

	<p align="center">SHE SPECIFICATION HIGH RISK WORK</p>	<p align="center">NAME OF DEPARTMENT MAINTENANCE</p>
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<p>Title: Provision of on-line leak sealing of Equipment on as and when required basis for a period of five (5) years.</p>	<p>Unique Identifier: 240-73418055</p> <p>Purchase Requisition Number: 1075565677</p>
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<p>Date: 2024/07/11</p>	<p>Date: 2024.07.11</p>	<p>Date: 2024-07-12</p>

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1. INTRODUCTION

Eskom's responsibility and commitment is to ensure a safe working environment is in line with its Safety, Health, Environmental and Quality Policy, along with legislative obligations.

This SHE specification is Eskom the minimum requirements which are required to be met for the specific contract and for the duration of the contract period by contractors and where required, the delivery organisation.

The contractor is expected to develop a SHE plan which meets these requirements as well as all the relevant applicable legislation they conform to.

Eskom in no way assumes the contractor's legal responsibilities. The contractor is and remains accountable for the quality and the execution of his/her health and safety programme for his/her employees and appointed contractor employees.

This SHE specification reflects minimum requirements and should not be construed as all encompassing.

Note 1: *All the requirements listed hereunder are in relation to the contract and do not supersede or replace any organizational SHE requirements.*

Where requirements listed are already in place, then the organisational requirements must be taken cognisance of and listed in the respective SHE plans. If there are any additional Eskom and or legislative requirements listed in the SHE specification, then these must be addressed.

2. SUPPORTING CLAUSES

2.1 SCOPE

This SHE specification lists the legislative and Eskom requirements and where applicable, any requirements pertaining to Local Authorities / Municipal by-laws / Environmental legislation that must be met by the contractor.

2.1.1 Purpose

This document will provide a standardised approach to the compilation of SHE specifications throughout Eskom for contracts, standards and NEC 3 contracts.

2.1.2 Applicability

This SHE specification is applicable to any contracting organisation who intends tendering for the contract.

2.2 NORMATIVE/INFORMATIVE REFERENCES

Parties using this document shall apply the most recent edition of the documents listed in the following paragraphs.

2.2.1 Normative

- [1] Basic Conditions of Employment Act No 75 of 1997.
- [2] Occupational Health and Safety Act and Regulations No 85 of 1993.
- [3] National Environmental Management Act 107 of 1998.
- [4] National Road Traffic Act 93 of 1996.
- [5] 32-37 Eskom Substance Abuse Procedure.
- [6] 32-136 Contractor Health and Safety Requirements
- [7] 240-62196227 Life- saving Rules
- [8] 32-95 Environmental, Occupational Health and Safety Incident Management Procedure
- [9] 32-727 SHEQ Policy
- [10] 32- 418 Working at Heights Procedure
- [11] 240-62946386 Vehicle and Driver Safety Management Procedure
- [12] 32-520 Risk Assessment procedure
- [13] Plant Safety Regulations

2.2.2 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

2.2.3 Definitions

Definition	Explanation
Appointed contractor	Means a contractor appointed by the principal contractor
Baseline risk assessment	(32-520) baseline operational risks refer to the health and safety risks associated with all standard processes and routine activities in the business
Business unit (BU)	(32-296) means any defined unit within the Eskom environment, operating as a business under a particular cost-centre number. In the context of this document and in terms of health and safety, any reference to a BU includes a defined unit within any Eskom division and its subsidiaries
Client	(OHS Act) Eskom representative (Internal – Asset Owner), also referred to as the contract administrator/custodian or agent or contract 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.
Competent person	(OHS Act) means any person having the knowledge, training, experience, and qualifications, specific to the work or task being performed, provided that, where appropriate, qualifications and training are registered in terms of the South African Qualifications Authority Act, 1995 (Act No. 58 of 1995)

Confined Space	<p>An enclosed, restricted or limited space in which, because of its construction, location, contents, or any work carried out therein, a hazardous substance may accumulate or an oxygen deficient atmosphere may occur, and includes any chamber, tunnel, pipe, pit, sewer, container, valve, pumps, sump or similar construction, equipment, machinery or object in which a dangerous concentration of gas, vapour, dust or fumes may be present. At Koeberg, confined space is classified into two categories, namely:</p> <p>(a) Hazardous to Health Confined Space – An enclosed, restricted or limited confined space in which, because of its construction, location or contents, or any work activity carried on therein, a hazardous substance may accumulate or an oxygen deficient atmosphere may occur. Furthermore, a dangerous liquid or a dangerous concentration of gas, vapour, dust or fumes may be present. An area outside of, or bordering on any hazardous to health confined space which, owing to its proximity to the confined space, presents a hazard as defined above is also classified a hazardous to health confined space.</p> <p>(b) Isolated Confined Space – A confined space which has been isolated from all pipes, ducts and all possible sources of dangerous energy and/or harmful substances by means of the shutting or locking of a valve or a cock.</p>
Contractor	(OHS Act) means an employer as defined in section 1 of the Act who performs contracted work and includes principal contractors
Consultant	means a person providing professional advice
Controlled disclosure	controlled disclosure to external parties (either enforced by law or discretionary)
Duty of care to the environment	(32-136) 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 authorised by law or cannot reasonably be avoided or stopped, such person must minimise and rectify such pollution or degradation of the environment
Employee	(OHS Act) means, subject to the provisions of subsection (2), any person who is employed by or works for an employer and who receives or is entitled to receive any remuneration or who works under the direction or supervision of an employer or any other person

Employer	(OHS Act) means, subject to the provisions of subsection (2), any person who employs or provides work for any person and remunerates that person or expressly or tacitly undertakes to remunerate him/her, but excludes a TES (ex. labour broker) as defined in section 1(1) of the Labour Relations Act 1956 (Act No. 28 of 1956)
Environment	(32-94) means: <ul style="list-style-type: none"> a) the land, water, and atmosphere of the earth; b) micro-organisms and plant and animal life; and c) any part or combination of (a) and (b) 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
Environmental Management plan	A detailed plan of action prepared to ensure that recommendations for enhancing or ensuring positive impacts and limiting or preventing negative environmental impacts are implemented during the life-cycle of a contract. This Environmental Management Plan should preferably form part of Eskom's Environmental Management System
Ergonomics	The application of scientific information concerning humans to the design of objects, systems and the environment for human use in order to optimise human well-being and overall system performance.
Eskom requirements	Eskom requirements flowing from directives, policies, standards, procedures, specifications, work instructions, guidelines, or manuals
Fall Arrest Equipment	Means equipment used to arrest a person in a fall, including personal equipment, a body harness, lanyards, deceleration devices, lifelines or similar equipment
Fall Prevention Equipment	Means equipment used to prevent persons from falling from a fall risk position, including personal equipment, a body harness, lanyards, lifelines or physical equipment such as guardrails, screens, barricades, anchorages or similar equipment.
Fall protection plan	(OHS Act) means a documented plan of all risks relating to working from an elevated position, considering the nature of work undertaken, and setting out the procedures and methods to be applied in order to eliminate the risk
Hazard	(OHS Act) means a source of, or exposure to, danger

Hazard identification	(OHS Act) means the identification and documenting of existing or expected hazards to the health and safety of persons, which are normally associated with the type of construction work being executed or to be executed
Health and safety file	(OHS Act) means a file or other record in permanent form, containing the information required in relation to the contract.
Health and safety plan	(OHS Act) means a document plan that addresses hazards identified and includes safe work procedures to mitigate, reduce, or control hazards identified
Health and safety specification	(OHS Act) means a document specification of all health and safety requirements pertaining to associated to a contract, so as to ensure the health and safety of persons.
Health and safety requirements	means comprehensive health and safety requirements for a contract, contract, site, and scope of work. 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 health and safety requirements must be specific to each contract, contract, site, and scope of work
Incident	An unplanned, undesired or unexpected event that could result in physical harms to a person and/or damage to assets and/or have a negative impact on the environment.
Lifesaving Rules	(240-62196227) a rule that, if not adhered to, has the potential to cause serious harm to people
Medical Certificate of fitness	(OHS Act) means a certificate valid for one year, issued by an occupational health practitioner, issued in terms of the regulations, whom shall be registered with the Health Professions Council of South Africa
Medical surveillance	(OHS Act) means a planned programme or periodic examination (which may include clinical examinations, biological monitoring, or medical tests) of employees by an occupational health practitioner or, in prescribed cases, by an occupational medicine practitioner
Method statement	(OHS Act) means a written document detailing the key activities to be performed in order to reduce, as reasonably as practicable, the hazards identified in any risk assessment
Organisation	may be defined as a group of individuals (large of small) that is cooperating under the direction of executive leadership in accomplishment of certain common objects

Potential Oxygen Deficient Area	A poorly ventilated area in which asphyxiating gases are stored or generated in tanks or cylinders or conveyed in pipelines. The surrounding area is not well ventilated and abnormal operating conditions could conceivably result in an oxygen deficient environment.
Pre-job meetings	(34-227) means a meeting that is held prior to the commencement of the day's work and that is attended by all the relevant employees associated with the work task
Principal contractor	(In the text of this document) Means an employer, as defined in section 1 of the OHS Act, who intends to tender for or has signed a contract with Eskom for services rendered.
Provincial director	(OHS Act) means the provincial director as defined in Regulation 1 of the General Administrative Regulations under the Act
Responsible Manager	Is a Manager of a department, section or operating/business unit who has been appointed as part of the Eskom delegation of authority process with the aim to assist the applicable 16(2) assigned person in executing his/her duties in terms of the Occupational Health and Safety Act
Risk assessment	(OHS Act) means a programme to determine any risk associated with any hazard at a construction site in order to identify the steps needed to be taken to remove, reduce, or control such hazard.
Risk Profile	A profile based on results of a risk assessment process that indicates the significance and the category (assets, people or environment) of risks to Safety, Health and Environment.
Safety	Includes the activities related to injury prevention, fire prevention, damage control and occupational hygiene.
Scaffold	Any temporary elevated platform and supporting structure used for providing access to and supporting worker or materials or both.
Site	(34-228) means an Eskom department, unit, complex, building, specific contract, work site, or the site where agents, clients, principal contractors, contractors, suppliers, vendors, and service providers provide a service to Eskom, directly or indirectly
Service provider	any private person or legal entity that provides any service(s) to Eskom for compensation

Structure	<p>a) 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, batching plants, pylon, surface and underground tanks, earth retaining structure or any structure designed to preserve or alter any natural feature, and any other similar structure;</p> <p>b) any formwork, false work, scaffold or other structure designed or used to provide support or means of access during construction work; or</p> <p>c) any fixed plant in respect of work which includes the installation, commissioning, decommissioning or dismantling and where any such work involves a risk of a person falling two meters or more.</p>
Subsidiary	(32-94) an enterprise controlled by another (called the parent) through the ownership of greater than 50% of its voting stock
Supplier	(32-1034) means a natural or legal person who renders a service and may include the following current or potential supplier vendor, contractor, consultant
Task	(34-227) a segment of work that requires a set of specific and distinct actions for its completion
Toolbox talks	(34-227) where the team leader, after conducting pre-task planning, shares all the tasks at hand and discusses task allocation, the identified risks, and the control measures with all his/her team members on site before commencing a specific task and documenting the agreed strategy. (This shall be done to ensure common understanding of the tasks, risks, and control measures required.)
The Act	(OHS Act) means the Occupational Health and Safety Act No. 85 of 1993, as amended, and the Regulations thereto
Visitor	any person visiting a workplace with the knowledge of, or under the supervision of, an employer.

2.2.4 Classification

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

2.3 ABBREVIATIONS

Abbreviation	Description
CNC	(Eskom) Customer Network Centre
CR	Construction Regulations of the OHS Act
AIA	Approved Inspection Authority
BU	Business Unit
CE	Chief Executive
COID Act	Compensation for Occupational Injuries and Diseases Act
DMR	Driven Machinery Regulations
DoL	Department of Labour (Inspection and Enforcement services – Provincial office)
EP	Emergency Preparedness
ERfW	Environmental Regulations for Workplaces
GAR	General Administrative Regulations
GSR	General Safety Regulations
HCS	Hazardous Chemical Substances
LDV	Light Delivery Vehicle
MSDS	Material Safety Data Sheets
NEMA	National Environmental Management Act
OHS Act	Occupational Health and Safety Act and Regulations, 85 of 1993
LoG	(COID) Letter of Good Standing
SACPCMP	South African Council for the Contract & Construction Management Professions
SABS	South African Bureau Standard
SANS	South African National Standard

2.4 APPLICABLE PROCEDURES

The procedures listed below must be complied with when conducting work at Koeberg Operating Unit:

- 32-520: **Occupational Health and Safety Risk Assessment Procedure**
- 32-95: **Environmental, Occupational and Health Incident Management Procedure**
- 32-418: **Working at Heights Procedure**
- 335-3: **Conduct of Maintenance: Reference Manual**
- KAA-708: **Processing a Safety Assurance Certificated and Work in Hazardous Areas**
- KAA-751: **Chemical Restrictions and Controls at Koeberg (Crack) Programme**
- KGA-067: **SHE Risk Assessment Guide**
- KSA-148: **The Management of Incidents, Occupational Injuries and Diseases at Koeberg Nuclear Power Station**
- KGA-073: **SHE Specification Guideline**
- KSA-069: **Foreign Material Exclusion**
- KSA-149: **Plant Material Condition Standard**
- KSA-130: **Standard for Electrical Safe Working**
- KSA-141: **Occupational Hygiene process and programme**
- KAA-611: **Emergency Mustering, Accountability and Evacuation**
- KSA-132: **Lifting and Rigging Program**
- KSA-025: **The Control of Flammable and Combustible Liquids**
- MANDIR 009: **Personal Protective Equipment Code for the Koeberg Operating Unit**

2.5 RELATED/SUPPORTING DOCUMENTS

Eskom OHS Act section 37 (2) agreement to be signed at procurement during the signing of the NEC contract, it is the responsibility of the contract manager to ensure that the 37(2) agreement is signed and a copy be kept in the contractor file at procurement.

3. DOCUMENT CONTENT

3.1 SCOPE OF WORK

The scope of work shall include the following:

The *Contractor* provides on-line leak sealing services on as and when required basis at Koeberg Operating Unit.

Description of the service

The *service* is an on-line leak sealing and is executed in accordance with the *Employers* procedures and at *Employers* site. *Employers*' procedures and processes at *Employer's* site. The applicable procedures are Engineering condition release, SAP general work order, Mechanical Maintenance working procedure (KWM-MM-MFU-001) and service specification DSG-310-087 (Generic Service Specification).

The on-line leak sealing service is carried on live steam mostly at full operating plant parameters, i.e temperatures and pressures. In some cases, based on risk assessment report, the plant operating parameters may be changed to ensure safety of personnel and plant.

The scope of work includes but not limited to the following plant equipment:

- **Valve Packing/Stuffing box leaks.**
- Valve Body leaks.
- Pressure Valve Bonnet leaks.
- Flange Joint leaks.
- Pipeline cracks or Pinhole leaks.
- Pipe Union, Elbows, Leaks and Other
- Piping and Fitting leaks.
- Rotating equipment leaks.
- Expansion Joint leaks.
- Weld thread leaks.
- Heat Exchanger Leaks and
- Any other activities that are related to leak sealing which the Contractor has capacity and capability to perform on plant.

Drawings where required and available will be issued with each task order.

The Contracts Manager ensures Engineering issues new service specification for new applications that are not covered by this contract.

A copy of the scope of works must be retained by the contractor.

LEGAL COMPLIANCE

3.1.1 Section 37(2) (Legal) Agreement

A section 37(2) agreement must be signed between Eskom and the principal contractor at the time of awarding the contract. The principal contractor must ensure that a section 37(2) agreement is compiled between the principal contractor and all their appointed contractors for the contract.

The original copy of the section 37(2) agreements must be retained by the contractor and a copy retained by the responsible contract manager.

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

3.1.2 Hazardous Work by Children (Child Labour)

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

1. *being protected from exploitative labour practices;*
2. *not to be required or permitted to perform work or provide services that*
 - i. *are inappropriate for a person of that child's age; or*
 - ii. *place at risk the child's well-being, education, physical or mental health or spiritual, moral or social development* and the Basic Conditions of Employment Act, Chapter six Section 43 "Prohibition of employment of children".

Before resorting to the use of child labour, due consideration must be given to the rights of the child in terms of the constitution. Where work is being performed which is not prohibited in terms of the constitution, then such work must be conducted in terms of the OHS Act "Regulations on Hazardous Work by Children in South Africa" with emphasis on paragraph 2 Purpose and Interpretation. Eskom does not condone the use of child labour and therefore all effort must be exercised and child labour should not be used.

3.2 OHS ACT

The principal contractor and appointed contractors shall have an up to date copy of the OHS Act and regulations which will be available to all employees.

3.3 LEGISLATIVE COMPLIANCE

All contractors will comply with all the legislation pertaining to this contract being:

3.3.1 Legislative Compliance

The principal contractor and all appointed contractors will comply with all the legislation pertaining to this contract being:

- 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 Road Traffic Act 93 of 1996.
- Compensation for Occupational Injuries and Diseases Act.
- SANS Standards –Contractor shall use the relative standards applicable to the contract.

3.4 ESKOM REQUIREMENTS

All contractors shall, before commencement of the contract ensure that all their employees are familiar with the relevant Eskom SHE documentation that is applicable to contract services.

3.5 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.

The principal contractor 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 OHS Act Section 16(2). The policy must be displayed in a prominent place within the workplace. A copy of the policy must be filed in the contractor SHE files and attached as an annexure in the SHE Plan.

3.6 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 (LoG) from such commissioner. The obligation lies with the contractors to ensure that the LoG remain valid throughout the contract period. A copy of the LoG must be filed in the contractor SHE files.

3.7 COSTING FOR SHE WITHIN THE CONTRACT

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

3.8 STATUTORY APPOINTMENTS

For the duration of the contract, the principal contractor and all appointed contractors shall appoint competent employees who will meet the requirements of the OHS Act. Where appointments are made, contractors shall ensure that the appointees have been suitably trained and or informed of their responsibilities before getting them to accept such appointment. The relevant statutory appointments shall be made in accordance with the requirements of the OHS Act which includes the requirement of a competent person being appointed in the relevant roles. The statutory appointments should include but not limited to the following:

- OHS Act General Administrative Regulation 9(2) – Incident Investigator
- 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 Hazardous Chemical Substances Regulation 3(3) Hazardous Chemical Substances Co-coordinator
- OHS Act, Section 17 – Health and Safety Representative.
- OHS Act General Machinery Regulation 2(1) – Supervision of Machinery
- OHS Act Construction Regulation 7(1)(V) Appointment of a Contractor (if appointing subcontractors)
- OHS Act Construction Regulation 9(1) - Person to Compile Risk Assessments
- OHS Act Construction Regulation 10(1) - Competent Person to Compile Fall Protection Plan
- OHS Act: Construction Regulations 28(a) Stacking and Storage Supervisor on Construction sites
- OHS Act: Construction Regulations 29(h) Firefighting Equipment Inspector
- OHS Act General Safety Regulations 3(4) – First Aider/s

3.8.1.1 Non statutory appointments

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

3.9 ESKOM LIFE-SAVING RULES

1. Eskom views health and safety in high esteem and encourages that any organisation who performs work for Eskom in Eskom adopt the same view.
2. Five Life-saving rules have been developed that will apply to all Eskom Employees, agents, consultants, and **contractors**. Failure to adhere to these rules by any Eskom employee or employee of a Principal Contractor

or appointed contractor will be considered a serious transgression. These rules are being implemented to prevent serious injury or death of any employee, labour broker or contractor working in any area within Eskom.

3. If any contractual work will be performed on any Eskom premises (including delivery of any product), then the rules **shall be obeyed** by any contractor and their employees.
4. The rules are:

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

5. Eskom will take a stance of zero tolerance on these rules.
6. Non-compliance to a Life Saving rule will be considered serious misconduct and will lead to serious disciplinary action, which may include dismissal.

7. This is to ensure that **every person** who works on or visits an Eskom **returns home safely to his or her family**.

3.10 SUBSTANCE ABUSE

1. Alcohol and substance abuse poses a significant threat to any business, more so in industrial incidents and the driving of vehicles. Eskom is therefore, entitled to take reasonable steps to ensure that intoxicated persons are identified and prevented from entering Eskom.
2. Any person who is or who appears to be drunk or under the influence of drugs, will be prevented from entering or remain on site. No persons shall have in his possession or bring onto site intoxication liquor or drugs
3. General Safety Regulation 2A is clear on the legal stance regarding intoxication.
4. The alcohol and drug permissible level is 0%.
5. All contractors shall comply with Eskom's procedure 32-37 ("Substance Abuse Procedure"), taking in to account that this is an Eskom Life-saving Rule number 4: BE SOBER"), this means anyone entering the Eskom will be subjected to 100% alcohol testing.
6. Contractors are encouraged to compile their own manual and to carry out regular alcohol testing of their own employees. The legislative alcohol level is deemed to be zero.
7. Test records must be treated as "Confidential" and filed in the employees' personal file.

3.11 ROLES AND RESPONSIBILITIES

Commitment

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

3.11.1 Principal contractors and appointed contractors

Note 3: Most of the roles and responsibilities listed apply to both principal contractors and any appointed contractors. Where some of the listed do not apply to both, then the specific responsibilities will be listed and titled.

The contractors shall:

1. Carry out all duties as listed in section 8, 9 and 10, the various other regulations that form part of the OHS Act and Regulation 7 of the Construction Regulations.

2. Carry accountability and responsibility for the safety and health of their employees and their appointed contractors within their working area, as contemplated by section 37(2) of the OHS Act;
3. Shall keep a record of all employees including the appointed contractor employees, including date of induction, relevant skills and licenses and be able to produce this list at the request of the Eskom Contract Manager.
4. Ensure that all their appointees are made aware of their accountabilities and responsibilities in terms of their appointment and that they advise and assist these appointees in the execution of their duties.
5. Ensure that the minimum legislative, regulatory and Eskom SHE requirements are complied with on all work sites.
6. Give the Eskom contract managers and line managers / responsible managers their full participation and cooperation.
7. Compile a SHE (health and safety) file where all relevant health and safety records must be kept for each work site.
8. The principal contractor must hand over a consolidated (to include any appointed contractors files) health and safety file to the Eskom contract manager on completion of the contract. This is to include all drawings, designs, lists of materials used and other applicable information about the completed contract, as well as the list of appointed contractors, the agreement, and the type of work completed.
9. Contractors must hand over a consolidated (to include any appointed contractors files) health and safety file to the principal contractor on completion of the contract. This is to include all drawings, designs, lists of materials used and other applicable information about the completed contract, as well as the list of appointed contractors, the agreement, and the type of work completed.
10. The principal contractor must provide the contract manager with a certified copy of his/her Compensation Commissioner's valid letter of good standing before the commencement of work and any future renewal letters obtained during the contract for record-keeping purposes. The letter of good standing shall reflect the name of the contractor's company. Similarly, the principal contractor must provide the Eskom contract manager with all the valid letters of good standing from their appointed contractors.
11. Contractors must provide the principal contractor with a certified copy of his/her Compensation Commissioner's valid letter of good standing before the commencement of work and any future renewal letters obtained during the contract for record-keeping purposes. The letter of good standing shall reflect the name of the contractor's company.
12. Appoint competent staff to perform the contract work and ensure that all employees are trained in the health and safety aspects relating to such work and that the employees understand the hazards associated with all other work being carried out on the contract.
13. Ensure that all employees are conversant with all relevant work procedures and that they adhere to such procedures. Similarly (without removing the appointed contractors' responsibilities), ensure that their appointed contractors and their employees are conversant with all relevant work procedures and that they adhere to such procedures.
14. Co-ordinate the activities of all the appointed contractors in the interests of safety and health;

15. Ensure that potential contractors (whom they intend appointing) submitting tenders have made detailed provision for the cost of safety and health measures throughout the contract.
16. Stop his /her employees and any appointed contractors if contract work is not in accordance with the health and safety plan or if such work poses a threat to the health and safety of persons or a risk of degradation to the environment.
17. Take reasonable steps to ensure cooperation between all their appointed contractors.
18. Only appoint contractors to do work, if satisfied that the contractor has the necessary competencies and resources to perform the work safely.
19. Appoint full-time competent employees in writing to supervise the performance of all specified work throughout the contract period.

Note 4: *No work may commence and or continue without the presence of the appointed contract manager or contract supervisor during performance of the contracted work.*

20. Ensure that the supervisor or manager do not supervise work on any site other than the site for which such supervisor has been appointed for.

Note 5: *In determining the number of appointed competent supervisors, the nature and scope of work being performed, shall be taken into consideration.*

21. Appoint a full time safety officer in writing.
22. Not victimise or dismiss employees, by virtue of the employees divulging health and safety information or suspecting such information has been divulged, in the interests of health and safety requirements;
23. Follow a process of disciplinary action if any of their employees or their appointed contractor employees have transgressed any of the requirements of the health and safety specification, safety and health plans, site rules or any other requirements.
24. Ensure that all appropriate precautions are taken to protect persons (visitors, members of the public, and other contractors) present at work or in the vicinity of a construction site against all risks that may arise from such site.
25. Before the commencement of any work, conduct risk assessments which shall include public safety. This should be done by a competent person appointed in writing with a view to identify hazardous and potentially hazardous work operations.
26. Ensure that pre-task risk assessments are conducted and documented daily and prior to the starting of any new task, irrespective of whether it is a repetitive task or not.
27. Take prime responsibility for all aspects of environmental management associated with the contract activity for which they are responsible.
28. Provide any appointed contractor who is making a bid or is appointed to perform work on Eskom's behalf, with the relevant sections of the documented Eskom's SHE Specification.
29. Principal contractors are required to approve appointed contractor's health and safety plans if they meet all the requirements.

30. Must ensure that an organisation medical surveillance programme for the duration of the contract is in place and maintained.
31. Prior to having pre-employment and periodic medicals fitness examinations conducted, person/man job specifications must be compiled and handed to the occupational health practitioner.
32. Ensure that pre-employment, periodic and exit medicals are carried out on their employees. Medical assessments must be conducted by a registered Occupational Health Practitioner. During the pre-employment medical, where employees will be required to work at heights, they will also be required to undergo the required employee physical and psychological fitness examinations.
33. Ensure, prior to the commencement of contracted work, that all persons involved in the contract work, as well as the appointed contractors, have received a health and safety induction training session. Similarly, ensure that all visitors to site undergo the site's induction training.
34. Ensure, prior to the commencement of contracted work, that all their employees involved in the contract work, as well as the appointed contractors, have received task-specific training.
35. Issue risk-based personal protective equipment (PPE) as a measure of last resort to their employees, inspect such equipment regularly and ensure recipients of PPE are trained in the proper use, care and where necessary, the maintenance of PPE;

Note 6: *Should the principal contractor or his/her appointed contractors entertain visitors on site, they will be held responsible for the provision and wearing PPE.*

36. Provide storage areas, fencing, and any other structure as may be required. Any such structures shall be positioned and erected in compliance with any instructions from the Eskom contract manager and the relevant site safety and fire prevention requirements;
37. On completion of the work remove all structures erected by them, and where required by law rehabilitate the environment.
38. Where performing work with the environment, ensure that minimal damage is done and that where an Environment Management Plan is in place, then adhere to the plan.
39. Respect the rights of land owners/lessors and the preservation of their registered activities;
40. Must have a substance abuse program which must be in line with the requirements of the OHS Act.
41. Ensure that no alcohol or other intoxicating substances are brought on to, or remains on the work sites.

Note 7: *Eskom will not tolerate the presence of anyone who is or who appears to be under the influence of alcohol or any other intoxicating substance whilst performing work for them or on any work site.*

42. Ensure that all equipment and tools used comply with OHS Act requirements with respect to condition, use, care, storage, maintenance, and the management of these;
43. Ensure that all incidents are reported and investigated timeously by competent incident investigators.
44. Be involved in all of their appointed contractor's investigations.

45. Establish health and safety committees, hold such committee meetings on all sites, and ensure that appointed contractors participate in their health and safety meetings.
46. Chair their own health and safety committee meetings and record such meetings.
47. Appoint sufficient number of health and safety representatives in terms of legislative requirements and ensure that the appointed contractors appoint health and safety representatives for their work sites.
48. When appointing contractors, advise the contract manager in writing timeously and obtain his/her approval prior to them commencing work.
49. Shall keep a record of all employees including the appointed contractor's employees, including date of induction, relevant skills and licenses and be able to produce this list at the request of the Eskom Contract Manager.

3.11.2 Contract Managers

Note 8: *No work may commence and or continue without the appointed supervisor or manager during the performance of the contracted work.*

1. Not supervise work on any site other than the site they have been appointed to supervise;
2. Assist the contractor and/or the appointed safety officer in conducting site induction training for new staff and site visitors;
3. Instruct and train all employees under their control on any hazardous and related work procedures, before any work commences and thereafter, at such times as may be determined by a risk assessment;
4. Ensure that the minimum legislative and Eskom SHE requirements are complied with on all work sites;
5. Stop any work that is not in accordance with the safety and health plan or if such work poses a threat to the safety and health of persons or a risk of degradation to the environment;
6. Ensure that risk-based personal protective equipment (PPE) has been issued and employees wear/use the PPE as instructed.
7. Inspect such PPE on a regular basis and record the inspections;
8. Ensure that all incidents are reported to the client and are investigated.
9. Be involved in all investigations that occur within their area of responsibility.
10. Carry out audits and or inspections on their contractors at least monthly and any appointed contractors on instructions of their contractor.
11. Ensure that employees under their control are conversant with all relevant work procedures and that they adhere to such procedures;
12. Before the commencement of any work, where possible, assist in the conducting of risk assessments and ensure that appropriate mitigating measures have been considered and implemented.;
13. Ensure that daily or pre-task risk assessments are conducted and documented daily and prior to the starting of any new task, irrespective of whether it is a repetitive task. Ensure that the team are involved in the abovementioned risk assessments;
14. Hold tool box talks at the start of each day/ task to discuss health and safety issues as well as confirming the requirements of the daily risk assessments;

15. Ensure that all appropriate precautions are taken to protect persons (visitors, members of the public, and other contractors) present at work or in the vicinity of a site against all risks that may arise from such site.
16. Ensure that no alcohol or other intoxicating substances are brought on to, or remains on, the premises / work sites and that no employee remains on site if he/she is under the influence. Furthermore, report such instances to contract management;
17. Ensure that all equipment and tools used on site comply with OHS Act requirements with respect to condition, use, care, storage, maintenance, and the management of these.
18. Ensure that they and their contractor managers give clear and unambiguous instructions for the contract work, to the employees for whom they are responsible for.
19. Not victimise their employees by virtue of their employees divulging health and safety information or suspecting such information has been divulged, in the interests of health and safety requirements (reference – section 26 of the OHS Act).
20. Where any work is performed which involves the environment, ensure that minimal damage is done to the environment and that where an Environment Management Plan is in place, then the plan adhere to the plan.
21. Stop any employee or contractor from performing work which is not in accordance with the principal contractor's and or appointed contractors health and safety plan which poses a threat to the health and safety of persons.

3.11.3 Contractor Site Supervisor or Contract Supervisor

Must:

1. Be competent to perform the required supervisory tasks;
2. Ensure their employees and all appointed contractors comply with the required statutory and Eskom contract requirements;
3. Inspect all work done by the Contractors to ensure adherence to Eskom's standards and specifications
4. Conduct follow-up inspections to ensure findings are closed out and preventative action is in place.
5. Monitor contractors for adhere to statutory requirements and safety standards.
6. Monitor contractors overall SHE performance on site in order to achieve excellent results
7. Ensuring a Safe working environment is established and maintained by the contractor for the elimination of unsafe acts by all people whilst on the contract site.
8. Discuss all SHE related problems with the relevant contractor management timeously in the first instance and thereafter the Eskom contract manager in the second instance relating to procedure requirements, non-conformance's identified, corrective actions, audits and inspection schedules.
9. Ensuring that quality records are maintained in accordance with legislative and Eskom requirements;
10. Continual liaison between the principal contractor, appointed contractors and employees.
11. Ensures that employees and appointed contractors are aware of latest standards, procedures, work instructions and safety regulations issued by Eskom:
12. Conduct site Inspections for compliance to SHE requirements and compiles the relevant inspection reports.
13. Submit the observation reports to the relevant management.

14. Have meaningful participation in the contract statutory health and safety committee meetings.
15. Participate in all appointed contractor incident investigations.
16. Participate in the principal contractors emergency preparedness planning.
17. Ensure that their own employees and those of any appointed contractor are competent to perform the tasks assigned.
18. Issue site instructions on behalf of the principal contractor where and when the appointed contractors deviate from safety requirements.
19. Assist the principal contractor with the handing over process, in particular the SHE file and relevant documentation.

3.11.4 Employees

Must:

1. Be responsible for their own safety and health and that of their co-workers;
2. Co-operate with their employer to meet all of the employer's as well as legislative and Eskom requirements;
3. Familiarise themselves with their responsibilities during induction and awareness training sessions, some of which are:
 - a. familiarising themselves with their workplaces and safety and health procedures;
 - b. working in a manner that does not endanger them or cause harm to others;
 - c. ensuring that the work area is kept tidy;
 - d. reporting all incidents and near misses;
 - e. protecting fellow workers against injury by performing job observations;
 - f. reporting unsafe acts and unsafe conditions;
 - g. reporting any situation that may become dangerous; and
 - h. carrying out lawful orders and obeying safety and health rules;
4. Who become aware of any person disregarding a safety notice, instruction, or regulation, immediately report this to the person concerned. If the person persists, stop that person from working, and report the matter to contractor management and/or Eskom's contract manager or supervisor immediately.
5. Not damage, alter, remove, render ineffective, or interfere with anything that has been provided for the protection of the site or for the health and safety of persons this includes any guarding of machinery or equipment.
6. Obey any safety signs and adhere to any site demarcation at all times.
7. When entering or leaving the site, do so via the official designated access/departure routes. Where reflective jackets/bibs are required to be worn, wear them.
8. Be subjected to any disciplinary action, if having transgressed any of the requirements of the health and safety site rules, Eskom requirements, company requirements, or legislative requirements.
9. Avoid any act that may endanger their own health and safety or that of fellow employees, members of the public, or visitors who may be affected by their acts and/or omissions at work.

10. Have the right to obtain proper information from their employer regarding health and safety risks and measures related to the work processes.
11. Use facilities placed at their disposal and not misuse anything provided for their own protection or that of others.
12. Have the right to remove themselves from danger when they have good reason to believe that there is an imminent and serious danger to their health and safety and have the duty to inform their supervisor immediately of such danger.
13. Report to their supervisor (in the first instance), the principal contractor (in the second instance), and/or the Eskom contract manager, any substandard acts and/or conditions that have come to their attention and that have not been rectified or acted on by their contractor management timeously.
14. Have the right and the duty at any workplace to participate in ensuring healthy and safe working conditions, to the extent of their control, over the equipment and methods of work adopted.
15. Maintain the surrounding area of the work site in a neat and tidy condition.
16. Have meaningful participation in regular health and safety meetings.
17. Have the right to refuse to perform or continue to perform any task/job on the grounds of health, safety, and environmental concerns.
18. When given instructions, understand the instructions and be permitted to clarify those instructions.

3.11.5 Contractor Health and Safety officer

1. Promote a SHE culture within the organisations involved in the contract / contract.
2. The contractor's safety and health officer shall assist in the control of all health and safety-related matters on the sites.
3. Be involved in the developing the contract SHE plan and SHE policy.
4. Be in constant liaison and cooperate with Eskom's SHE professionals responsible for providing them with a health and safety service.
5. Ensure that this SHE specification is adhered to by his/her principal contractor and is submitted to any appointed contractors.
6. Conduct audits and inspections of all work sites for the duration of the contract.
7. Be involved in the organisations incident investigations when required.
8. Participate in the organisation's statutory and non-statutory health and safety committees meetings.
9. Conduct organisational, site and visitor induction training.
10. Stop any employee or contractor from performing work which is not in accordance with the principal contractor's and or appointed contractors health and safety plan which poses a threat to the health and safety of persons.
11. Ensure that no alcohol or other intoxicating substances are brought on to, or remains on, the premises / work sites and that no employee remains on site if he/she is under the influence. Furthermore, report such instances to contract management.

12. Make themselves available and ensure co-operation of employees under their control to undergo breathalyser and drug testing while entering and/or being on any Eskom work site by Eskom.
13. Carry out audits and or inspections on their contractors at least monthly and any appointed contractors on instructions of their contractor;
14. Carry out frequent behaviour observations of employees under their control at least monthly and any appointed contractors on instructions of their contractor.

3.11.6 Risk assessment (refer to 32-520)

1. It is a legal requirement in terms of Section 8 (2)(d) of the OHS Act for an employer to carry out risk assessments, to establish which risks and hazards are attached to the health and safety of persons due to any work which is performed, any article or substance which is, handled, stored, transported. A risk assessment is defined as an identification of the hazards present in an organisation and an estimate of the extent of the risks involved, taking into account whatever precautions are already being taken.
2. It is essentially a three stage process:
 - a. identification of all hazards;
 - b. evaluation of the risks;
 - c. Measures to control the risks.
3. Risk assessments are required to be maintained. This means that significant changes to a process or activity, or any new process or activity should be subjected to a risk assessment and that if new hazards come to light during the work process, then these should also be subjected to risk assessments.
4. Risk assessments for long term processes should be periodically reviewed and updated. Method statements or written safe work procedures are an effective method as information and record of the way jobs / tasks must be performed.
5. Daily or issue based or task specific or on the job risk assessments must be conducted at the place where work is to be performed/ conducted to allow managers and employees to assess any inherent risks that could have been overlooked during the initial risk assessment or any changes that might have occurred in a period of absence. For example if a job / task is extended over a day or halted due to inclement weather.
6. A contractor shall ensure that a copy of the risk assessment is available on site for inspection by an inspector, client, client's agent, contractor, employee, representative trade union, health and safety representative or any member of the health and safety committee.
7. Every contractor shall consult with the health and safety committee or, if no health and safety committee exists, with a representative group of employees, on the development, monitoring and review of the risk assessment.
8. A contractor shall ensure that all employees under his or her control are informed, instructed and trained by a competent person regarding any hazard and the related work procedures before any work commences, and thereafter at such times as may be determined in the risk assessment.

9. A principal contractor shall ensure that all contractors are informed regarding any hazard as stipulated in the risk assessment before any work commences, and thereafter at such times as may be determined in the risk assessment.
10. A contractor shall ensure that as far as is reasonably practicable, ergonomic related hazards are analysed, evaluated and addressed in the risk assessment.
11. Not with-standing the requirements laid down in sub-regulation (4), no contractor shall allow or permit any employee or person to enter any site, unless such employee or person has undergone health and safety induction training pertaining to the hazards prevalent on the site at the time of entry.
12. A contractor shall ensure that all visitors to a site undergoes health and safety induction pertaining to the hazards prevalent on the site and shall be provided with the necessary personal protective equipment.
13. Every employee on site shall:
 - a. be in possession of proof of the health and safety induction training as determined in sub regulation (7), issued by a competent person prior to the commencement of work; and;
 - b. carry the proof contemplated in paragraph (a) for the duration of that contract or for the period that the employee will be on the site.
14. Guidelines for actual steps involved in a job/task specific risk assessment are:
 - a. Each activity is listed;
 - b. Specific hazards are identified and listed against each activity;
 - c. The magnitude of each risk is rated as Low. Medium or High;
 - d. All known documentary and supervisory controls are listed. For instance: What safe work procedures exist for ladders;
 - e. The relevance, effectiveness and sufficiency of these controls are assessed;
 - f. In the event of insufficient or deficient controls for the particular activity, steps to be taken to rectify this shall be recorded, and safe working procedures drawn up;
 - g. Persons responsible for implementing and supervising the task shall be identified, nominated and duly assigned;
 - h. Persons responsible for monitoring the task and carrying out the planned job observation must be nominated;
 - i. Completed risk assessment shall be handed to the Eskom contract manager representative for comment and approval.
 - j. The relevant section of the risk assessment shall be issued with a Transmittal Note to the Supervisor nominated as the responsible person; and the names of workmen who have received instruction on the work content and the sequence of the activities listed in the risk assessment shall be recorded, and their competence established. This instruction shall be done through an interpreter if required

and recorded on the Pre-Job Brief (Daily Safe Task Instructions), with reference to applicable Risk Assessments.

3.11.7 Safe work procedures / method statements

1. Method statements / written safe work procedure are control measures used to prevent an incident from occurring during the execution of the contract. A written safe work procedure/ method statements provide guidance how to execute the task safely and it must be aligned with the risk assessments. Appendix 1 should be used to develop the method statement.
2. A safe working procedure should be written when:-
 - a. Designing a new job or task;
 - b. Changing a job or task;
 - c. Introducing new equipment or substances; and
3. The safe working procedure should identify:
 - a. The supervisor for the task or job and the employees who will undertake the task;
 - b. The tasks that are to be undertaken that pose risks;
 - c. The equipment and substances that are used in these tasks;
 - d. The control measures that have been built into these tasks;
 - e. Any training or qualification needed to undertake the task;
 - f. The personal protective equipment to be worn;
 - g. Actions to be undertaken to address safety issues that may arise while undertaking the task.

3.12 SPECIFIC HAZARDS

3.12.1 Radiation

Radiation is present in all the controlled zones at the power plant. Personnel needing to access these areas will have undertaken the following activities:

- Attended the Radiation workers training session, being it the initial or a re-qualification if the individual has already attended the initial training in the country of origin.
- Passed the theoretical assessment

- Passed the practical assessment in the training simulator

3.12.2 Hydrogen (H₂)

1. Hydrogen (H₂) gas is used in many areas of the plant. H₂ gas is highly explosive when mixed with air and as the possibility of leaks can never be ruled out, all areas where H₂ is or may be present have been indicated by a "Danger of Explosion" pictogram.
2. In all these areas, smoking, naked flames, welding or any spark-producing operation is forbidden unless a Hot Work Permit has been issued and the area/system monitored for explosive atmospheres by the SHE Group.

3.12.3 Hydrogen Sulfide (H₂S)

1. Hydrogen sulfide (H₂S) is a foul-smelling (rotten egg odour) very reactive gas that is highly toxic and is found in the CFI/SEC Drum & Rake screen pits due to the decay of organic matter when the Unit is offline.
2. Being heavier than air, it tends to accumulate at the bottom of these poorly ventilated spaces and although very pungent at first, it quickly deadens the sense of smell, so victims may be unaware of its presence until it is too late
3. Entering these areas without first determining the oxygen levels can be fatal. Workers entering such an area are required to wear Oxygen (Multi-gas) monitors and respirators at all times with constant ventilation supplied. Staff using Oxygen (Multi-gas) monitors is to ensure that the monitor is within calibration and is in working order prior to entering the area.

3.12.4 Nitrogen (N₂) and Carbon Dioxide (CO₂)

1. As in the case of hydrogen, the use of nitrogen (N₂) gas and carbon dioxide gas (CO₂) is prevalent on site.
2. N₂ and CO₂ are asphyxiating gases which replace oxygen in the atmosphere. Therefore, all areas where nitrogen or carbon dioxide may be present have been marked with an appropriate N₂ or CO₂ warning. Entering these areas without first determining the oxygen levels can be fatal. Workers entering such an area are required to wear oxygen monitors at all times. Staff using oxygen monitors are to ensure that the monitor is within calibration and is in working order prior to entering a potentially oxygen deficient area.

3.12.5 Heat Stress Areas

1. Heat stress areas are areas in which high temperature levels will be encountered. All heat stress areas are clearly sign-posted. Due to the hazards associated with temperature extremes, no person is permitted to enter a heat stress area unless he complies with stringent medical and safety requirements. Any person who enters such an area must be certified fit to perform heat stress work (a medical examination is required), be in possession of a Safety Assurance Certificate and obey the two man rule requirements.

3.12.6 Two Man Rule Areas

1. Two man rule areas are sign-posted by pictograms indicating two persons joined by the arm. No person may enter a two-man rule area unless a second person accompanies him.

3.12.7 Confined Space and Potential Oxygen Deficient Areas

1. Confined space will be identified on the Permit to Work. Potential oxygen deficient areas are clearly sign-posted. Contractor staff may only enter a confined space or potential oxygen deficient area if all the Koeberg safety criteria are complied with. The following is a brief outline of definitions and basic requirements for work in a confined space or potential oxygen deficient area. If in doubt, consult with the SHE Group representative.

Note 9: *No persons can enter a confined space unless training has been given by the SHE Group or the Technical Training Group.*

3.12.7.1 Requirements for working in confined space:

1. Requirements for Work in a “Hazardous to Health” Confined Space:

- a. Hazardous to health confined spaces will be specified in the Permit to Work.
- b. A Permit to Work and Safety Assurance Certificate must be in force before work commences in a hazardous to health confined space.
- c. The person entering the hazardous to health confined space must wear a safety harness to which a rope is securely attached and which reaches beyond the access to the confined space.
- d. At least one other person trained in resuscitation and the use of breathing apparatus must remain in attendance immediately outside the hazardous to health confined space to assist or rescue any person from the confined space. The person in attendance must keep the person in the hazardous to health confined space under direct and continuous observation.
- e. Breathing and resuscitation apparatus must be available immediately outside the confined space.
- f. An officer from SHE Group will survey the hazardous to health confined space to evaluate hazards and issue a Safe to Work Permit, specifying additional safety requirements if necessary. The officer will remain in attendance when work is performed in the hazardous to health confined space. Generally, a worker is required to wear appropriate breathing apparatus when entering a hazardous to health confined space. Safety requirements specified in the Safe to Work Permit must be enforced at all times.

2. Requirements for Work in an Isolated Confined Space

- a. A Permit to Work and Safety Assurance Certificate must be in force before work commences in an isolated confined space.

- b. An officer from SHE Group must survey the isolated confined space and certify that it is safe to enter, taking into account the nature and duration of work to be performed therein. The person entering the isolated confined space is required to wear an oxygen monitor;
- c. A person working in an isolated confined space must comply with all the safety requirements set out in the Safe to Work Permit;
- d. The isolated confined space must immediately be evacuated if the oxygen monitor alarms. The control room and the SHE Group must be informed.

3. Requirements for Work in Potential Oxygen Deficient Areas

- a. The area may only be entered if the audible and visual alarm have not been activated. If the alarm is activated while a person is in the area, he/she must evacuate the area by the shortest practical route and notify the control room and the SHE Group. Persons entering a potentially oxygen deficient area must wear an oxygen monitor.

4. Water Environments

- a. A contractor shall ensure that where work is done over or in close proximity to water, provision is made for:
 - Preventing workers from falling into water, and
 - The rescuing of workers in danger of drowning.
- b. A contractor shall ensure that where a worker is exposed to the risk of drowning by falling into the water, a lifejacket is provided to and worn by the worker.

3.13 ELECTRICAL SAFETY

1. Electrical faults may occur due to failed installation, accidental contact with live systems, circuit-breaker failure and by energising systems of faulty circuits. Electrical faults could result in an internal electric arc exposing workers to extreme arc temperatures and may result in molten contractile and shock waves.
2. Electrical faults cannot be ruled out during switching operations, maintenance, modification or work. Workers must be supplied with protective clothing and personal protective equipment for protection against a shock and the thermal hazards of an electric arc, when working on or near electrically **ALIVE** plant or equipment.
3. Workers that will be engaged with electrically **ALIVE** plant or equipment during the course of their work/activities must undergo Electrically Safety Arc Flash Protection Training. The requirement of KSA-130 (Standard for electrical safe working practices) to be complied with.

3.14 FIRE EQUIPMENT AND MAINTENANCE

1. All firefighting equipment that have been provided shall:
 - a. Be clearly labelled

- b. Conspicuously numbered
 - c. Entered in a register
 - d. Inspected monthly by a competent person
- 2. Tested and serviced at recommended intervals by an accredited supplier
- 3. Results entered in the register and signed by competent person.
- 4. All Koeberg's fire prevention rules must be obeyed.
- 5. The burning of refuse is strictly prohibited on site. This prohibition includes the kindling of any type of fire for whatever reason or purpose.
- 6. Fire doors must be kept closed at all times.
- 7. Approval must be obtained from Koeberg's Fire Risk Management Group before any fire barrier (door, penetration seal, or damper) is compromised in any manner.
- 8. Smoking is strictly prohibited in all plant areas.
- 9. Oily rags, waste and other substances liable to ignite are without delay removed to a safe place; and
- 10. Sufficient and suitable storage is provided for flammable liquids, solids and gases.
- 11. Workers must be trained in the use of fire-extinguishing equipment.

3.15 STORAGE OF FLAMMABLE SUBSTANCES

Flammable substances may not be stored on Koeberg's property without the prior consent of Koeberg's Fire Risk Management Group. They shall prescribe storage arrangements and safety requirements. Please note that highly volatile substances such as acetone may only be taken to the plant areas under transient combustible permits obtainable from Fire Risk Management.

3.15.1 Use and Temporary Storage of Flammable Liquids on Site

- 1. Notwithstanding the provisions for the use and storage of flammable liquids as determined in the General Safety Regulations promulgated by Government Notice No.R1031 dated 30 May 1986, as amended, a contractor shall ensure that:
 - a. Where flammable liquids are being used, applied or stored at the workplace concerned, this is done in such a manner which would cause no fire or explosion hazard, and that the workplace is effectively ventilated: Provided that where the workplace cannot effectively be ventilated;
 - b. Every employee involved is provided with a respirator, mask or breathing apparatus of a type approved by the chief inspector, and
 - c. Steps are taken to ensure that every such employee, while using or applying flammable liquid, uses the apparatus supplied to him or her;

- d. No person smokes in any place in which' flammable liquid is used or stored, and such contractor shall affix a suitable and conspicuous notice at all entrances to any such areas prohibiting such smoking;
- e. Flammable liquids on a site is stored in a well-ventilated reasonably fire resistant container, cage or room and kept locked with proper access control measures in place;
- f. An adequate amount of efficient fire-fighting equipment is installed in suitable locations around the flammable liquids store with the recognised symbolic signs;
- g. Only the quantity of flammable liquid needed for work on one day is to be taken out of the store for use;
- h. All containers holding flammable liquids are kept tightly closed when not in actual use and, after their contents have been used up, to be removed from the site and safely disposed of;
- i. Where flammable liquids are decanted, the metal containers are bonded or earthed; and
- j. No flammable material such as cotton waste, paper, cleaning rags or similar material is stored together with flammable liquids;

3.16 FIRST AID AND EQUIPMENT

- 1. The requirements of the OHS Act GSR 3 must be observed.
- 2. First aid appointments must be made to meet the requirements, this includes sites. Appointees must be trained to level 2. It is good practice for all employees to be trained to at least level 1.
- 3. When appointing employees for work sites, cognisance must be taken into account the type of work performed, the distance teams are working apart and the terrain to be covered if an emergency should arise.
- 4. A list of emergency numbers must be displayed on the notice boards and made accessible for all employees.
- 5. Principal Contractor must ensure that his /her employees and appointed contractor employees are familiar with the emergency numbers.
- 6. Contractors shall have one first aid box for the first 5 persons and thereafter one for every 50 or team of workers on site or part thereof, taking into account the type of work performed and the distance between teams.
- 7. More first aid boxes shall be provided in accordance with the risk assessment. Boxes must be available and accessible for the immediate treatment of injured persons at the workplace.
- 8. For offices, signs indicating where the first aid box or boxes are kept as well as the name and contact details of the First Aider of such first aid box or boxes shall be erected.
- 9. The Principal Contractor and appointed contractor shall ensure that alternative arrangements be made for incidents occurring after working hours.

3.16.1 Boxes and equipment

1. The following is a list of minimum contents of a first aid box:
 - a. Item 1: Wound cleaner/antiseptic (100ml).
 - b. Item 2: Swabs for cleaning wounds.
 - c. Item 3: Cotton wool for padding (100 g).
 - d. Item 4: Sterile gauze (minimum quantity 10).
 - e. Item 5: 1 Pair of forceps (for splinters).
 - f. Item 6: 1 Pair of scissors (minimum size 100 mm).
 - g. Item 7: 1 Set of safety pins.
 - h. Item 8: 4 Triangular bandages.
 - i. Item 9: 4 Roller bandages (75 mm X 5 m).
 - j. Item 10: 4 Roller bandages (100 mm X 5 m).
 - k. Item 11: 1 Roll of elastic adhesive (25 mm X 3 m).
 - l. Item 12: 1 Non-allergenic adhesive strip (25 mm X 3 m).
 - m. Item 13: 1 Packet of adhesive dressing strips (minimum quantity, 10 assorted sizes).
 - n. Item 14: 4 First aid dressings (75 mm X 100 mm).
 - o. Item 15: 4 First aid dressings (150 mm x 200 mm).
 - p. Item 16: 2 Straight splints.
 - q. Item 17: 2 Pairs large and 2 pairs medium disposable latex gloves.
 - r. Item 18: 2 CPR mouth pieces or similar devices.

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

3.17 SHE COMMUNICATION SYSTEMS

1. Principal Contractor/s and their appointed contractors must develop a communication strategy outlining how they intend to communicate SHE issues to their staff, the mediums they will employ and how they will measure the effectiveness of their SHE communication. Below is a brief on how communication should take place. Where contract meetings are conducted on site, SHE shall be included as a standing agenda point and minutes of these meetings shall be available on site at all times. Minutes of meeting must be compiled and filed in the relevant SHE files. All employees shall have access to these minutes. Attendance register shall be kept for all the health and safety meetings.

3.17.1 Statutory Health and Safety Committees

1. The principal contractor shall establish statutory health and safety committee in terms of Section 19 of the OHS Act, Act. Similarly, appointed contractors shall establish their own statutory health and safety committee.
2. All appointed contractors shall be members of the principal contractor's safety committee.
3. The Committee shall meet to discuss SHE issues concerning the current work being performed, training, upcoming work and SHE requirements, incidents and lessons learned specific SHE problems, safety performance, action plans and other relevant SHE issues. Listed below is a preferred agenda.
4. SHE representatives for a workplace shall be members of the relevant workplace safety committees (Refer to Section 19 (2) (a) of the OHS Act).
5. The number of persons nominated by employer must not be more than the Health and Safety Representatives on that specific statutory health and safety committee. (Refer to Section 19(2)(c) of the OHS Act)
6. A statutory health and safety committee meeting shall be held at least 3 monthly (where medium to high risk work is involved, more frequent if required), and all appointed members of the committee shall attend the meeting.
7. Statutory health and safety committees may make recommendations to the principal contractor and the contract manager and the Inspector at DoL.
8. All health and safety committees shall discuss all contracts related OHS Act Section 24 and 25 incidents and other notified serious incidents.
9. Health and safety committees shall follow up on incident investigation recommendations and shall keep record of all recommendations made by the committee.
10. Statutory health and safety committees may make recommendations for the revision of current standards, procedures and practices.
11. The principal contractor and appointed contractors shall ensure that statutory and non-statutory health and safety committees carry out their duties.
12. The chairperson of the health and safety committees shall be selected and appointed by the contractor. The appointed chairperson must be competent to chair meetings and be able to make informed decisions.

3.17.2 Non-statutory health and safety committees

1. Where there are large worksites, then non-statutory sub-committee must be established within that worksite to assist with the communication of health and safety related matters between the statutory health and safety committee and the workplace.

2. The duties and responsibilities of the non- statutory health and safety committees will be the same as the statutory safety committee

3.17.3 Agenda

1. The following serves as the guideline for the SHE Committee meeting agenda.
 - a. List of agenda items:
 - b. Matters arising from previous minutes
 - c. Matters arising from Contractor's SHE meetings.
 - d. Audit results and feedback
 - e. Review Health and Safety Representative Inspection Reports
 - f. Review
 - Incident investigation reports
 - Non-Conformances
 - Announcements (near miss/injury/damage)
 - Follow up on recommendations made by the employer in incident investigation reports
 - g. Accident Prevention – Safety Promotion
 - Planned Job Observations
 - SHE Training
 - Protective clothing and equipment
 - Incident Announcements / Recall
 - h. Forthcoming High hazard activities.
 - i. Non-conformances.
 - j. Housekeeping.
 - k. Work permits.
 - l. Work procedures.
 - m. Hazardous materials / substances.
 - n. Fire Prevention
 - o. Occupational Hygiene Assessments, Health Risks and Actions
 - p. Security
 - q. vehicles and mobile equipment
 - r. Rules, Instructions
 - s. Public Safety

- t. Environmental Management
- u. Emergency Preparedness
- v. Statistics report
- w. Closure

3.17.4 Minutes and action items for all health and safety committee meetings

1. Minutes and record of action items shall be kept of all health and safety committee meetings.
2. Action column with target dates and responsible person shall be clearly visible on the minutes and shall be completed during the meeting.
3. Statutory health and safety committee meeting minutes and record of action items shall be kept for the duration of the contract or a minimum period of three years.
4. Non-statutory health and safety committee meeting minutes shall be kept for the duration of the contract or a minimum period of 12 months.
5. All other meeting minutes where SHE is on the agenda, shall be kept for a minimum period of 12 months.
6. The original copy of the minutes and record of the action items must be signed by the chairperson.
7. The relevant contract manager and principal contractor shall endorse the relevant minutes with his/her recommendations and return the minutes to the relevant contractors chairperson within 14 calendar days of the meeting.

3.17.5 Tool box talks / Daily team talks / pre job meetings

1. A meeting must be 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 an attendance list of that pre-job brief form undertaking that they have an understanding of the tasks, risks and control measures required.
2. Where possible, tool box talks can be included in the pre-job brief meetings. If this does not occur, then weekly tool box talks must be conducted. The toolbox talk topics will be based on SHE issues pertaining to the site and or the contract. The topic contents shall be in writing. Attendance registers with the topic listed shall be kept.

3.17.6 Safety, Health And Environmental Programme

1. Contractors shall implement key elements of Koeberg's Safety, Health and Environment Programme as recommended by SHE Group.

3.18 SHE TRAINING

1. The principal contractor, when making a bid for this contract shall provide a breakdown list of the SHE training requirements and the costing of such requirements. Similarly, appointed contractor must provide the same requirements when bidding with the principal contractor.
2. The scope of training includes but is not limited to the type of work being performed and the relevant procedures. Additional to the requirements, will be that the principal contractor and appointed contractors must have the appropriate qualifications, certificates and employees should always be under competent supervision.
3. Where legislative and Eskom recommended appointments are made, the relevant training shall be given to those appointees prior to the acceptance of those appointments.
4. When there is an amendment to the Acts and/or to the regulations, SHE specification and SHE plan, all affected staff shall undergo the applicable refresher training.
5. Appropriate time must be set aside for training (induction and other) of all employees.
6. Records of all training and qualifications of all contractor employees must be kept on the SHE file.

3.18.1 Induction training

1. The principal contractor shall ensure that all his / her employees, appointed contractors and their employees have undergone the Eskom Safety Contractor Management induction training prior to commencing work on site.
2. Attendance registers must be completed of any induction training given, which must indicate that they have received and understood the induction training.
3. Prior to attending the induction training, all employees must undergo a pre-employment medical examination and found fit for duty. A copy of the certificate of fitness must be kept in the SHE file on site for the duration of the contract.
4. All employees and visitors on site shall carry the proof of induction training.

3.18.2 Site specific induction training

The principal contractor shall ensure that all his / her employees and appointed contractor employees undergo site specific work induction with regard to the approved contract SHE plan, general hazards prevalent on the site, risk assessment, rules and regulations, and other related aspects. The induction training should also include identification of sensitive features such as wetlands/vlei areas, red data species, graves, etc.

3.18.3 Visitors to site induction

1. Visitors to the site shall be required to undergo and comply with the principal contractor's site-specific safety induction prior to being allowed access to site.
2. 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 work onsite, of any nature.
3. Visitors who have completed site induction must be provided with a record of proof of Induction training.

3.18.4 General training

1. The principal contractor will be required to ensure that before an employee commences work on the contract, the respective supervisor informs the employee of his scope of authority, the hazards associated with work as well as the control measures to be taken. This will include man-job specifications, the discussion of any task procedures or hazardous operational procedures to be performed by the employee. The Principal Contractor is to ensure that the supervisor has satisfied himself that the employee understands the hazards associated with any work to be performed by conducting task/job observations.

3.19 CONTRACTOR SITE ESTABLISHMENT

1. Principal contractor's site facilities should be managed at all times.
2. Prior to establishing a contract site, a site plan is required to be drawn listing position of all buildings, amenities, storage and stacking areas. The appropriate colour coding and demarcation of storage and stacking areas must be carried out.
3. Where, working in the field and material is stored at the work sites, then proper stacking and storage shall be carried out.
4. When compiling the site plan, cognisance must be taken to the establishment of the site camp, ablution facilities and dining area in relation to one another and away from stacking and storage areas.

3.19.1 Vehicle safety

1. It is the responsibility of the driver to ensure:
 - a. Their passengers wear seat belts whilst the vehicle is in motion, if found guilty of such offence the offender will be subject to Koeberg's MANDIR-091 concerning the enforcing of SHE Rules.
 - b. That he complies with all traffic road rules, safety, direction and speed signs.
 - c. That vehicle loads are properly secured prior to moving off.
 - d. That vehicle is not overloaded.
 - e. That no persons are transported at the back of vehicles.

- f. That persons and material are not transported simultaneously as such material may move in transit and injure passengers.
2. No drivers or operators may text, talk on dect phones or two way radios whilst driving, unless a hands free kit is used.
3. All drivers of vehicles are to have valid medical fitness certificates.
4. Contractor must maintain their vehicles in a roadworthy condition and a vehicle license must be valid at all times.
5. 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
6. Contractor vehicles can be subject to inspections by the Client/Agent's representative. Vehicles which are not roadworthy will not be permitted to be used on the contract.
7. Drivers/operators shall be responsible for the travel-worthiness of all loads conveyed by them. Precautions shall be taken to secure all loads properly. Loads contracting 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 contracting material.
8. All vehicle movements within the plant and works shall be carried out with due regard to the safety of pedestrians. A general speed restriction of 35km/h as indicated is in operation within the works area.
9. Speed limits displayed on Koeberg's property must be complied with as they are legally enforceable. The speed limit on site is 35 km/h.

3.20 LOCK-OUT SYSTEM AND USAGE

1. The contractor will be required to submit to the Koeberg Permit-to-Work/Lockout System.
2. Under no circumstances may the contractor remove or change Koeberg lockout tag or forcibly remove locks to gain access to equipment. Unauthorised interference with Koeberg's lockout procedures will constitute legal violations in terms of the OH&S Act and could be construed as breach of contract.

3.21 WORK PERMITS

1. The following permits are used to control work in or on the plant.
 - a. Permit To Work/Limited Access Register.
2. The permits are issued by the Operating Department. A Permit to Work must be in force for hazardous work performed on the plant. Work performed under a Permit to Work is always supervised by an Authorised Responsible Person. (A person authorised in terms of the Eskom Plant Safety Regulations);
3. Certain work may be carried out without a Permit to Work. A Limited Access Register is used to control work performed under the following conditions;

- a. no risk of personal injury;
- b. no risk of turbine/reactor trip;
- c. work is completed in one shift.
- d. work is performed by a skilled person

3.21.1 Safety Assurance Certificate

1. This permit is issued by the SHE Group for work in hazardous environments, confined spaces and heat stress areas.

3.22 HOUSEKEEPING AND ORDER

1. All contractors shall maintain a high standard of housekeeping within their sites and vehicles for the duration of the contract in line with KSA-149.
2. Prompt disposal of waste materials, scrap and rubbish is essential.
3. Materials/objects shall not be left unsecured in elevated areas - falling objects may cause serious injuries/fatalities.
4. Nails protruding through timber shall be bent over or removed so as not to cause injury.
5. All packaging material including boxes, pallets, crates, etc. to be removed from the work area immediately.
6. 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.
7. In cases where an inadequate standard of housekeeping has developed, compromising safety and cleanliness, anyone has the responsibility to bring it to the attention of the principal contractor in the first instance and the Eskom contract/site manager in the second instance.
8. The Eskom Contract/Site Manager has the right to instruct the principal contractor and appointed 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 with this requirement will result into site cleaning by another cleaning contractor company at the cost of the principal contractor.
9. The principal contractor shall carry out regular safety/housekeeping inspections (at least weekly) to ensure maintenance of satisfactory standards. The principal contractor shall document the results of each inspection and shall maintain records for viewing.

3.22.1 Stacking and Storage

1. Before stacking/storing any material, the contractors or their employees must consult the contract manager for authorisation to use such an area for stacking purposes. This is to prevent haphazard arrangements.

2. Adequate care must be taken by the contractor to ensure that storage and stacking is carried out correctly and safely.
3. Correct shelf stacking must be carried out, heavy and bulky on the bottom, light and small on top.
4. A contractor shall ensure that:
 - a. A competent person is appointed in writing with the duty of supervising all stacking and storage on a site;
 - b. Adequate storage areas are provided;
 - c. There are demarcated storage areas; and
 - d. Storage areas are kept neat and under control.

3.23 WORKPLACE SIGNAGE AND COLOUR CODING

1. Symbolic safety signage shall be displayed where it is required by legislation.
2. All symbolic safety signage shall conform to the requirements of SANS standard 1186.
3. Signs shall be positioned to be seen from most positions within the work sites / areas.
4. All signage must be clear at all times and be replaced timeously when worn out.
5. Contractors establishing sites must erect a company sign at their site offices to reflect the name and contact details of the: Supervisor; Health and Safety Manager/Practitioner; First Aider; Health and Safety Representative and Evacuation warden.
6. The location of every first aid box; fire extinguisher and emergency exit is to be clearly indicated by means of a sign.
7. Contractors shall provide 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.
8. The meanings of the appropriate symbolic signage must be discussed during induction training and toolbox talks.
9. Where possible, within workshops, work areas and established premises, the appropriate sign indicating the meaning of symbolic safety signs must be displayed.

3.24 TOOLS AND EQUIPMENT

1. Contractors shall ensure that all tools and equipment are identified, safe to be used and is maintained in a good condition.

2. Contractors shall ensure that all tools and equipment are listed on an inventory list, be regularly inspected at least monthly or as required by legislation and risk assessments. The equipment should be numbered or tagged so that it can be properly monitored and inspected.
3. Where applicable, tools and equipment must have the necessary approved test or calibration documentation prior to being brought onto the contract and the records shall form part of the SHE plan. Maintenance calibration shall be undertaken in terms of the manufacturer's requirements.
4. All fuel driven equipment must be properly maintained in accordance with the manufacturer's recommendations and legal requirements.
5. Eskom reserves the right to inspect tools or items of equipment brought to site by contractors for use on this contract.
6. Should Eskom personnel find any item that is inadequate, faulty, and unsafe or in any other way unsuitable for the safe and satisfactory execution of the work for which it is intended, the Eskom personnel shall advise the contractor in writing and the contractor shall forthwith remove the item from site and replace it with a safe and adequate substitute.

Note 10: *In such cases, the contractor shall not be entitled to extra payments or extensions of time in respect of delay caused by Eskom's instructions.*

7. Where defective tools and equipment's are identified, such tools and equipment shall be removed out of site immediately, locked away to prevent further use until such time as the tool or piece of equipment has been repaired.
8. Contractors shall ensure that the appropriate records are kept for all tools and equipment used on the contract. Such tools and equipment's shall be subjected to regular inspections.

3.24.1 Hand tools

1. All hand tools must be recorded on a register and inspected by the Supervisor on a monthly basis as well as by users prior to use.
2. Tools with sharp points in tool boxes must be protected with a cover.
3. All files and similar tools must be fitted with handles.
4. No make shift tools are permissible on the contract.

3.24.2 Portable electrical tools including hand lamps

NOTE 11: *Portable Electrical Tools must comply to the Regulations as defined in the Electrical Machinery Regulations in Section 9 and 10.*

1. A record book shall be provided and kept up to date by the contractor for the inspection by a person who has been trained and appointed in writing to carry out such inspections (and such person shall be a contractor's employee), of all portable tools and shall include welding machines and hand lamps.
2. These portable tools shall be inspected and tested at least once a week and the record book signed by the person conducting such inspection.
3. Portable tools are to be clearly marked that the of these tools complies with double insulation. Please note that such appliances need to be earthed.
4. Earth leakage circuit protection is required during the usage of portable electrical tools including hand lamps. This is considered adequate protection when working in wet or damp conditions or in closely confined spaces inside metal vessels.
5. All portable tools shall be maintained in good and safe working order. The wiring of 3 point plugs must comply with the following:
 6. Cable Sheath clamped to plug
 7. Earth Conductor wired with a loop to provide earth protection during forced disconnection
8. Such record book shall be made available to Koeberg representative on request.

3.25 LADDERS

1. Ladders used shall conform to the requirements of GSR 13A and used in terms of GSR 6.
2. The appropriate head protection, with chin strap shall be worn by employees working from a ladder or with climbing irons.
3. The ladder wheels, brakes and platform must be in good condition.
4. All metal parts to be in good condition, no cracks.
5. Non-slip devices must be in good condition and no paint to be on wooden ladders
6. The correct fall protection equipment shall be worn and used whilst climbing up, working from and climbing down ladders.
7. A detailed inspection of all ladders shall be conducted monthly by a competent person and every time prior to climbing by employees using such ladders. The inspection check lists must be filed in the site SHE files.
8. The usage of ladders must comply with the following:
 - a. Ladders must be tied off at the top to prevent movement.
 - b. Ladders must be inspected monthly by a person appointed in writing and the findings recorded on an inspection checklist

- c. The base of the ladder must be set back a safe distance from the vertical, approximately a fourth of length of the ladders;
- d. Ladders used to access a floor or platform must extend at least 1 meter above such a floor or platform;
- e. Stepladders must be fully opened to permit the spreader to lock;
- f. It is not permissible to stand on the top rung of a ladder.

3.26 CRANES

- 1. Overhead cranes may not be operated unless the overhead Crane Pendant Station course has been completed.

3.27 SCAFFOLDING

- 1. Koeberg erects scaffold structures for specific work required, unless otherwise agreed upon.
- 2. Scaffolding use shall conform to the requirements of CR 14, Eskom procedure 32-418 and used in terms of GSR 6.
- 3. The requirements for using a scaffold platform shall be determined by the work at heights risk assessment.
- 4. All scaffolding that will be used shall conform to the SANS standard 10085 and the requirements of CR 16 shall be carried out.
- 5. Scaffolding shall be erected and inspected by competent personnel. Under no circumstances may a contractor modify or change existing scaffolding to suit his requirements. Changes to Scaffolding are solely authorised by the scaffold inspector.
- 6. The designated scaffold inspector on site must approve all scaffolding. Hence, no scaffold may be accessed which does not display the standard green safe-for-use tag signed by the scaffold inspector.
- 7. The correct fall protection equipment shall be worn and used whilst climbing up, working from and climbing down the scaffolds.
- 8. A detailed inspection of all scaffolding shall be conducted monthly by a competent person and every time prior to climbing by employees using such scaffolding. The inspection check lists must be filed in the site SHE files.

3.28 AUDITING

3.28.1 Approval and compliance of principal contractor SHE plan

1. The Contractor's SHE Plan will be audited against compliance checklist so as to verify compliance to the requirements of the Eskom SHE specifications. Once there is compliance only then will the principal contractors SHE plan be approved by the contract manager or an appointed Eskom contract custodian. The implementation of the SHE Plan shall be assessed / audited by Eskom personnel on a regular basis. This will include physical conditions evaluation.

3.28.2 Eskom SHE audits

1. Eskom shall evaluate all contractors' SHE performance on an ongoing basis against the legal, Eskom requirements, SHE specification and the contractors SHE plans.

Note 12: *Eskom reserves the right to conduct unannounced audits on contractors*

2. There will be monthly audits conducted by Eskom on the principal contractor/s and/or appointed contractors. These audits shall be attended by the contractor's site manager or his representative.
3. If there are any findings / non-compliance identified as serious in these audits, an activity will be stopped for that specific Principal Contractor and appointed contractor. Refer to section on "Work Stoppage" in this SHE Specification.

3.28.3 Contractor audits

1. Principal Contractors are required to conduct internal audits on both their employees and their appointed contractors on the implementation of their SHE Plan on a monthly basis or when the scope of work changes. A summary of the findings and the proposed corrective actions shall be submitted to Eskom contract manager within one week after completion of the audit. Where appointed contractors are audited by the principal contractor a copy of the audit report shall be submitted to the appointed contractor within 7 days of the audit.

3.28.4 Smoking

1. The national smoking policy must be observed and smoking is permitted in designated areas only (Eskom Smoking Procedure 32-36).

3.28.5 Cellular phones

1. The national requirements regarding the use of cellular phones must be observed, in particular when driving and or operating mobile equipment and or machinery.

3.29 OCCUPATIONAL HEALTH, HYGIENE AND REHABILITATION

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

3.29.1 Medicals

Note 13: Eskom will only accept medical surveillances conducted by an Occupational Health Practitioner who holds a qualification in occupational health.

1. Principal contractors must ensure that their employees and their appointed contractor employees have a medical surveillance program whereby their employees undergo entry, periodic and exit medical fitness examinations.
2. In order for the appropriate medical examinations to be conducted, each employee must have a man job specification, which must indicate the description of work, list of hazards and potential occupational exposure limits, physical hazards and required physical attributes.
3. Medical fitness certificates shall be renewed annually for employees who are working on site. This shall be maintained until completion of the contract.
4. The Principal Contractor must ensure that his / her employees and appointed contractor employees have undergone pre-entry medical examination before starting work on the contract.
5. The principal contractor shall provide a documented process for managing those employees who are issued with a conditional certificate of fitness.
6. Health Services will conduct the following health surveillance:
 - a. Physical Examinations;
 - b. Random drug testing;
 - c. Biological Monitoring;
 - d. Heat stress certification;
 - e. Personal exposure monitoring.
7. Limited primary health care services are available from 13h00 to 14h00 daily in the event of staff falling sick at work. Written permission from the supervisor will be required.
8. Health services will respond to medical emergencies during normal working hours. The Fire and Rescue team will provide this function after hours.

3.29.2 Medical Notification

1. All contractor employees must notify the Medical Group of any communicable disease or illness they are suffering from immediately it becomes known to them or on commencement of work at Koeberg irrespective whether they contracted the ailment prior to employment on Koeberg site.
2. The following diseases/illnesses are noticeable:
 - a. All contagious/infectious diseases such as German Measles, Measles, Mumps
 - b. Food handlers must report the following illnesses: Typhoid, hepatitis A, skin conditions, upper respiratory tract infections.
 - c. Tuberculosis (this can be treated by Health Services on site).

3.30 ROLES AND RESPONSIBILITIES

1. All contractors are required to list employee's roles and responsibilities pertaining to the contract.

3.31 WORKING AT HEIGHTS

3.31.1 General Requirements

1. Wherever reasonably practicable, preference is given to the performance of work at ground level as opposed to the elevated position. Where work in an elevated position is necessary, preference is given to fall prevention measures such as, but not limited to, effective barricading and the use of work platforms. Persons may only work from a fall risk position if a site-specific fall protection plan is in place and correctly implemented and consists of the following:
 - a. All appointments for the fall protection plan developer and implementer are in place.
 - b. Baseline risk assessment, which is specific and incorporates the working at height risk assessment, as well as the site-specific risk assessment, has been completed for the work to be conducted.
 - c. Safe working procedure/task analysis and work instructions, approved by a competent person, are in place.
 - d. A fall rescue plan, along with necessary equipment and trained rescuers, is in place.
 - e. Appropriate training, as determined by the Work at Height Standard (32-418) clause 3.4.5.
 - f. Appropriate height safety equipment and personal protective equipment have been issued to the individual.
 - g. There are equipment inspection procedures and up-to-date inspection records.
 - h. Individuals are medically fit to work at height, and records of this are kept.

- i. A site-specific risk assessment is performed.
2. While work is in progress, adequate warning signs and/or barricades shall be used in all areas where there is a risk of persons being injured by materials or equipment falling from the work area. Barricades should be continuous and easily visible.
3. A drop zone shall be established with appropriate warning signs and barricading, warning personnel below of workers above and potential falling objects.

3.31.2 Every employer shall ensure that work at height is:

1. properly planned;
2. appropriately supervised; and
3. carried out in a manner that is, as far as is reasonably practicable, safe and that its planning includes the selection of work equipment.

3.31.3 Fall Protection

3.31.3.1 The contractor shall ensure that:

1. All unprotected openings in floors, edges, slabs, hatchways and stairways are adequately guarded, fenced or barricaded or that similar means are used to safeguard any person from falling through such openings;
2. No person works in an elevated position, unless such work is performed safely as if working from a scaffold or ladder;
3. Notices are conspicuously placed at all openings where the possibility exists that a person might fall through such openings;
4. Fall prevention and fall arrest equipment is:
 - a. Suitable and of sufficient strength for the purpose or purposes for which it is being used having regard to the work being carried out and the load, including any person, it is intended to bear; and
 - b. Securely attached to a structure or plant and the structure or plant and the means of attachment thereto is suitable and of sufficient strength and stability for the purpose of safely supporting the equipment and any person who is liable to fall;
 - c. Fall arrest equipment shall only be used where it is not reasonably practicable to use fall prevention equipment; and
 - d. Suitable and sufficient steps shall be taken to ensure, as far as is reasonably practicable, that in the event of a fall by any person, the fall arrest equipment or the surrounding environment does not cause injury to the person.

3.32 PERSONAL PROTECTIVE EQUIPMENT REQUIREMENTS

1. The Principal contractor must provide a detailed programme that includes the issuing, maintenance and replacement of PPE for all his employees and appointed contractors on site.
2. All contractors shall comply with the requirements of GSR 2 of the OHS Act.
3. The risk based PPE matrix must be compiled detailing the types of PPE that is required to be issued to employees performing the respective tasks.
4. Where there are unusual instances where particular activities require additional type of PPE, then a risk assessment must be conducted where such PPE requirements will be identified and the issuing be carried out.
5. All contractors shall ensure that their visitors wear and use the correct PPE whilst on worksites.
6. Where PPE is required and visitors are not in possession of, then it is the individual contractor's responsibility to provide the PPE.
7. All PPE purchased and used by all contractor employees including visitors must comply with the relevant SANS standards.
8. Where deemed as a requirement, then high visibility vests shall be worn.
9. Once on site the contractor shall familiarise himself/herself with MANDIR-009 which details PPE requirement of the various plant areas.

3.33 INCIDENT INVESTIGATION

1. All injuries, illness and environmental incidents shall be reported immediately but not later than at the end of the shift. Injuries shall be reported by raising a condition report which is available from the Eskom Representative or Contracts Manager.
2. All incidents shall be investigated in terms of OHS Act General Administrative Regulations 8 and 9, using Eskom Procedure 32-95 as a reference, and where injuries as contemplated in sections 24 and 25 have been sustained, be reported to the Department of Labour.
3. Contractors shall use the standard General Administrative Regulation Annexure 1 "Recording of an Incident" form for all incident investigation reports. The objective of incident investigation, should not only be a legal requirement, but should establish why and how the incident occurred and find out the real root cause of the incident and to decide on precautionary measures that are required to address the root cause to prevent any further recurrences of the same or similar incidents.
4. Copies of the Accident Report are to be given, within 24 hours to the following:
 - a. Contractor Representative / Manager
 - b. Occupational, Hygiene and Safety department

3.34 CHEMICAL CONTROL PROGRAMME

1. A chemical control programme has been implemented at Koeberg to preserve the long term health of the plant and that of the employees.
2. The aim of the programme is to control: Access of chemical products onto site; Issuing of chemical products from Stores; Usage of chemical products on the plant; Removal of chemicals from site.

3.34.1 Requirements for Contractors are as follow:

- a. No chemical products are brought onto site without prior approval from the Koeberg representative;
- b. Must provide up front list of all chemical products that are to be used on site during the contract. (The Koeberg representative must determine if the chemical products are on the Approved Chemical Product List and if not, follow the approval process in accordance with KAA-751);
- c. Must supply the Koeberg representative with a chemical analysis certificate if the chemical product is not listed on the Approved Chemical Product List;
- d. Must ensure that all the chemical products are labelled before bringing them onto site i.e. standard hazard/precautions label and Koeberg specific label;
- e. Must provide up front Material Safety Data Sheets relating to specific chemical products used
- f. Must ensure that all flammable substances for duration of work on site is properly stored;
- g. Obtain Transient Combustible Certificate from Fire Risk Management for substances used in accordance with KSA-025;
- h. Must ensure that staff are provided with correct personal protective equipment e.g. respirators, safety spectacles, etc. prior to work commencement;
- i. Must brief staff on hazards and risk when working with specific chemical products during work on site;
- j. Before leaving site must remove all chemical products originally brought on site. This includes both empty containers and any remaining unused chemical products;
- k. Any accidental exposure is to be reported to Medical Services and Occupational Hygiene & Safety department.
- l. It is important that the Koeberg representative and Contractor liaise with SHE Group prior to commencing work on site in order to ensure that the hazards and risks are evaluated. However, more importantly, that the legal requirements are met in accordance with the OHS Act and NEMA.

3.35 EMERGENCY MANAGEMENT

1. The art of emergency preparedness and response is to minimise the effects of any emergency and to restore normal activities as soon as practical. The contractor must familiarise themselves with the Eskom emergency

response plan and procedure. Periodic emergency drills must be undertaken to test the effectiveness of the plan. This must be recorded and provided on request.

2. Telephone numbers to be used for the reporting of any emergency:

- a. **CONTROL ROOM: PAX 4222.**

3.36 NON CONFORMANCE AND COMPLIANCE

1. Any non-compliance to any health and safety requirement in this SHE specification is subject to discipline in terms of the Eskom Procurement and Supply Management Procedure.
2. Principal contractors are required to implement a non-conformance procedure (if not already in place) for issuing to contractors for transgressions. The procedure can include “quality” related non-conformance issues. Similarly, appointed contractors must implement a non-conformance procedure.
3. The procedure for the issuing and closing off of non-conformance reports shall be strictly adhered to.
4. Contractor site management must monitor the close out non-conformances issued, in not doing so; any recommendations made may not be implemented.
5. Where non-conformances are issued by Eskom then one of the close-out steps of the procedure will be for the offender to be called by the responsible contract manager to explain the non-conformance issued and what plan is in place to prevent a recurrence of the non-conformance.
6. Should the contractor fail to provide adequate PPE to their employees for the tasks being performed and/or to visitors; failure to enforce the wearing of such PPE will be viewed as a transgression of the legislative and Eskom requirements.

3.37 SHE FILES

1. A SHE file means a file or other record in permanent form, containing the information about the safety and health management system during the contract.
2. All contractors are required to keep a SHE file on every contract site. If there is more than one site per contract, a file per site shall be kept at that site. Contractors may keep additional files at their head office as additional records. The SHE file shall be maintained by all the contractors on their sites and shall be available on request for audit and inspection purposes.
3. The SHE file shall consist of the requirements in terms of the contract’s safety specification, the contractor’s safety and health plans.
4. The sequence of filing the documentation must be kept in the same sequence as listed in Appendix 2.

5. Each record shall be separated by partitions to afford easy identification and access. Each partition must be labelled.
6. On completion of the contract, the principal contractor must hand over a consolidated health and safety file to the contract manager. The principal contractor must also hand over all drawings, designs, lists of materials used, and other applicable information about the completed structure, as well as the list of subcontractors, the agreement, and the type of work completed.
7. In case where the contract is extended, should the documentation in the SHE files become cumbersome, the older documentation must be archived in boxes which shall be correctly labelled and be available for auditing purposes. The archived documentation must be handed over at the completion of the contract.

3.38 WORK STOPPAGE

1. Any person may stop any activity where an unsafe act or unsafe condition that poses or may pose an imminent threat to the safety and health of an individual or create a risk of degradation of the environment. This includes any unauthorised work or service performed by, or legally or contractually non-compliant acts or omissions by, any contractor contracted to work at that site.
2. Work stoppages that are initiated due to SHE concerns, non-compliance, or poor performance related to the contractor's works or services shall not warrant any financial compensation claim lodged against Eskom where the contractor has not met the requirements defined legally or contractually.
3. Where stoppages are carried out, the required non-conformance report shall be raised.
4. All work stoppages ideally should be investigated and documented by contract custodians.

3.39 HOURS OF WORK

1. The requirements of the Basic Conditions of Employment Act, Chapter Two "Regulation of Working Time" must be adhered to. All contractors are required to maintain an accurate record of time worked by each employee.

3.39.1 Normal work

1. All work conducted on site shall fall within the legal requirements in accordance with the Basic Conditions of Employment Act. Contractors will notify their Eskom Supervisor or contract manager of any work that needs to be performed after hours according to the agreed arrangements. (The application needs to be submitted timeously). Where applicable, the notification should include proof of application, for overtime, to the Department of Labour and /or the letter of approval from the Department of Labour.

3.39.2 Night work

1. When night work is to be performed; contractors shall provide sufficient lighting to enable the entire work site to be illuminated to a degree that employees will not work in dark (un-illuminated) or dimly lit areas. Care must be exercised as not to use few lights with high light intensives as this will cause night blindness.
2. If work is continuing from day light into night, at dusk, a tool box talk must be held where all employees will be advised of the hazards of night work and the extra precautions which require to be taken, i.e. poor housekeeping, stepping on uneven ground, stepping into holes etc.

3.39.3 Overtime

1. When overtime is required to be performed, the appointed contractors shall inform the principal contractor of such action. The principal contractor shall inform the Eskom contract manager of such function. Contractors shall be aware of the effects of human fatigue and regulate overtime accordingly. The baseline risk assessment must be reviewed to include the management of overtime work.

3.40 HORSEPLAY AND ASSAULTS

1. The contractor shall make an effort to prevent horseplay or assaults at Koeberg. Any offender will be removed from the Koeberg premises.

3.41 RECOGNISED ROUTES TO BE FOLLOWED

1. Contractors shall ascertain from Koeberg's representative the correct route along which their employees may proceed when coming on or going off shift and direct their employees accordingly.
2. No employee shall be permitted to remain on site and/or in the works at the end of his shift. The contractor shall institute effective measures enabling him/her to ensure that all persons leave the site and/or the works on completion of his/her shift.
3. Occurrence of cases of missing persons shall be reported immediately to the Koeberg representative, and the contractor shall co-operate in tracing such person(s).

A. OMISSIONS FROM SAFETY AND HEALTH REQUIREMENTS SPECIFICATION

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

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

B. CONTRACT SIGN OFF

On completion of the contract, all appointed contractors shall close out their contract documentation and SHE files and forward such to the principal contractor. The principal contractor shall likewise close out his/her contract documentation and SHE files and forward such to the Eskom contract manager.

3.42 APPENDICES

Appendix 1 – SHE Risk Register (Baseline Risk Assessment)

METHOD STATEMENT**APPENDIX 2****SHE FILE INDEX**

1. 37 (2) Mandatary Agreement
2. Valid letter of Good Standing
3. SHEQ Policy
4. Client Baseline Risk Assessment
5. Client SHE Specification
6. Organogram as per legal appointments
7. List names of employees that will be working on the contract, copies of ID and drivers license for vehicle operators
8. Method statement and Baseline Risk Assessment
9. Safe work procedures
10. Health and Safety Plan
11. Environmental Management Plan
12. Legal appointments and competencies to support the legal appointments
13. Competencies
14. Medical Fitness Certificates
15. Fall Protection Plan (Applicable to working at heights only)
16. MSDS's

17. Templates of inspection checklist i.e. portable electrical equipment, ladder inspections, personal protective equipment etc.
18. Emergency information i.e. copy of evacuation procedure, rescue plans, etc.
19. General information i.e. copy of induction training, etc.