental requirements to which Principal Contractors must comply whilst performing construction work on the premises of Eskom Camden Power Station.

Conformance with the Occupational Health and Safety Act, 85 of 1993 including all its Regulations as well as all other relevant environmental legislation is mandatory.

The Principal contractor shall remain accountable for health and safety programme for his employees and contractor employees.

2. Scope

2.1 Purpose

To set out the minimum requirements to ensure compliance with safety, health and environmental legislation as well as Eskom Camden Power Station Standards and Procedures and to assist the Project Managers and the Principal Contractors, to develop, implement and maintain an organised safety, health and environmental management system.

2.2 Applicability

This standard is applicable to all Contractors and Suppliers and all the activities and processes carried out for and on behalf of Camden Power Station that affect the services rendered.

3. NORMATIVE/INFORMATIVE References

3.1 Normative

[1] Occupational Health and Safety Act, act 85 of 1993 and all applicable regulations
[2] OHSAS 18001 Safety Management Assessment Series
[3] ISO 14001 Environmental Management Systems
[4] 32-727 - SHEQ Policy
[5] 32-37 - Substance Abuse Procedure
[6] 240-62946386 - Vehicle driver safety management
[7] 32-95 - Procedure for the effective Management of Safety, Health and Environmental Incidents
[8] 32-123 - Emergency Planning
[9] 32-245 - Waste Management Procedure
[10] 32-282 - Procedure for Medical Surveillance
[11] 32-407 - Behavioural Safety Observation
[12] 32-418 - Working at Heights
[13] 32-425 - Hearing Conservation
[14] 32-345 - Eskom Vehicle Safety Specification
[15] 32-641 - Occupational Hygiene and Safety data Assurance Process

[16] 32-726 - SHE Requirements for the Eskom Commercial Process
[17] 39-13 - Process for Health and Safety Risk Assessment
[18] 39-87 - Hearing Conservation Programme
[19] 39-91 - Visible Felt Leadership and Walkabouts
[20] 39-98 - Safe use of lifting machines and lifting tackle
[21] 39-113 - Food Hygiene and Safety Management
[22] 39-163 - Change Management Procedure
[23] 240-44175132 - PPE Specification
[24] 004/4626 - Emergency Preparedness Procedure
[25] Plant Safety Regulations
[26] 32-136 - Contractor Health and Safety Requirements
[27] 32-520 - Risk Assessment Procedure
[28] 240-62196227 - Life Saving Rules Procedure
[29] 32-846 - Operating Regulations for High Voltage Systems
[30] 32-303 - Requirements for safe processing, handling, storing, disposal and phase-out of asbestos and asbestos containing material, equipment and articles
[31]004/4082 - Environmental Aspects and Impacts Identification
[32]004/4081 - Environmental legal requirements
[33]004/4083 - Environmental Objectives and targets
[34]004/2554 - Business Organizational Roles and Responsibilities
[35]004/3055 - Camden Communication Policy
[36]004/5446 - Document & Records Management
[37]004/4093 - Environmental Monitoring and Measurements Procedure
[38]004/4095 - Legal Compliance
[39]229/12243 - Non-conformance Reporting Process
[40]004/5900 - Camden Audit Management
[41]004/4099 - Environmental Management Review

3.2 Informative

[1] Tobacco Products Control Act 83 of 1993 (Updated 2011.05.19)
[2] SANS 1186 Symbolic Safety Signs
[3] Constitution of the Republic of South Africa No 108 of 1996
[4] 32-1126 - Smoking Policy
[5] 004/10609 - Radiation Management Procedure
[6] 004/8516 - Asbestos Control Management Procedure
[7] 004/5234 - Impairment of Fire Protection System

Note: The Principal Contractor and its Sub-contractors are to ensure compliance to those legal requirements and conformance to those Eskom procedures not listed above, but that are according to the scope of works, applicable to the project. The applicable Eskom procedures can be requested during the tender enquiry phase

3.3 DEFINITIONS AND CLASSIFICATIONS

3.3.1 Classifications

Controlled disclosure: controlled disclosure to external parties (either enforced by law, or discretionary).

3.3.2 Definitions

All applicable definitions will be as per the latest revision of the OHS Act, act 85 of 1993 and all other applicable legislations.

Agent: means any external person who acts as a representative for the client and has formally been appointed as such by the client.

Client: means Eskom representative (Internal – Asset Owner), also referred to as the contract administrator/custodian or agent or project manager (as defined in the contract). He/she is the person responsible for ensuring that the works or services are executed in terms of the contract, as well as adherence to legislation pertaining to the contract.).

Contractor: means an employer, as defined in section 1 of the OHSA, who performs construction work for the client either directly or through an agent, and includes principal contractors.

Subcontractor: means a contractor who is employed by a principal contractor and has no direct formal contractual agreement of employment with the client.

Construction work - m e a n s any work in connection with—

a) the construction, erection, alteration, renovation, repair, demolition or dismantling of or addition to a building or any similar structure; or

b) the construction, erection, maintenance, demolition or dismantling of any bridge, dam, canal, road, railway, runway, 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;

Design: in relation to any structure, includes drawings, calculations, design details, and specifications.

Designer: means any of the following persons:

a) a person who prepares a design
b) A person who checks and approves a design
c) A person who arranges for any person at work under his/her control (including an employee of his/hers, where he/she is the employer) to prepare a design
d) An architect or engineer contributing to, or having overall responsibility for, the design
e) A building-services engineer designing details for fixed plant
f) A surveyor specifying articles or drawing up specifications
g) A contractor carrying out design works as part of a design and build project
h) A temporary works engineer designing form work and false work
i) An interior designer, shop fitter, and landscape architect

Duty of care to the environment: anybody who causes or has caused or may cause significant pollution or degradation of the environment must take reasonable measures to prevent such

pollution or degradation from occurring, continuing, or recurring. If such harm to the environment is authorized by law, or cannot reasonably be avoided or stopped, such person must minimize and rectify such pollution or degradation of the environment.

Employee: means a person who performs work for an employer. This includes any person who has entered into, or works under, a contract of service, apprenticeship, or learner ship with an employer, whether the contract is explicit or implicit, oral or in writing, whether the remuneration is calculated by time or work done and paid for in cash or in kind, and includes a situation where such a person is under the control, instruction, and supervision of Eskom, namely:

a) a casual employee employed for the purpose of the employer's business;

b) a person who has entered into a contract of service or of apprenticeship or learner ship with the employer;

c) a person provided to Eskom by a TES (temporary employment service) or a labour broker and who works under the control, instruction, and supervision of an Eskom employee;

d) a part-time worker;

e) a temporary worker;

f) an occasional employee;

g) an unattached learner;

h) a bursary-holder while under the supervision of Eskom;

i) any family member or visitor of a teleworker in the event of an incident, if present, and involved in performing work for, or on behalf of the teleworker at the house deemed to be the employee's (section 37);

j) Any contractor, where no written agreement is available, as required in terms of section 37(2) of the OHSA, will be regarded as an employee; and

k) Any contractor's employees who perform any work under the instruction and/or supervision of an Eskom employee, where the instruction given directly resulted in an injury.

Employer: means any person who employs or provides work for any person and remunerates that person or expressly or tacitly undertakes to remunerate him/her.

Environment: means:

i) The land, water, and atmosphere of the earth;

ii) Micro-organisms, plant and animal life; any part or combination of (i) and (ii) and the interrelationships among and between them; and the physical, chemical, aesthetic, and cultural properties and conditions of the foregoing that influence human health and well-being.

Hazard: a hazard is defined as any real or potential condition that can cause illness, injury, death, property dam

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

Internal service provider: means an Eskom department that performs construction work for another Eskom department. Eskom Enterprises Pty Ltd is not regarded as an internal service provider.

Joint venture: means a strategic alliance between two or more parties to undertake economic

activity together. The parties agree to create a new entity (incorporated or unincorporated) together by each party's contribution of equity, and they then share in the profits, losses, and control of the enterprise. The venture may be for one specific project only or a continuing business relationship.

Method statement: means a written document detailing the key activities to reduce the hazards identified in any risk assessment. In the case of internal work, it includes procedures, safe work procedures, and work standards.

Procurement practitioner: means a qualified buyer who assists the client/agent during the commercial process to enter into contracts for the procurement of goods and services.

Pollution: means any change in the environment caused by: substances; radioactive or other waves; or noise, odours, dust, or heat, emitted from any activity, including the storage or treatment of waste or substances, construction, and the provision of services, whether engaged in by any person or an organ of state, where that change has an adverse effect on human health or well-being or on the composition, resilience, and productivity of natural or managed ecosystems or on materials useful to people, or will have such an effect in the future.

Principal contractor: means an employer, as defined in section 1 of the relevant Act, who performs construction work and is appointed by the client or the client's agent to be in overall control and management of a part of, or the whole of, a construction site.

Note: where construction work is performed within Eskom by an Eskom internal service provider, that individual or department will be regarded as the internal service provider for the purpose of this specification.

Project: means an activity or a group of activities that has a defined start and end date, a defined scope, and a defined sum of money allocated to complete the activities.

Project manager: means the person who has the responsibility for the successful planning and execution of a project. The project manager must satisfy the certification requirements set by the South African Council for the Project and Construction Management Professions.

Provincial director: means the provincial director as defined in regulation 1 of the General Administrative Regulations under the relevant Act.

Risk assessment: means a programme to determine any hazard at a construction site and to identify the steps needed to remove, reduce, or control such hazard.

Safety, health, and environmental (SHE) specification: means a documented specification of significant residual SHE requirements for a construction site, of which a competent and resourced principal contractor or subcontractor would not have been aware. This specification is intended to ensure the health and safety of persons, both workers and the public, and the duty of care to the environment. The client compiles the SHE specification, which must be specific to each construction project, site, and scope of work.

Safety, health, and environmental file: means a permanent record containing information about the SHE management system during construction and all information relating to the post-construction phase after the handover to the client, so that the client can maintain the works in a healthy and safe way.

Safety, health, and environmental plan: means a documented plan that addresses the hazards identified in the SHE specification and risk assessments of the project work activities of principal contractors and subcontractors. This plan must include any required method statements, safe work procedures to mitigate, reduce, or control the hazards identified, SHE rules, and monitoring procedures. It is specific to each construction project undertaken and site where work is done, is

compiled by the principal contractor or subcontractor, and must be approved by the client or agent prior to the commencement of any construction activities on a project. The principal contractor and the client (or agent, where applicable) must both be signatories to the SHE plan once negotiated, agreed, and accepted. This plan has to be regularly updated to take account of any changes in project scope and unanticipated conditions.

Site: means a specific project site, or the site where the contractor does the work.

Structure - means: any building, steel or reinforced concrete structure (not being a building), railway line or siding, bridge, waterworks, reservoir, pipe or pipeline, cable, sewer, sewage works, fixed vessels, road, drainage works, earthworks, dam, wall, mast, tower, tower crane, bulk mixing plant, pylon, surface and underground tanks, earth retaining structure or any structure designed to preserve or alter any natural feature, and any other similar structure;

The Act: means the Occupational Health and Safety Act, No 85 of 1993.

Working at or from Heights - Any work performed above a stable work surface or where a person puts himself/herself in a position where he/she exposes himself/herself to a fall from or into

3.3.3 Abbreviations

Abbreviation	Description
AIA: OH&H	Approved Inspection Authority: Occupational Health and Hygiene
APP	Appointed Person
CE	Chief Executive
C&I	Control and Instrumentation
COID Act	Compensation for Occupational Injuries and Diseases Act
CR	Construction Regulations
CRP	Coal Refurbishment/Replacement Project
DMR	Driven Machinery Regulations
DWA	Department of Water Affairs
EAP	Employee Assistance Programme
EIA	Environmental Impact Assessment
EM	Environmental Manager
EMP	Environmental Management Plan
EO	Environmental Officer
FRO	Fire Risk Officer
GAR	Government Administration Act
GSR	General Safety Regulations
HCS	Hazardous Chemical Substances
HV	High Voltage
ICAS	International Counselling and Advisory Services
LoGS	Letter of Good Standing
MSDS	Material Safety Data Sheet

NEMA	National Environmental Management Act
OHN	Occupational Health Nurse
OHP	Occupational Health Practitioner
OHS	Occupational Health and Safety
OHS Act	Occupational Health and Safety Act
ORHVS	Operating Regulations for High Voltage Systems
PC	Principal Contractor
PPE	Personal Protective Equipment
PSM	Power Station Manager
PSR	Plant Safety Regulations
RCat	Root cause analysis training
ROD	Record of Decision
RP	Responsible Person
RT	Response Team
SAMTRAC	Safety Management Training Course
SACPCMP	South African Council for Construction Management Professions
SANS	South African National Standards
SHE	Safety Health and Environment
SSS	Senior Shift Supervisor
TES	Temporary Employment Service
VCT	Voluntary Counselling and Testing
VUP	Vessels Under Pressure

3.4 PROCESS FOR MONITORING

Conformance to this specification shall be assessed by the Employers representatives during site inspections and audits as stipulated in the specification.

3.5 RELATED/SUPPORTING DOCUMENTS

[1] 32-136 - Contractors Health and Safety requirements
[2] Eskom OHS Act section 37 (2) agreement to be signed after signing the NEC contract and safety file approval, it is the responsibility of the project manager to ensure that the 37(2) agreement is signed and a copy be kept in the contractor file.

4. DOCUMENT CONTENT

4.1 Details, Accountabilities, and Responsibilities

4.1.1 Employers Representative: Eskom Executive Project Manager

The Executive Project Manager is the overall accountable person for the overall management of the project both on and off site. He / She may delegate duties to any competent person, internal or external to Eskom. If applicable: if an agent is to be appointed, the appointment is as per the OHS Act, CR 4(5) as an agent representative by the Employers representative

4.1.2 Eskom: Project Manager

The Project Manager is a delegated responsible person appointed in terms of the OHS Act by the delegated responsible person. He/she is responsible for the overall SHE control of the project and must ensure compliance on behalf of the client, to CR regulation 5 requirements.

4.1.3 Eskom: Contracts Manager

The Contracts Manager, as defined in the contract is responsible for managing the contract between the Employer and the Principal Contractor, shall ensure that the SHE specifications and baseline risk assessment are issued with tender enquiries and that the Principal Contractor's SHE plan is approved prior to commencement of work. He/she must ensure that all the statutory and Eskom requirements, the SHE specifications and SHE plan requirements, are adhered to by the Principal Contractor and its Sub-contractors at all times.

4.1.4 Eskom: Engineering Manager

The Project Engineering Manager is responsible for the overall management of the project design application as well as for ensuring the management of the compliance of the completed works with the design during and after construction on site in conjunction with the project supervisor and under the auspices of the project manager. The Project Engineer is the person responsible for ensuring that the employer's professional and legal obligations with respect to the implementation of the design are fulfilled.

4.1.5 Eskom: OHS Health, Safety and Environmental Manager/Practitioner

The responsibility of the OHS Manager/Practitioner is to provide assurance, as well as to advise, assist, and support the project manager, supervisor, and project engineer in the management of the health and safety issues on the project, which includes ensuring proper coordination among the various contractors. The OHS Manager/Practitioner will also be responsible for the development of site and project specific SHE specifications and for ensuring that SHE specifications are issued with enquiry documents and that the contractor's SHE plans are submitted, evaluated, and approved. He/she will be responsible for auditing and ensuring compliance with legal requirements.

The responsibility of the OHS Officer is also to provide assurance and advice and to assist and support the Eskom project manager, supervisor, and project engineer in the management of the environmental issues on the project, which includes ensuring that environmental documentation is issued with enquiry documents and ensuring compliance with the record of decision (ROD) and the environmental management plan (EMP) of the Camden Power Station.

4.1.6 Principal Contractor: Project/Site Construction Manager

The Principal Contractor Project/Site Manager carries accountability and responsibility for the health and safety of his/her employees and Sub-contractor employees within the working area, as contemplated by section 37(2) of the OHS Act. None of the additional safety requirements specified by the Employer reduce the Principal Contractor's Project/Site Manager accountability and responsibility for the health and safety of his/her employees and Sub-contractor employees within the working area.

a) A Principal Contractor shall provide and demonstrate to the client a suitable and sufficiently documented safety, health and environmental plan, based on the client's documented safety, health and environmental specifications
b) A Principal Contractor shall take reasonable steps to ensure co-operation between all contractors/sub-contractors.
c) A Principal Contractor shall provide any contractor/sub-contractor who is making a bid or appointed to perform construction work for the Principal Contractor with the relevant sections of the safety, health and environmental specifications.
d) Appoint each contractor/sub-contractor in writing for the part of the project.
e) A Principal Contractor must take reasonable steps to ensure that each contractor / sub contractor's safety, health and environmental plan is implemented and maintained on the construction site. It shall include periodic audits at intervals as required by legislation and as mutually agreed upon between the Principal Contractor and the contractor/sub-contractor.
f) To stop any contractor/sub-contractor from executing any construction work, which is not in accordance with the Principal Contractors and/or contractor/sub contractor's safety, health and environmental plan or which poses a threat to the health and safety of persons and the environment.
g) To ensure that where changes are brought about to the design and construction, sufficient safety, health and environmental information and appropriate resources are made available to the contractor/sub-contractor.
h) To ensure that every contractor/sub-contractor is registered and in good standing with the Compensation Fund or with a licensed compensation insurer, prior to work commencing on site.
i) Principal Contractor to ensure that Eskom Camden Power Station's Medical Centre and Safety Officer for contractors receives a copy of valid letter of good standing).
j) To ensure that potential contractors/sub-contractors submitting tenders have made provision for the cost of safety, health and environmental measures during the construction process.
k) The Principal Contractor shall discuss and negotiate with the contractor/sub-contractor the contents of the contractor/sub contractor's safety, health and environmental plan before final approval of the plan for implementation.
l) The Principal Contractor shall ensure that a copy of his safety, health and environmental plan as well as a copy of the contractor/sub contractor's safety, health and environmental plan is available to the client.
m) The Principal Contractor shall hand over a consolidated safety, health and environmental report to the client upon completion of the construction work.

n) The Principal Contractor shall compile a comprehensive and updated list of all the contractors/sub-contractors on site, the agreements between them and the type of work being done.
o) A Principal Contractor shall not appoint a contractor/sub-contractor, unless he/she is satisfied that the contractor/sub-contractor which he/she intends to appoint, has the required competencies and resources to perform the work efficiently, effectively and according to safety, health and environmental requirements, relevant legislation and the relevant Eskom Camden Power Station Standards and Procedures.

It must also be noted that:

a) The Principal Contractor's Site Manager shall provide a list of names and contact telephone numbers of all his/her strategic employees as well as the subcontractor's employees on site. This list shall be updated as and when new subcontractors commence on site.
b) The Principal Contractor's Site Manager shall keep a record of all employees, including the subcontractor's employees, including date of induction, relevant skills, and licenses, and be able to produce this list at the request of the Eskom project manager. These records shall be filed in the SHE file
c) The Principal Contractor shall ensure that its managers and supervisors give clear and unambiguous instructions for the work in hand to the personnel for whom they are responsible. 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; and
- Identification of sensitive features that may be impacted on by the project.

4.1.7 Principal Contractor and Sub-contractor Supervisors

The Principal Contractor shall ensure that the performance of all specified work is supervised, throughout the contract period, by a sufficient number of competent appointed representatives of the principal contractor and/or subcontractor, who have experience in the type of work specified.

Note 1: No work may commence and/or continue without the presence of appointed supervisors during performance of the contracted work.

In determining the number of appointed competent supervisors, the nature and scope of work being performed shall be taken into consideration.

It must also be noted that the required appointed construction supervisor (OHS Act CR 8(7)) may not leave the site unless there are a sufficient number of appointed competent subordinate supervisors (OHS Act CR 8(8)) on site to assist with supervision.

4.1.8 Principal Contractor and Sub-contractor OHS Practitioner

The Principal Contractor's/Sub-contractor's OHS Practitioner shall assist and support the contractor's construction manager to ensure that the contractor's SHE responsibilities are fulfilled and that there is conformance to the SHE specifications and SHE plans.

Note: As per CR regulation 8(6) no contractor may appoint a construction health and safety officer to assist in the control of health and safety related aspects on the site unless he or she is reasonably satisfied that the construction health and safety officer that he or she intends to appoint is registered with a statutory body approved by the Chief Inspector and has the necessary competencies and resources to assist the contractor.

4.1.9 All Contractor employees on the project

Employees are responsible for their own health and safety and that of their co-workers in their area. They must comply with all national legislation requirements, and conform to Eskom requirements and SHE Specifications.

4.1.10 Client:

a) Prepare and provide baseline risk assessment to DoL & Principal Contractor

b) Prepare and provide the designer with health and Safety specifications based on the baseline risk assessment and to be included in the tender documents (for each project)

c) Verify/evaluate competencies and resources of contractor before appointment i.e. During technical evaluations

d) Ensure that the potential contractor has made provision of H&S cost in the submission of tender documents

e) Ensure before any work commences on a site that every PC is registered and good standing with LoGS or with licenced compensation insurer as contemplated in COID Act. No 130 of 1993

f) Where a construction permit is required, the client must appoint a competent agent in writing to act on behalf of the client.

g) Must ensure the safety file is kept and maintained by the PC.

h) Where a fatality or permanent disabling injury occurs on the construction site, the client must ensure that the contractor provides the provincial director with the report contemplated in section 24 of the OHS Act and the report includes the measure that the contractor intents to implement to ensure a safe construction site.

i) Undertake final compliance assessment to evaluate project from health and safety point for record purposes as well as: (Reduce public liability, reputation risk for management and professional team, compliance standard and proposed risks mitigations, Reduce criminal exposures, prosecution risks and reduce focus from Dept. of Labour) .

j) Agree on and formal approval of the principal contractor's OHS plan before work may start

k) Ensure that periodic health and safety audits and document verification to ensure that the agreed OHS plan is implemented and maintained at least on a monthly basis for ccontractors performing high risk activities and on quarterly basis for contractors conducting low risk activities.

l) Ensure that a copy of the health and safety audit report is provided to the PC within seven days after the audit.

m) Stop any contractor from executing a construction activity which poses a threat to the health and safety of persons which is not in accordance with the client's health and safety specification and the Principal Contractor's health and safety plan for the site

n) Appoint each Principal contractor in writing

o) Communicate existing and emerging risks as well as the changes to the project

4.1.11 Agent

a) Act as a client's representative and duties imposed upon the client, apply as far as reasonably practicable to the agent appointed

b) Must manage the health and safety on a construction site

c) Be registered with the statutory body approved by the chief inspector as qualified to perform required functions

5. LEGAL COMPLIANCE

5.1 Section 37(2) Legal Agreement

In terms of section 37(2) of the OHS Act, it shall be required of every Principal Contractor to sign an agreement and a CR, regulation 5(1) (k) appointment with Eskom.

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

The original copy of the section 37(2) agreement must be retained by the principal contractor and a copy retained by the responsible / project manager.

A copy all the agreements must form part of the respective contractor's SHE files

5.2 Notification of Construction Work

Unless otherwise contractually agreed upon, Principal Contractor/s who intends to carry out any construction work other than work contemplated in regulation 3(1), must at least 7 days before that work is to be carried out notify the Department of Labour in writing in a form similar to Annexure 2 about construction work intended to be carried out in Camden Power Station if it includes:

a) Includes excavation work;

b) Includes working at a height where there is a risk of falling

c) The demolition of a structure; or

d) Include the use of explosives to perform construction work; or

e) The use of explosives to perform construction work

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

5.3 SHE Policy

A SHE policy is a statement of intent and a commitment by the organisation's CE and senior management in relation to the relevant SHE roles and responsibilities, the achievement of their strategic objectives, values of integrity, customer satisfaction, excellence, and innovation.

Principal Contractors and all appointed contractors, if already not in place, will be required to compile an organisational SHE policy in line with their SHE responsibilities. The policy must be signed by the organisation's CE or the appointed assistant to the CE Section 16(2). Where possible, the policy must be displayed in a prominent place within in the workplace.

5.4 COID

The principal contractor and all his/her appointed contractors shall be registered with an appropriate employment compensation commissioner and have available a valid letter of good standing from such commissioner. The obligation lies with the contractors to ensure that the LoGS remain valid throughout the contract period. A copy of the LoGS must be filed in the contract SHE files and as an annexure to the SHE plan.

5.5 OHS Act

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

6. CONTRACTOR ORGANISATIONAL STRUCTURES

6.1 Principal Contractor Organogram

The Principal Contractor shall provide the Employer with its site based organizational, SHE structure and legal appointee organograms.

The principal contractor must ensure that all appointed contractors comply with this requirement. The principal contractor is responsible for keeping copies of all of the organograms' as well as submitting them with the SHE plan. All organograms' shall be updated timeously when appointments are changed and filed in the SHE files

6.2 Appointments – Legal and Others

The Principal Contractor, as defined in the contract, shall ensure that all relevant site-related legislative and non-statutory appointments are in place and that they are specific and indicate for which areas within the OHS Act and regulations individuals are responsible.

The Principal Contractor shall ensure that all its appointees are made aware of their accountabilities and responsibilities in terms of their appointment and that it advises and assists these appointees in the execution of their duties.

All appointees shall be suitably trained and found to be competent for the responsibilities assigned.

Copies of any appointments made by the Principal Contractor shall be included in the health and safety file and be provided to the Camden Power Station OHS Department.

NOTE: The actual appointments shall be communicated to the Employers Health and Safety Manager/Practitioner on site and shall include a copy of the appointment letter, a curriculum vitae, and relevant certificates of competence for the proposed role

The under mentioned applicable appointments as per the scope of work are required:

6.2.1 Statutory appointments

- OHS Act Section 16(2) - Designated Employer assigned by CEO
- OHS Act Section 17 – Health and Safety Representative.
- OHS Act Construction Regulation 8(1) - Construction Manager
- OHS Act Construction Regulation 8(2) – Assistant Construction Manager
- OHS Act General Machinery Regulation 2(7)(a) – Assistant Supervision of machinery
- OHS Act Construction Regulation 8(7) - Construction Supervisor
- OHS Act Construction Regulation 8(8) – Assistant Construction Supervisor
- OHS Act General Administrative Regulation 9(2) – Incident Investigator
- OHS Act Construction Regulation 8(5) – Construction Safety Officer
- OHS Act General Safety Regulations 3(1) – First Aider/s
- OHS Act General Safety Regulations 13 (a) - Ladder Inspector
- OHS Act Section 19 (3) - Health and Safety Committee Member
- OHS Act Section 19(6)(a) – Co-opted Health and Safety Committee member
- OHS Act Driven Machinery Regulation 18(11) - Lifting Machinery Operator (Appointment or Permit)
- OHS Act Driven Machinery Regulation 18(5) & 18(6) - Lifting Machinery Inspector
- OHS Act Driven Machinery Regulation 18(10)(e) - Lifting Tackle Inspector
- OHS Act Electrical Machinery Regulations 10 -Portable Electrical Equipment Inspector
- OHS Act Hazardous Chemical Substances Regulation 3(3) Hazardous Chemical Substances Coordinator
- OHS Act Construction Regulation 7(1)(c) Appointment of a Contractor (if appointing subcontractors)
- OHS Act Construction Regulation 9(1) - Competent person to perform Risk Assessments
- OHS Act Construction Regulation 10(1)(a) - Competent Person to Compile Fall Protection Plan
- OHS Act Construction Regulation 11(1) - Competent Person to supervise excavation
- OHS Act Construction Regulation 12(1) - Competent Person to supervise and control demolition
- OHS Act: Construction Regulations 14(2) Scaffolding Supervisor
- OHS Act: Pressure Equipment Regulations 11 & 12 - Portable Gas Container Inspector
- OHS Act: Construction Regulations 22(a) - Crane Operator
- OHS Act: Construction Regulations 23 (1)(d)(i) - Construction Vehicle and Mobile Plant Inspector
- OHS Act: Construction Regulations 23 (1)(d)(i) - Mobile Plant
- OHS Act: Construction Regulations 24(d) & (e) Temporary Electrical Installation Controller
- OHS Act: Construction Regulations 28(a) Stacking and Storage Supervisor
- OHS Act: Construction Regulations 29(h) Firefighting Equipment Inspector

6.2.2 Non statutory appointments

- Eskom requirement – Emergency Planning Co-coordinator
- Eskom requirement – Fire official
- Eskom requirement - Chairperson of Health and Safety Committee

6.3 Competencies and Training

The Principal Contractor shall ensure that its and its Sub-contractor employees undergo the appropriate training, and the scope of the training shall include, but is not limited to, the type of work being performed and the relevant procedures.

In addition, the Principal Contractor and its Sub-contractors employees will have the appropriate qualifications, certificates, and tickets and will be under competent supervision. Records of all training and qualifications of the Principal Contractor and its Sub-contractor employees must be kept. The Principal Contractor shall for the duration of the contract, maintain comprehensive records of all employees under its control (including all employees of the Sub-contractor) attending induction training. Acknowledgement of receiving and understanding the induction must be signed by all persons receiving the induction.

When there is an amendment to the acts and/or to the regulations, SHE specification and or SHE plan, all affected staff shall undergo the relevant retraining as soon as reasonably practicable.

6.3.1 Competencies

The Principal Contractor shall ensure that adequate and competent staff is employed to manage SHE matters on site. The Principal Contractor shall ensure persons appointed in the following positions, have the following SHE related training as a minimum requirement:

6.3.1.1 Construction Supervisor (CR 8(7) Appointee) SHE Competency:

- 3 years applicable experience in construction management;
- Accredited Construction Supervisor training course
- Risk assessment training;
- Incident investigation training;
- Root cause analysis training (RCat);
- OH&S Act & Construction Regulations training
- Eskom PSR and ORHVS as and when required by the contract scope of works

6.3.1.2 Team Leader/Supervisor SHE Competency:

- Attended an accredited supervisory training course;
- Risk assessment training;
- Root cause analysis training (RCat); and
- OH&S Act & Construction Regulations training
- Eskom PSR and ORHVS as and when required by the contract scope of works

6.3.1.3 Safety Officer (CR 8(5) Appointee) SHE Competency:

- Registered with an approved authority as contemplated in CR regulation 8(6) (SACPCMP)
- SAMTRAC as a minimum requirement and or NADSAM/ Environmental Health
- Risk assessment training;
- Incident investigation training;
- Root cause analysis training (RCat); and
- OH&S Act & Construction Regulations training
- Eskom PSR and ORHVS as and when required by the contract scope of works

6.3.2 Training

6.3.2.1 General

The Principal Contractor shall ensure that all its employees and its Sub-contractor's employees working on the site are adequately trained in the type of work/tasks to be performed. The training shall extend to include relevant procedures, hazard identification, and risk assessment. They shall have the appropriate qualifications, certificates, and tickets and shall be under competent supervision. Copies of records of appropriate training and qualifications for all employees must be kept and maintained in the SHE file.

6.3.2.2 Site induction

The Principal Contractor shall ensure that all its employees, agents and Sub-contractor employees have undergone the Eskom Camden induction programme prior to commencing work on site. Proof of the Principal Contractor's inductions shall be presented to the Employers Health and Safety Manager/Practitioner on site, prior to undergoing the Eskom Camden induction.

Appropriate time must be set aside for training (induction and other appropriate training) of all employees.

A copy of the verified certificate of fitness must be presented for permanent record at the induction center and kept at site offices for permanent record.

All employees and visitors on site shall have proof of induction training.

6.3.2.3 General construction site induction

The Principal Contractor shall ensure that all its employees and Sub-contractor employees undergo general work 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. Job- specific induction

The Principal Contractor is required to ensure, before an employee commences work on the project, that the supervisor in control with responsibility for the employee has informed the employee of his/her scope of authority, any hazards associated with the work to be performed, as well as the control measures to be taken. This will include man-task specifications and the discussion of any standard task procedures or hazardous operational procedures to be performed by the employee. The Principal Contractor is to ensure that the supervisor has satisfied himself/herself that the employee understands the hazards associated with any work to be performed by conducting task/job observations.

6.3.2.4 Visitors and Suppliers to the site

Visitors to the site shall be required to undergo and conform to Camden Power Station site-specific safety induction requirements prior to being allowed access to the site.

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.

6.3.2.5 Toolbox talk

The Principal Contractor is expected to have a daily toolbox meeting. The meeting is expected to be brief and concise. Subjects/topics are applicable to the job/task at hand. Near misses, accidents, up- and-coming work are to be discussed along with suggestions and comments and risks identified during the pre-task/work risk assessment.

6.3.2.6 SHE Staffing

The Principal Contractor shall submit to the Employer for approval, a schedule detailing qualifications and experience of all key employees who will be employed on the project.

The Principal Contractor shall ensure that the following staffing totals are employed as a minimum.

6.3.2.6.1 Safety Manager

Depending on the risk, the Employer may impose the requirement of employing a Full-time Health and Safety Manager to the project. Details of this requirement will be included in the contract works information

6.3.2.6.2 Safety Officer

The Principal Contractor shall, according to the project risk profile, employ the services of a Part-time or Full-time Safety Officer during its term of contract. If the risk or if the Eskom Project Manager/Inspector of the D.O.L requires it, the Principal Contractor shall appoint additional Full-time Safety Officers, as requested, to manage safety and health matters on site.

6.3.2.6.3 Environmental Officer

The Principal Contractor shall, according to the project risk profile, employ the services of a Part-time or Full-time Environmental Officer during its term of contract. If the risk or if the Eskom Project Manager/Inspector of the D.O.L requires it, the Principal Contractor shall appoint additional Full-time Environmental Officers, as requested, to manage safety and health matters on site.

6.3.2.6.4 Construction Professional Registration

The legislation and the SACPCMP's publications direct that all persons assuming responsibility for Construction Project Management, Construction Management and Construction Health and Safety should be registered as professionals in the appropriate category with the SACPCMP in order to comply with legal and statutory requirements within South Africa. Employees who perform work identified by the councils for the professions must register with the relevant council as a professional. Alternatively, an employee must perform such work under the direction, control, supervision of or in association with a person, registered as a professional with respect to that category of work and who must assume responsibility for the work performed.

7. SUBCONTRACTOR MANAGEMENT

7.1 Principal Contractor Accountabilities for their Sub-Contractors

The Principal Contractor shall carry accountability and responsibility for the health and safety of its employees and its Sub-contractor employees within its working area, as contemplated by the OHS Act and its regulations.

When Sub-contractors are appointed, the Principal Contractor shall inform the Employer. The Principal Contractor, deemed as the "employer" in terms of the OHS Act, shall ensure that a 37.2 agreement is signed between itself and its Sub-contractors, countersigned by Eskom and a copy submitted to the Employer.

Furthermore, the Principal Contractor shall ensure that all legal appointments required in terms of the OH&S Act and regulations, the scope of works and Eskom requirements, are made by itself and its Sub- contractors. Proof of such appointments shall be provided to the Employers SHE management representative.

The Principal Contractor is directly accountable for the actions of its Sub-contractors. The Principal Contractor will also be responsible for initiating any remedial action (recovery plan) that may be necessary to ensure that the Sub-contractor complies with all requirements.

The Principal Contractor shall provide any Sub-contractor who is making a bid or is appointed to perform construction work with the relevant sections of the documented SHE specification, who would, in turn, provide the Employer with a SHE plan for approval

The Principal Contractor shall carry out audits on the Sub-contractors as contemplated in the OH&S Act and regulations, to ensure that its SHE plan is being implemented and maintained.

As per OH&S Act, Construction Regulations, Eskom may conduct audits on Sub-contractors to ensure compliance with the Employers' SHE Specification and the Principal Contractors SHE Plan. Any non- conformances/findings/observations found in these audits shall be raised and discussed with the relevant Principal Contractor (with whom the Sub-contractor is contracted). A report will be provided to the Principal Contractor within 7 days of such an audit, whereby the Principal Contractor must ensure closure within 14 days of all subsequent findings indicated on an action plan or within a period subsequently agreed upon between the Employer and the Principal Contractor.

The Employer shall stop any Principal Contractor and/or the Principal Contractor shall stop any Sub-contractor from executing construction work that poses a threat to the safety and health of persons or the environment or non-compliance with the approved SHE plan. The cost of such stoppages will be at the cost of the Principal Contractor.

The Principal Contractor shall have a work coordination process in place that will prevent any conflict occurring between individual site activities and subcontractor activities.

The work coordination process provides the management arrangements for reviewing, controlling, and monitoring each Sub-contractor and its individual work packages while it is present and working on the project site.

The work coordination process should identify the overall SHE working requirements that a Principal Contractor and its Sub-contractors will need to provide to the project to enable assessment of their procedure and controls. The work coordination process will allow the work to proceed without risk to the health and safety of the contractor's personnel, other contractors operating in the vicinity, visitors, delivery personnel, and the Employer's personnel present on the site.

The Principal Contractor shall, in terms of section 37(2) of the OHSA, shall ensure compliance with regards to Construction Regulation that where more than one contractor is appointed, the Principal Contractor must take reasonable steps to ensure co-operation between all contractors in order to ensure compliance with these regulations.

7.2 Sub-Contractor SHE Plans

The Sub-contractor shall prepare a SHE plan based on applicable parts of the SHE specifications that shall be provided by the Principal Contractor.

The SHE plan must detail specific plans and programmes for implementing the health, safety, and environmental requirements of the contract. The SHE plan may be a collection of actual documents and manuals and should include, where applicable, the following the following Eskom Camden requirements as a minimum:

- The Principal Contractor(s)' and their subcontractor(s)' SHE policies;
- Indication of competent supervision on site (CVs to be included);Duties and safety responsibilities of all appointed persons on the project
- Selection, placement, and training procedures, including induction and ongoing training, in "basic safe work" and occupational health and safety training for newly hired or promoted supervisors;
- Occupational health and safety communications and meetings, including daily safe task instructions and project safety meetings;
- Assessment of its SHE Plan by the Principal Contractor;
- SHE Plan requirements stipulated by the Principal Contractor;
- Safety awareness promotions;
- Nomination of personnel to carry out safety inspections. The task may be shared with other duties and provided within the resources of individual gangs and may be rotated;
- Sub-contractor Senior Management involvement with the company's staff in consultative
- Processes and daily management safety walkabouts;
- Rules and regulations, including safety procedures that the contractor has in place for recurring work activities;
- Control of dangerous and hazardous substances;
- System of hazard identification and risk control, such as risk assessments, daily safe task instructions, and communication;
- Design control (if applicable);

- Audits to ensure compliance with safety plans;
- Daily site safety inspections and audits. The auditing role may be shared with other duties or provided within the resources of individual groups. The role may be rotated;
- Inspection of plant, tools, and equipment prior to introduction to site and regularly thereafter;
- Accident incident reporting, recording, investigation, and analysis, which ensure that corrective action is taken and that this action is communicated to report initiators;
- Medical and first-aid arrangements;
- Evacuation and emergency planning;
- Rehabilitation procedures that encourage an early return to work;
- Substance abuse programme;
- Record keeping, including details of what is kept and for how long;
- Detailed financial allocation for health and safety;
- Monitoring mechanisms;
- Site meeting arrangements;
- Audit arrangements;
- Maintenance arrangements of machinery and equipment;
- Workers' welfare facilities;
- Arrangements for induction and toolbox talks;
- Training arrangements
- Letter of good standing with a compensation insurer;
- Performance review and improvements on the project;
- Past health and safety performance statistics of the company (at least two years);
- Applicable standards, legislation, and guidelines to be adopted;
- Details of the interface between the client/agent and the contractor;
- Specific procedures, methods, and work instructions to be applied;
- Personal protective equipment provision and rules;
- Transport safety;
- Occupational health and hygiene arrangements, including, but not limited to respiratory and hearing protection, alcohol and drug policies, health assessments, smoking, and first aid;
- Training and competence regarding SHE;
- Legal appointments;
- Medical examinations for all employees; and
- Working hours - compliance with Labour Relations/Basic Conditions of Employment Act.

The SHE plan shall be submitted to the Employer for review and approval and, once accepted, shall not be amended without prior consultation and acceptance by the Principal Contractor and its Employer.

8. FORUMS FOR SHE COMMUNICATION

Occupational Health and Safety Act, sections 17, 18, 19, and 20

The Principal Contractor shall provide a communication strategy outlining how it intends to communicate SHE issues to its staff and, where appropriate, its subcontractors and their staff, the mediums it will employ, and how it will measure the effectiveness of its SHE communication.

The Principal Contractor shall ensure that safety representatives and a committee shall be formed and shall perform all statutory functions as per OHSA section 19(1).

Every formal 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 lists shall be kept for all the health and safety meetings. Matters that are discussed include, but are not limited to the following:

- Accident/safety incidents
- Accident investigations (including near misses) and close-out of recommendations
- Audit findings and close-out
- Hazardous materials/substances
- Work procedures
- Protective clothing/equipment
- Housekeeping
- Work permits
- Non-conformances
- Emergency preparedness
- Traffic control
- Medicals
- Training
- Forthcoming high-hazard activities
- General SHE issues
- Matters arising from contractors' SHE meetings

8.1 Toolbox Talks

Objective: this is 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. The job, relevant procedures, associated hazards, safety measures, i.e., the task risk assessments shall be discussed. Each employee who attends the briefing shall sign the back of that pre-job brief form. Toolbox talks shall be included in the pre-job brief meetings. The toolbox topics will be based on SHE issues pertaining to the construction site. The topic contents shall be in writing.

Chairman: Contractor Supervisor

Frequency: Daily, when job requirements have changed or an employee is assigned a new task

Required Attendees: Principal Contractor/s and their Sub-contractor/s and all relevant personnel

8.2 Camden Power Station Safety, Health and Environmental Meetings

Principal Contractors appointed on a permanent basis shall be included in the Eskom Camden Power Station safety, health and environmental meetings (Central SHE).

During a project, a safety, health and environmental meeting will be held at least once a month under the leadership of the Eskom Camden Power Station Safety Officer for contractors. The following persons shall be members of this committee:

Principal Contractors/contractors/sub contractor's Site Managers and safety

8.3 Principal Contractor Statutory Health & Safety Committee Meeting

The Principal Contractor and its Sub-contractors shall implement a statutory health & safety committee, as per the OHS Act, section 19. The Principal Contractor shall comply with the requirements as stipulated in the Employers latest revision of the procedure for Health & Safety Representative Committee and Systems 39-11.

Individual Principal Contractors shall hold a statutory safety, health and environmental meeting at least once a month. Where a Principal Contractor has sub-contractors the sub-contractor shall be included in the Principal Contractor's meetings.

All appointed safety health and environmental representatives shall be a member of at least one committee and the meeting must be held in accordance with the Occupational Health and Safety Act.

This meeting will be attended by the Principal Contractor's Safety Manager/Practitioner and the Safety Practitioners from all other Sub-contractors and where required the Principal Contractor Management on site.

8.4 Safety Awareness Schemes

The Principal Contractor shall continuously roll out safety awareness schemes on the site. These schemes may be in the form of posters and or talks on specific safety topics identified as pertinent to the site and safety of every employee. This must form part of the Principal Contractors Health and Safety Plan.

8.5 General Walk-Downs

The Principal Contractor's Project and Site Management shall take part in site walk downs, as agreed upon, to demonstrate their commitment towards occupational health and safety matters. These site visits will be used to identify both strengths and areas for improvement regarding SHE issues.

The Principal Contractor's Project and Site Management including all levels of supervision will be required to do Visual Field Leadership inspection (VFL'S). Proof of all VFL"S to be submitted to the Employer's OHS Department within the time frame agreed upon, as part of the reportable statistics.

9. LEGAL AND OTHER COMPLIANCE AND NON-CONFORMANCES

The Principal Contractor and its Sub-contractors on the project site shall comply, as a minimum, with all relevant National Legislation, and conform to South African National Standards and with the Employers Policies, Standards and Procedures, which include, but are 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)
- National Environmental Management Waste Act, 2008(Act 59 of 2008)
- National Environmental Management: Air Quality Act, 2002(Act 32 of 2002)
- Conservation of Agricultural Resources Act, 1983 (Act 43 of 1983)
- Civil and Building Work Act
- Mine Health and Safety Act, 1996 (Act 29 of 1996) and Regulations (Where Applicable)
- Explosives Act, 2003 (Act 15 of 2003)
- Compensation for Occupational Illness and Diseases Act, 1996(Act 93 0f 1996)
- Any other applicable South African legislation
- Applicable South African National Standards (SANS)
- Applicable International Standards
- National Roads Traffic Act, 1996(Act 93 of 1996)
- Eskom Operating Regulations for High-voltage Systems (ORHVS)
- Eskom Plant Safety Regulations (Low-voltage Regulations)
- Work-at-height Procedures, 32-418
- Procedure Manual for Environmental, Occupational Health and Safety Incident Management, 32-95
- Eskom's Implementation of Life Saving Rules, 39-47
- Eskom's Procurement and Supply Chain Management Procedure, 32-188
- Eskom's Disciplinary Code Standard, 32-196
- Project and Power Station Environmental Management Plan (EMP)

It is the duty of the Principal Contractor and its Sub-contractor to ensure that they are familiar with all the necessary SHE legislation required for implementation on the project.

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 it is performing on this project. The register shall be updated on a regular basis.

The Employer is entitled to stop work and issue non-conformance reports whenever health, safety, or environmental violations are observed for both contractors and/or their subcontractors. Any costs incurred as a result of such work stoppage and standing time shall be for the contractor's account. Any non-conformances/findings/observations found during audits/inspections on Sub-contractors shall be raised, discussed, and resolved with the relevant contractor (with whom the subcontractor is contracted).

9.1 Suspension of Works and Services under a Contract

Any person may stop an activity, unsafe act or unsafe condition that poses or may pose a threat to the health and safety of an individual, threat to plant or machinery or create a risk of degradation of the environment. This includes any work or service performed by, whether legally or contractually, non- compliant acts or omissions by a Principal Contractor, a Sub-contractor and or a Vendor/Supplier. Work stoppages that are initiated due to SHE concerns, non-compliance or poor performance related to the Principal Contractor and his Sub-contractors works or services, shall not warrant any financial compensation claim lodged against Eskom where the Principal Contractor, Sub-contractors and Vendor or Supplier has not met the requirements defined legally or contractually.

10. CONTRACTOR'S SITE FACILITIES

10.1 Temporary Facilities Layout Plan

The Principal Contractor shall submit a detail plan of its and its Sub-contractors site layout for acceptance by the Client. The location for the Principal Contractor's site establishment is detailed in the Works Information document.

10.2 Dining Room Facilities

The Principal Contractor shall provide and maintain adequate dining room facilities appropriate to the workforce size and work duration, that conform with the requirements of the OHS Act Construction Regulations, Facilities Regulations, and the Hazardous Chemical Substances Regulations.

Furthermore, the Principal Contractor shall provide sheltered eating areas for use of its own, as entire well as its sub-contractors' personnel employed on site. The maintenance and cleaning of eating areas shall be the responsibility of the Principal Contractors. All costs involved are deemed to be included in the tender price.

Eating areas shall provide adequate shelter and shall be ventilated and lighted. Tables and backed seating shall be provided. Suitable receptacles with lids for depositing waste shall be provided at convenient points inside and outside the eating areas.

Furthermore, the principal contractor shall ensure compliance to all legislation and Eskom's Manual for Internal Quality Assurance Management of the Eskom Occupational Hygiene Approved Inspection Authority -240-75567900 and Eskom's Food Hygiene and Safety Management - 39-113 procedure w.r.t food management.

10.3 Change Rooms

The Principal Contractor shall provide and maintain adequate and suitable washing facilities appropriate to the workforce size and work duration, that conform with the requirements of the OHS Act, Construction Regulations and Facilities Regulations.

10.4 Ablution Facilities

The Principal Contractor shall provide and maintain adequate and suitable sanitary facilities appropriate to the workforce size and work duration, that conform with the requirements of the OHS Act Construction Regulations, Facilities Regulations and the Hazardous Chemical Substances Regulations.

10.5 Lay-Down and Storage

The Principal Contractor shall include in its temporary facilities plan, a detailed plan for all lay-down areas required for storage of materials, equipment and machinery.

The Principal Contractor shall provide and maintain adequate and suitable storage facilities appropriate to the scale of the project and work duration, that conform to the requirements of the OHS Act Construction Regulations, regulation 28, and as approved by the Client.

The location for the Principal Contractor's site establishment is detailed in the Works Information Document.

10.6 Principal Contractor/Sub-Contractor Site Access

Access to the Principal Contractor and its Sub-contractors site areas will be the responsibility of the Principal and Sub-contractors, and that no unauthorised access is gained to site laydown areas. The Principal Contractor and its Sub-contractors are to submit a plan to the Client, indicating how it intends to control access to its laydown areas.

The Principal Contractor and its Sub-contractors shall ensure that no inadvertent access is gained to any of its materials, equipment or machinery.

10.7 Temporary Site Services

The Principal Contractor shall indicate electrical and water supply connections required as a part of its site establishment requirements. The Client shall supply electrical and water connection points as well as a sewage connection point or as otherwise specified in the works information.

The Client will not be liable for any delays arising from any interruption of the electrical and or water supply or for any inadequacies in the supply. The Principal Contractor shall make its own arrangements for distribution of the water supplies from the terminal point.

10.8 Existing Services

The Principal Contractor shall give prior notice in writing to the Employer of his intention to begin excavation work in any area. The Employer will then arrange to have the approximate location of all known buried cables and or other existing services indicated to the Contractor and, where practical, marked on the ground before excavation commences. All movement and removal of existing buried services will, if necessary, be carried out by the Principal Contractor.

The Principal Contractor shall immediately inform the Employer of any existing services uncovered during the work. Prior to any excavation work, a scan shall be done by the Principal Contractor to determine the location of any hidden services underground. Where possible, air driven shovels are to

be used for any excavation work. The Principal Contractor may only make use of manual labor as a last resort.

10.9 Installation and Maintenance of Temporary Construction Electrical Supply, Lighting, and Equipment

The Principal Contractor and its Sub-contractors shall ensure that all temporary electrical supply, light and equipment are installed and used in accordance with the OHS Act, Electrical Installation Regulations, relevant national standards, by-laws and regulations of the OEM and supplier concerned. Attention shall be given to the positioning of such equipment in order to minimize 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. Each Portable generator shall be fitted with an earth and/or earth pen.

10.10 Adjacent Land Users/Surrounding Property Exposures

The Principal Contractor and its Sub-contractors shall ensure that adjacent land users/surrounding property owners are not exposed to excessive exposure levels that exceed the legislative requirements as stipulated in the Environmental Regulations, and or exposed to any form of construction activity that would endanger or harm the environment and or persons. The following exposures are to be taken note of, but not limited to:

- Noise Induced Hearing Loss as per the regulations and all other standards or specifications;
- Hazardous chemical substances as per the regulations;
- Asbestos as per the regulations; and
- Lead as per the regulations.

10.11 Boundary and Access Control/Public Liability Exposures

The Principal Contractor and its Sub-contractors shall ensure that no member of the public and or fauna is exposed to any form of construction activity that would endanger or harm them or their environment.

The Principal Contractor and its Sub-contractors shall be liable for all costs arising from public incidents arising in the course of its contract, and as a result of its construction activities.

10.12 Site De-Establishment

The Principal Contractor shall comply with the requirements as stipulated in the Employers Site De- establishment Plan and Power Station EMP.

11. CLIENT'S SITE RULES

The Principal Contractor and its Sub-contractors shall adhere to all the site rules and stipulated by the client. The following basic safety rules are to: be adhered to at all times:

- Only approved hard hats and safety glasses may be worn.
- Only steel-toe/safety-toe work boots shall be allowed to be worn in the construction areas.

- No high-heeled shoes will be allowed on any construction site. Only flat sole shoes may be worn on site or in office buildings.
- Additional eye protection shall be worn when job-specific hazards dictate.
- Hearing protection shall be worn when entering all operations areas and areas posted as hearing protection areas or when using equipment that produces noise levels in excess of 85 decibels.
- Respiratory protection shall be worn when performing tasks that dictate the need for such equipment.
- Good housekeeping practices shall be continually maintained and work areas left in a clean and safe condition at the end of each shift.
- Smoking policy: smoking is permitted in designated areas only.
- Risk assessment will determine the need for fall protection when working from height
- Only trained, certified personnel shall operate aerial lifts, forklifts, or motorised equipment.
- Ladders must be properly constructed and kept in good repair. Ladders shall be the proper length and type for the task. All ladders shall be identified and registered.
- All scaffolding will be constructed per SANS standards and OHS Act regulations. Each person responsible for working on an elevated platform shall visually identify that scaffolding has been inspected and tagged by a competent person prior to each shift.
- Compressed gas cylinders must be stored and used in the upright position and properly secured at all times; protective caps shall be in place when cylinders are not in use, and gauges shall be removed prior to transportation of cylinders.
- All guards for personnel or equipment protection shall be kept in place and shall not be modified or tampered with.
- All floor and wall openings must be protected by adequate and firmly fixed means (that is, coverings, guardrails, and toe plates).
- Employees shall not walk or work under suspended loads.
- Equipment must be shut off and parking brakes engaged when the equipment is being lubricated, refuelled, or adjusted.
- All excavations must meet Construction Regulations requirements and must comply with the project minimum standards for barricading, and adequate access and egress must be provided for excavations.
- Lockout/tag-out procedures must be followed when performing work on piping, mechanical equipment, electrical services, etc. that has the potential for the release of stored hazardous energy.
- Take into consideration areas that require a permit to work.
- Access to safety equipment must be kept clear at all times. A clear area must be maintained around fire hydrants at all times.
- All safety and warning tags and/or signs shall be observed.
- Posted speed limits must be observed.
- All incidents/injuries, no matter how minor, must be reported to the client/agent and recorded in writing.
- Consider a crane's rated capacity when engaging in lifting work.

- Obtain the necessary permits.
- All contractors must provide their own bins on site, which must be utilized for all waste as per the site EMP
- Illegal drugs, alcohol, firearms, or other dangerous substances shall not be allowed on the project. Reporting for work under the influence of an illegal drug, alcohol, or other dangerous substance is not permitted.
- All contractors' employees must undergo full medical examination prior to any work on site.
- Do not use cellular phones in areas where cellphone usage is prohibited.
- When walking through the site or to personal work areas, use recognized thoroughfares. Do not take short cuts or walk on uneven ground surfaces.
- Vehicles and traffic rules - refer to the section on "CONSTRUCTION VEHICLES AND MOBILE PLANT" for requirements.

All fire extinguishers shall be:

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

11.1 Access Control to the Power Station and Site

The Principal Contractor in collaboration with the Employers representative will ensure that proper access control is in place and functional at all times on and off the construction site.
All security requirements shall be highlighted at the induction given by the Employers representative.

The Principal Contractor and its Sub-contractors are to strictly adhere to all security requirements on the premises as laid down by the Employer.

11.2 Management of Substance Abuse

- No person (employees, contractors, consultants, visitors) shall report for duty or continue with his/her duties, if he/she is under the influence of intoxicating substances.
- No person may consume alcohol or drugs/controlled substances while on Eskom Camden sites or while on Eskom business.
- Contractors shall manage substance abuse and conduct periodic testing
- All contractor employees, consultants and visitors shall comply with any reasonable request to undergo random or specific alcohol testing.
- All persons entering Eskom premises and/or required to perform critical tasks or to drive vehicles may be required to undertake a drug and/or breath alcohol test prior to commencing their duties and, where necessary, on a periodic or on a random basis.

- The tester shall be responsible for ensuring that the person is tested in accordance with the testing procedures. The tester shall immediately report the test results to the person's manager if a person is found to be under the influence.
- A person on standby shall submit to a substance abuse test, if required. If such a test is utilised and the reading is positive, the person shall be sent home, and disciplinary action shall be instituted.
- A person who is suspected of being under the influence or who is selected for testing in terms of this procedure and who refuses to undergo appropriate testing or who fails to provide an adequate breath, urine, or saliva sample shall leave the work site immediately and will not be remunerated for the period not work
- Refusal by a person to undergo a substance abuse test or to provide an adequate breath, urine, or saliva sample may result in an adverse inference being drawn against the person's version and shall lead to a situation, which may result in disciplinary action taken. In the case of a contractor, such refusal may result in the exclusion of that contractor from Eskom's workplaces.

11.3 Construction Vehicles and Mobile Plant

The Principal Contractor and its Sub-contractors shall ensure that:

- All motor vehicles operated by contractors within the area shall, in all respects, comply with the Road Traffic Ordinance and Road Traffic Act. Designated drivers shall be in possession of a driver's licence, valid for the class of vehicle. The driver's licence shall be kept by the person so authorised, and he/she shall produce such card on request.
- All drivers of construction vehicles and mobile plant are to have medical certificates of fitness to determine physical and where applicable psychological fitness.
- The speed limit within the bounds of the construction site is 40 km/h or as indicated by the Power
- Station Traffic Management Plan.
- No drivers or operators may talk on a cell phone or two-way radio while driving, unless a hands- free kit is used.
- It is the responsibility of the driver to ensure that:
- He/she and his/her passengers, at all times, wear seat belts while the vehicle is in motion;
- He/she complies with all safety, direction, and speed signs;
- Vehicle loads are properly secured and loaded onto vehicles; and
- Vehicles are not overloaded.
- All requirements with regard to the transportation of tools/equipment/material and persons on the back of construction vehicles must be adhered to:
- If contractor employees are to be transported on the back of construction vehicles, those vehicles are to be fitted with canopies that meet the required SANS standards.
- Tools, equipment, and material are to be secured in a separate compartment, in order to prevent movement.
- Fixed and firmly secured seats with seat belts - adequate for the number of passengers being transported and SANS approved

- Construction vehicles are to be fitted with rollover bars as per SANS standards.
- The driver and all passengers are to be seated with seat belts fastened while the vehicle is in motion.
- The Principal Contractor shall ensure that its employees and those of its Sub-contractors do not:
- Ride on the back of elevators, cranes, or any other mobile plant equipment;
- Leave vehicles unattended with the engine running; and
- Park vehicles in unauthorized zones/areas.
- Eskom reserves the right to search any vehicle on the premises or when entering or leaving the premises.
- The Principal Contractor shall be solely responsible for the safety and security of any of its vehicles (including private vehicles) on the premises.
- The Principal Contractor shall attach identification markers on all of its 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.
- The Principal Contractor is to ensure that visibility (for example, switching on of lights, reflectors, barricades equipped with lights, etc.) is enhanced on all construction vehicles and mobile plant in order to identify the location of the vehicles or plant.
- The Principal Contractor must maintain its vehicles in a roadworthy condition and have a valid licence. These vehicles shall be subject to inspection by the client's/agent's representative. Vehicles that are not roadworthy will not be allowed onto the site.
- In the event where the Principal Contractor and its Sub-contractor do not own the equipment, the Principal Contractor is still responsible for ensuring that all conditions are complied with by all of its Sub-contractors or hire companies.
- Drivers/operators shall be responsible for the travel-worthiness of all loads conveyed by them.
- 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.
- All waste from servicing must be disposed of in accordance with environmental legislation.
- Every mobile machine whose vision is impaired when reversing must have a siren/hooter that sounds when the machine is reversing. This includes trucks, cranes, loaders, etc
- Operators have great difficulty in seeing light vehicles behind their machines. Drivers of light vehicles must avoid stopping or parking in the vicinity of machines. At least 30 (thirty) meters must be left clear between such a vehicle and such a machine.

12. OCCUPATIONAL HEALTH, REHABILITATION AND HYGIENE

The aim of this section is to stipulate Eskom's requirements with regard to occupational health and hygiene practices expected from the contractors and their subcontractors.

12.1 Workers' Compensation

The Principal Contractor must submit proof of registration and a letter of good standing with the compensation fund or with a licensed compensation insurer for his/her company and each of his/her subcontractors. This must remain valid for the duration of the contract. The letter of good standing must reflect the name of the Principal Contractor and/or Sub-contractor company, Expiry date and the registration number.

The certificate will be issued without any alterations.

No company may do any work without a valid letter of good standing.

12.2 HIV/AIDS Awareness Programme

An HIV/Aids awareness programme will be implemented and maintained by the employer. This will include voluntary counselling and testing (VCT) of individuals prior to initial commencement of work at the site and HIV/AIDS awareness training and access to ongoing support for affected individuals. The Principal Contractor shall ensure that its employees and its Sub-contractor employees are aware of this programme. Records of awareness programmes and training are to be provided during audits and inspections as and when required by the Client.

12.3 Protection against Dehydration and Heat Exhaustion

The Principal Contractor shall take into consideration and mitigate dehydration and exhaustion of employees.

12.4 Protection from Wet and Cold Conditions

The Principal Contractor shall take into consideration and mitigate inclement and extreme weather conditions.

12.5 Employee Health and Wellness Programme

The 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 programme and an employee assistance programme as detailed below.

12.6 Medical Surveillance Programme

The Principal Contractor must ensure compliance to CR regulation 7(8) and furthermore that:

- Its employees and Sub-contractor employees have undergone pre-entry medical examination before starting any work on site. An exit medical examination must be done by all employees before leaving the site.
- The verified certificate of fitness shall be issued before commencement of work and shall be presented at induction. If the Principal Contractor does not provide proof of valid and verified certificate of fitness for its employees and Sub-contractor employees, then access to site will be denied.

- Where required by the contract works information, all medicals conducted on the Principal Contractor and Sub-contractor employees, by an external service provider, shall be subjected to a medical verification process by the Eskom OHN/OHP on site, prior to the validity of the Certificate of Fitness being confirmed and accepted. Only verified certificates of fitness will be deemed acceptable when presented for inductions. The following information is required for verification by the Employers OHN/OHP:
- Copy of ID document
- A valid medical surveillance certificate inclusive of: physical test, eye test, audio test, lung function test, and where required by legislation and x-ray report and a site specific Man Job Specification. This medical information must be presented to the Employers OHN/OHP.
- The certificate shall be renewed at permitted legal intervals but as a minimum; annually (for employees who are not office-bound, including drivers) and once every three years (for employees who are office-bound) (until completion of the project), at which stage 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, i.e. medical restrictions.
- In instances where sick leave is taken for a period of one week or more, the Principal Contractor shall institute an arrangement that employees need to sign a declaration indicating that they did not suffer any illness or injuries that occurred in the period of absence that may affect their ability to work on site.
- Visitors and Suppliers who are visit site for a brief period of less than one day, will not be required to provide a medical certificate of fitness, but will need to declare any medical restrictions.

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

12.7 Occupational Hygiene

Occupational hygiene factors and stresses are those that effect a person over a long period of time e.g. noise - results in noise induced hearing loss during old age, exposure to asbestos could result in Asbestosis in due time.
The Contractor shall conduct Health Risk Assessments of all the Occupational Hygiene / Environmental stressors (e.g. noise, dust, illumination, HCS, heat & cold stressors, ergonomics, etc) present in the area where they operate to determine if there is any possible worker exposure. Records of all these assessment should be documented and kept up to date.

The Contractor shall monitor the extent to which their employees are exposed to the occupational hygiene stressors. Assessments of regulated activities i.e. Noise, HCS, HBA and Asbestos shall be conducted by an Approved Inspection Authority for Occupational Health and Hygiene as listed on the Department of Labour database and be accredited by SANAS as an Inspection Body in terms of ISO17020. (A list of AIA is available on the Department of labour website). All other Assessments, namely, Indoor Air Quality, Illumination, Thermal Stressors (Heat/Cold), Ergonomics, Vibration needs

to be conducted by a competent person. And such report/work needs to be verified by a Hygienist. The findings from these assessments should be communicated to all affected parties and be reported to relevant authorities.

12.7.1 Noise

- All employees who are exposed to noise must be educated and made aware of the harmful effects of long-term exposure to noise
- They must be provided with approved hearing protection where necessary and record must be kept of such issues.
- Noise areas must be demarcated with the appropriate signboards. The following areas should be considered, e.g. where compressors, jackhammers, explosive tools, riveting tools, etc. are used.
- Acuity hearing tests shall be done on all employees. Records of such tests shall be available on site

12.7.2 Illumination

- Adequate and sufficient illumination is essential and where it is insufficient the Principal Contractor must make additions to ensure safe-working conditions at all times.
- Ensure that all roof lights, light fittings and fanlights are kept clear and unobstructed.
- When use is made of artificial lighting where machinery is being used, all moving parts must be clearly visible.
- Illumination provided must be so designed to avoid glare, reflections and stroboscopic effects.
- Illumination survey must be conducted at required intervals

12.7.3 Heat

- When employees are working in hot conditions, clean cool drinking water must be supplied with easy access to all workers.
- Employees must be made aware of the dangers of heat exhaustion /stroke and the signs and symptoms of impending heat collapse.
- Frequent and extended rest periods must be provided in accordance with the Occupational Health and Safety Act.
- Heat Stress Monitoring will be done when working in the confined space.

12.7.4 Asbestos Control Management

- The Contractor shall inform the Eskom Project Manager and OHS Department if during construction work asbestos or suspected asbestos containing material is found.
- Only Department of Labour registered Asbestos Contractor can work on asbestos containing material. Asbestos monitoring should be carried out in accordance with MDHS 39/4 during asbestos work.

- Monitoring should be performed by an Approved Inspection Authority. Medical surveillance should be carried out on all people working with asbestos.
- The asbestos area should be demarcated and relevant signs should be posted at all entrances and exits.
- After the asbestos work is finished, a clearance certificate should be issued by a competent person.

13. EMERGENCY CARE

13.1 First Aid Station/Emergency Services

The Principal Contractor shall provide a first aid facility as close to the construction area as possible. The first aid station shall be equipped with the general first aid equipment and in addition the Principal Contractor shall be responsible for the following:

- Comply with the established communication network within the project/site or facility (including outside sources, if necessary);
- Establishing personnel accountability systems (including visitors);
- Stopping work and controlling the affected areas;
- Defining key personnel responsibilities and duties;
- Access to appropriate emergency resources and medical personnel as dictated by the emergency
- Providing emergency response training sessions and exercises;
- Briefing and reporting requirements; and
- Preparing contingency plans.
- Adequate measures and emergency plans shall be stipulated in writing and posted at various locations on the site to adequately inform all personnel and visitors.

13.2 Additional Emergency Care Requirements

The Principal Contractor shall ensure:

- A list of emergency numbers must be posted at phones and in every office.
- Its employees and Sub-contractor employees are familiar with the emergency numbers and also are provided with stickers with the emergency numbers printed on them to place inside their hard hats.
- There is one first-aid box for the first five persons and, thereafter, one for every 50 or team of workers on site or part thereof.
- Additional 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).
- A prominent notice or sign in a conspicuous place at a workplace (SANS 1186-approved signs to indicate location of first-aid boxes), indicating where the first-aid box or boxes are kept as well as the name and contact details of the first-aider of such first-aid box or boxes.

- The Principal Contractor and Sub-contractors shall ensure that alternative arrangements shall be made for possible incidents occurring after normal working hours.
- Where services are not available from the medical centre or where there is no medical centre, the Principal Contractor shall make alternative arrangements for any medical assistance. Proof of this must be made available in the Principal Contractor and its Sub-contractor's SHE plans.
- The Principal Contractor shall ensure that it and its Sub-contractors appoint trained and competent First Aiders as per the OH&S Act and regulations.

Note: The Principal Contractor shall ensure that the minimum contents of a first-aid box are as per the OH&S Act and regulations.

14. WELFARE

The following welfare facilities must be provided for in a clean and suitable condition, unless agreement with the client's/agent's representative has been confirmed regarding the use of existing facilities:

- Shower facilities;
- Sanitary facilities;
- Changing facilities;
- Eating areas;
- Drinking water at strategic locations on site; and
- Safe pedestrian walkways
- Water for drinking/consumption purposes shall be drawn only from taps in mess areas and ablution
- Blocks and at points on site marked "drinking water".
- No equipment or system shall be connected to the drinking water system without prior approval of the Client's/agent's representative.
- The Principal Contractor will be required to provide its own accommodation for the workers.

15. FOOD HYGIENE

15.1 Storage, Distribution, and Transportation of Food

The storage, distribution, and transportation of foodstuffs shall be such as to prevent damage, contamination, or deterioration of the foodstuffs or of materials that come into contact with them. Methods of preservation and necessary controls shall, within the limits of good commercial practice, be such as to protect the product from deterioration and contamination and from becoming a public health hazard.

Stores shall be proofed against rodents, insects, and birds and shall be kept in a hygienic condition.

Food that requires special storage conditions, such as controlled atmosphere, temperature, or relative humidity, shall be stored under appropriate conditions, and records shall be kept of the storage conditions.

All persons who handle unpacked food shall be provided with clean protective clothing in sound condition. Management shall be responsible for the cleaning and issuing of protective clothing and shall ensure that protective clothing is not removed from the premises for cleaning, repair, or other purposes without authorisation and that such clothing, when not in use, is kept in a change room, central store, or locker.

The use of gloves in the handling of foodstuffs shall be limited to cases where foodstuffs are to be protected from possible contamination by the worker.

Vehicles used for the transportation or distribution of food shall be clean, free from any odours, weather-proof, and easy to clean, and in the case of vehicles with refrigeration, the refrigeration unit shall be adequate to maintain the food at the required temperature. Food shall not be transported in the same container or unit as non-food items, unless it can be demonstrated that the non-food items present no risk of contamination to the food.

15.2 Training

The Principal Contractor shall arrange for all food handlers to receive adequate and continued training in the hygienic handling of food and in personal hygiene so that they know what precautions to take to preclude contamination of food

16. SIGNAGE

The contractor(s) shall use all symbolic safety signage that conforms to the requirements of SANS and/or applicable legislative requirements.

The display of the following signs is mandatory:

- For all contractors with site establishment: the contractor company sign must be posted at their site offices to reflect the name and contact details of the Site Manager, Construction Supervisor, Health and Safety Manager/Practitioner, First-aider, Health and Safety Representative, and Evacuation Warden.
- Furthermore, all contractors shall display a statistical board containing: The nos. of employees, the Days worked without a Lost Time Injury, total hours worked without a Lost Time Injury, date of last Lost Time Injury.
- “Radioactive material” symbolic signs at radioactive storage areas.
- The location of every first-aid box, fire extinguisher, and emergency exit is to be clearly indicated by means of a sign.
- At the entrance to premises where machinery is used: restricted access on “Authorised person only” signs on entry.
- When in use, an explosive-powered tool shall have a sign warning people of its use.
- 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.

17. HOUSEKEEPING

The Principal Contractor and its Sub-contractor shall maintain a high standard of housekeeping within the site and shall ensure that:

- The prompt disposal of waste materials, scrap, and rubbish is essential and shall be conducted as per the Camden Power Station Environmental Management Plan (EMP) and Waste Management Procedure, and according to legislative requirements;
- Adequate care must be taken by the contractor to ensure that storage and stacking are correctly and safely carried out;
- Before stacking any material, the contractor, subcontractor, or their employees must consult the Eskom project/site manager for allocation of a stacking area, and shall comply to legislative requirements;
- Materials/objects shall not be left unsecured in elevated areas; falling objects may cause serious injuries/fatalities;
- Nails protruding through timber shall be bent over or removed so as not to cause injury;
- All packaging material, including boxes, pallets, crates, etc., to be removed from the work area immediately;
- Meal rooms shall be kept in a clean and tidy manner;
- On completion of his/her work, the contractor is responsible for clearing his/her work area of all materials, scrap, temporary buildings, and building bases to the satisfaction of the client/agent;
- In cases where an inadequate standard of housekeeping has developed, compromising safety and cleanliness, everyone has the responsibility to bring it to the attention of the Eskom Project/Site Manager. The Eskom Project/Site Manager has the right to instruct the Principal Contractor and its Sub-contractors to cease work until the area has been tidied up and made safe. Neither additional costs nor extension of time to the contract shall be allowed as a result of such a stoppage. Failure to comply will result in site cleaning by another cleaning contractor company at the cost of the Principal Contractor; and
- It shall carry out regular safety/housekeeping inspections (at least weekly) to ensure maintenance of satisfactory standards. The inspections shall document the results of each inspection and the principal Contractor shall maintain records for viewing

18. 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.

The Principal Contractor and its Sub-contractor employees at the construction site, including visitors, shall use the following SANS or the relevant internationally recognized authority-approved risk-based PPE at all times, as a minimum:

- Head protection (hard hat), with an attached chin strap;
- Steel-toe capped safety boots (No Stilettos or high-heeled shoes will be allowed on the project);
- 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 (with reflective strips sowed on). For all electrical work conducted in switchgear rooms, protective overalls with a minimum Cal value of 8 shall be worn;
- High-visibility vests; and
- Hearing protection as determined by the Principal Contractors Noise assessment.

Note: The Principal Contractor and its Sub-contractors shall comply with the General Safety Regulation 2 of the OHS Act, section 23 and the Eskom Personal Protective Equipment Standard - 240-44175132 as a minimum requirement.

However, if there are particular activities/areas/risk assessments that require a specific type of PPE, that specific PPE requirement must be adhered to (for example, for dusty environments - eye goggles; for welding - welding helmet; high voltage work - category 2 overalls; etc.).

The Principal Contractor shall ensure that:

- Its and its Sub-contractor employees understand why personal protective equipment is necessary and that they use it correctly.
- Strict non-compliance measures must be administered for any employee not complying with the use of PPE, and he/she shall be removed from the site.
- The use of safety belts (work positioning belt with a work positioning lanyard) is strictly prohibited. Only Eskom-approved fall arrest/fall prevention equipment must be used when conducting work in elevated positions.
- Welders, brazers, cutters, and aiders shall wear suitable eye protection, gloves, and apron spats, and screens shall be provided to protect onlookers and passers-by.
- Suitable impact-resistant eye protection shall always be worn for grinding, chipping, and chasing, and screens shall be provided to protect onlookers and passers-by.
- When working with hazardous chemical substances (for example, acids or caustic substances), suitable eye protection, gloves, and special overalls shall be worn.
- Suitable eye protection shall be worn by all persons, including visitors, to any designated eye protection area.
- Ear protection shall be worn in any designated noise zone.
- Suitable respirators shall be provided where gas and/or dust could pose a hazard.

Note: No contractor employee may wear clothing that indicates any other company, other than the company he/she is currently employed at and working for on the project. Any employee found in contravention of this requirement, will be removed from the project until the appropriate clothing is worn.

18.1 Notices and Signs for the Wearing of PPE

All equipment brought onto the construction site (including motorized equipment, for example, a bobcat) that requires PPE to be worn during operation must have the relevant PPE mandatory sign(s) attached. Symbolic signs (to comply with SANS 1186) indicating the type and use of PPE will be placed at all entry points to the construction site

18.2 Issue, Replacement, Care and Control of PPE

The Principal Contractor must provide a detailed programme on the issuing, maintenance, and replacement of PPE for all its and its Sub-contractor employees on site.

The Principal Contractor is required to keep an updated register of all PPE issued, including that of its and its Sub-contractor employees.

18.3 Training

All users of PPE shall be trained, assessed, and declared competent for the specific personal protective equipment.

Documented training records for all training shall be maintained.

19. HAZARDOUS MATERIALS/CHEMICALS MANAGEMENT

The Principal Contractor and its Sub-contractors shall describe how hazardous substances, as defined in the Hazardous Chemical Substances Regulations (OHS Act), will be managed.

Prior to any hazardous chemical substances (HCS) being brought onto the site or produced on the site, the Principal Contractor shall supply the Eskom Project Manager with the following:

- Material safety data sheets (MSDS) in accordance with the requirements of the OHS Act
- Regulations for Hazardous Chemical Substances;
- Purpose for bringing the hazardous substance onto the site;
- Proposed arrangements for safe storage;
- Proposed methods for handling/usage;
- Proposed method of disposal; and
- Hazard communication/training plan.
- This information is to be provided at least five (5) working days prior to the expected delivery on site.
- The Eskom Project Manager shall approve the use of any hazardous substance after receiving the above information. The Principal Contractor shall ensure that:
- No HCS is to be brought onto the site until the Eskom Project Manager's approval has been received.
- All HCS containers to be clearly labelled. Containers that are not marked will not be allowed.
- No HCS to be stored in food or drink containers.
- Users of an HCS must wear/use the correct PPE as per the HCS material safety data sheet.
- Users of an HCS must be adequately trained in the HCS that they are handling
- The Principal Contractor must have and maintain a register with all the HCS that they have on site.

20. FLAMMABLE AND COMBUSTIBLE LIQUIDS

The Principal Contractor shall submit a proposal on how it intends to store fuel on site, and must have written approval from the Eskom Project Manager prior commencing with the fuel storage. The volumes of fuel allowed to be stored will depend on site conditions and statutory regulations.

The Principal Contractor shall ensure that the following is strictly adhered to:

- A maximum of 40 litres of fuel is allowed to be stored. Anything greater than 40 litres is to be stored in a flammable/combustible liquid store.
- Adequate numbers of dry chemical fire extinguishers, each with a minimum capacity of 4.5 kg, shall be provided, installed, and maintained.
- Before a machine is refuelled, the motor must be stopped. Refuelling shall take place at designated safe areas, and appropriate warning signs shall be installed. Suitable drip trays must be used to prevent spillage at the filling nozzle.
- All fuel storage areas must comply with the following requirements:
- Storage should be well clear of buildings.
- Storage areas must be kept free from all combustible materials.
- All danger signs must be prominently displayed, that is:
  - Flammable Liquid;
  - No Smoking;
  - No Naked Flames; and
  - Hazchem identification.
- Adequate fire-fighting equipment must be available.
- Diesel tanks will be installed in a bunded area; the bunded area must be able to contain 110% of tank capacity.
- The bunded area shall be of a concrete or steel construction.
- The bunded area shall have a drain valve.
- No other material/equipment shall be stored in the bunded area.

The Principal Contractor and its Sub-contractors must comply with the legal requirements for storage of flammable and combustible liquids, as stipulated in the Construction Regulations, regulation 25

21. EXPLOSIVES

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

Note: The transport, handling, use and storage of explosives will be managed according to the requirements as stipulated in the Explosives Regulations as published in GNR. 109 of 17 January 2003.

The Principal Contractor and its Sub-contractors shall ensure that:

- A copy of the written permission from the Chief Inspector of the Department of Labour shall be obtained before use of any explosive material – refer to the requirements in Explosives Regulation 13 of the OHS Act.
- Requirements for the transporting and storage of explosives to be in accordance with Explosives Regulation 13.4 of the OSH Act and SANS 100228 “Code of Practice for the Identification and Classification of Dangerous Substances and Goods” (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 landowners must be notified prior to the blasting activities on site.
- The construction operations may necessitate that ground and rock be blasted. Prior to a blast, a siren will have to be sounded. Warning flags will have to be displayed at the entrance to the area of the blast, and guards will be placed at strategic points.
- The Principal Contractor and or its Sub-contractors, where required to carry out blasting operations, shall fully acquaint it with, and adhere to the blasting procedures and legislation. Every blast must be cleared with the appropriate Employers representative before charges are placed.
- Only the appointed holder of an approved surface blasting certificate, as approved by the inspector of mines, may be allowed to blast.

22. COMPRESSED GAS CYLINDERS

All compressed gas cylinders shall be managed according to and conform to the General Safety Regulations, regulation 9 and SANS 1548.

The following requirements apply to all gas cylinder storage:

- Contractors shall establish storage areas as approved by the Eskom project manager.
- Storage areas should be well clear of buildings
- The storage areas shall be fenced, shaded, stable, and solid surfaces
- For security and ventilation purposes, a wire mesh fence should surround the storage area.
- Keep the enclosure locked.
- All danger signs must be prominently displayed at storage areas, for example:

  - No Smoking; and
  - No Naked Flames.

- A protective covering must be provided;
- Adequate ventilation must be provided;
- Storage areas must be kept free from all combustible materials; no other materials must be stored in the cylinder enclosure;
- Full cylinders must be kept apart from empty cylinders so that it will not be necessary to open valves to check whether cylinders are empty or full;
- Cylinders must always be chained separately in an upright position, and special stands must be used for cylinders;

- Cylinders must be stored in rows with an aisle in-between for easy removal in the event of fire;
- Mark empty cylinders clearly, and move to approved storage areas;
- Adequate fire-fighting equipment must be available;
- Cylinders for different gases must be stored separately;
- Flammable and oxidising gases must not be stored together; greases and oils must never be allowed to come into contact with oxygen;
- Only flame-proof electrical lighting should be used, if required;
- Cylinders will only be allowed on site in an approved trolley, properly secured, and with a chain; and
- All gas cylinder torches to have flashback arrestors fitted on both sides.

23. MACHINERY, TOOLS, AND EQUIPMENT

The Principal Contractor and its Sub-contractors shall ensure the following all machinery, tools and equipment:

- Are identified and safe to be used and are maintained in a good condition.
- Shall be adequately guarded when driven by means of belts, gear wheels, chains, and couplings.
- A machine is guarded when persons cannot gain inadvertent access to the moving parts
- Listed on an inventory list, which is handed to Security with a copy, kept on site.
- Are regularly inspected at least monthly or as required by legislation and risk assessments; registers of tools shall be kept in the safety file.
- Are numbered or tagged so that it can be properly monitored and inspected.
- Must 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 must be inspected by the Eskom SHE practitioners prior to mobilising it on site.
- All fuel-driven equipment must be properly maintained in accordance with the manufacturer's recommendations and legal requirements.

The Principal Contractor shall supply, at its cost, all items of plant and equipment necessary to perform the work, unless otherwise indicated in the works information.

The Employer reserves the right to inspect items of plant or equipment brought to site by the Principal Contractor and its Sub-contractors, for use on this contract. Should the Employer 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 Employer 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 Employers instructions.

The Principal Contractor and its Sub-contractors will ensure that it has all the necessary registers to record all tools and equipment.

The Principal Contractor and Sub-contractor employees shall:

- Be competent when operating or using machines and tools;
- Have a valid certificate; and
- Have proof of any form of task-related training.

24. MACHINE GUARDING

The Principal Contractor and its Sub-contractors shall ensure that:

- 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;
- The machine or tool should be guarded to prevent limbs or loose clothing from getting under, into, above, or around the dangerous moving parts
- Every shaft, pulley, wheel gear, sprocket, coupling, clutch, friction drum, spindle end screw, key, bolt on a revolving shaft, driving belt, chain rope, or similar object shall be securely fenced or guarded;
- Guards should form a permanent part of the machine or tool and be easy to remove, non-corrosive, rigged, and as far as reasonable heat-resistant;
- Machine guards must be painted on the outside in the same colour as the machine or tool;
- The inside of guards and moving or rotating parts must be painted orange; and
- All guards must 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.

24.1 Record Keeping

The Principal Contractor and its Sub-contractors shall ensure that:

- A register should be used that indicates the name, the number of the machine or tool, and the number of guards.
- The register should be kept in the safety file.

25. HAND TOOLS AND PNEUMATIC TOOLS

The Principal Contractor and its Sub-contractors shall ensure that:

- All hand tools (hammers, chisels, spanners, etc.) must be recorded in a register and inspected by the supervisor on a monthly basis as well as by users prior to use.
- All pneumatic tools should be numbered, recorded, and inspected at least monthly as well as by users prior to use. The revolutions per minute must be measured in accordance with the manufacturer's specifications.
- Tools with sharp points in toolboxes must be protected with a cover.
- All files and similar tools must be fitted with handles.
- It has a policy on makeshift tools on site.

Note: It is illegal for a pneumatic tool to be operated by using a compressed gas cylinder. Furthermore, the Principal Contractor and its Sub-contractors shall ensure that:

- Pneumatic equipment shall only draw supply from mobile air compressors or from compressed air lines installed within the premises after gaining permission the Employers representative.
- When using the interlocking type of connection of an air-line, connectors shall be secured with wire clips through holes provided to prevent accidental disconnection.

- Compressed air shall NOT be used for any purpose other than that for which it is provided.
- Compressed air should not be used to remove dust from clothing.
- Hoses to be orderly routed and elevated, if required, in order to prevent tripping hazards.

25.1 Record Keeping

The Principal Contractor and its Sub-contractors shall ensure that they have:

- A checklist for hand tools;
- A checklist for air tools, including records of the measurement of revolutions on grinders;
- A gas cylinder trolley checklist; and
- Registers for each.

26. BOILERS, PRESSURISED SYSTEMS, AND PRESSURE EQUIPMENT

The Principal Contractor shall ensure that:

- All vessels under pressure are inspected by an approved inspection authority, and he/she shall be in possession of the manufacturer's certificate.
- All pressure vessels shall be provided with at least one safety valve, and such safety valve should be kept locked.
- The vessel under pressure should be provided with a manufacturer's plate.
- The vessel under pressure should be fitted with a pressure gauge in pascal and the maximum permissible operation pressure marked with a red line on the dial.

26.1 Record Keeping

The following records shall be kept and maintained:

- Inspection registers for vessels under pressure;
- The certificate from the manufacturers; and
- Registration certificate of an approved inspection authority.

27. EXPLOSIVE-POWERED TOOLS/ EXPLOSIVE ACTUATING FASTENING DEVICES

The Principal Contractor shall ensure compliance to CR regulation 21 in that:

- Written permission to use these tools on site must be obtained by the Eskom Project Manager;
- Only trained and competent personnel (CR Regulation 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-powered tools are used.
- Users should be issued with suitable protective equipment.
- Cartridges and explosive-powered tools to be stored separately
- Refer to the requirements of the CR regulation 21 of the OHS Act.

27.1 Record Keeping

The following records shall be kept and maintained:

- Register for the issue and return of cartridges.

28. LIFTING MACHINES AND LIFTING TACKLE

The Principal Contractor shall ensure that:

- A competent rigger with a red seal is utilized for all rigging activities.
- 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;
- 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 shall conduct an inspection when equipment is brought onto site. If it's the Principal Contractors intention to use a Sub-contractor, it must enter the name of the Sub-contractor in the notification letter to the Department of Labour;
- All lifting machine operators shall be competent to operate a lifting machine. They must be in possession of a valid permit;
- Whenever use is made of an external contractor to do lifting work, the Principal Contractor must ensure that the operator is competent, and if the Principal Contractor is satisfied with the operator's competence after looking at its portfolio, it should issue a temporary permit to the operator;
- The Principal Contractor should verify whether the lifting machines have been examined and a performance test done;
- The training should have been done according to the code of practice by a provider registered with the Department of Labour;
- Before using any lifting machines or tackle, the operator should inspect it/them;
- All lifting machines shall be examined and subjected to a performance test by an accredited person/company at intervals not exceeding 12 months;
- All lifting tackle should be examined by an accredited person/company at intervals not exceeding three months
- All lifting tackle should be recorded in a register;
- All hooks shall be fitted with a safety latch/catch;
- A management control system should be implemented to ensure that only an operator who is competent can draw lifting machines and forklifts;
- All lifting tackle should be conspicuously and clearly marked with identification particulars and the maximum mass load for which it is designed;
- No person shall be moved or supported by means of a lifting machine, unless such a machine is fitted with a cradle approved by an inspector;
- A risk assessment should be conducted prior to starting with the task;
- Account should be taken of wind forces;
- Lifting machines are erected taking into account a safe distance from excavations;

- 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, Legislative and other requirements (SANS);
- Account should be taken of the bearing capacity of the ground;
- The Principal Contractor and Sub-contractor 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;
- The Principal Contractor and Sub-contractor employees shall ensure that crane loads are not carried over the heads of any workmen; and
- Guide ropes to be used to prevent loads from swinging.
- The Principal Contractor shall compile and submit a Lifting Plan for acceptance and approval by the Client, for each lift.

Note: Refer to the requirements of the Driven Machinery Regulation 18 and CR regulation 23 of the, OHS Act.

28.1 Record Keeping

The following records shall be kept and maintained:

- Record books and test certificates of lifting machines and tackle should be kept in the safety file;
- A copy of the risk assessment should be kept in the safety file;
- A certificate of approval shall be obtained from the Department of Labour inspector
- Register of all lifting machines and tackle on site (for inspection purposes); and
- Training certificates and certificates of fitness for operators of the equipment.

29. WORKING AT HEIGHT

Working at height is a high-risk activity, and as such, all precautions including, but not limited to Eskom and legislative requirements must be taken to prevent incidents while working at height. All users of height safety equipment for working at height shall be trained, assessed, and declared competent for the specific height safety equipment and associated structures.

The Principal Contractor and its Sub-contractors shall ensure that for work conducted at heights the following requirements are met:

- A task-/job-specific fall protection plan shall be developed and approved by a competent person for any activity where there is a risk of a fall.
- The fall protection plan and its requirements shall be integrated into the health and safety plan.
- Adherence to the fall protection plan is mandatory.
- The fall protection plan shall be suitably amended in accordance with the risk assessment, equipment technology, standards, and legislation.

The fall protection plan shall include a task-/job-specific risk assessment and requirements relating to the following:

- Training programme for employees working from a fall risk position;

- Appointments and authorisations;
- The procedure addressing the inspection, testing, and maintenance of all fall protection equipment;
- The processes for evaluation of the employees' medical fitness necessary to work in a fall risk
- position and the records thereof (medical surveillance programme);
- Equipment use and specification;
- Fall prevention, fall arrest, and fall rescue; and
- Method statements or safe work procedures/task analysis/work instruction.

Furthermore, the Principal Contractor shall ensure that:

- When working at height, appropriate PPE as determined by the risk assessment and written safe work procedure/task analysis/work instruction shall be used at all times.
- The type of personal protective equipment to be used must be appropriate to the activity and provide adequate hand, eye, face, foot, and head protection.

Work restraint methods must be used before placing workers in fall arrest situations

- "Working at height" shall be indicated on all job specifications of employees who are expected to work at height and shall be taken into account in all medical and psychological assessments/surveillances.
- All fall arrest protection equipment shall comply with SANS Standards and other recognised international standards.
- All height safety equipment purchased shall conform to relevant national standards, statutory requirements, and approved Eskom divisional-specific requirements.
- All portable ladders used on the site shall be in compliance with the OHS Act and Regulations.
- All scaffolding used shall comply with the OHS Act and Regulations as well as SANS 10085.

30. FALL PROTECTION PLAN

A fall protection plan must be compiled whenever there is a possibility that a person can fall. A fall protection plan will be compiled to show the responsibilities and the process to be followed to ensure that the possibility of a person falling from an elevated position will be eliminated or mitigated. A competent person will be appointed in writing to compile a fall protection plan.

The duties of the dedicated employer (person in charge), the supervisor and the workers will be clearly recorded.

The fall protection plan will include: -

- A proper risk assessment
- Proper training of risk assessment and the fall protection plan by a competent person appointed in writing.
- An attendance register will include the date of training and the names and signatures of all trainees and will be kept on site and be available for inspection at all times.
- Maintenance registers as per checklists of the fall protection equipment and fall arrestors will be kept and inspected by a competent person appointed in writing.
- A rescue Procedure should be in place.

The supervisor supervising the relevant work will be in possession of the latest fall protection plan. The contractor shall ensure that when working at heights:

- all openings on the floor are guarded or barricaded to safeguard any person from falling through such openings
- no person works in an elevated position unless such work is performed safely as if working from scaffolding or ladder
- fall protection and fall arrest equipment is suitable and of sufficient strength for the purpose
- fall arrest equipment shall only be used where it is not reasonable practicable to use fall protection equipment
- suitable steps shall be taken to ensure that in the event of falling the fall arrest equipment or surrounding environment does not cause injury to the person
- Working at height" shall be indicated on all job specifications of employees expected to work at height and shall be taken into account in all medical and psychological assessments/ surveillances.
- It is a prerequisite for workers to be medically and psychologically fit to work safely in a fall risk position or such similar environment, and as proof thereof, those workers shall be in possession of a medical certificate of fitness.
- Only competent persons shall be allowed to inspect, test, and maintain fall protection and/or fall arrest equipment.

Where roof work is performed onsite the contractor shall include in the fall protection plan that:

- the roof work is properly planned
- Where roof work is to be performed, a risk assessment must be carried out prior to climbing on to the roof to determine the hazards (stability, suitability strength etc.), consequences of climbing and control measures that are required.
- roof erectors are competent to carry out the work
- no employees are permitted to carry out the work on roofs during inclement weather

31. EXCAVATIONS, TRENCHES, AND FLOOR OPENINGS

The Principal Contractor and its Sub-contractors shall comply with the following requirements:

- Digging, excavation, or driving a peg, pile, or spike into the ground by the contractor may not commence without written authorisation from the client's/agent's representative.
- Prior to commencing work on any excavation or trench, the Principal Contractor and or its Sub- contractors shall determine the location of all underground installations, that is, sewer, telephone, water, fuel, electric, 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 in areas where a fall hazard is present. Solid barricading and/or hole covers shall be provided around all holes or openings to prevent any person being

injured as a result of a fall. Danger tape may only be used as a pre-warning to make the solid barricading more visible and to prevent persons from coming close to the danger area.

- Barricading must be placed as close as reasonably possible 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 that are subject to vibrations from railroad traffic, road traffic, blasting in open-cast mining, or the operation of machinery (for example, shovels, cranes, trucks), must be secured by a support system, shield system, or other protective system (that is, 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 railings or floors, and these shall be maintained in position at all times until the hazard no longer applies
- Warning signs and flashing warning lights at night shall be displayed in suitable positions to warn any persons approaching the area of the location and extent of any excavation.
- No material to be within 3 m of the excavation edges.
- All excavations must be on register and inspected daily before work commences and after inclement weather by the contractor's appointed competent person, declared safe, and his/her findings noted in the said register. The Employer may review the said register on a predetermined frequency not exceeding seven (7) days.
- While work is being performed in an excavation, there shall be a supervisor at all times.
- Every twelve meters, there shall be an escape ladder in all excavations.
- Requirements in CR regulation 13 of the OHS Act shall apply as well.
- No work shall commence in an excavation, unless the excavation has been declared safe by the competent person.

32. BARRICADING (GUARDING OF EXCAVATIONS, TRENCHES, AND FLOOR OPENINGS)

The Principal Contractor and its Sub-contractors shall ensure that:

- In areas where the restriction or prevention of unauthorised persons/members of the public/passers-by is required, the barricading requirements shall be adhered to;
- Requirements for barricading (if risk assessments require more stringent mitigation measures, then those stringent measures shall apply):
- The name and contact detail of the person and contractor company 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 100 kg.
- Only solid (scaffolding or standalone) barricading with orange "snow netting" will be allowed.
- Ballards (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 contractor's barricading standard must accompany the SHE plan

33. PERMIT TO WORK

The Principal Contractor and its Sub-contractor's 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 that contractors must be trained, competence-assessed, and authorized in writing to perform the duties of an authorized or responsible person as contemplated in the applicable Eskom regulations, for example:

- Operating Regulations for High-voltage Systems;
- Plant Safety Regulations;
- Hot work;
- Radiation; and
- Confined space work.

The Employers representative is to provide more details on the permit-to-work system for the specific work to be conducted by the principal contractor.

Note: No construction work shall commence or carried out without an authorized Construction Work Permit as require by CR regulation 2(7).

34. RADIOGRAPHY, ULTRASONIC, OR NON-DESTRUCTIVE TESTING (NDT)

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

- No radioactive sources may be brought onto site without prior written consent of the Eskom Camden Power Station RPO
- Where a statutory appointment exists, it has appointed, in writing, a suitably qualified and experienced Radiation Protection Officer (RPO) to provide advice on the observance of the law and other relevant health and safety matters;
- The Contractors shall submit the radiography file with, inclusive of all required legal appointments and procedures as required under Hazardous Chemical Substances Regulation.
- Radiography areas are clearly identified by the erection of suitable barriers, sirens, warning notices, and/or flashing lights. Vehicles transporting radioactive material shall be clearly identified;
- Radiation operators must submit proof of certification;

- Sources must be stored according to legal requirements;

The Employer and all contractors must be informed of X-ray activities; and

- X-ray work may only commence with a valid permit to work
- The Principal Contractor shall ensure compliance to, but not limited to, the following requirements:
  - 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"

35. WORKING NEAR PUBLIC ROADS

The Principal Contractor shall ensure that:

- Necessary precautionary and preventive safety measures shall be taken where persons are required to work on or near roadways. Consideration shall be given to the wearing of high-visibility vests, and protection by red cones or flags during daylight and use of red or amber flashing lamps at night;
- Work areas must be adequately barricaded so as to prevent unauthorised access; and
- Road traffic warning signs shall be placed well ahead of the work area.

36. WORKING OVER OR NEAR WATER

Working over water will often, although not always, involve working at height. The Principal Contractor shall put measures in place to manage the potential risks of both these hazards.

Ideally, work shall be carried out from a stable working platform that may prevent an accidental fall into the water. Where there is a risk of someone accidentally falling into water, appropriate rescue equipment and people who are competent to use it must be available. The Principal Contractors shall plan and practice rescue drills.

The Principal Contractor shall conduct a special PPE survey for working over or near water activities.

The Principal Contractor shall give appropriate consideration to the health implications arising from the accidental entry into contaminated water e.g. the possibility of contracting leptospirosis whilst working over or near to water.

37. FORMWORK AND SUPPORT WORK

The Principal Contractor shall prepare a detailed procedure for formwork and support work to ensure that all such work is carried out under the supervision of a competent person and that the design of formwork and support work structures are done with reference to the structural design drawings and kept on site.

38. CUTTING, WELDING, AND HOT WORK

The Principal Contractor and its Sub-contractors shall ensure compliance to the GSR regulations, regulation 9, with regards to all welding, flame cutting, soldering and similar operations.

Prior to cutting or coring of concrete suspended slabs, cast in place or pre-cast walls, and slab on grade, the Principal Contractor must either X-ray the slab or, if X-ray is not feasible, provide other approved Alternate methods for determining live electrical wiring concealed in the slab or walls. Signage shall be posted to ensure that 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 have ended to ensure that no fire starts.

Furthermore, the Principal Contractor and its Sub-contractors shall ensure that prior to any such activities taking, it complies with the Employers permit-to-work requirements for Hot-work activities.

Eskom and each Contractor that is required to perform Hot Work shall appoint in writing at least a Hot Work Monitor (HWM) for that day or outage related work. The Hot work monitor must preferably not be responsible for more than four hot Work areas simultaneously.

The Hot Work Monitor must complete a Hot Work Application form prior to the permit being issued; the relevant Responsible Person must provide the Appointed Person with the completed and signed Hot Work Application form. The Hot work Application form must be cross-referenced (linked) to the Permit to work (as per Plant Safety regulations /operating regulation for High Voltage systems).

A daily hot work Approval form must be completed by the Fire Watch and displayed on the Hot Work area. The Hot Work Monitor is responsible to ensure that all hot work requirements are communicated to the relevant responsible person. This must be done on a daily basis. The Hot Work monitor shall do inspection after daily hot work of all relevant areas where hot work is completed and signed.

The Hot Work Monitor shall also do the final inspection of all areas where hot work is completed and if satisfactory shall then sign and hand over to the Responsible Person for clearance and auditing purposes.

Approval needs to be obtained all the time when hot work needs to be conducted in a Non-dedicated hot work place e.g. Plant.

When hot work is conducted in a workshop that is suitable and provided with means of fire prevention and fire control and Risk assessment conducted Hot work Approval will not be necessary

39. WORK STOPPAGE

The Employer reserves the right to stop all or part of the work if the Principal Contractor and or its Sub-contractors are found to be working unsafely or in unsafe working conditions, and performing unauthorised work. However, every employee on observation of an unsafe act or condition; has the right to stop part or all of the activities in the best interest of health and safety.

Work stoppages that are initiated due to SHE concerns, non-compliance or poor performance related to the Principal Contractor and or its Sub-contractors works or services, shall not warrant any extension of time or financial compensation claim lodged against the Employer, where the Principal Contractor and or its Sub-contractors have not met the requirements defined by legislation and or the contract.

The conditions that lead to work stoppages are based on:

- Management of change - this is when there are changes to the work environment (for example, climatic changes) and construction work (for example, modifications to the design), in any phase of the construction project, and/or amendments with regard to Eskom rules and regulations and/or legislative amendments;
- Unsafe acts/behaviours; and
- Unsafe conditions. The process to be followed is:
- The relevant activity must be stopped.
- The Eskom Project Manager and or the Principal Contractor and its Sub-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 who are competent to make the area safe.
- The Principal Contractor and or its Sub-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 shall be suitably barricaded and signposted with the wording “Unsafe Area - Authorized Access Only”.
- The Eskom Project Manager shall review the affected parts/sections of the SHE specification with the purpose of providing sufficient SHE information to the Principal Contractor.
- The Eskom Project Manager must ensure that the revised provisions in the SHE plan are adequate and must approve them before the work activity is commenced
- The Principal Contractor shall then revise the relevant sections in the SHE plan to accommodate the changes.
- Before the workforce is allowed back in the area, the principal contractor and his/her subcontractors shall ensure that:
- The area is re-inspected by the contractor safety practitioner and supervisor and note corrective actions taken; and
- Declare the area safe for work by signing off on the “work stoppage” notice issued by the
- Eskom site/project manager.

Note: The Principal Contractor is to take note of the requirements of Construction Regulation 4(e) of the OHS Act imposed on the Employer/Client by the regulation.

39.1 Temporary Stoppage of Activity(s)/Task(s) Due to SHE Concerns, Including the Following Circumstances:

Ad hoc work stoppages by Eskom management, at the discretion of the Eskom Senior Management, or all work of a similar nature may be stopped due to the occurrence of a fatal or serious incident, and the applicable vendors will be required to comply with and/or verify the conditions stipulated in the work stoppage instruction pack.

39.2 Stoppage /Suspension/Termination of Contract

The Employers representative as defined in the Eskom contract with the Principal Contractor will be the authorised person to communicate the stoppage/suspension/termination of the contract after seeking advice from Eskom's Legal Department and approval from the BU Management.

Note: The Principal Contractor and its Sub-contractors must take note of the procedure for Supplier Suspension Process 32-188.

"Eskom takes a ZERO TOLERANCE stance to violation of Eskom Life Saving Rules and unsafe acts and conditions, and WILL apply appropriate sanctions"

40. HAZARD AND RISK MANAGEMENT

The aim of this section is to do the following:

- Highlight the construction site SHE risks and hazards (reference must be made to the EIA,
- EMP, ROD, and the client's/agent's baseline risk assessment);
- Request the Principal Contractor and its Sub-contractors to identify hazardous and potentially hazardous work operations. The contractor needs to demonstrate that the site hazards and the contractor's activity risks and the mitigating measure have been considered in his/her risk assessments;
- There must be method statements or written safe work procedures for all the contractor activities; and
- Emerging risks and hazards must be managed during construction work

Execution of the works will require the control of all identified hazards and associated risks and shall include, in particular, the following identified at initial design stage as being amongst a non-exhaustive list of particular hazards associated with the works.

The Principal Contractor shall ensure that:

- All hazards are identified, before and during project execution, and that appropriate activity-based risk assessments are carried out;
- The activity-based risk assessments shall be available where the work is performed and communicated to the employees daily;
- Activity-based risk assessments must be conducted by an appointed and competent person of the contractor;
- All risk assessments shall be reviewed at least every six months, or sooner should site conditions dictate; and
- The Principal Contractors shall submit all risk assessments to the Employer's representative for review and these documents shall form part of the contractor's SHE Plan/File; and
- Preliminary hazard identification shall be conducted by the contractor prior to work beginning on site.

40.1 Site-Specific Health and Safety Hazards

- In complying with the requirements of Regulation 5(1)(a) of the Construction Regulations of the OHS Act, the Eskom Project Manager will outline the site-specific health and safety hazards, within the baseline risk assessment, pertaining to the environment and physical conditions that the contractor will be exposed to in performing its work on site.

- The baseline risk assessment shall be reviewed by the Eskom Project Manager, SHE Manager/Practitioner and Engineering Manager to make it project/site specific.
- The Eskom Project Manager will make all reasonable efforts to ensure that the information provided is complete and correct. However, the Principal Contractor shall make its own assessment of the hazards and risks associated with the work under the contract.
- The site and project-specific hazards are listed in baseline risk assessment in order to make potential contractors aware of the hazards.
- It is, however, pointed out to the contractor that the list may not be totally comprehensive, and it is the duty of each Principal Contractor to ensure that all the hazards are identified, before and during the project, and the necessary activity-based risk assessments are carried out. These risk assessments shall form part of the SHE plan that will be passed on for scrutiny and approval by the client's/agent's representative when updated.
- Furthermore, the Eskom Project Manager may provide on request to the Principal Contractor, on contract award, with the client's site specific baseline risk assessment.

40.2 Hazardous and Potentially Hazardous Work Operations and Emerging Risks

The Principal Contractor shall identify hazards and potentially hazardous work operations. For each work operation identified, the Principal Contractor shall supply a risk assessment, which shall:

- Describe the operation to be performed in the sequence of the basic job steps;
- Identify and rank the hazard or potential hazard;
- Describe how the hazard will be managed; and
- Identify the responsible person for each mitigation action.

Note: There must be method statements and written safe work procedures for all activities.

During construction work, the Principal Contractor, its Sub-contractors, or the Eskom representative may identify emerging hazards and risks. For each such newly identified hazard or risk, the Eskom Project Manager shall review the site baseline risk assessment and the relevant section(s) of the SHE specification. The Client shall provide the revised SHE specification and, on request, baseline risk assessment shall be submitted to the Principal Contractor, who will review its own risk assessments and relevant sections of the SHE plan, as well as those of the Sub-contractors. The Principal Contractor will prepare and submit both documents to the Eskom Project Manager for approval.

The Principal Contractor and its Sub-contractors shall not proceed with the work/operation in hazardous areas until the Employers representative has reviewed the risk assessment and has approved and signed the revised SHE plan and issued a valid permit to work and work as per Eskom's Plant Safety Regulations (OPR 3305) and/or ORHVS Regulations (32-846).

40.3 Pre-Task/Work Risk Assessments

The Principal Contractor shall ensure that on a daily basis and for every task to be performed, a pre-task risk assessment is conducted, with all employees involved in the task(s) present. The pre-task risk assessment will form the basis of the daily pre-job brief/toolbox talks prior to the start of work. 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 will be filed in the contractor's safety file.

40.4 Risk Assessment (Additional Guidelines)

Activity-based risk assessments must be conducted and approved by the contractor's competent person before any activity begins on site and must be updated regularly to ensure their relevance to changing scope and/or circumstances.

The intent is zero tolerance of unsafe acts and conditions on the construction site through the assessment of risk of each operation executed by the contractor and the provision of the necessary means to eliminate or minimize the risk to ensure a healthy and safe working environment

The process involves input from the site manager, supervisor(s), safety practitioner, and the specialist artisans for the job as well as the health and safety representative for the workplace concerned. Additional operation-specific risk assessments are required for certain tasks throughout the project.

Guidelines for actual steps involved in an operation-specific risk assessment are as follows:

- Each activity is listed;
- Specific hazards are identified and listed against each activity;
- The magnitude of each risk is rated as low, medium, or high;
- All known documentary and supervisory controls are listed, for instance, what safe work procedures exist for scaffolds and ladders;
- The relevance, effectiveness, and sufficiency of these controls are assessed;
- In the event of deficient controls for the particular activity, actions to be taken will be recorded and safe working procedures drawn up;
- Persons responsible for implementing and supervising the task are to be identified, nominated, and duly assigned;
- Persons responsible for monitoring the task and carrying out the planned job observation must be nominated and
- The completed risk assessment must be handed to the Eskom site/project manager's representative for comment and scrutiny.

Names of workmen who have received instruction on the work content and the sequence of the activities listed in the risk assessment are to be recorded to obtain their confirmation of comprehension of their roles (signature or other markings). This instruction must be done through an interpreter if required and recorded on the pre-job brief (daily safe task instructions), with reference to applicable risk assessments.

41. SAFE WORK PROCEDURES AND PRACTICES

The aim of this section is to provide an indication of the activities that require safe work procedures and practices.

There must be written safe work procedures for all activities. Risk assessments should refer to the safe work procedures. A safe working procedure should be written when:

- Designing a new job or task;
- Changing a job or task;

- Introducing new equipment or substances; and
- Reviewing a procedure when problems have been identified, for example, from near miss incidents or an accident/incident investigation.
- The safe working procedure should identify:
- The level of supervision required for the task;
- The training and qualifications required by the workers to perform the task;
- The supervisor for the task or job and the employees who will undertake the task
- The tasks that are to be undertaken that pose risks;
- The equipment and substances that are used in these tasks;
- The control measures that have been built into these tasks;
- The personal protective equipment to be worn; and
- Actions to be undertaken to address safety issues that may arise while undertaking the tasks

42. HIGH-RISK ACTIVITIES

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

- Ensure that permanent and adequate on-site supervision is available for the entire duration of the work that is being conducted;
- Ensure the use of safety standbys in areas of high-risk activities and activities that fall within the scope of the permit-to-work system; and
- 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.

Furthermore, the Principal Contractor shall:

- 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 at its own cost.

43. SHE PLAN

The Principal Contractor shall develop and submit a SHE plan that must detail specific plans and programmes for implementing the health, safety, and environmental requirements of the contract. The SHE plan may be a collection of documents and manuals and should include, where applicable, the following as a minimum:

- SHE policies;
- Applicable standards, legislation, and guidelines to be adopted;
- Commitments to government approvals and project licences;
- SHE objectives;
- Allocation of responsibilities and authorities;

- Details of the interface between the client/agent and the contractor;
- Specific procedures, methods, and work instructions to be applied;
- Risk assessments;
- Safety awareness promotions;
- Personal protective equipment provision and rules;
- Rehabilitation procedures to encourage an early return to work;
- Transport safety;
- Occupational health and hygiene arrangements, including, but not limited to respiratory and hearing protection, alcohol and drug policies, health assessments, smoking, and first aid;
- Monitoring of employee exposure to occupational stressors as identified in the risk assessments;
- Safety meeting schedules;
- Management of Sub-contractors - Employers requires the same from subcontractors as it does from contractors;
- Training and competence regarding SHE;
- Incident reporting, investigation, and recording;
- Audit, review, and management feedback;
- Letter of good standing - Workmen's Commissioner;
- Legal appointments;
- Medical examinations for all employees;
- SHE personnel presence on site;
- Crisis and emergency response arrangements;
- Maintenance, inspection, and testing of construction vehicles, machinery, equipment, and substances; and
- Working hours - compliance with Labour Relations/Basic Conditions of Employment Act;

The SHE plan shall be submitted to the Employers representative for review and approval and, once accepted, shall not be amended without prior consultation and acceptance by the Employer representative.

44. EMERGENCY PREPAREDNESS

The Principal Contractor and its Sub-contractors shall develop a site-specific emergency response plan.

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

Periodic emergency drills will be undertaken by Eskom; however, the Principal Contractor must initiate its own emergency drills with permission from the Eskom Project Manager, and at its own cost. This must be recorded and provided on request.

45. FIRE RISK MANAGEMENT

The Principal Contractor must 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, the type of work being done (for example, cutting, welding, grinding, etc.), the amount of combustible materials, and the Power Stations Emergency Plan. 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 on 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 Employer.

45.1 Eskom Fire Safety Guidelines

45.1.1 Fire alarms

Fire systems must never be removed from service in an occupied building, unless a trained and qualified person is standing at the fire alarm panel who is capable of reinitiating the system and who is in communication with persons performing the work or alternate procedures are 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.

45.1.2 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.

45.1.3 Construction sites

The Principal Contractor shall ensure that the following are in place:

- Fire safety plan: prior to the commencement of construction or building alterations, a fire safety plan shall be prepared for the construction site.
- Fire warning: a suitable means of alerting site personnel to a fire shall be provided and must be capable of being heard in all areas of the building.
- Portable extinguishers: suitable extinguishers must be available at the construction site and, in cases of hot work, be readily available at the location.
- Combustible liquid and flammable liquid storage: storage of combustible and flammable liquid at 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 and 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 as per Eskom policy and legislation requirements

45.1.4 Impairment of Fire Protection System

- The RP is a person who is required to do the work on the Fire protection System and shall apply for a permit to work
- Once the APP has received the application, he or she needs to treat it as a special requirement in terms of the Operating regulation for high Voltage system, plant Safety regulation permit to work. He or she must immediately contact the Fire Risk Officer or Asst. Fire Risk Officer or Captain of the Response Team informing him or her about the application and that the system will be isolate based on the scope of work as applied by the RP
- The FRO must conduct a risk assessment before any isolating of fire protection system is initiated by completing annexure A-Part A
- The APP must cross reference both applications for a permit to work from the RP and the annexure A Part-A from the FRO
- The APP to inform the C&I system engineer and the maintenance personnel when isolating Boiler burner front fire protection system for them to disable the alarms and again when de-isolating the system to enable the system alarms.
- AP to inform the Fire System Engineer that the system is isolated (Date and Time) and the possible return date.
- Once a request has been received, the FRO or Asst. FRO or RT Captain. To complete the annexure 1 Part-A form only if satisfied that the work needs to be carried out.
- Once he or she hands over the risk assessment to the AP, the RP will then apply for the permit to work as per the scope of work. The reason for the application must be given as Fire Protection System integrity confirmation”
- At every isolation point that is being isolated by the AP. A protection out of service red tag shall be completed by the FRO, Asst. FRO or RT Captain in triplicate with the original copy to the permit to work , second copy to remain at the fire station and the last hard copy to be displayed on the isolated system
- Once the work has been completed, the affected system must be de-isolated which will allows both the AP and the FRO to perform a full flow test on the system recording all the readings. This test is very important and serves as a final check to ensure that all control valves have been locked in an open position by:
    - Fully opening a valve (drain vent)
    - Notice a strong flow of water from the valve indicates that the system is pressurised
    - No flow of water indicates that the valve is totally shut or completely obstructed
    - Sometimes a valve disk becomes detached and slips into the closed position, yet the valve appears to be open or the spindle is broken in an open position yet from the visual inspection looks like is closed
    - Investigate immediately if test are not satisfactory
    - On satisfactory completion of the relevant test , the FRO to ensure that all valves are locked in a full 100% open position
    - All completed fire protection out of red tag service must be filed at the Fire Station for a minimum period of 12 months
    - Once the FRO has completed the Reg Tag Service label, he need to inform the OU3, Local Risk and Assurance Manager and Head Office and attached the tag on to the isolated valve.
    - Ensure that all pressure gauges are working and recording properly

- Once Risk and Assurance Manager receive the confirmation that the fire system is going to be isolated for 8 hours or more need to inform the PSM who will then escalate the information to the Eskom insurer and Head Office.
- He/She must ensure that the Business unit is not exposed to excessive fire risk
- If there is a probability of that risk, then inform the relevant personnel like Camden Management and Corporate Risk Control
- The Senior Shift Supervisor (SSS) is the person who has the authority to keep the fire protection system keys and to ensure that at all time the system is locked in an open position and that when need arises to isolate the system, keys are available
    - To coordinate the isolation of the fire protection system by the OPS common plant personnel
    - To ensure that all isolated fire protection systems are communicated to the Fire Risk Officer, Asst. Fire Risk Officer or the response Team Captain's on a daily basis through either telephonically or outlook communication.
    - To ensure that once the system is repaired and all functional tests conducted is then locked in an open position.
    - Fire system engineer in partnership with Fire risk management to conduct risk assessment and come up with mitigation circumstances in terms of protecting the exposed plant.
    - On the return of the fire system together with the Fire risk management to conduct quality assurance to ensure that the system was returned to normality and according to specifications.

45.1.5 Fire Extinguishers

The Principal Contractor shall ensure that Fire Extinguishers are:

- Clearly labelled;
- Conspicuously numbered;
- Entered into a register;
- Inspected on a monthly basis by a competent person; and
- Tested and serviced at recommended intervals by an accredited supplier, with the results entered in the register and signed by a competent person

46. ENVIRONMENTAL MANAGEMENT

The Principal Contractor and its Sub-contractors shall comply and conform to the Power Station Environmental Management Plan (EMP) and Environmental Management System before performing any work.

This plan will be in detail discussed with all Principle contractors. The aim of this section is to highlight some matters which may have an impact on the environment in and around the construction site. Please note that the project is subjected to a service level agreement with Generation. All EMP and ROD compliances must be adhered to at all times. All applicable legislation with regard to the environment must be adhered to during the time of the project by the Principal contractors. Permit and license conditions must be adhered to at all times. The environmental plan and requirements of Generation (Station) shall be followed at all times.

46.1 General Roles and Responsibilities

The Principal Contractors shall plan activities in such a way that adverse impacts are prevented and beneficial impacts are enhanced. Good construction practices play an important role in avoiding the occurrence of an incident.

In the event that prevention is not practicable, or is not achieved because of misapplication, the Principal Contractor shall apply approved measures that limit and contain the magnitude, duration and intensity of the impact as soon as practical. The Principal Contractor shall demonstrate that it is capable of repairing and reinstating the damaged environment.

46.2 Training and Awareness Programme

The Principal Contractor, together with the EM and the Employer, shall ensure that its employees receive adequate environmental training prior to the commencement of construction. The Employer will make an induction presentation on environmental awareness. The cost, venue and logistics shall be for the Principal Contractor's account. Where possible, training will be conducted in the language of the employees. Record of the training date, people who attended and discussion points will be kept by the Employer and the Principal Contractor.

The Employer will convey the contents of this section, the conditions of the Project EMP as well as the landowners' special conditions to all contractors' site staff and discuss the contents in detail with the Employer's Project Team and the Principal Contractors at a pre-construction meeting.

46.3 Compliance by the Principal and Its Sub-Contractors

Any contractor shall be deemed not to have complied with the environmental mitigation measures if there is evidence of: -

- Negligence or recklessness resulting in the contravention of any of the instructions, both within and outside the boundaries of the construction site.
- Failure to comply with instructions issued by the Employer.
- Any contractor's employees poaching or entering neighbouring areas.

The Principal Contractor shall monitor its own performance relative to the requirements stipulated in these environmental requirements and shall record and report on non-conformances

46.4 Environmental Emergency Procedures

The Principal Contractor shall submit method statements covering the procedures for the following emergencies:

46.5 Fires

The Principal Contractor shall advise the relevant authority of a fire as soon as one starts and shall not wait until he can no longer control it. The Principal Contractor shall ensure that its and its Sub-contractor employees are aware of the procedure to be followed in the event of a fire.

46.6 Accidental Leakages and Spillages

The Principal Contractors shall ensure that it and its Sub-contractor employees are aware of the procedure to be followed for dealing with spills and leaks, which shall include notifying the Eskom Project Manager, the Eskom Supervisor and the relevant authorities. It shall ensure that the necessary materials and equipment for dealing with spills and leaks are available on site at all times. Treatment and re-establishment of the spill areas shall be undertaken to the reasonable satisfaction of the Eskom Project Manager and the Eskom Supervisor.

46.6.1 Hydrocarbon spills

In the event of a hydrocarbon spill, the source of the spillage shall be isolated, and the spillage contained. The area shall be cordoned off and secured. The Principal Contractor shall ensure that there is always a supply of absorbent material readily available to absorb or neutralise the spillage. Where possible, the area shall be designed to encapsulate minor hydrocarbon spillage.

The quantity of the absorbent materials shall be able to handle a minimum of 200 litres of hydrocarbon liquid spill. Hydrocarbons and chemical spills must be prevented at all costs, however in case of an emergency/major accidental spill the station's Environmental department must be notified and relevant Hazmat response team/contractor should be called out.

46.7 Waste and Refuse Control

The Principal Contractor shall compile a waste plan before commencing of work and prepare a register for hazardous waste in which all waste disposals will be recorded. In addition the Principal Contractors shall submit a method statement for prevention of pollution to the EM/EO for approval.

No waste, whether it be biodegradable or not, is to be left on site once work has ended.

Domestic and hazardous waste generated shall not be burned, buried, or disposed of on Eskom or any other landowners' property but shall be controlled and removed to a licensed waste site on a regular basis.

On a daily basis the Principal Contractor and its Sub-contractors working on site shall ensure that oil, fuel, and chemicals are confined to specific and secure areas throughout the construction period. These materials must be stored in a bunted area with adequate containment for potential spills and leaks.

The Principal Contractor shall ensure that sufficient waste bins/containers are made available for waste control, as per the Power Station's Waste Management Procedure.

General wastes generated by the Principal and its Sub-contractors shall be delivered to a centralised collection facility, as designated by the Power Stations representative for disposal by the project. These can be divided into two main waste-producing activities: general waste and construction waste. Waste segregation will cover both these main waste-producing activities. Waste shall be segregated into the following waste streams as a minimum:

- Compactable;
- Un-compactable;

- Building rubble;
- Process waste;
- Scrap metal; and
- Hazardous waste (Lamps etc.).

The Principal Contractor shall source recycled products wherever practicable and shall inform the engineer of any recycled products being utilised on site.

The Principal Contractor shall develop a site waste management plan for the site under its control. This shall include identifying all waste streams, the sources of those waste streams, the quantities of waste generated (by volume and/or by mass), the potential for recycling within those waste streams, and the quantity of waste recycled or reused elsewhere. This proportion of waste recycled to waste generated will form part of the performance audit of contractors.

The Principal Contractor shall develop and utilise waste manifest documentation for delivery to the centralised waste collection point. This documentation shall detail the type of waste being moved, the quantity of waste, the source of the waste, the date, the responsible person from the waste generator, and the signature of acceptance from the responsible person at the centralised waste collection point.

46.8 Hazardous Chemical Substances

The Principal Contractor shall keep a register of hazardous chemical substances and material safety data sheets should be kept on site.

46.9 Herbicide Usage

The Principal Contractor shall keep a herbicide register for usage is to be compiled and maintained and a copy handed to the project leader/environmental advisor on completion of the project/contract. The application of herbicides has to be in accordance with the Fertilisers, 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. Only registered pest control operators may apply herbicides on a commercial basis. All staff applying herbicides must be trained in the application of herbicides.

46.10 Dust and / Asbestos

All employees must be made aware of the inherent dangers of dust. Employees must take such measures as may be necessary to decrease the generation of dust and post warning signs.

The use of Thermal Insulation Materials containing Asbestos is not allowed at Eskom Camden Power Station. Where any process necessitates the breaking up, grinding, pulverising, crushing or cutting of Asbestos cement products the Project Manager and the Occupational Hygienist must be notified immediately of the quantity and location.

Where employees are exposed to dusts such as Silica, Asbestos Cement, Fibreglass and Cement, etc. adequate protective clothing and appliances must be provided.

Note: Adhere to Eskom Camden Power Station's Asbestos Procedure (004-8516) and Eskom Requirements for safe processing, handling, storing, disposal and phase-out of asbestos and asbestos containing material, equipment and articles (32-303)

Mitigation measures are to be implemented as required/agreed on with the Eskom Project Manager/Environmental Advisor.

Dust suppression measures must be in place to reduce the dust caused by the movement of heavy vehicles.

46.11 Environmental Incidents

The Principal Contractor and its Sub-contractors shall ensure that:

- All environmental incidents such as pollution (air, water, land, noise, etc.), bird kills, animals killed, plants destroyed, public complaints, etc. must be reported to the project leader and/or environmental advisor within 24 hours of their occurrence, as per the Eskom Procedure Manual for Environmental, Occupational Health and Safety Incident Management, 32-95; and
- All environmental incidents occurring on site must be recorded, detailing how each incident was dealt with. Proof thereof must be kept in an incident register.

Note: The contractor will be held liable for any infringement of statutory requirements of the Environmental Conservation Act, No. 73 of 1989, or any other relevant legislation

46.12 Fauna and Flora

The Principal Contractor shall ensure that clearing of vegetation is done in consultation with the EM and the relevant landowner to prevent vegetation and more specifically red data species from being unnecessarily removed or relocated. No trees shall be felled for the purpose of obtaining firewood.

All contractors shall be responsible to prohibit their employees from hunting fauna and setting of snares.

46.13 Rivers, Stream and Water Courses

The Principal Contractor shall implement effective measures to prevent any pollution of rivers, streams and watercourses on the site. All contractors shall prevent discharge of any pollutants, such as cement, concrete, lime chemicals and fuels into any water resources

The Principal Contractor shall ensure that its and its Sub-contractor employees have enough potable water to prevent them from going to nearby streams or farms to fetch water.

Construction material shall not be stored closer than 100m from any watercourse and approved temporary toilet facilities shall be sited in such a way that they do not cause water pollution.

- No construction is allowed within the 1:100 year floodlines. Should any pollution of the watercourse occur, the Department of Water Affairs and Forestry must be notified immediately
- Water usage on site has to be verified with the substations'/power stations' responsible person and the project leader/environmental advisor to ensure compliance with legislation. Borehole water must be verified for human consumption fitness. All incidents related to water contamination are to be reported within 24 hours.
- Chemical toilets may not be in close proximity of the drainage lines/ways.

46.14 Soil Conservation and Management

Topsoil shall be stripped from all areas that will be used during the construction period and where permanent structures and access will be required. These areas shall include at least temporary access roads, railway line earthworks footprint, construction camps and laydown areas and borrow pits. Topsoil shall be stripped after clearing of woody vegetation and before excavation or

construction commences. The Principal Contractor shall be responsible to ensure that all topsoil stripping, stockpiling and placement are done in accordance with the requirements set out in the project EMP.

Where applicable, the Principal Contractor shall comply with the Power Stations Land Management Plan.

46.15 Storm Water and Erosion Control

The Principal Contractor shall prepare a Method Statement detailing how it intends to control erosion and sedimentation due to construction activities including information of the rehabilitation method for the stabilisation of the cut and fill slopes. This Method Statement shall be submitted to the Eskom Project Manager and ECO for approval.

47. AUDITING

The Principal Contractor shall conduct monthly statutory audits of all its Sub-contractors' safety management systems and their work areas. The results of these audits shall be kept on record on the site SHE files.

The Employer will conduct audits on the Principal Contractor and may also conduct audits on all its Sub-contractors on monthly basis for high risk activities and quarterly for low risk activities.

The Principal Contractor shall conduct daily and weekly inspections of Sub-contractors' activities and follow up that corrective action has been implemented on findings.

The Principal Contractor shall produce a monthly report on all its internal audit findings with an accompanying corrective action plan to the Employer for review.

The Employer and the Principal Contractor's Senior Site Management shall also take part in site walks/inspections to demonstrate to the workforce management commitment to occupational health and safety to the workforce.

Note: The Principal Contractor/Sub-contractor shall be included in all Eskom Auditing processes. The following audits and inspections shall be conducted on the Principal Contractor

47.1 Compliance and Approval of the Principal and Sub-Contractors SHE Plans

The Principal Contractor's SHE plan will be audited against a compliance checklist so as to confirm compliance with the requirements in the Eskom SHE specifications. Once there is compliance, only then will the Principal Contractor's SHE plan be approved by the Employer. The implementation of the SHE plan shall be assessed by conducting a systems and physical conditions evaluation.

47.2 Principal Contractor SHE Performance Evaluation

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

47.3 Internal Audits

The Principal Contractor is required to conduct internal audits on its and its Sub-contractors employees on the implementation of its 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 Project Manager on the last day of the audit.

The report shall be submitted within one week after completion of the audit.

47.4 SHE Plan Audits

There will be audits conducted by Eskom on the Principal Contractor and/or Sub-contractors. These audits shall be attended by the Principal Contractor's Site manager and or his/her representative. Contractors performing high risk activities will be audited on monthly basis, contractors conducting low risk activities will be audited on quarterly basis.

If findings and or non-compliances are identified during these audits, work will be stopped for that specific Principal Contractor and or Sub-contractor company. Refer to the section on "Work stoppage" in this SHE specification.

48. INCIDENT MANAGEMENT

The contractor shall have an incident reporting system that is compatible with Eskom's requirements and all applicable legislation. Any incident or near miss involving the Employer's, Principal Contractor's, Sub- contractor's or third-party's personnel, property, plant, or equipment shall be verbally reported to the Eskom representative within 60 min of occurrence.

The contractor shall:

- Ensure compliance with Eskom incident management processes for reporting and investigation of incidents, as stipulated in the latest revision of the Procedure Manual for Environmental, Occupational Health and Safety Incident Management 32-95 Rev6
- All incidents shall be documented on the appropriate flash report template, as provided for by the
- Employer, and submitted to the Eskom SHE Department before the end of the shift.
- The Principal Contractor shall keep on site/at the 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.
- In addition to the reporting of incidents as required in terms of the Occupational Health and Safety Act and Compensation for Occupational Injuries and Diseases Act and Eskom Incident Management Procedure 32-95, each accident (first aid, medical treatment, and disabling and/or fatal injury) shall be reported to Eskom Camden Power Station Project Manager, the Occupational Health Nurse, Eskom Safety Officer, Contractor SHE Rep or Supervisor and the Safety Officer for contractors. Reporting of injuries must be done immediately or before the end of the shift.

- Incidents such as fire and damage must also be reported to Eskom Camden Power Station's Safety Department (Fire Department).
- Every Principal Contractor will be in possession of an Accident Register as required by the Occupational Health and Safety Act and must acquaint himself with the contents of Sections 24 of the OHS Act (Reportable Incidents). All reportable incidents must be reported to Department of Labour within 24hours.
- Incident must be investigated within 7 days of the occurrence of the incident. Recommendations outlined during the investigation must be implemented and proof of implementation be submitted to Safety Department for the incident to be closed out.

Eskom reserves the right to conduct an independent investigation in any incident.

Note: The Employer shall have a right to designate a representative to participate in the investigation at the Employers sole discretion.

49. MONTHLY/WEEKLY STATISTICAL REPORTS

The Principal Contractor shall submit on a monthly basis, on the last day of the month, a statistical performance report on the Employers template for weekly and month-end reports.

50. 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 subcontractor's contract is to be recorded in the file.

The SHE file shall be maintained by the contractor(s) on the construction site. The contractor shall also record in the SHE file:

- Information about removal or dismantling of installed plant and equipment;
- Hands-on information about equipment needing cleaning and maintenance, for future purposes;
- Nature, location, and markings of services; and
- As-built drawings.

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

At the end of the contractor's contract, the SHE file shall be handed over to the client/agent.

51. 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 shall notify the Eskom Supervisor(s) of any work that needs to be performed after hours according to the agreed arrangements. (The notification needs to be submitted timeously.) Where applicable, the notification should include proof of application for extended overtime to the Department of Labour and/or the letter of approval from the Department of Labour.

52. ESKOM SHEQ POLICY

Eskom is fully committed to protecting the health and safety of employees, contractors, visitors and members of public. Occupational health and safety is a core value in ESKOM and the belief is that all unsafe acts and incidents are preventable and this belief guides our approach to safety across of our business activities.

The Eskom Safety, Health, Environment and Quality Policy is contained in document 32-727

53. ESKOM LIFE-SAVING RULES

The Principal Contractor shall comply with the requirements as stipulated in most recent version for the Implementation of the Eskom Life-saving Rules 240-62196227 document.

Eskom has identified five Lifesaving rules. Failure to adhere to these rules by any Eskom employee or employee of a Principal Contractor or any of its Sub-contractors will be considered a serious transgression.

These rules have been implemented to prevent serious injury to or death of any employee, labour broker or contractor working in any area on Eskom premises.

Eskom will take a stance of zero tolerance on transgression of these rules. Non-compliance to any one of the lifesaving rules will be considered serious misconduct and will lead to disciplinary action, which may include dismissal.

These 5 Life-saving rules are as follows:

- Rule 1 - Open, isolate, test, earth, bond, and/or insulate before touch
- Rule 2 - Hook up at height
- Rule 3 - Buckle up
- Rule 4 - Be sober
- Rule 5 - Ensure that you have a permit to work

These Life-saving Rules are non-negotiable health and safety rules that must not be broken under any circumstances. Where additional Life-saving Rules have been implemented as part of a site specific requirement, the Principal Contractor and its Sub-contractor will comply accordingly

54. SAFETY MANAGEMENT SYSTEMS

The Principal Contractor shall ensure that it and its Sub-contractors implement and complies with the requirements of a recognized and accredited safety management system.

Comprehensive details and requirements of the system shall be submitted to the Employer for acceptance and monitoring of compliance during internal audits.

55. OMISSIONS FROM THIS SHE SPECIFICATION

By developing this SHE specification, Eskom has endeavored 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. Further risks identified by Eskom or its agents will be included in the contract works information and/or relayed at the clarification or negotiation meeting.

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

56. SUMMARY OF REVISION CHANGES

Date	Rev.	Compiler / Reviewer	Remarks
03 October 2016	06	GR Maswanganyi	Review Internal Audit frequency Occupational hygiene Fire risk management Update reviewed Eskom procedures
03 June 2015	05	T. Mathonsi	Review to add Management of Substance Abuse
16 March 2015	04	T. Mathonsi	Review to incorporate New Construction Regulation Requirements
15 May 2014	03	T. Mathonsi	Review to incorporate Construction Regulation Requirements
03 January 2014	02	T. Mathonsi	Review to add Construction Regulations Elements omitted

57. DEVELOPMENT TEAM

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

- Thandeka Mathonsi
- Absalom Simelane
- Lindiwe Makhubo
- Manare Mapeka
- Zipo Mahlalempini
- Fikile Sithole
- Refilwe Maswanganyi

58. Records

Record Name	Responsible Person	Location	Retention Period
Minutes or briefs of the management review meetings shall be prepared by the Secretary to the SHE manager, then to the attendees.	OHS Department and Line Managers	G-Drive	5 years
Attendance register	OHS Department	G-Drive	5 years
Management review action plan	OHS Department	G-Drive	5 years

59. Document Acceptance (Stakeholders)

This document has been seen and accepted by:

Name	Designation	Approval Signatures
1. Nkhetheni Sadiki	OHS Officer	
2. Thandeka Mathonsi	OHS Officer	
3. Bets Spies	Assistant OHS Officer	
4. Katlego Masha	Fire Officer	
5. Absalom Simelane	Assistant Fire Officer	
6. Fikile Sithole	Acting Environmental Manager	
7. Primrose Soko	Occupational Health Nurse	
8. Manare Mapeka	Occupational Hygiene Officer	
9. Njabulo Ndlovu	OHS Officer	
10. Malekgoa Sejake	Environmental Senior Advisor	
11. Phahla Nthlane	Environmental Officer	