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1. Introduction

The PED Coal Automation Project is committed to ensuring a safe working environment that is in line with Eskom's Safety, Health, Environmental and Quality (SHEQ) Policy, Eskom requirements, along with legislative obligations. The objective of this specification is to outline the legal requirements as contemplated in the Occupational health and Safety Act (act 85 of 1993) and all applicable regulations, specifically referencing the Construction Regulations, GMR 84 of February 2014 as amended and to ensure that a common approach is adopted when engaging in the project work.

2. Supporting Clauses

2.1 Scope

2.1.1 Purpose

This specification covers the following scope:

1) Tender Enquiry and evaluations;
2) Site Establishment of a contractor;
3) The PED Coal Automation Project execution phase;
4) Project execution phase (PED/Gx Coal); and
5) Contractor Site De-establishment

2.1.2 Applicability

This document shall apply to all PED Coal Automation Projects.

2.1.3 Effective date

The effective date shall be on the signing thereof by the Project Manager of the PED Coal Automation Project.

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] Occupational Health and Safety Act, act 85 of 1993 and all applicable Regulations and amendments;

[2] Construction Regulations, GMR 84 of February 2014.

2.2.2 Informative

[3] ISO 9001 Quality Management Systems;

[4] Mines Health and Safety Act, act 29 of 1996, as amended

[5] Compensation for Occupational Disease Act, act 130 of 1993

[6] National Environmental Act, act 107 of 1998

[7] Petroleum Products Act, act 120 of 1997

[8] 32-727_SHEQ Policy

[9] 32-1126_Smoking Policy

[10] 32-37_Substance Abuse

[11] 32-93_Vehicle driver safety management

[12] 32-95_OHS Incident Management Procedure

[13] 32-96_Environmental Procedure: Environment Control Document

[14] 32-123_Emergency Planning

[15] 32-124_Eskom Fire Risk Management

[16] 32-245_Waste Management Procedure

[17] 32-248_Environmental Procedure: Environmental Management Programme

[18] 32-282_Procedure for Medical Surveillance

[19] 32-303_Requirements for the Safe Processing, Handling, Storing, Disposal and Phase-out of Asbestos

[20] 32-407_Behavioural Safety Observations

[21] 32-418_Working at Heights

[22] 32-421_Eskom lifesaving rules

[23] 32-425_Hearing Conservation

[24] 32-345_Vehicle specification

[25] 32-641_Occupational Hygiene and Safety data Assurance Process

[26] 36-681_Eskom Plant Safety Regulations

[27] 32-726_SHE Requirements for the Eskom Commercial Process

[28] 39-11_Health and Safety Representatives and Committee Systems

[29] 39-13_Process for Health and Safety Risk Assessment

[30] 39-98_Safe use of lifting machines and lifting tackle

[31] 39-113_Food Hygiene and Safety Management

[32] EPC 32-846_Eskom Operating Regulations for High Voltage Systems (ORHVS)

[33] SAN Standards relevant to the scope of works

[34] 240-133087117_Environmental Incident Management Procedure

[35] 240-142261250_ Refurbishment & Construction Project Weekly Statistical Data Capturing Sheet

[36] 240-43848327_Employees Right of Refusal to work in an Unsafe Situation

[37] 240-56227573_Air-Insulated Withdrawable AC Metal-Enclosed Switchgear and Control Gear for Rated Voltages above 1kV up to and including 52kV

[38] 240-56357424_MV and LV Switchgear Protection Standard

[39] 240-70044736_Arc Flash Protective Clothing and Personal Protective Equipment against the Thermal Hazard of an Electrical Arc

[40] 240-100979499_Personal Protective Equipment for Work at Heights Specification

[41] 285-39332_Radio Active Source Control Procedure

2.3 Definitions

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

Agent: A competent person who acts as a representative for a Client

Client: Any person for who work is being performed.

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

Contract: Is an agreement with conditions between the Client and a Contractor where an adjudication authority has approved a scope of work to be completed in a specific time frame and within a specified value.

Contractor: Contractor that will be contracted by the EPC Contractor. This includes suppliers, sub-contractors, consultants and vendors etc.

EPC Contractor: The contractor is the contracting party to Eskom

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

Note 1: Any reference made to *Project Manager* (in italics) in this SHE Specification, refers to the definition as per the contract classification and the Client as defined in the OHS Act and Construction Regulations.

Note 2: Any reference to *Contractor* in this SHE Specification refers to the definition as per the contract classification and the principal contractor as defined in the OHS Act and Construction Regulations.

2.3.1 Document:

2.4 Abbreviations

Abbreviation	Explanation
ADT	Articulated Dumper Truck
AIA	Approved Inspection Authority
AP	Authorized Person
COF	Certificate of Fitness
CHSA	Construction Health and Safety Agent
CMD	Construction Management Department
COID Act	Compensation for Occupational Injuries and Diseases Act, act 130 of 1993
CR	Construction Regulations, GMR 84 of February 2014
CRP	Coal Refurbishment/Replacement Project
DEA	Department of Environmental Affairs
DMR	Driven Machinery Regulations
DOEL	Department of Employment and Labour
DWS	Department of Water and Sanitation
EA	Environmental Authorization
EAP	Employee Assistance Programme
ECSA	Engineering Council of South Africa
EO	Environmental Officer
ECO	Environmental Control Officer
EIA	Environmental Impact Assessment
EM	Environmental Manager
EMPr	Environmental Management Programme
EMR	Emergency and Response
EMS	Environmental Management System
EO	Environmental Officer
EP	Emergency Preparedness
EPC	Engineering, Procurement and Construction
GAR	Government Administration Act
GCD	Group Capital Division
GCE	Group Chief Executive
GM	General Manager
GSR	General Safety Regulations
Gx	Generation Division
HCS	Hazardous Chemical Substance
HV	High Voltage
ICAS	International Counselling and Advisory Services
IEA	Integrated Environmental Authorization

Abbreviation	Explanation
LDV	Light Delivery Vehicle
LTIR	Lost Time Injury Rate
LV	Low Voltage
MS	Method Statement
MSDS	Material Safety Data Sheet
MV	Medium Voltage
NEMA	National Environmental Management Act, act 107 of 1998
OHN	Occupational Health Nurse
OHP	Occupational Health Practitioner
OHS	Occupational Health and Safety
OHS Act	Occupational Health and Safety Act, act 85 of 1993
ORHVS	Operating Regulations for High Voltage Systems
PED	Primary Energy Division
PER	Pressurized Equipment Regulations
PPE	Personal Protective Equipment
PS	Power Station
PSR	Plant Safety Regulations
RP	Responsible Person
RPO	Radiation Protection Officer
SACPCMP	The South African Council for the Project and Construction Management Professions
SANS	South African National Standards
SHE	Safety Health and Environment
SM	Senior Manager
SWL	Safe Working Load
SWP	Safe Work Procedure
VCT	Voluntary Counselling and Testing
VUP	Vessels Under Pressure

2.5 Roles and Responsibilities

2.5.1 Commitment

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

2.5.2 *Project Manager:* Project Manager

The Site Project Manager is the person accountable for the overall management of the site for the PED Coal Automation Project. He or she may delegate duties to any competent person, internal or external to Eskom and shall ensure that this SHE specification is issued with tender enquiries and that the *Contractor*'s SHE Plan is approved by the *Project Manager* prior to commencement of work. He must ensure that all the statutory and *Project Manager's* requirements, SHE specifications and *Contractor's* SHE plan, are adhered to by the *Contractor* and its sub-contractors at all times.

2.5.3 *Project Manager:* Construction Health and Safety Agent

The Construction Health and Safety Agent is a person appointed by the Project Manager. The Construction Health and Safety Agent is responsible for the overall management of safety and health on the project and must support the Client Project Manager, appointed in terms of the contract, by ensuring compliance on behalf of the Client, to all regulatory and Eskom requirements. The appointment of the agent is as per the OHS Act, CR regulation 5(5).

The Construction Health and Safety Agent shall be registered with the SACPCMP Council of South Africa. He or she is responsible for developing and implementing the Client SHE Specification and defining the systems of SHE management required for the safe execution of the PED Coal Automation Project.

2.5.4 *Project Manager:* Contracts Manager

The Contracts Manager is responsible for managing the contract between the *Project Manager* and *Contractor*. He or she must advise the *Project Manager* on matters pertaining to the contract and ensure compliance to the contract by the *Contractor*.

2.5.5 *Project Manager:* Construction Health, Safety and Environmental Manager/Practitioner

The responsibility of the SHE Manager/Practitioner is to provide assurance, as well as to advise, assist, and support the *Project Manager* in the management of the SHE related issues on the project.

2.5.6 *Contractor*: Project Manager

The *Contractor* Project Manager is the person accountable for the overall management of the project. He or she may delegate duties to any competent person, and shall ensure sufficient resources are made available in order to execute the project safely. He or she must ensure that all the statutory and Eskom requirements, SHE specifications and Contractor's SHE plan, are adhered to by the contractors at all times.

2.5.7 Contractor: Construction Manager

The Construction Manager carries accountability and responsibility for the health and safety of his or her employees and sub-contractor employees as contemplated by section 37(2) of the OHS Act.

He or she shall ensure that all contractor employees under his or her charge, complies to all the requirements as contemplated in the OHS Act and applicable regulations, with specific reference to the Construction Regulations, GNR 84 of February 2014.

2.5.8 *Contractor:* Designer

The Designer of a structure must ensure that the applicable safety standards incorporated in the CR, regulations 6, under Section 44 of the Occupational Health and Safety Act, SANS and any other applicable standard, as well as the Client SHE Specification, is taken into consideration whilst designing the works.

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

A Designer of works shall be a registered professional, registered with the Engineering Council of South Africa.

2.5.9 *Contractor:* Construction Health and Safety Officer

The Contractor's and sub-contractor's SHE Practitioner shall be appointed in terms of CR, Regulation 8(5), and shall assist and support the Construction Manager to ensure that the Contractor's SHE responsibilities are fulfilled and that there is compliance to all applicable legislation and conformance to the Client SHE specifications and *Contractor* SHE plans.

2.5.10 *Contractor:* All contractor employees on the project

Employees must take reasonable care for their own health and safety and that of their co-workers in their area. They must comply with all national legislation requirements, and conform to the Eskom requirements, Client SHE Specifications, *Contractor* SHE Plan, *Contractor* method statements and risk assessments.

2.6 Process for Monitoring

Conformance to this specification shall be assessed by the *Project Manager's* representatives during site inspections and audits as stipulated in the specification.

This document is valid for the duration of the works and will be amended, as and when necessary, as requirements are being amended and therefore it will be required for the EPC contractor's plan and management system to be amended accordingly.

2.7 Related/Supporting Documents

[42] PED Coal Automation Project Weekly Statistical Data Capturing Sheet

[43] A section 37(2) agreement must be signed between the Client and the EPC Contractor at the time of awarding the contract. A signed copy of this agreement is submitted to the Client prior to commencement of any activities on site. (Employer's document number 240-59678141).

[44] Annexure A: Eskom Flash Report Template

[45] Annexure B: Rcat Investigation Template

[46] Annexure C - Acknowledgement Form for Eskom SHE Rules and other requirements

[47] Annexure D - The Client's Non-Negotiable Conventional Health and Safety Requirements

[48] Annexure E - Lifting and Rigging Risk Analysis and Inspection Form

[49] Annexure F: Eskom SHEQ Policy

3. SHE Specification requirements

3.1 Legal Agreement

In terms of section 37(2) of the OHS Act, it shall be required of the *Contractor* to sign a legal agreement that it accepts the responsibilities imposed on the *Project Manager* by the act, and commits to dutifully ensuring compliance to them as if it were the *Project Manager.* Furthermore, the Contractor signs an appointment as Principal Contractor, in accordance to CR, regulation 5(1)(k) with the *Project Manager*, thereby accepting all the legal accountabilities and responsibilities imposed on a Principal Contractor by legislation.

The *Contractor* shall ensure that in terms of section 37(2) of the OHS Act and in terms of the CR of February 2014, CR 7(1)(c)(v), it signs both appointments with all sub-contractors it intends to appoint.

3.2 Contractor Organizational Structures

The Contractor shall provide the *Project Manager* with its site based organogram, SHE departmental organogram, and legal appointee organogram, inclusive of CV's and competency certificates, and shall update such when changes take place.

3.3 Appointments: Legal and other

The *Contractor*, as defined in the NEC 3 contract, shall ensure that all site-related legal & other appointments are in place and that they are specific and indicate for which areas within the OHS Act and regulations, and or other requirements, individuals are responsible. The *Contractor* shall ensure that all appointments, as per the works information, are made.

All appointees shall be based at the PED Coal Automation Project on a full-time basis, and may not be appointed to other construction sites.

3.4 SHE staffing requirements

The Contractor shall submit to the *Project Manager* for acceptance, a schedule detailing qualifications and experience of all key employees who will be employed on the project.

The Contractor shall ensure that the following SHE staffing totals are employed as a minimum:

3.4.1 Construction Manager

Due to the project risk profile and in terms of CR regulation 8(1), the *Contractor* shall appoint the services of a full-time Construction Manager. The Contractor may not appoint a Construction Manager to assist in the control of construction activities on the site unless he or she is reasonably satisfied that the Construction Manager that he or she intends to appoint is fully registered with a statutory body approved by the Chief Inspector and has the necessary competencies and resources to assist the Contractor, i.e. SACPCMP Council.

The CV of such a Construction Manager shall be subjected to acceptance by the *Project Manager* and the Construction Health and Safety Agent, before appointing such a person to the project.

3.4.2 Construction Health and Safety Manager

Due to the project risk profile, the *Contractor* shall employ a Full-time Health and Construction Health and Safety Manager to the project.

The Contractor may not appoint a Construction Health and Safety Manager to assist in the control of SHE related aspects on the site unless he or she is reasonably satisfied that the Construction Health and Safety Manager that he or she intends to appoint is fully registered with a statutory body approved by the Chief Inspector and has the necessary competencies and resources to assist the Contractor, i.e. SACPCMP Council.

The CV of such a Construction Health & Safety Manager shall be subjected to acceptance by the Construction Health and Safety Agent, before appointing such a person to the project.

Note 1: A successful application, pending examinations, and or pending the outcome of an examination, and or awaiting the final certificate shall not be deemed as being registered in terms of this Client SHE Specification.

Note 2: The appointed SHE Manager may not be appointed for any other construction site managed by the *Contractor*, and shall only be based and be present at the required CAS site where work will be executed.

3.4.3 Construction Health and Safety Officer

The *Contractor* shall, according to the project risk profile, employ the services of a Full-time Safety Officer during its term of contract. If the risk or if the *Project Manager* and or an Inspector of the DOEL requires it, the *Contractor* shall appoint additional Full-time Safety Officers, as requested, to manage safety and health matters on site. The *Contractor* shall ensure that sufficient Safety Officers are employed by all sub-contractors it intends to employ.

The CV of such a Safety Officer/s shall be subjected to acceptance by the Construction Health and Safety Agent, before appointing such a person to the project.

The *Contractor* shall ensure a ratio of at least 1 Safety Officer to every 50 employees, and on every shift worked by the *Contractor*, or as otherwise agreed upon with the *Project Manager*'s Project Manager. Such an agreement shall be documented and signed by both the *Project Manager* and *Contractor*.

Note: Where required, and as per CR regulation 8(6) the *Contractor* may not appoint a Construction Health and Safety Officer to assist in the control of SHE related aspects on the site unless he or she is reasonably satisfied that the Construction Health and Safety Officer that he or she intends to appoint is registered with a statutory body approved by the Chief Inspector and has the necessary competencies and resources to assist the *Contractor,* i.e. SACPCMP Council.

3.4.4 Construction Supervisor

The *Contractor* shall appoint a competent and qualified person as a Construction Supervisor in terms of CR, regulation 8(7). Such a person must ensure that all construction activities are effectively supervised and all legislative, Eskom and contractor requirements are fully adhered to.

The Contractor may not appoint a Construction Supervisor to assist in the control of SHE related aspects on the site unless he or she is reasonably satisfied that the Construction Supervisor that he or she intends to appoint is fully registered with a statutory body approved by the Chief Inspector and has the necessary competencies and resources to assist the Contractor, i.e. SACPCMP Council.

The CV of such a Construction Supervisor shall be subjected to acceptance by the *Project Manager* and Construction Health and Safety Agent, before appointing such a person to the project.

3.4.5 Environmental Officer

The *Contractor* shall, according to the project risk profile, employ the services of a Full-time Environmental Officer during its term of contract. If the risk or if the *Project Manager* and or an Inspector of the DWS and DEA requires it, the *Contractor* shall appoint additional Full-time Environmental Officers, as requested, to manage environmental matters on site.

The CV of such an Environmental Officer shall be subjected to acceptance by the Client SHE Manager in consultation with the GCD Environmental Manager, before appointing such a person to the project.

3.5 Environmental Control Officer

The *Project Manager*, in consultation with the PED Coal Automation Project Site Project Manager and Client SHE Manager, and in accordance with the NEMA Act and Power Station EMPr, must where required, appoint the services of an independent Environmental Control Officer who will advise the *Project Manager* on environmental matters and furthermore ensure compliance to all legislative requirements pertaining to the construction project.

Such an appointment shall be subject to the approval from the DEA and DWS Departments.

3.6 SHE competencies and training

3.6.1 SHE competencies

3.6.1.1 Construction Supervisor (CR 8(7) Appointee)

The following SHE competencies are required as a minimum before appointing a Construction Supervisor at the PED Coal Automation Project:

- 3 years applicable experience in civil construction management;
- SAQA accredited Construction Supervisor training course;
- Risk assessment training;
- Incident investigation training;
- Root cause analysis training (RCat);
- Occupational Health and Safety Act 85 van 1993;
- Construction Regulations, GNR 84 of February 2014;
- Eskom PSR and ORHVS training as and when required by the contract scope of works;
- Basic Scaffolding Erecting & Dismantling training; and
- Basic lifting and rigging training, with a minimum of 3 years exposure to construction lifting and rigging related operations.

Note 1: If required to manage electrical works, Construction Supervisors must undergo or have undergone and passed the Eskom PSR and ORHVS training.

3.6.1.2 Assistant to the Construction Supervisor (Team Leader/Supervisor/Assistant Supervisor)

The following SHE competencies are required as a minimum before appointing an assistant to the Construction Supervisor at the PED Coal Automation Project:

- 3 years applicable experience in civil construction management;
- Attended an SAQA accredited supervisory training course;
- Risk assessment training;
- Root cause analysis training (RCat);
- Occupational Health and Safety Act 85 van 1993;
- Construction Regulations, GNR 84 of February 2014;
- Eskom PSR and ORHVS training as and when required by the contract scope of works;
- Basic Scaffolding Erecting & Dismantling training; and
- Basic lifting and rigging training, with a minimum of 3 years exposure to construction lifting and rigging related operations.

Note 1: If required to manage electrical works, Construction Supervisors must undergo or have undergone and passed the Eskom PSR and ORHVS training.

3.6.1.3 Responsible and Authorized Persons

Where required, and on instruction by the *Project Manager*, the *Contractor* shall appoint competent persons as AP's and RP's to manage all electrical work to be conducted on the project.

All appointed RP's and AP's shall have undergone and passed the PSR and ORHVS regulations, and have been authorized by the residing Eskom authorization body.

3.6.1.4 Construction Health and Safety Officer (CR 8(5) Appointee)

The following SHE competencies are required as a minimum before appointing a Construction Health and Safety Officer at the PED Coal Automation Project:

- Registered with an approved authority as contemplated in CR regulation 8(6), i.e. SCAPCMP Council as a Construction Health and Safety Officer;
- Risk assessment training;
- Root cause analysis training (RCat);
- Occupational Health and Safety Act 85 van 1993;
- Construction Regulations, GNR 84 of February 2014;
- Compensation for Occupational Injuries and Diseases Act 130 of 1993
- Eskom PSR and ORHVS training as and when required by the contract scope of works;
- Basic Scaffolding Erecting & Dismantling training; and
- Basic lifting and rigging training, with a minimum of 3 years exposure to construction lifting and rigging related operations.

Note 1: All Construction Health and Safety Officers appointed in terms of the CR, regulation 8(5), to the PED Coal Automation Project, must have the minimum criteria of exposure to civil work construction, as is stipulated by the SACPCMP Council.

Note 2: A competent person who has successfully applied to the SACPCMP Council for professional registration, and has received a confirmation letter of acceptance, after being assessed and found competent to proceed to the examinations, may be appointed to the PED Coal Automation Project on a temporary basis, pending the outcome of the examination and final registration as a Construction Health and Safety Officer. Should the candidate complete the examinations, the Contractor must inform the *Project* Manager, and after consultation with the *Project Manager* and Construction Health and Safety Agent, ensure such a person is removed from the PED Coal Automation Project and replaced with a suitable competent person.

If the competent person is deferred by the SACPCMP Council to that of a Candidate Construction Health and Safety Officer, the *Contractor* shall place such a person under the direct supervision of a fully registered Construction Health and Safety Officer and or Construction Health and Safety Manager appointed on a full-time basis at the PED Coal Automation Project. A Candidate Construction Health and Safety Officer may not operate in the capacity of a Construction Safety Officer on his or her own and may not be appointed in terms of CR regulation 8(5).

3.6.1.5 Construction Health and Safety Manager

Where appointed to the project, the following SHE competencies are required as a minimum before appointing a Construction Health and Safety Manager at the Project:

- Fully registered with an approved authority in terms of the CR, regulation 8(6), i.e. SCAPCMP Council as a Construction SHE Manager;
- Risk assessment training;
- Root cause analysis training (RCat);
- Occupational Health and Safety Act 85 van 1993;
- Construction Regulations, GNR 84 of February 2014;
- Compensation for Occupational Injuries and Diseases Act 130 of 1993;
- Eskom PSR and ORHVS training where electrical work forms a part of the scope of works;
- Basic Scaffolding Erecting & Dismantling training;
- Basic lifting and rigging training, with a minimum of 3 years exposure to construction lifting and rigging related operations;
- Environmental legislation training;
- ISO 14001 Environmental Management Systems training; and
- Environmental Aspects and Impacts Assessment training.

Note 1: Where the *Contractor* is required to appoint a Construction Health and Safety Manager appointed to the Project, such a manager must have the minimum criteria of exposure to civil work construction, as is stipulated by the SACPCMP Council.

Note 2: A competent person who has successfully applied to the SACPCMP Council for professional registration, and has received a confirmation letter of acceptance, after being assessed and found competent to proceed to the examinations, may be appointed to the PED Coal Automation Project on a temporary basis, pending the outcome of the examination and final registration as a Construction Health and Safety Manager. Should the candidate complete the examinations, the *Contractor* must inform the *Project Manager*, and after consultation with the *Project Manager* and Construction Health and Safety Agent, ensure such a person is removed from the PED Coal Automation Project and replaced with a suitable competent person.

If the competent person is deferred by the SACPCMP Council to that of a Candidate Construction Health and Safety Manager, the *Contractor* shall place such a person under the direct supervision of a fully registered Construction Health and Safety Manager and or a Construction Health and Safety Agent within the company and as a mentor, shall at least bi-weekly, visit the Refurbishment and Construction Projects to assess the candidate and also ensure construction works are being conducted in a safe manner. A Candidate Construction Health and Safety Manager may not operate in the capacity of a Construction Health and Safety Manager on his or her own.

3.6.1.6 Environmental Officer

The following SHE competencies are required as a minimum before appointing a Construction Health and Safety Manager at the PED Coal Automation Project:

- National Diploma, B-Tech or BSC in Environmental Management;
- ISO 14001 Development, Implementation and Auditing Certificate;
- All applicable Environmental Legislation
    - Environmental Conservation Act 73 of 1989
    - National Environmental Management Act 107 of 1998
    - National Environmental Management: Air Quality Act 39 of 2004
    - National Environmental Management: Biodiversity Act 10 of 2004;
    - National Environmental Management: Protected Areas Act 57 of 2003;
    - National Environmental Management: Waste Act 59 of 2008;
    - National Heritage Resources Act 25 of 1999;
    - National Veld and Forest Fire Act 101 of 1998;
    - National Water Act 36 of 1998;
    - World Heritage Convention Act 49 of 1999
    - Hazardous Substances Act 15 of 1973;
    - Hazardous Chemical Substances Regulations, GNR 1179 of 25 August 1995;
    - Asbestos Regulations, GNR 155 of 10 February 2002;
    - Regulations for Hazardous Biological Agents, GNR 1390 of 27 December 2001
- Environmental Incident Investigation; and
- Nature conservation training:
    - Animal Studies
    - Conservation Ecology
    - Conservation
    - Conservation Administration
    - Conservation Resource Management
    - Ethical Information and Communication Technologies for Development Solutions
    - Fundamentals of Conservation
    - Plant Studies
    - Soil Science
    - Ecological Management Plan

- Environmental Awareness and Responsibility
- Environmental Authorization Training
- Water Use License Training;
- Occupational Health and Safety Act 85 van 1993; and
- Construction Regulations, GNR 84 of February 2014

Note 1: An Environmental Officer must have at least 3 years of experience working on a construction project, managing environmental compliance, inclusive of exposure to wetlands management in that period.

Note 2: The *Contractor* must ensure that those persons who have the relevant qualifications achieved via the Recognition of Prior Learning (RPL) standard; must have such qualifications graded by the SAQA body in order to determine the overall level of qualifications and competency in terms of environmental management. Overall RPL Grading must meet the minimum level of grading equivalent to that of a National Degree or Diploma. All additional training in terms of environmental legislation will be mandatory, over and above the SAQA grading.

Note 3: Before appointing Environmental Managers and Officers to the PED Coal Automation Project, the *Contractor* shall submit the CV and verified copies of such qualifications to the *Project Manager* for verification and acceptance by the Client appointed Construction Health and Safety Manager/SHE Manager and the GCD Environmental Manager.

3.6.1.7 SHE Representatives

The *Contractor* shall appoint competent SHE Representatives, as per the OH&S Act section 17, who shall represent employees on occupational health & safety matters within in the working areas. The following SHE competencies are required as a minimum before appointing any SHE Representatives at the PED Coal Automation Project:

- Risk assessment training;
- Root cause analysis training (RCat);
- Occupational Health and Safety Act 85 van 1993;
- Construction Regulations, GNR 84 of February 2014;
- Compensation for Occupational Injuries and Diseases Act 130 of 1993;
- Eskom PSR and ORHVS training where electrical work forms a part of the scope of works;
- Basic Scaffolding Erecting & Dismantling training;
- Basic lifting and rigging training, with a minimum of 3 years exposure to construction lifting and rigging related operations; and
- Environmental legislation training.

Note: The appointment of Health and Safety Representatives shall satisfy the minimum criteria as per the Eskom Procedure 39-11_Health and Safety Representatives and Committee Systems.

3.7 SHE Training

3.7.1 General

The *Contractor* shall ensure that all contractor employees, under his or her supervision, working at the PED Coal Automation Project, are adequately trained in the type of work/tasks to be performed. The training shall extend, but not limited, to include relevant procedures, Site instructions, Method statements, hazard identification and risk assessments, SHE Plan and SHE Specification. They shall have the appropriate qualifications, certificates, and tickets and shall be under competent supervision. Copies of records of appropriate training and qualifications for all employees must be kept and maintained in the SHE file.

Furthermore, the *Contractor* shall develop and submit to the *Project Manager*, a SHE Training Matrix indicating the intended SHE training per person and the status of completion thereof. Such a matrix shall form a part of the SHE file and be made available on request, and form a part of the weekly SHE statistical report feedback.

Note 1: No employee may be employed and or appointed to the PED Coal Automation Project, unless the *Contractor* has ensured that all relevant SHE training has been concluded and passed, and the employee found competent in the relevant SHE training.

3.7.2 Site Safety Induction and Environmental Awareness

The *Contractor* shall ensure that all contractors have undergone the Coal Automation System Project safety induction and environmental awareness training prior to commencing work on site. Proof of the Power Station induction shall be presented at the project SHE induction, prior to undergoing the project specific induction training. The *Contractor* must provide an employee mobilisation plan highlighting the number of employees to be mobilised to site on any particular day, so as to assist the Client in scheduling sufficient time for induction and awareness training.

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

A copy of the employee's medical certificate of fitness (C.O.F) must be presented for permanent record at the induction centre and kept at the site offices.

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

Furthermore, the *Contractor* shall ensure that induction sessions for contractors are timeously booked with the Client SHE Department, at least 24hrs in advance. The *Contractor* may request an emergency induction be conducted, on consultation with the Construction Health and Safety Agent. This induction will be at the sole discretion of the Construction Health and Safety Agent and may not invoke a habit forming process with regards to general inductions for new employees to site.

The Client safety induction and environmental awareness training times are as follows:

- Mondays - 09:00am and 14:00pm
- Wednesdays - 09:00am and 14:00pm

Proof of inductions and acknowledgement of Life Saving Rules shall be kept in the SHE file and be made available to the *Project Manager* or any auditor approved by the *Project Manager* on request.

Note: No employee, consultant, visitor or vendor shall be allowed onto site, or perform any form of work, without undergoing an induction and awareness training.

3.8 Contractor and Sub-contractor Management

3.8.1 The Contractor's accountabilities for their Sub-Contractors

In accordance with OHS Act and its regulations, the *Contractor* shall carry accountability and responsibility for the health and safety of its employees within the project.

The *Contractor* shall inform the *Project Manager* of its intention to appoint sub-contractors. The *Contractor* shall be deemed as the "Employer" in terms of the OHS Act, and shall fully comply with the requirements as stipulated in the OHS Act, section 8. Furthermore, the *Contractor* shall ensure that a 37.2 agreement is signed with all appointed sub-contractors. The agreement is to be kept in the *Contractor's* SHE File and be made available on request of the *Project Manager* and all auditors approved by the *Project Manager*. Proof of such an appointment shall be provided to the *Project Manager*.

The *Contractor* shall ensure that all appointed sub-contractors and suppliers fully comply with the requirements as stipulated by the OH&S Act, Nos. 85 of 1993 and all applicable regulations (as amended), according to the scope of works and the *Client* SHE specifications and Eskom requirements.

3.8.2 SHE File

The *Contractor* shall keep a SHE file on site in accordance with the CR Regulation 7(1)(c). This requirement shall be applicable for all sub-contractors appointed to the project by the *Contractor.*

The *Contractor* shall submit its and its sub-contractors SHE file to the *Project Manager* for acceptance and approval at least one week prior to commencing work. Sub-contractor SHE files shall be approved by the *Contractor*, and together with the comments and recommendations made by the *Contractor* on such a file, shall be submitted to the *Project Manager* for acceptance.

The SHE file shall contain the following as a minimum requirement:

- The SHE Plan;
- The Client SHE Specification;
- All documentation as required by the Client SHE Specification; and
- All documentation generated as a result of SHE management during the project.

The *Contractor* shall ensure that the SHE files are submitted to the *Project Manager* at the end of the project, inclusive of each sub-contractor SHE files.

Note: The *Contractor* shall ensure that in the event a sub-contractor leaves the project, after concluding its work or for any contractual reasons, the *Contractor* shall ensure that he or she retains the sub-contractor SHE file for submission to the *Project Manager* in terms of CR regulation 7(1)(e).

3.8.3 Contractor and Sub-contractor SHE Plans

The *Contractor* shall prepare a SHE plan based on the requirements as stipulated by the Client SHE specifications; and for all sub-contractors, based on applicable parts of the Client SHE specifications that shall be provided by the *Project Manager*.

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

- SHE Policy signed by the CEO of the company;
- A valid letter of good standing from the workman's compensation commissioner (COID); (To appear in the SHE File)
- SHE accountability and responsibility Organogram;
- Duties and safety responsibilities of all appointed persons on the project
- Applicable standards, legislation, and guidelines to be adopted;
- Commitments to government acceptances and project licences;
- SHE strategy;
- SHE objectives and targets;
- Past health and safety performance statistics of the company (at least two years);
- Medical Screening Methodology;
- Medical and first-aid arrangements;
- Specific procedures, method statements and work instructions to be applied for all types of planned activities;
- Design control Procedure (if applicable);
- Control of Dangerous and Hazardous Substances Procedure
- Construction Vehicle and Traffic Management Plan;
- Audits & Inspection Procedure and Schedule;
- SHE Training and Competence Procedure & Matrix;
- Hazard Identification and Risk Control Procedure;
- Daily Safe Task Instruction and Communication Procedure;
- Risk assessments for all activities to be conducted;

- Records Management Procedure
- Safety Awareness Promotions & Programmes to be implemented;
- Personal Protective Equipment Management Procedure;
- Occupational Health and Hygiene Plan, including, but not limited to respiratory and hearing protection, alcohol and drug policies, health assessments, smoking, and first aid;
- Site SHE Meeting Procedures & Schedules, inclusive of Toolbox Talks;
- Safety meeting schedules;
- Management of sub-contractors;
- Incident Reporting, Investigation, and Recording Procedure;
- Legal appointments;
- Details of SHE personnel on site;
- Emergency response plan in line with the PS Emergency and Response Plan;
- Fire safety plan;
- Waste management plan;
- Maintenance, inspection and testing of construction vehicles, machinery, equipment; and
- Working hours - compliance with Labour Relations/Basic Conditions of Employment Act;
- Indication of competent supervision on site (CVs to be included);
- Substance Abuse Programme;
- Workers' Welfare Facilities Procedure; and
- Assessment of the contractor SHE Plan by the *Project Manager* (to appear in the SHE File);

The SHE plan shall be submitted as part of the tender returnables for review and acceptance and, once accepted, shall not be amended without prior consultation and acceptance by the *Project Manager* after consultation with the Client appointed Construction Health and Safety Agent.

On acceptance by the *Project Manager*, the *Contractor* shall ensure that all employees are informed of the changes and new requirements. These awareness sharing sessions shall be documented and registers of attendance shall be kept in the SHE file, and made available on request by the *Project Manager* or any auditor approved by the *Project Manager.*

3.9 Forums for SHE Communications

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

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

Every formal meeting conducted on site shall include SHE as a standing agenda point, inclusive of Life Saving Rules and SHE culture, and minutes of these meetings shall be kept in the SHE file and made available on request by the *Project Manager* or any auditor approved by the *Project Manager.*

3.9.1 Statutory Health and Safety Committee Meetings

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

The *Contractor* and its sub-contractors shall implement a statutory Health & Safety Committee, as per the OHS Act, section 19. The *Contractor* shall comply with the requirements as stipulated in the Eskom latest revision of the procedure for Health & Safety Representative Committee and Systems 39-11. Copies of this procedure will be provided to the *Contractor* on request.

Matters that are discussed include, but are not limited to the following:

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

Attendance registers for all Statutory Health and Safety forums shall be kept in the SHE file, and made available on request by the *Project Manager* or any auditor approved by the *Project Manager.*

Furthermore, the *Contractor* shall maintain a tracking matrix for all actions forthcoming from such meetings, and action close-out forms shall be kept in the SHE file, with supporting evidence of closure, and be made available on request by the *Project Manager* or any auditor approved by the *Project Manager.*

3.9.2 Toolbox Talks

All contractors shall have a briefing session prior to the commencement of the day's work, again directly after lunch time, as well as well as before and after shift work during outages with all relevant personnel associated with the work task in attendance. The job, relevant procedures, associated hazards, safety measures, i.e., the task risk assessments shall be discussed. Each employee who attends the briefing shall sign the back of that pre-job brief form. Toolbox talks shall be included in the pre-job brief meetings. The toolbox topics will be based on SHE issues pertaining to the construction site. The topic contents shall be in writing and defined by the *Contractor*.

Chairman: Contractor'*s* Supervisor
Frequency: Daily (Before work starts and directly after lunch), when job requirements have changed, an employee is assigned a new task and or when required by the *Project Manager* and or Construction Health and Safety Agent*.*

Required Attendees: All contractor employees

3.9.3 Weekly SHE Meeting

The *Contractor* shall host a weekly site SHE meeting to discuss SHE related matters. A set agenda for these meetings will be agreed upon with the Construction Health and Safety Agent. A typical agenda would contain, but not be limited to, the previous week's labour statistics, outline of the scheduled work on site, permits issued, new plant on site, planned training interventions and daily safety action item list for the forthcoming week, review of recorded incidents and co-ordination of any other safety matters.

Attendance registers for all weekly SHE meetings shall be kept in the SHE file, and made available on request by the *Project Manager* or any auditor approved by the *Project Manager.*

Furthermore, the *Contractor* shall ensure that all actions forthcoming from such a meeting is documented, tracked and when closed-out, supporting evidence of closure is to be kept in the SHE file with the minutes, and be made available on request by the *Project Manager* or any auditor approved by the *Project Manager.*

The *Project Manager* and Construction Health and Safety Agent reserve the right to attend such meetings, and it is expected of the *Contractor* to extend an invitation to the *Project Manager* and Construction Health and Safety Agent/SHE Manager.

Chairman: *Contractor* Site Manager
Frequency: Weekly and or when required by the *Project Manager* and or Construction Health and Agent.

Required Attendees: Management, SHE Department and Supervisors

Note: The *Contractor* SHE Department shall attend the weekly SHE meeting arranged by the Client SHE Forum Chairperson, which shall be attended by the Client Construction Health and Safety Agent/SHE Manager and SHE Officers*, Contractor* Safety Officers and Environmental Officer, and where requested by the Construction Health and Safety Agent, the *Project Manager* and *Contractor* must attend.

3.9.4 Monthly Client SHE Meetings

The Construction Health and Safety Manager shall host monthly contractor SHE meetings, which will be attended by the *Project Manager* and the *Contractor* (Project and Site Management teams and SHE Departments). The Project and contractor SHE performance for the previous month will be presented to the Client Project Management and Construction Health and Safety Agent. This meeting is mandatory and will show commitment by leadership towards supporting and enforcing compliance.

Attendance registers for all monthly SHE meetings shall be kept in the SHE file, and made available on request by the *Project Manager* or any auditor approved by the *Project Manager.*

Furthermore, the *Contractor* shall maintain a tracking register for all actions forthcoming from such meetings, and action close-out forms shall be kept in the SHE file, with supporting evidence of closure, and be made available on request by the *Project Manager* or any auditor approved by the *Project Manager.*

Weekly Chairperson: SHE Officer
Monthly Chairman: Construction Health and Safety Agent
Frequency: Weekly/Monthly

Required Attendees: Client Project Management and SHE Department and contractor SHE Departments

Note: The *Contractor* shall host a monthly SHE related meeting for all contractor employees under his or her charge. The meeting shall be documented and actions arising from the meeting shall be closed-out within an agreed upon timeframe. Such minutes and actions shall be submitted within 3 days of the meeting to the *Project Manager* and Construction Health and Safety Agent for acceptance and awareness.

3.9.5 Safety Awareness Themes and Talk Topics

The *Contractor* shall on a monthly basis roll out safety awareness themes on the site. These themes may be in the form of posters and or talks on specific safety topics identified as pertinent to the site and safety of every employee. This must form part of the *Contractor*'s SHE Plan.

The *Contractor* shall ensure that the Eskom Talk Topics for Safety, Health and Environment are discussed with all contractor employees and the attendance registers, together with the Toolbox Talk, is submitted to the *Project Manager* for acceptance.

3.9.6 General Walk-downs

The Site Management from the *Contractor* shall lead the site walk downs with the *Project Manager*, on a weekly basis, to demonstrate their commitment towards occupational health and safety

matters. These site visits will be used to identify both strengths and areas for improvement regarding SHE issues. Site walk downs will be documented and relevant report submitted to the *Project Manager*, within 24hrs, inclusive of an action plan to close out all deviations noted during such a walk-down.

Project staff and site management of the *Project Manager,* including all levels of supervision, will be required to do Visual Field Leadership inspection (VFL'S and Behavioural Safety Observations). The *Contractor* shall ensure participation and co-operation from all employees during such interventions.

3.9.7 Safety Stand-downs

There is an urgent need in the business to swiftly address the escalating number of safety and environmental incidents and to bring employee wellness to the fore. A decision was taken at the GCD Executive Committee on 19th July 2016, to reinforce SHEQ requirements by having two work stand-down interventions at each project site each year.

The target audience for these interventions will be employees and contractors. These engagements will focus on, amongst others, the pro-active reviews of SHEQ plans and the implementation thereof, audit findings and associated action plans, peer reviews, etc.

Furthermore, there is a need to mobilize employees and contractors around the site specific SHEQ focus areas, thus building a culture of safe work practices in line with Eskom's Zero Harm drive underpinned by the Lifesaving Rules. Discuss Gx Coal Business and SHE Culture points; and Eskom Life Saving rules

Two Eskom wide planned work stand down interventions per project/department each year in a collaborative manner focusing on the following outcomes:

- Recognition for good practice and attaining improved and sustained performance;
- Pro-active planned reviews of site specific SHE risk assessments and operational plans;
- Raise awareness with regards to site specific risks, trends and opportunities;
- Promote improved SHE performance;
- Leadership empowered and committed to engaging employees on safety and environmental management;
- Informed, empowered employees who take ownership of their personal safety and caring for that of others.
- Concentrate on weak links in the SHEQ chain supervision, complacency and training;
- Creation of a ZERO TOLERANCE culture towards SHE contraventions and adherence to the Life Saving Rules;
- Build a SHE culture within the construction environment ;
- To get Senior Management from the contractor companies to:
    - Review and update their construction processes, the co-ordination, administration and the management of resources on the construction site;
    - Discuss the implementation of their SHE plans and ensure the maintenance thereof;

- Review SHE audit reports;
- Ensure that SHE management system is maintained by the *Contractor* and its sub-contractors;
- Ensure co-operation between all contractors in order to ensure compliance with the Construction Regulations;
- Focus on site specific hazards, risks and opportunities in order to continuously improve SHE performance.

- Build a culture of safe work practices, pertaining to Safety, Health and Environmental excellence throughout the division, thus keeping our people, plant and the environment we operate in, safe from harm and injury;
- Energize, inspire and motivate employees to incorporate SHE behaviours into daily personal activities; and

Note 1: The *Project Manager* shall not be liable for any cost and time lost as results of such safety stoppage/stand down.

Note 2: The *Project Manager*, in consultation with the Client appointed Construction Health and Safety Agent, may request additional stand-downs due to an increase in incidents or any other SHE related matter. These stand-downs will be for the expense of the *Contractor.*

3.10 Legal and Other Requirements

The *Contractor* shall comply, as a minimum, with all relevant National Legislation, and conform to South African National Standards, the Eskom Policies, Standards, Procedures and Safety Site Instruction, as pertaining to the scope of the project.

It is the duty of the *Contractor* to ensure that they are familiar with all the necessary SHE legislation required for implementation on the project.

The *Contractor* shall compile a legal register listing all applicable legislation and standards that may have an impact on the scope of work that it is performing on this project. The register shall be updated on a regular basis and the *Project Manager* notified of such changes. The *Contractor* shall ensure that such a register is made available on request by the *Project Manager* or any auditor approved by the *Project Manager*.

3.11 Suspension of Activities under the Contract

Any person may stop an unsafe act or unsafe condition or activity that poses or may pose a threat to the health and safety of an individual, threat to plant or machinery or create a risk of degradation of the environment.

The *Project Manager* shall not be liable for any time and cost as a result of such work stoppage.

Note 1: A Client representative who deems it necessary to stop an activity as a result of unsafe acts and or conditions, must do so immediately and in the shortest possible timeframe, notify the *Project Manager* and appointed Client Supervisor.

3.12 Temporary SHE Work Stoppages

The project shall host quarterly SHE work stoppages, over and above the Eskom wide stand-downs. These stoppages will be to re-affirm the Project SHE Culture and provide feedback to all employees on SHE related performance achievements. The *Contractor* shall prepare a SHE related performance presentation, which the *Contractor* (In terms of the NEC 3 Contract) will present to all contractors working at the project. The *Contractor* shall ensure that all contractor employees are in attendance and actively participate.

At the discretion of the the *Project Manager* and the appointed Construction Health and Safety Agent, adhoc work stoppages may be implemented so as to further re-affirm the Eskom and project SHE Culture as a result of regular incidents and poor safety and environmental performance and conditions prevailing at the project.

3.13 Suspension or Termination of Contract due to Poor SHE Performance

The *Project Manager,* as defined in the contract between the *Project Manager* and the *Contractor,* will be the only authorised person to communicate the suspension or termination of the contract, as a result of continued poor SHE related performance.

“Eskom takes a ZERO TOLERANCE stance to violation of Eskom Lifesaving Rules and will apply appropriate sanctions.”

3.14 Contractor Site Facilities

3.14.1 Temporary Facilities Layout

Where required, the *Contractor* shall submit a detailed site layout plan for acceptance by the *Project Manager* after consultation with the Construction Health and Safety Agent/SHE Manager, Client Environmental Manager, the Power Station Environmental Manager and the Independent Environmental Control Officer.

Note 1: No site establishment shall take place prior to approval of the plan for temporary site camps and laydown/stockpile areas, by the *Project Manager*.

3.14.2 Dining Rooms and Eating Facilities

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

Furthermore, the *Contractor* shall provide, to the acceptance of the *Project Manager*, sheltered eating areas for use by the contractor employees. The maintenance and cleaning of eating areas shall be the responsibility of the *Contractor*. All costs involved are deemed to be included in the tender price.

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

The dining room facility, and all electrical appliances utilized for the purpose of boiling water and or heating food, shall be kept in a state of good repair and hygienically clean.

3.14.3 Change Rooms and Shower Facilities

Where required, the *Contractor* shall provide and maintain adequate and suitable changing and washing facilities appropriate to the workforce size and work duration, that conform with the requirements of all applicable legislation. The *Contractor* shall ensure that separate changing facilities are provided for both genders.

3.14.4 Ablution Facilities

Where required, the *Contractor* shall provide and maintain adequate and suitable sanitized ablution facilities appropriate to the workforce size and work duration that conforms to the requirements of all applicable legislation. Separate ablution facilities shall be provided for both genders.

Where the *Contractor* makes use of existing facilities provided by Power Station, the *Contractor* shall ensure that his or her employees support the aim of keeping these facilities clean and hygienic.

3.14.5 Laydown and Storage Areas and Facilities

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

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

Note: No establishment of laydown and storage areas and facilities shall take place prior to approval of the contractor site layout plan by the *Project Manager* has been received in writing.

3.14.6 Site Access Control

The *Contractor* Access shall ensure that no unauthorised access is gained to site laydown or construction areas by the public or farm animals. The *Contractor* is to submit a plan to the *Project Manager*, indicating how he or she intends to control access to site camps, laydown and constructions areas.

The *Contractor* shall ensure that no inadvertent access is gained to any of the materials, chemical substances, fuel, equipment or machinery.

3.14.7 Temporary Services

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

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

3.14.8 Existing Services

The *Contractor* shall give prior notice in writing to the *Project Manager* of his intention to begin excavation work in any area. The *Project Manager* will then arrange to have the approximate location of all known buried cables and or other existing services indicated to the *Contractor*. All movement and removal of existing buried services will, if necessary, be carried out by the *Contractor*.

The *Contractor* shall immediately inform the *Project Manager* of any existing services uncovered during the work. Prior to any excavation work, a scan shall be done by the *Contractor* to determine the exact location of any hidden services underground. Where possible, air driven shovels are to be used for any excavation work. The *Contractor* may only make use of manual labour as a last resort.

Note: The *Contractor* shall be responsible to obtain all permits to work for excavations to be dug, powerline crossings, hotwork to be conducted, from the Power Station, prior to commencing with excavation work.

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

The *Contractor* shall ensure that all temporary electrical supply, lights and equipment are installed and used in accordance with the OHS Act, Electrical Installation Regulations, relevant South African National Standards and by-laws, Regulations of the OEM and supplier concerned, including the PSR and ORHVS regulations. Attention shall be given to the positioning of such equipment in order to minimize pollution caused by noise and fumes.

Every portable generator shall be issued with a drip tray and refueling of these generators shall be done in such a way to prevent any spillage. Each Portable generator shall be fitted with an earth and/or earth spike.

All electrical installation shall have a C.O.C issued by a competent and appointed person.

3.14.10 Site De-establishment

The *Contractor* shall submit to the *Project Manager, a* Site De-establishment Plan that complies with the Power Station EMPr and project Site De-Establishment Plan Guideline, at least 30 days prior to any de-establishment of contractors under its control.

3.15 Contractor SHE requirements

The *Contractor* shall adhere to all the site rules as stipulated by the *Project Manager* and Power Station.

3.15.1 General Safety requirements

The *Contractor* shall ensure that:

- Good housekeeping practices shall be continually maintained and work areas left in a clean and safe condition at the end of each shift;
- Smoking policy: smoking is permitted in designated areas only;
- Only trained, certified personnel shall operate aerial lifts, forklifts or motorised equipment;
- Ladders must be properly constructed and kept in good repair. Ladders shall be the proper length and type for the task. All ladders shall be identified and registered;
- All scaffolding will be constructed per SANS Standards and the OHS Act & applicable regulations. Each person responsible for working on an elevated platform shall visually identify that scaffolding has been inspected and tagged by a competent person prior to each shift;
- Compressed gas cylinders must be stored and used in the upright position and properly secured at all times; protective caps shall be in place when cylinders are not in use, and gauges shall be removed prior to transportation of cylinders;
- All guards for personnel or equipment protection shall be kept in place and shall not be modified or tampered with;
- All floor and wall openings must be protected by adequate and firmly fixed means (that is, coverings, guardrails, and toe plates);
- Employees shall not walk or work under suspended loads;
- Mobile equipment must be shut off and parking brakes engaged when the equipment is being lubricated, refuelled, or adjusted;
- All excavations must meet Construction Regulations requirements and must comply with the project minimum standards for barricading, and adequate access and egress must be provided for excavations;
- Access to safety equipment must be kept clear at all times. A clear area must be maintained around fire hydrants at all times;
- All safety and warning tags and/or signs shall be observed;
- Speed limits must be observed (40km/h) or as otherwise indicated on the speed limit boards;
- All contractors must provide their own bins on site, which must be utilised for all waste as per the Power Station EMPr;
- Illegal drugs, alcohol, firearms, or other dangerous substances shall not be allowed on the project. Reporting for work under the influence of an illegal drug, alcohol, or other dangerous substance is not permitted;

- Cellular phones shall not be used in areas where cell-phone usage is prohibited;
- No earphones shall be worn during the normal working hours either by mobile machinery and LDV operators or pedestrians; and
- When walking through the site or to personal work areas, use recognised thoroughfares. Do not take short cuts or walk on uneven ground surfaces.

3.15.2 Traffic Management Plan

The *Contractor* shall develop and implement an adequate traffic management plan, taking into account all the requirements of the permits, licenses and consents as well as the safe access and egress of all anticipated traffic, pedestrians and vehicles to all working areas of the site including the core construction area, the lay down area and the site offices.

The *Contractor* shall also take into consideration the requirements as stipulated in the Client SHE Specification and once the plan is develop it shall be subjected for acceptance by the *Project Manager*. The purpose of the plan will be to organize the construction site so that vehicles and pedestrians using site routes can move around safely.

Key issues in dealing with traffic management on site, as a minimum, will be:

- Keeping pedestrians and vehicles apart as far as reasonably practicable by means of demarcation, signage and dedicated vehicle / pedestrian routes or other suitable means;
- Management of vehicle movement e.g. movement systems, speed limits;
- Vehicle parking, markings, signaling, loading and unloading procedures;
- Improving visibility of vehicles and pedestrians;
- As far as reasonably practicably possible, eliminate reversing;
- Signs and instructions;
- Public/employee interface;
- Project road maintenance;
- Operator and driver training and medical fitness;
- Vehicle/Plant maintenance program. (Tyre maintenance, Services, Dealing with defects etc.);
- Overhead power lines/structures;
- Ingress & Egress routes; and
- Parking of Mobile machinery & Equipment overnight.

The *Contractor* shall enforce the principles of road safety both on and off the site. This shall include the control of vehicles on site, road worthiness, vehicle maintenance programmes, signage, speed limits, and flagmen, warning lights, high-level flags and disciplinary procedures as and if required. The *Contractor* shall conduct road safety audits on a regular basis.

3.15.3 Construction Vehicles

3.15.3.1 Interaction between Construction Vehicles and Pedestrians

The *Contractor* must take reasonably practicable measures to ensure that pedestrians are prevented from being injured as a result of being run-over by construction vehicles and or mobile machinery.

Such measures must include at least the following:

- Spotters (where required);
- Separate walkways;
- Risk Assessment & Monitoring Plan;
- Access control;
- Traffic Management Plan & Site Layout Plan; and
- Awareness training.

3.15.3.2 Parking of Construction Vehicles

The *Contractor* shall ensure that sufficient parking space is allocated for the parking of all construction vehicles. Parking spaces must be demarcated per vehicle and may not restrict operations of the Power Station.

3.16 Occupational Health and Hygiene Management

The aim of this section is to stipulate the *Project Manager's* requirements with regard to occupational health and hygiene practices expected from the *Contractor* and its sub-contractors.

3.16.1 Workers' Compensation

The *Contractor* must submit proof of registration and a letter of good standing with the compensation fund or with a licensed compensation insurer for it and its sub-contractor companies as contemplated in the Construction Regulations of 2014, regulation 7(1)(iv). This must remain valid for the duration of the contract. The letter of good standing must reflect the name of the *Contractor* and or the sub-contractor.

Note: An application for registration or renewal of registration and or payment is not deemed as approved by the D.O.L.

3.16.2 HIV/Aids/TB & EBOLA Awareness Programme

An HIV/Aids awareness programme will be implemented and maintained by the *Project Manager*. This will include voluntary counselling and testing (VCT) of individuals prior to initial commencement of work at the site and HIV/AIDS awareness training and access to ongoing support for affected individuals. The *Contractor* shall ensure that its employees and its sub-contractor's employees are aware of this programme. Records of awareness programmes and

training are to be provided during audits and inspections as and when required by the *Project Manager*.

The *Contractor* shall also implement an HIV/Ebola/TB awareness programme to raise employee awareness regarding the disease. The *Contractor* shall submit such a programme to the *Project Manager* for acceptance and approval.

3.16.3 Protection against Dehydration and Heat Exhaustion

The *Contractor* shall take into consideration and mitigate dehydration and exhaustion of employees. Furthermore, the *Contractor* shall implement a procedure to address fatigue, and must be submitted to the *Project Manager* for acceptance.

3.16.4 Protections from Wet and Cold Conditions

The *Contractor* shall take into consideration and mitigate inclement and extreme hot and or cold weather conditions.

3.16.5 Employee Health and Wellness

The *Contractor* shall submit details of their employee health and wellness programme as part of their SHE Plan, which should include a medical surveillance programme and an employee assistance programme.

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

- Occupational health risk assessment as a background;
- Occupational health risk exposure profiles;
- Occupational hygiene monitoring program and ensure that monitoring is performed by an approved Inspection Authority;
- Communication of occupational hygiene results and requirements;
- Proof of awareness training; and
- Documentation and control of records (Records to be kept for 40 years).

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

- Hearing Conservation Program;
- Respiratory Protective Program;
- Hazardous Chemical Substances Program;

- Procedure for the use and management of radioactive sources;
- Heat and Cold Stress Management Program;
- Illumination Program; and
- Airborne Pollutants Management Program

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

Copies of all occupational hygiene assessments conducted by the *Contractor* must be submitted to the *Project Manager*. These assessments shall include but not be limited to Heat & Cold Stress, Airborne Pollutants, Noise, Vibration, Illumination, Radioactive Sources, Ergonomics and Hazardous Chemical Substances.

The *Project Manager* shall establish a database of contractor occupational hygiene surveys and corrective plans.

3.16.6 Medical Surveillance Programme

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

- The Health Risk Assessment defines the scope of the medical surveillance programme;
- The verified certificate of fitness shall be presented at to the *Project Manager's* Representative at the induction session. If the *Contractor* does not provide proof of valid and verified certificate of fitness for its employees and sub-contractor's employees, then access to site will be denied.
- That all medicals conducted by an external service provider, shall include the following information:
    - Copy of ID document;
    - A valid medical surveillance certificate inclusive of: physical test, eye test, audio test, lung function test, and where required by legislation and x-ray report and a site specific Man Job Specification.
    - Any restrictions to be indicated on the Certificate of Fitness (COF).
- The certificate of fitness shall be renewed at permitted legal intervals but as a minimum; annually (for employees who are not office-bound, including drivers) and once every three years (for employees who are office-bound. At termination of employment or on completion of the project, an exit medical examination shall be conducted for all employees, unless otherwise advised by the Occupational Health Practitioner.

- Visitors and suppliers who are visit site for a brief period of less than one day, will not be required to provide a medical certificate of fitness, but will need to declare any medical restrictions. If any visitor or supplier is to be conducted an form of construction work while on site, a medical certificate of fitness will be required.

Note 1: The *Project Manager* will only accept medical surveillances conducted by an Occupational Health Practitioner who holds a qualification in occupational health and registered with the Medical Board for Health Practitioners.

Note 2: All C.O.F's must comply with the template as is recorded in annexure 3 of the OHS & S Act, act 85 of 1993.

Note 3: The *Contractor* shall keep a medical restriction register on site and monitor remedial recommendations from the OHN who performed the employee medical. Such a register shall be made available during audits.

3.17 Emergency Care

3.17.1 First Aid Station

The *Contractor* shall provide a temporary first aid facility as close to the construction area as possible. The first aid station shall provide the initial medical treatment required to stabilize an injured employee, and shall be equipped with the general first aid equipment and in addition the *Contractor* shall be responsible for the following:

- Comply with the established communication network within the project/site or facility (including outside sources, if necessary);
- Establishing personnel accountability systems (including visitors);
- Stopping work and controlling the affected areas;
- Defining key personnel responsibilities and duties;
- Access to appropriate emergency resources and medical personnel as dictated by the emergency;
- Providing first aid training; and
- Briefing and reporting requirements.

The *Contractor* shall ensure that adequate measures and emergency plans shall be stipulated in writing and posted at various locations on the site to adequately inform all personnel and visitors.

The *Contractor* shall ensure that a competent First Aider is appointed and present on each shift of work.

First aid boxes shall be checked and documented on a monthly basis. The inspection checklist shall be made available during audits and a copy thereof placed inside the sealed first aid box.

3.18 Additional Emergency Care Requirements

The *Contractor* shall ensure:

- A list of all emergency numbers must be posted at phones and in every office;
- All contractor employees are familiar with the emergency numbers and also are provided with stickers with the emergency numbers printed on them to place inside their hard hats;
- There is one first-aid box for the first five persons and, thereafter, one for every 50 or team of workers on site or part thereof;
- Additional first-aid boxes shall be provided if the risks, distance between work teams, or workplace requirements require it (it should be available and accessible for the treatment of injured persons at that workplace);
- A prominent notice or sign in a conspicuous place at a workplace (SANS 1186-approved signs to indicate location of first-aid boxes), indicating where the first-aid box or boxes are kept as well as the name and contact details of the first-aider of such first-aid box or boxes;
- Alternative arrangements are made for possible incidents occurring after normal working hours;
- When services are not readily available from the PS Ash Dam Project medical centre, the *Contractor* shall make alternative arrangements for any medical assistance. Proof of this must be made available in the *Contractor* and its sub-contractor's SHE plans;
- That in instances where his employees and sub-contractor's employees require medical treatment off Site, the *Contracto*r's Safety Officer and the *Project Manager's* Safety Officer or *Supervisor* will accompany such employee;
- That it and its sub-contractors appoint trained and competent First Aiders as per the OH&S Act and regulations; and
- That the minimum contents of a first-aid box are as per the OH&S Act and regulations.

3.19 Emergency Contact Details

The following emergency numbers will be utilised during project execution at the Power Station:

- General Emergency Number -
- Fire Station -
- Medical Station -
- Security -

The *Contractor* shall ensure that the above numbers are posted on phones and in every office; and employees are familiar with these number. Employees shall be provided with stickers with the emergency numbers printed on them, and ensure that they are displayed at the back of their hard hats.

3.20 Welfare

The following welfare facilities must be provided for in a clean and suitable condition, unless agreement with the *Project Manager* has been confirmed regarding the use of existing facilities:

- Sanitary facilities;
- Changing facilities;
- Eating areas;
- Drinking water at strategic locations on site; and
- Safe pedestrian walkways.

Water for drinking/consumption purposes shall be drawn only from taps in mess areas and ablution blocks and at points on site marked “drinking water”.

No equipment or system shall be connected to the drinking water system without prior acceptance of the *Project Manager*. The Contractor will be required to provide its own accommodation for the workers.

The *Contractor* will be required to provide its own accommodation for the workers.

3.21 Housekeeping, Stacking and Storage

The *Contractor* and its sub-contractor’s shall maintain a high standard of housekeeping in accordance with the Construction Regulations of 07 February 2014, regulation 27 within the Laydown and Working Areas and shall ensure that:

In accordance with the Construction Regulations of 07 February 2014, regulation 28, the *Contractor* shall appoint in writing a competent person with the duty of supervising stacking and storage on the construction site; that shall ensure:

- That storage and stacking are correctly and safely carried out;
- Materials/objects shall not be left unsecured in elevated areas; falling objects may cause serious injuries/fatalities;
- All packaging material, including boxes, pallets, crates, etc., to be removed from the work area immediately;
- Working areas are cleaned of all rubble, and or that the rubble is effectively barricaded until such time as it can be removed, to the satisfaction of the *Project Manager*; and that

Regular safety/housekeeping inspections are carried out at least weekly. The inspections shall document the results of each inspection and the *Contractor* shall maintain records for viewing.

Note: No materials may be stored elsewhere, other than in areas that have been approved in writing by the *Project Manager*.

3.22 Signage

All contractors shall use all symbolic safety signage that conforms to the requirements of the SAN Standards and/or applicable legislative requirements.

The display of the following signs is mandatory:

- All contractor companies must post a sign up at their site offices to reflecting the name of the contractor, the name and contact details of the Construction Manager, Construction Supervisor, Health and Safety Manager/Practitioner, First-aider, Health and Safety Representative, and Evacuation Warden.
- Furthermore, all contractors shall display a statistical board containing the number of employees, the days worked without a Lost Time Injury, total hours worked without a Lost Time Injury, date of last Lost Time Injury. The numbers shall be visible and readable from a minimum distance of 15m.
- “Radioactive material” symbolic signs at radioactive storage areas.
- The location of every first-aid box, fire extinguisher, and emergency exit is to be clearly indicated by means of a sign.
- At the entrance to premises where machinery is used: restricted access on “Authorised person only” signs on entry.
- When in use, an explosive-powered tool shall have a sign warning people of its use.
- All contractors shall provide the signage where work is conducted and where unauthorised entry is prohibited and/or where alerting and cautioning passers-by to be aware of potential dangers.

All appropriate signage for stores, flammable liquid stores, chemicals stores, workshops, construction areas etc, is to be conspicuously displayed as per legislative requirements.

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

3.23 Personal Protective Equipment (PPE)

Refer to Eskom’s PPE Specification 240-44175132 and Section 8 of the OHS Act.

Additional PPE requirements shall apply in certain circumstances as per risk assessment conducted by the *Contractor*.

The *Contractor* and its sub-contractor’s employees, including visitors, shall use the following SANS or the relevant internationally recognised authority-approved risk-based PPE at all times, as a minimum:

- Head protection - hard hat with an attached 3 point chin strap;
- Steel-toe capped safety boots (No Stilettos or high-heeled shoes will be allowed on the project);
- Eye protection - Wearing of impact safety spectacles with side shields. Prescription glasses must comply with the same standard, or cover impact safety spectacles must be worn over them;

- Long-sleeved and long pants protective clothing (with reflective strips sowed on). For all electrical work conducted in switchgear rooms, protective overalls with a minimum Cal value of 8 shall be worn;
- High-visibility vests; and
- Hearing protection as determined by the *Contractor's* noise assessment and Health Risk Assessment.

3.23.1 General requirements for PPE

The *Contractor* shall ensure that:

- All contractor employees understand why personal protective equipment is necessary and that they use it correctly.
- Strict non-compliance measures must be administered for any employee not complying with the use of PPE, and he/she shall be removed from the site.
- The use of safety belts (work positioning belt with a work positioning lanyard - picture 1) is strictly prohibited. Only Eskom-approved fall arrest/fall prevention equipment must be used when conducting work in elevated positions.

Picture 1: Tool Lanyard

- Welders, brazers, cutters, and aiders shall wear suitable eye protection, gloves, and apron spats, and screens shall be provided to protect onlookers and passers-by.
- Suitable impact-resistant eye protection shall always be worn for grinding, chipping, and chasing, and screens shall be provided to protect onlookers and passers-by.
- When working with hazardous chemical substances (for example, acids or caustic substances), suitable eye protection, gloves, and special overalls shall be worn.
- Suitable eye protection shall be worn by all persons, including visitors, to any designated eye protection area.
- Ear protection shall be worn in any designated noise zone.
- Suitable respirators shall be provided where gas and/or dust could pose a hazard.

- All employees are properly trained in the use of PPE, prior to the issuing thereof and such training shall include maintenance and storage thereof as prescribed by the OEM requirements.
- No contractor employee shall wear clothing that indicates any other company, other than the company he/she is currently employed at and working for on the project. Any employee found in contravention of this requirement, will be removed from the project until the appropriate clothing is worn.
- All hard hats are to be worn with chin straps attached as per Eskom requirements.
- All contractors shall comply with the General Safety Regulation 2 of the OHS Act, section 23 and the Eskom Personal Protective Equipment Standard - 240-44175132 as a minimum requirement.
- All employees wear mandatory long-sleeved and long pants protective clothing when entering the construction site, or as otherwise agreed upon between the *Project Manager* and the *Contractor*.

3.23.2 Management Responsibilities for PPE

Management must ensure that:

- The needs for PPE are assessed by a person who is competent to judge whether other methods of risk control can offer better protection of safety and health than the provision of PPE
- Professional advice is obtained, where necessary, to identify the most suitable types of PPE for the tasks to be carried out
- Training is provided to supervisors and employees to enable them to ensure the proper selection, fit, use, cleaning and maintenance of PPE
- Supervision and enforcement of the PPE policy is undertaken
- Evaluation of the effectiveness of the PPE program is carried out on a regular basis
- Suitable PPE is provided for visitors who may be exposed to hazards in the workplace.
- All equipment complies with current relevant Australian Standards and should be stamped or labelled with an AS compliance marking. Existing PPE shall be re-assessed regularly to ensure compliance.

3.23.3 Employee Responsibilities for PPE

Employees must ensure that:

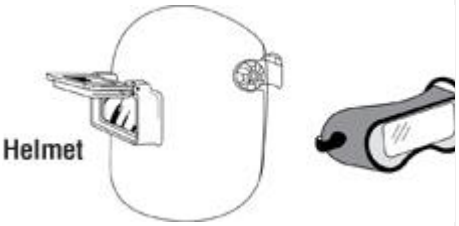
- Must use the protective clothing or equipment in a manner in which he or she has been properly instructed to use it;
- Must not misuse or damage the clothing or equipment;

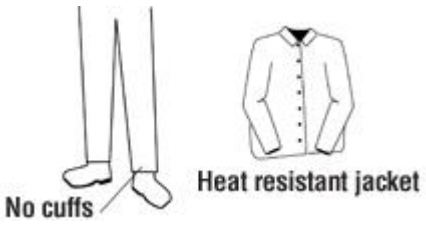
- As soon as practicable after becoming aware of any damage to, malfunction of, or need to clean or sterilise, the clothing or equipment, notify the person providing the clothing or equipment of the damage, malfunction or need to clean or sterilise the clothing or equipment.

3.23.4 Types of PPE

PPE can be considered in the following categories, based on the type of protection afforded by the equipment:

- Respiratory protection - for example, disposable, cartridge, airline, half or full face;
- Eye protection - for example, spectacles/goggles, shields, visors;
- Hearing protection - for example, ear muffs and plugs;
- Hand protection - for example, gloves and barrier creams;
- Foot protection - for example, shoes/boots (Steel-toe capped);
- Head protection - for example, helmets, caps, hoods, hats;
- Working from heights - for example, harness and fall arrest devices;
- Skin protection - for example, hats, sunburn cream, long sleeved clothes; and
- Other personal protective equipment - this may include PPE for specific tasks such disposable clothing for working with chemicals, radiation hazards, welding, painting. Examples include: lead aprons for x-ray protection; sleeve protectors, aprons, coveralls when using chemicals; leather jackets, trousers and spats for welding; category 2 overalls for voltage work, thermal and cold protective clothing for work near furnaces and cool rooms.

Welding - Personal Protective Equipment			
Body Part	**Equipment**	**Illustration**	**Reason**
Eyes and face	Welding helmet, hand shield, or goggles		Protects from: • radiation • flying particles, debris • hot slag, sparks • intense light • irritation and chemical burns Wear fire resistant head coverings under the helmet where appropriate

Lungs (breathing)	Respirators		Protects against: • fumes and oxides
Exposed skin (other than feet, hands, and head)	Fire/Flame resistant clothing and aprons		Protects against: • heat, fires • burns • radiation Notes: pants should not have cuffs, shirts should have flaps over pockets or be taped closed
Ears - hearing	Ear muffs, ear plugs		Protects against: • noise Use fire resistant ear muffs where sparks or splatter may enter the ear, rather than plugs.
Feet and hands	Boots, gloves		Protects against: • electric shock • heat • burns • fires

Note 1: If there are particular activities/areas/risk assessments that require a specific type of PPE, that specific PPE requirement must be adhered to (for example, for dusty environments - eye goggles; for welding - welding helmet; Low, Medium and high voltage work - category 2 overalls; etc.).

Note 2: When conducting grinding activities, double eye protection shall be worn (eye goggles and face shields)

Note 2: The *Contractor* shall ensure that all artisans involved in hotwork, wear adequate neck, leg and arm protection to prevent any injuries; see pictures 2 below for an example.

Picture 2: Protection for Hotwork

3.23.5 Issue, Replacement, Care and Control of PPE

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

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

3.24 Hazardous Materials and Chemicals Management

The *Contractor* and its sub-contractors shall comply with the HCS Regulations GNR.1179 of 25 August 2995 and all subsequent amendments.

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

- Material safety data sheets (MSDS) in accordance with the requirements of the OHS Act Regulations for Hazardous Chemical Substances;
- Purpose for bringing the hazardous substance onto the site;
- Proposed arrangements for safe storage;
- Proposed methods for handling/usage;
- Proposed method of disposal; and
- Hazard communication/training plan.

This information is to be provided to the *Project Manager* for review and acceptance at least ten (10) working days prior to the expected delivery on site.

The *Contractor* shall ensure that the MSDS's are present at the point of storage and usage of the chemical and that the appropriate training has been given.

3.25 Flammable and Combustible Liquids

The *Contractor* shall submit a proposal on how he intends to store fuel on site, and must have written acceptance from the *Project Manager* prior commencing with the fuel storage. The volumes of fuel allowed to be stored will depend on site conditions and Statutory Regulations.

The *Contractor* and its sub-contractors must comply with the legal requirements for storage of flammable and combustible liquids, as stipulated in the Construction Regulations, regulation 25, the General Safety Regulations, regulation 4 and SANS 10131.

3.26 Compressed Gas Cylinders

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

Gas cylinders shall be stored in a gas cylinder store, and the *Contractor*, shall ensure that:

- Cylinders are stored in types of contents;
- Stored in an upright position and chained into position to prevent falling over;
- Empty bottles are stored separately from full bottles;
- Stores are effectively roofed to prevent exposure of bottles to weather elements and direct sunlight;
- The store is locked at all times;
- Required signage is displayed;
- FFE are placed a minimum of 5m away from any store; and

- All vegetation is cleared inside and from within 2m of any store.

The *Contractor* shall ensure that when in use, gas bottles are securely placed on a trolley designed for the purpose of holding gas cylinders upright. See Picture 3 for an example.

Picture 3: Gas Cylinder Trolley

3.27 Machinery, Tools and Equipment

All machinery, tools and equipment shall be managed according to applicable regulations. The *Contractor* and its sub-contractors shall ensure all machinery, tools and equipment:

- Are identified and safe to be used and are maintained in a good condition;
- Shall be adequately guarded when driven by means of belts, gear wheels, chains, and couplings. A machine is guarded when persons cannot gain inadvertent access to the moving parts;
- Machine guards must be painted on the outside in the same colour as the machine or tool;
- The inside of guards and moving or rotating parts must be painted orange;
- Listed on an inventory list, which is handed to Security with a copy, kept on site;
- Are regularly inspected at least monthly or as required by legislation and risk assessments; registers of tools shall be kept in the safety file;
- Are numbered or tagged so that it can be properly monitored and inspected;
- Must have the necessary approved test or calibration documentation, where applicable, prior to being brought onto the premises, and the records shall form part of the SHE plan;
- All fuel-driven equipment must be inspected by the *Project Manager's* SHE practitioners prior to mobilising it on site; and

- All fuel-driven equipment must be properly maintained in accordance with the manufacturer's recommendations and legal requirements.

The *Project Manager* reserves the right to inspect items of plant or equipment brought to site by the *Contractor* and its sub-contractors, for use on this contract. The *Project Manager*, on finding that any item is faulty, unsafe or in any other way unsuitable for the safe execution of the work, for which it is intended, shall instruct the *Contractor* in writing, and the *Contractor* shall forthwith remove the item from the site and replace it with a safe substitute.

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

Record-keeping

The *Contractor* and its sub-contractors shall ensure that:

- A register should be used that indicates the name, the number of the machine or tool, and the number of guards;
- The register should be kept in the safety file;
- A checklist for air tools, including records of the measurement of revolutions on grinders;
- A checklist for all other tools; and
- A gas cylinder trolley checklist.

3.28 Explosive-powered Tools and Actuating Fastening Devices

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

- Written permission to use these tools on site must be obtained by the *Project Manager*;
- Only trained and competent personnel (CR Regulation 21 (1)(b)) are allowed to operate explosive-powered tools on site;
- A valid permit must be obtained before commencement of work.
- Safety signs and barriers must be erected before explosive-powered tools are used;
- Users should be issued with suitable protective equipment; and
- Cartridges and explosive-powered tools to be stored separately.

Record-keeping

The following records shall be kept and maintained:

- Register for the issue and return of cartridges; and
- Register of all explosive-powered Tools and actuating fastening devices.

3.29 Lifting Machines/Equipment and Lifting Tackle

All lifting machines, equipment, lifting tackle and lifting operations must be managed in accordance with the applicable regulations and SAN Standards and Eskom Procedure, 39-98_Safe use of lifting machines and lifting tackle. In addition, the *Contractor* shall ensure that:

- A competent Lifting Machine Inspector (LMI), registered with the Engineering Council of South Africa (ECSA) is appointed and manages all lifting equipment and operations;
- Only a competent rigger with a red seal is utilised for all rigging activities above 10 tons and or all critical loads;
- That he/she is in possession of a lifting machine authorised permit/carry card;
- A risk assessment shall be conducted prior to commencing with the task to identify the risk involved, and appropriate mitigation measures must be put in place;
- If it is the *Contractor*'s intention to use lifting machines on site, it should be indicated in the *Contractor*'s SHE Plan. The *Contractor* shall ensure that all lifting equipment is inspected before being brought to site and such inspections records to be submitted to the Client for verification. If it's the *Contractor*s intention to use a sub-contractor, he or she must enter the name of the sub-contractor in the notification letter to the Department of Labour;
- All lifting machine operators shall be competent to operate a specific type of lifting machine. They must be in possession of a valid permit;
- The *Contractor* shall verify whether the lifting machines have been examined and a performance test done;
- The training shall be done according to the code of practice by a provider registered with the Department of Labour;
- Before using any lifting machines or tackle, the operator shall inspect it/them;
- All lifting tackle should be examined by an accredited person/company at intervals not exceeding three months;
- All lifting tackle should be recorded in a register;
- All hooks shall be fitted with a safety latch/catch;
- A management control system should be implemented to ensure that only an operator who is competent can draw lifting machines and forklifts;
- All lifting tackle should be conspicuously and clearly marked with identification particulars and the maximum mass load for which it is designed;
- No person shall be moved or supported by means of a lifting machine, unless such a machine is fitted with a cradle approved by an inspector;
- A risk assessment should be conducted prior to starting with the task;
- Account should be taken of wind forces;
- Lifting machines are erected taking into account a safe distance from excavations, so as to ensure stability of the ground surrounding excavations;
- No work will be done in close proximity to power lines unless the line is isolated;

- Account should be taken of the bearing capacity of the ground;
- The *Contractor* and sub-contractor's employees shall keep out from under suspended loads, including excavators, and between a load and a solid object where they might be crushed if the load should swing or fall. They shall not pass or work under the boom or any crane or excavator;
- Crane loads are not carried over the heads of any workmen; and
- Guide ropes to be used to prevent loads from swinging.
- A Lifting Plan or Rigging Study is compiled for all lifts, submitted to the *Project Manager* for acceptance, and must be in accordance with the Eskom Procedure for the Safe Use of Lifting Machines and Lifting Tackle - 39-98.

The following criteria will be required, in addition to Eskom's Procedure for the Safe Use of Lifting Machines and Lifting Tackle - 39-98, and as a minimum within such a Lifting Plan:

- Name of Competent Lifting Plan/Lifting Rigging Study Developer and competency certificates;
- Name of Competent Rigger and competency certificates;
- Name of Competent Hoist Operator and competency certificates (specific to the type and size of the crane);
- Name of signaller (where necessary) and competency certificates;
- Crane to be used to make the lift with load charts showing capacity and radius from centre of the crane, including crane identification number;
- Rigging design drawings where necessary to describe the lift and rigging being used for the lift;
- Serial/tag numbers of the hoists and slings;
- Communication medium and parties;
- Sling attachment drawings;
- Size, weight, and configuration of the component being lifted;
- Elevation that component is being lifted too;
- Method statements;
- Risk assessments; and
- Safety precautions necessary for all employees in the area, including personnel employed by other contractors;

Prior to the lift taking place, the Contractor shall ensure that a review is conducted. This review shall include the following:

- Review of crane inspection and maintenance documentation to be assured they are current;
- A Pre-job briefing including all employees involved in making the lift; and

- The briefing of all other contractor's supervisors who have employees working within the area, if any.

Note 1: The *Contractor* may make use of the Lifting and Rigging Risk Analysis and Inspection Template as indicated in Appendix D.

Note 2: No mobile or any other lifting equipment may be brought to site and put into use, prior to the Power Station GMR2 authorizing such an equipment or mobile plant.

Record-keeping

The following records shall be kept and maintained:

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

3.30 Working at Heights

Refer to Eskom's Procedure Working at Heights 32-418 (Latest revision).

Where applicable, the *Contractor* shall ensure that all employees designated to work at heights have received the appropriate training in the safe use of harnesses.

The *Contractor* shall develop and submit a task specific Fall Protection Plan prior to any work commencing at heights, which shall include as a minimum, the following requirements:

- Statement of Company Policy;
- Scope of the project or activity;
- The details and competency certificates of the Fall Protection Plan developer;
- Appointment and authorization letters of Key Personnel;
- Risk Assessment of the site and task;
- Evaluation of Employee Physical & Psychological fitness;
- Program for Training;
- General Preventive Measures;
- Fall Protection Systems to be used;
- Calculation of Fall Clearances;
- Anchorage point specifications and diagrams;
- Implementation of Plan;

- Fall Arrest PPE requirements in compliance with the relevant legislative and SAN Standards;
- Company Working at Heights Procedure;
- Rescue Plan;
- Changes to the Plan;
- Checks and Inspections of Fall Arrest Systems;
- Permit Systems;
- Medical COF of team members;
- Any Special requirements;
- Work platform requirements;
- Weather Hazard requirements;
- Incident Investigation Procedure;
- Method statement, Safe work procedure, Task analysis and any Work instruction; and
- Toolbox Talk and attendance registers.

All training received shall be from an accredited service provider, registered with SAQA, and be able to present the following accreditations as a minimum:

- Fall protection plan design training (SAQA NQF Unit standard no. 229995, 230000, 229999 and 229994)
- Ladder Course Trainer (SAQA NQF Unit Standard no. 229995, 230000 and 229999)
- Fall Arrest Trainer (SAQA NQF Unit Standard no. 229995, 230000, 229999)
- Rope Access Trainer (IWH approved trainer and rope access level 3)
- Unit Standard Assessor (The assessor of each course must be a SETA accredited assessor for that specific unit standard that is being assessed.).

Note 1: In the event that the *Contractor* has not identified an accredited service provider, it may request the training vendor list from the *Project Manager.*

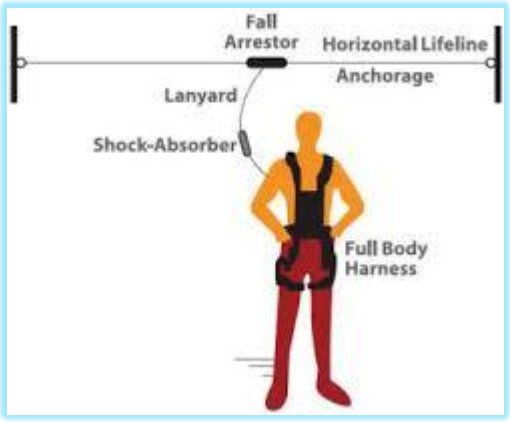
Note 2: The *Contractor* shall ensure that the Fall Protection Plan is incorporated into the overall project SHE Plan.

Note 3: The *Contractor* shall ensure that all portable ladders and scaffolding, comply with the relevant legislation and SAN Standards; i.e. SANS 10085.

Note 4: The *Contractor* shall ensure that all temporary and permanent lifelines are installed by a competent person (Rope Technician trained in terms of the relevant SAQA Unit Standards), in accordance with legislation, and permanent lifelines authorized by a Civil Structural Engineer.

Note 5: See pictures below for Fall Arrest Systems.



3.31 Excavations, Trenches, Floor Openings and Working Areas

All excavations, trenches and floor openings shall be done in accordance with CR Regulation 13. In addition, the *Contractor* and its sub-contractors shall comply with the following requirements:

- Areas where there is an interfacing of activities with project employees and activities, in relation to normal operations at the Power Station, the *Contractor* shall ensure that effective solid and demarcated barricading is placed, so as to protect project employees.
- Digging, excavation, or driving a peg, pile, or spike into the ground by the *Contractor* shall not commence without written authorisation from the *Project Manager* (Permit to Work);
- Prior to commencing work on any excavation or trench, the *Contractor* and or its sub-contractors shall determine the location of all underground installations, that is, sewer, telephone, water, fuel, electric, etc. Overhead hazards shall be assessed and dealt with prior to commencement of work;
- Adequate precautions shall be taken by the *Contractor* to prevent slumping of excavations, as well as to prevent rocks and loose material falling onto workers;
- Where an excavation endangers the stability of building or walls, and are adjacent to roads, railway lines, backfilled excavations or trenches that may impose vibrations on such an excavation, the *Contractor* must ensure that the excavation is secured by a suitable means;

- All excavations dug by the *Contractor* are to be clearly demarcated and barricaded to prevent accidental access by mobile machinery, construction vehicles and or people;

- Only solid barricading will be used in areas where a fall hazard or where the possibility of mobile machinery driving into and excavation or trench is present. Solid barricading and or hole covers shall be provided around all holes or openings to prevent any person being injured as a result of a fall. Danger tape may only be used as a pre-warning to make the solid barricading more visible and to prevent persons, mobile machinery or construction vehicles from coming close to the danger area; See Picture 4 below.

Picture 4: Solid Barricading with Danger Tape

- Solid barricading must be placed as close as reasonably possible to the excavation, and along the entire length and circumference of the excavation;

- Adequate lighting shall be provided for (portable lights), where excavations will be left over night, regardless of the effectiveness of the barricading;

- Where it is impracticable to provide fixed guard railing, effective removable barriers shall be provided at all unguarded openings, railings or floors, and these shall be maintained in position at all times until the hazard no longer applies;

- Warning signs and flashing warning lights at night shall be displayed in suitable positions to warn any persons approaching the area of the location and extent of any excavation;

- No material to be stacked within 3 m of the excavation edges;

- All excavations must captured be on a register and inspected daily before any work commences and after inclement weather by the *Contractor*'s appointed competent person, declared safe, and his findings noted in the said register. The *Project Manager* may review the said register at any given point in time but not exceeding 30 days; and

- All excavation work will be performed under continuous direct supervision.

The *Contractor* shall ensure that the edges of all soil stockpiles are protected with a solid soil barricade/berm and or step hill, sufficient enough to prevent the edge overrun by any mobile machinery or construction vehicle.

Note 1: Where barricading cannot be placed due to the construction methodology of starter and dam walls and civil excavations, strict access control shall be enforced. Delineators shall be posted against the edges of such walls, and at least 1m from any other type of excavation, so as to create a visible indicator for operators as to the whereabouts of the edge of the wall or excavation.

Note 2: The *Contractor* shall develop and submit a procedure for managing all excavations for the duration of the project. Should it be required by the DOEL, *Project Manager* and or Construction Health and Safety Agent appointed by the Client, the procedure and methodology of managing excavations and walls shall be revised.

3.32 Permit to Work

The *Contractor* and its sub-contractors must adhere to the approved Eskom permit-to-work system.

The *Contractor* shall ensure that an adequate number of employees are trained, competence-assessed, and authorised in writing to perform the duties of an Authorised (AP) or Responsible Person (RP) as contemplated in the applicable Eskom regulations, for example:

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

The *Project Manager* is to provide more details on the permit-to-work system for the specific work to be conducted by the *Contractor*.

Note: Where an integration of or multiple permits exist in a certain working area, and activities takes place by the Power Station and the *Contractor* in the same area, it will be the responsibility of the *Contractor* to notify the *Project Manager*, who will set up an integration meeting so as to ensure no incidents take place which could result in injuries or damages to operating plant. Examples thereof are different work taking place by the Power Station and the *Contractor* in Switchgear Rooms.

3.33 Working Close to Roads and Access Routes

The *Contractor* shall ensure that necessary precautionary and preventative safety measures are to be taken where persons are required to work near roadways. Consideration must be given to the wearing of high-visibility vests, and protection by red cones or flags during daylight and use of red or amber flashing lamps at night.

Work areas are to be effectively barricaded so as to prevent unauthorized access and all appropriate road traffic warning signs are to be conspicuously displayed in compliance with Road Note 13 for work to be conducted on roads.

The *Contractor* shall ensure that adequate demarcation, barricading and illumination exist during such activities, both during day work and night work.

3.34 Form Work and Support Work

The *Contractor* shall prepare a detailed procedure for form work and support work to ensure that all such work is carried out under the supervision of a competent person and that the design of such formwork and support work structures are done with reference to the structural design drawings and kept on site. All scaffolding to be used must be designed by a competent person, and take into consideration the building or structure it will be used against and or for, and also take into consideration CR 2014, regulation 6, when designing scaffolding structures.

3.35 Cutting, Welding and Hotwork

All cutting, welding and hot work shall be conducted or performed in accordance with the applicable Regulations. In addition, the *Contractor* and its sub-contractors shall ensure:

- A valid hot-work permit shall be present during all hot-work activities, and be made out per working area. Block permits will not be permitted;
- An adequate number of approved fire extinguishers shall be provided by the *Contractor*; and
- That a Fire Watcher is present during hot work activities and that a thirty minute fire watch is maintained after the operations have ended to ensure that no fire starts.

Furthermore, the *Contractor* and its sub-contractors shall ensure that prior to any such activities taking place; it complies with the *Project Manager's* permit-to-work requirements for Hot-work activities.

3.36 Hazard and Risk Management

The *Contractor* shall have risk assessments performed by a person who is competent and appointed in writing, in compliance to the Construction Regulation 9 (1) (a-e), and in alignment to the Eskom 32-520_Eskom OHS Risk Assessment Procedure. Such risk assessments shall form a part of the SHE Plan to be applied to the site.

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

The Contractor shall ensure that:

- All hazards and risks, pre-emptive and emerging, pertaining to the scope of works are identified;
- All risks are analysed and evaluated;
- All risks are mitigated by means of the hierarchy of controls;
- Risk monitoring review plans are developed and implemented; and
- All risk assessments are well communicated, understood and mitigating controls effectively implemented.

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

Project Specific Hazards		
Insufficient lighting	Electrical contact	Ground stability
Dust (Coal & other)	High winds	Mobile plant
Inclement weather	Heat	Fatigue
Lifting & rigging operations	Loading and unloading	Design & maintenance
Working at heights	Underground services	Pedestrians
High vehicle movement	Skills and resources	Muddy road surfaces
Ill-health	Hot work (Welding, cutting etc)	Man/Machine interfacing
Substance abuse	Access control	Fires
Moving machinery parts	Excavations	Environmental Degradation
Unrests, Strikes	Nip Points	Graves
Water masses	Contractor Interfacing	Theft
Wild animals	Noise	Subsidence of Stockpiles
Falling objects	Vibration	Regulated Areas

Note 1: The list above is not conclusive. The *Contractor* is to ensure that the *Project Manager* is notified of all new risks not indicated in the list above or within this SHE Specification.

Note 2: Furthermore the *Contractor* shall ensure that all risk assessments are made available to the *Project Manager* for review and that these documents form part of the *Contractor's* SHE Plan and SHE File.

3.37 Baseline Risk Assessment

The *Contractor* shall take into consideration, the *Project Manager's* Baseline Risks as identified above in point **3.36**, when identifying, evaluating, and mitigating project SHE risks.

Risk assessments shall be reviewed at least annually, after an incident, before introduction of new technologies, after any changes take place to the activity as a minimum.

The baseline risk assessment shall be conducted prior to site establishment and the *Contractor* shall ensure that remedial actions are addressed to prevent occurrence thereof.

Note: Please refer to Annexure E (Risk assessment Template) as a minimum guideline.

3.38 Issue-based/Activity-based Risk Assessment

Activity based risk assessments shall be conducted for all activities and be available on site where the work is performed. Such a risk assessment shall be communicated to the particular employees before commencement of the activity.

The Issue-based assessment shall be utilized to develop the SWP's and or MS's for the specific task.

3.39 Pre-task or Work Risk Assessment

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

Proof of communication as well as confirmation that it was received and understood by all will be noted on a standard form, which will be kept at the job site during the job execution. The completed signed pre-task risk assessment form will be filed in the *Contractor's* SHE File and made available to the *Project Manager* and all auditors appointed by the *Project Manager* on request.

The *Contractor* shall ensure that all pre-task/work risk assessments are:

- Signed-off by the SHE Representative and SHE Officer on the same day;
- Reviewed when the task changes and or additional task steps are added.

3.40 Safe Work Procedures and Practices (Method Statements)

The *Contractor* shall ensure that there are written safe work procedures/method statements for all activities. Risk assessments should refer to the safe work procedures, i.e. reference number and task name. A safe working procedure should be written when:

- Designing a new job or task;
- Changing a job or task;
- Introducing new equipment or substances; and
- Reviewing a procedure when problems have been identified, for example, from near miss incidents or an accident/incident investigation.

The SWP/MS should identify:

- The level of supervision required for the task;
- The training and qualifications required by the workers to perform the task;
- The supervisor for the task or job and the employees who will undertake the task;
- The tasks that are to be undertaken that pose risks;
- The equipment and substances that are used in these tasks;
- The control measures that have been built into these tasks;
- The personal protective equipment to be worn;
- Actions to be undertaken to address safety issues that may arise while undertaking the task; and
- Procedures to be followed in the event of an emergency.

The *Contractor* shall ensure that the appropriate method statement or safe work procedures are communicated to the appropriate employees before commencing the task. Proof of communication and awareness training shall be kept in the SHE file and be made available to the *Project Manager* and all auditors appointed by the *Project Manager* on request.

Note 1: Safe Work Procedures and or Method Statements, shall be comprehensive, and shall include all SHE requirements as identified in the risk assessment. The *Contractor* may not claim that SHE requirements are identified in the risk assessment and thereby omit them from the SWP and or MS.

Note 2: All applicable procedures and other requirements are to be documented in the SWP/MS and provided with the SWP/MS for evaluation to the *Project Manager*.

Note 3: No generic SWP or MS shall be allowed. Each task shall be pre-empted with a unique and up to date SWP or MS.

Note 4: All SWP's and or MS, shall be submitted to the *Project Manager* for evaluation by the Client SHE Department, prior to the commencement of any activity or task. No task or activity may commence without the acceptance and sign-off of the SWP and or MS.

Note 5: SWP's and or MS's shall be revised after each incident, regardless of the severity thereof.

3.41 High Risk Activities

When the *Contractor* and or its sub-contractors are working in an area where a high health and safety risk exists, the *Contractor* shall:

- Ensure that direct supervision is present for the full duration of the high risk activity that is being conducted;
- Ensure the use of safety standbys in areas of high-risk activities;
- Provide, erect, and maintain all the required solid barricading, lighting, flags, flashing lights, or other safety control equipment to enable operations to proceed in a safe manner.
- Maintain, at all times, defined access ways, which are clear of objects or obstructions, so as to allow for emergency vehicle entry; and
- Provide any temporary protective shielding required for protecting nearby operations from the construction activities.

High-risk activities shall include, *but not limited* to the following:

- Demolishing of existing structures
- Excavation activities;
- Erection of new structures;
- Loading and offloading of trucks;
- Lifting and lowering operations;
- Working at heights;
- Working underneath overhead power lines;

- Working on electrical switchgear;
- Working in wetlands and extreme muddy areas; and
- Operating man cages.

3.42 Emergency Preparedness and Response

The *Contractor* and its sub-contractors shall develop a site-specific emergency response plan.

Using the Power Station Emergency and Response Plan, the *Contractor*, together with its sub-contractors, will develop their own emergency response plan (as a guideline) for site and submit this plan to the *Project Manager* for acceptance. The *Contractor* will ensure that all contractor employees are trained on this plan.

The *Contractor* shall undertake periodic emergency drills, not exceeding 3 months apart, or as and when required by the *Project Manager.*

The *Contractor* shall participate in all periodic emergency drills undertaken by *Project Manager* and the Power Station.

The following emergency numbers will be applicable to the project:

- General Emergency Number -
- Fire Station -
- Medical Station -
- Security –

Note 1: The *Contractor* shall ensure that the EMR Plans are in co-ordination with the powers station EMR Plans; and

Note 2: Such plans shall be submitted to the *Project Manager*, who after consultation with the Construction Health and Safety Agent and Fire Master for the Power Station, will accept the plans.

3.43 Fire Risk Management

The *Contractor* must develop a fire safety procedure for the specific construction site prior to commencing work. The procedure must take into consideration the size of the site, the type of work being done, the amount of combustible materials and the Power Station Emergency Preparedness and Evacuation Plans. It must be developed in accordance with the hot work permit of the Eskom Plant Safety Regulations, Eskom Fire Risk Management requirements and all other applicable Regulations.

The number of employees that need to be trained in basic firefighting and any duties they are required to perform will be determined by the *Contractor*'s risk assessment.

3.43.1 Fire Safety Plan

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

- Fire safety plan: the *Contractor* shall prepare a fire safety plan for the construction site, inclusive of laydown areas;
- Fire warning: a suitable means of alerting site personnel to a fire shall be provided and must be capable of being heard in all areas of the construction site;
- Portable extinguishers: suitable extinguishers must be available at the construction site and, in cases of hot work, be readily available at the location;
- Combustible liquid and flammable liquid storage: storage of combustible and flammable liquid at the construction site is not permitted unless stored in approved flammable cabinets or outdoors away from the buildings; and
- Smoking restrictions: smoking is not permitted indoors, at entrances to buildings, or near air intake systems as per Eskom policy and legislation requirements.

The Fire Safety Plan shall include the following:

- The designation and organisation of site personnel to carry out fire safety duties, including fire watch service;
- The emergency procedures to be used in the case of fire, including:
  - Initiating the fire alarm;
  - Notifying the Fire Department;
  - Instructing site personnel;
  - Fire-fighting procedures; and
  - Integrating with existing emergency procedures.
- The control of fire hazards in and around the building; and
- Maintenance of fire-fighting facilities.

Note 1: The *Contractor* Fire Risk and Emergency Plan shall meet the minimum requirements of the Power Station Plans; and

Note 2: The *Contractor* shall submit his or her Fire Risk and Emergency Plan for evaluation and approval by the Power Station EP Co-ordinator.

3.44 Fire Extinguishers

The *Contractor* shall ensure that all Fire Extinguishers are:

- Clearly labelled;
- Conspicuously displays an inspection sticker for the monthly and annual inspections;
- Conspicuously numbered;
- Entered into a register;
- Inspected on a monthly basis by a competent person;
- Tested and serviced at recommended intervals by an accredited supplier, with the results entered in the register and signed by a competent person;
- Clear from any obstructions;
- And cabled seal still intact; and
- Needle indicator still positioned in the green segment.

3.45 Demolition Work

Where applicable, the *Contractor* shall ensure that it complies with the requirements for demolition work, as stipulated in the CR 2014, regulation 14. The *Co*ntractor shall submit for evaluation and acceptance, a comprehensive and detailed method statement indicating the process for the demolition work, before commencing with such an activity.

Furthermore, the *Contactor* shall ensure that all equipment utilized for the demolition works, is operated, maintained and stored as per the OEM requirements. Only operators that are trained and appointed may operate specialized equipment for such an activity.

Note: All SWP's and or MS's, shall conform to the SWP and MS criteria as indicated in **point 3.4.0**.

3.46 Environmental Management

The *Contractor* and its sub-contractors shall comply to the National Environmental Management Act No 107 of 1998 and the Power Station Environment Management Programme (EMPr) and all applicable Integrated Environmental Authorizations (IEA's) before performing any work.

3.46.1 Environmental Emergency Procedures

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

3.46.2 Fires

The *Contractor* shall advise the relevant authority of a fire as soon as one starts and shall not wait until he can no longer control it. The *Contractor* shall ensure that all employees are aware of the procedures to be followed in the event of a fire.

3.46.3 Accidental Leakages and Spillages

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

Note: All leakages and spillages must be immediately reported to the appointed ECO and Client Environmental Officer.

3.46.4 Hydrocarbon Spillages

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

The quantity of the absorbent materials shall be able to handle a minimum of 200 litres of hydrocarbon liquid spill.

3.46.5 Waste and Refuse Management

Refer to Eskom's Procedure EPC 32-245.

The *Contractor* shall comply to the National Environmental Management Waste Act 59 of 2008.

The *Contractor* shall compile a waste management plan before commencing with work and prepare a register for hazardous waste in which all waste disposals will be recorded. In addition, the *Contractor* shall submit a method statement for the prevention of pollution and submit to the *Project Manager* for acceptance.

The *Contractor* shall ensure that all hazardous or contaminated materials and construction waste is managed in accordance to the National Environmental Management Waste Act (NEMWA).

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

The *Contractor* shall implement an effective process to manage and contain litter to a point of eradivation.

On a daily basis the *Contractor* and its sub-contractors working on site shall ensure that oil, fuel, and chemicals are confined to specific and secure areas throughout the construction period. These materials must be stored in a bunded area with at least 110% volume capicity of the total volume of chemicals stored for potential spills and leaks.

The *Contractor* shall ensure that sufficient waste bins/containers are made available for waste control, as per the Power Station EMPr.

General wastes generated by the *Contractor* and its sub-contractors shall be delivered to a centralised collection facility, as designated by the *Project Manager* for disposal by the project. Hazardous wastes remain the responsibility of the *Contractor* from the point of generation to the point of disposal (that is, the cradle-to-grave approach). All waste shall be segregated into the various waste stream fractions. These can be divided into two main waste-producing activities: general waste and construction waste. Waste segregation will cover both these main waste-producing activities. Waste shall be segregated into the following waste streams as a minimum:

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

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

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

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

3.46.6 Hazardous Chemical Substances

The *Contractor* shall keep a register of hazardous chemical substances and material safety data sheets should be kept on file on site, at the HCS store and where the HCS is in use.

3.46.7 Dust and Noise

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

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

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

Dust suppression measures must be in place to reduce the dust caused by construction activities. Water, utilized for dust supression, may only be obtained from identifed watering points, indicated by the Power Station Environmental Manager.

3.46.8 Environmental Awareness Training

The *Contractor* and its sub-contractors shall ensure that:

- Its management and SHE staff have attended Environmental Legislation training;
- Its employees receive environmental awareness Induction training prior to the commencement of the construction activities; and

The Eskom Environmental Topic of the month is discussed at all toolbox talks, and conspicuously displayed on communication boards.

3.46.9 Environmental Method Statements

The Contractor shall ensure that an activity specific Environmental Method Statements are developed and submitted to the *Project Manager* for approval, in consultation with the Client SHE Manager and ECO.

3.47 Audits and Inspections

3.47.1 Audits on Contractor SHE Plans

The *Project Manager,* and or representatives appointed by the *Project Manager,* shall audit legal compliance of the *Contractor* on a monthly basis or otherwise agreed upon between the *Project Manager* and *Contractor*. The implementation of and compliance to the SHE plan shall be assessed by conducting a systems and physical conditions evaluation.

An audit report will be submitted to the *Contractor* by the *Project Manager* within 7 days on completion thereof. Close-out of corrective actions agreed upon between the *Project Manager* and the *Contractor*, shall be documented on an action plan close-out form and all proof of close-outs submitted to the *Project Manager* for verification.

Note: The *Project Manager* and or the Construction Health and Safety Agent, reserves the right to instruct monthly SHE Plan audits to be conducted on all sub-contractors.

3.47.2 Statutory Contractor Audits

The *Project Manager,* and or representatives appointed by the *Project Manager,* shall conduct statutory audits on the *Contractor*, in accordance with the Construction Regulations, regulation 5(o).

An audit report will be submitted to the *Contractor* by the *Project Manager* within 7 days on completion thereof. Close-out of corrective actions agreed upon between the *Project Manager* and the *Contractor*, shall be documented on an action plan close-out form and all proof of close-outs submitted to the *Project Manager* for verification within 30 days of receiving the report.

The *Contractor*, as an employer in his or her own right, shall conduct monthly statutory audits on all contractors and their work areas. The results of these audits shall be kept on record on the site SHE files and shall be made available within 30 days of the audit for verification by the *Project Manager,* and or representatives appointed by the *Project Manager,* during monthly audits.

Note: The *Project Manager* and or Construction Health and Safety Agent, reserves the right to instruct monthly statutory audits to be conducted on all sub-contractors.

3.47.3 Internal Audits

The *Contractor* is required to conduct internal audits on his or her contractors on the implementation of their SHE Plans, and legal compliance, on a monthly basis or when the scope of work changes. A summary of the findings and the proposed corrective actions shall be submitted to the *Project Manager* on the last day of the audit.

The final report and proof of corrective action implementation, as agreed upon between the *Contractor* and the sub-contractor, shall be made available within 30 days of the audit for verification by the *Project Manager* during monthly audits.

3.47.4 Third Party and Legal Compliance Audits

The *Contractor* shall ensure participation and co-operation during all Eskom Internal and third party audits, as arranged by the Eskom Corporate and Divisional Offices.

If the *Contractor* has a third party legal compliance verification audit conducted on its construction activities, it must notify the *Project Manager* prior to the audit commencing and submit a copy of the summary of the findings and the proposed corrective actions to the *Project Manager* on receiving the report from the auditor.

The final report and proof of corrective action implementation shall be made available for verification by the *Project Manager* during monthly audits.

3.47.5 Audits and Inspections Conducted by the Department of Labour, Department of Environmental Affairs or Department of Water and Sanitation

The *Contractor* shall ensure participation and co-operation during all audits as conducted by the Department of Labour.

Immediately on being informed of an audit by an Inspector from the DOEL/DWS/DEA, the *Contractor* shall immediately notify the *Project Manager* of such an audit.

The *Project Manager* shall immediately inform the *Contractor* of any audit or inspection requested by the Department of Environmental Affairs or the Department of Water and Sanitation.

3.47.6 Contractor SHE Performance Evaluation

The *Project Manager,* and or representatives appointed by the *Project Manager,* shall evaluate the *Contractor's* SHE performance on an ongoing basis against the Eskom requirements. The findings of such an audit shall be discussed at the weekly and monthly SHE meetings between the *Project Manager* and *Contractor.*

The *Contractor* shall likewise, conduct his or her own SHE performance evaluation and submit the results thereof to the Client SHE Department for verification, and final acceptance by the *Project Manager*.

3.47.7 Environmental Audits and Inspections

The *Contractor* shall take note, that:

- Audits will be conducted on the *Contractor* at least once a month, by the appointed ECO and Client EO. These audits will include but not be limited to the Client SHE Specification, the Contractor SHE Plan, EMPr/IWUL/IEA compliance;
- Audits by external environmental specialists will be conducted in compliance with the EMPr, bi-annually and by DEA and DWS when informed as such;
- Audits by external auditors will be conducted on the project and the *Contractor* shall fully support and participate in such audits. The *Project Manager* shall timeously notify the *Contractor* of such audits, so as to ensure the relevant personnel are present and all information is available;
- Daily inspections will be conducted by the appointed ECO and the Client EO, Supervisors and *Project Manager*, so as to ensure full compliance to all legislative and Eskom requirements.

All audit shall be documented, an action plan completed by the *Contractor* and submitted to the Client SHE Department for verification thereof. The *Contractor* is to ensure that all findings from such audits and inspections are timeously closed out to the satisfaction of the auditor or inspection authority.

Furthermore, the *Contractor* shall ensure that all SHE related audits and inspections conducted on him or herself, are documented, action plans completed and supported with closing evidence. Such reports are to be provided on requested to the *Project Manager* and or representative of the *Project Manager*.

Note 1: Although an audit schedule will be provided to the *Contractor* by the *Project Manager,* the *Project Manager* reserves the right to conduct unannounced audits on all contractors.

Note 2: The *Project Manager* reserves the right to conduct environmental audits on any sub-contractor, announced or unannounced.

3.47.8 Inspections

Daily inspections will be conducted on the *Contractor* by the *Project Manager* and or representatives appointed by the *Project Manager*, so as to ensure full compliance to all requirements. The *Contractor* is to document these inspections accordingly and submit for approval an action plan inclusive of close-outs dates of all identified non-conformances.

All closed-outs actions are to be submitted to the *Project Manager* inclusive of supporting evidence for acceptance by the *Project Manager.*

3.48 Incident Management

The *Contractor* shall implement an incident reporting system that is compatible with Eskom requirements and all applicable legislation.

All incident reporting, recording, classification and investigation will be done according to the requirements set out in the Eskom 32-95_OHS Incident Management Procedure (latest revision) and the Eskom 240-133087117_Environmental Incident Management Procedure.

3.48.1 Environmental Incidents

The *Contractor* shall ensure that:

- All environmental incidents such as pollution (air, water, land, biodiversity etc.), bird kills, animals killed, plants destroyed, public complaints, etc. are reported to the *Project Manager* within 30 minutes of their occurrence; and

- All environmental incidents occurring on site must be recorded, detailing how each incident was dealt with. Proof thereof must be kept in an incident register and made available during audits.

Note: The *Contractor* will be held liable for any infringement of statutory requirements of the NEMA Act, act 107 of 1998 and subsequent acts and regulations.

3.48.2 Reporting of Incidents

The *Contractor* shall ensure that:

- All incidents or near miss incidents, *Contractor*, sub-contractor or third-party personnel, property, plant, or equipment shall be verbally reported to the *Project Manager* and or SHE Representatives of the *Project Manager,* immediately of becoming aware of the occurrence; and
- A flash report is submitted to the *Project Manager,* and or representatives appointed by the *Project Manager,* for all incidents/accidents as required in terms of legislation including near miss incidents, first aid, medical treatment, lost time incidents (lost time injuries and fatalities); Section 24 and 25 incidents; electrical contact; major equipment damage; chemical spillage and other environmental incidents within 24 hours or before the end of the work shift.

Note: If it is found that the *Contractor* is hiding or not reporting incidents, then steps (which may include consequence management) shall be taken against the Line Management of the *Contractor*.

3.48.3 Incident Investigation

All incident investigations shall be managed according to the latest revision of the Eskom 32-95_OHS Incident Management Procedure (Latest revision) and 240-133087117_Environmental Incident Management Procedure (Latest Revision).

The *Contractor* shall compile and implement a procedure for the reporting and investigation of contractor incidents. This document should set out the procedures to be followed when reporting, recording and investigating incidents that occur on the construction site and shall be aligned to the Eskom 32-95_OHS Incident Management Procedure (Latest revision) and 240-133087117_Environmental Incident Management Procedure (Latest Revision).

3.48.4 Contractor Investigations

The *Contractor* shall ensure that:

- All accidents/incidents, regardless of severity, are investigated and are discussed at the weekly and monthly SHE meetings held on site; and
- All accidents/incidents shall be investigated and recorded in terms of the requirements of the Occupational Health and Safety Act, the National Environmental Management Act and National Water Act, and the Eskom 32-95_OHS Incident Management Procedure (Latest revision) and 240-133087117_Environmental Incident Management Procedure (Latest Revision) as applicable.

Note 1: The *Project Manager*, and or representatives appointed by the *Project Manager*, reserves the right to participate in any accident/incident investigation if the accident/incident is directly linked to any activity within the scope of the construction project. The *Contractor* is obliged to invite the *Project Manager* and or a SHE Representative appointed by the *Project Manager* to attend all investigations conducted by the *Contractor*.

Note 2: The *Contractor* may make use of the RCat Investigation Template as indicated in Appendix C, but the template used by the *Contractor* shall at least meet the minimum requirements indicated on Appendix C, and requirements of the Eskom procedures governing incident management.

Note 3: The *Contractor* may make use of the Flash Report Template as indicated in Appendix C, but must ensure that the flash report template submitted by the *Contractor*, complies with the minimum requirements as is indicated the Appendix B:

Note 4: The *Contractor* must appoint a competent and suitably qualified person with a minimum of an accredited Rcat training certificate, to lead the investigation as lead investigator. Such a person may not form part of the SHE Department, i.e. SHE Manager or a SHE Officer. It is preferred that a Construction Manager or Supervisor must chair such investigations.

Note 5: All evidence, witness statements and all relevant documents pertaining to such an investigation will not be seen as intellectual property of the *Contractor*, and shall be made available to the *Project Manager* on request.

3.48.5 Employer's Investigations

In addition to the *Contractor* investigations, the *Project Manager* may separately, conduct his or her own investigation. The *Contractor* will be required to co-operate with the *Project Manager's* investigation committee. No joint investigations will be held, i.e.: with Eskom and the *Contractor*.

The *Project Manager* shall define parties to be involved in the investigations.

All investigation teams must include at least 1 person (from both the Client and *Contractor*) that is competent in the Root Cause Analysis Technique.

All investigations required by the *Project Manager*, shall be in accordance with the Eskom 32-95_OHS Incident Management Procedure.

3.49 Presentation of Incidents

The *Contractor* shall on request of the *Project Manager*, present an incident to the SHE Committee at the monthly SHE meetings, and when requested to do so by the Chairperson of the GCD SHE Steering Committee and or SM/GM for the project.

The Chairperson of the GCD SHE Steering Committee or project GM shall determine which employee and contractor Loss Time Incidents, Environmental Sustainability Index Incidents, Repeat Incidents and Near-miss Incidents must be presented by the relevant Business Unit Manager and the Managing Director of the contracting company. If the relevant Business Unit Manager and the Managing Director of the contracting company are not in attendance, the incident presentation will not be allowed.

All fatal incidents shall be reviewed by the committee within one week after the incident. Preliminary investigation information shall be shared.

All employee and contractor incidents that were in contravention of any one of the Eskom Lifesaving Rules must be presented by the relevant Business Unit Manager and the Managing Director of the contracting company.

Note 1: The purpose of these presentations are to confirm that all the root causes were identified, addressed and closed out and furthermore it serves as an opportunity for sharing the lessons that were learnt from each of those incidents.

Note 2: The *Project Manager* reserves the right to conduct an independent investigation into any incident.

Note 3: The *Project Manager* and or Construction Health and Safety Agent reserves the right to sanction the re-opening of any incident investigated by the *Contractor*, should it be deemed that root causes were insufficiently addressed.

Note: Should any evidence requested by the *Project Manager*, not be produced in the format requested, i.e. original copies, it will be deemed that the *Contractor* has deliberately withheld such information to influence the outcome of further investigation.

3.49.1 Incident Case Studies

The *Contractor* shall compile *c*ase studies for all lost time incidents and fatalities. The *Project Manager* may request lessons learnt to be compiled for any other incident, on the advice from the Construction Health and Safety Agent appointed to the project.

3.49.2 Incident Registers

The *Contractor* shall keep on site/workplace, an accurate and up to date record of all accidents that have occurred and are related to the project, as well as incidents reportable in the form of the OHS Act Annexure 1 investigation form as referenced in the OH&S Act, act 85 of 1993 (Incident Investigation Report).

3.49.3 Incident Investigation Reports

A comprehensive and detailed investigation report shall be submitted to the *Project Manager* within 7 days after the incident, which shall include as a minimum:

- Date, time and place of incident;
- Description of the incident;
- Direct causes of the incident/accident;
- Root cause of the incident/accident;
- Type of injury (if any);
- Medical treatment provided (if any);
- Persons involved;
- Photographs of the incident scene and injuries (Discretion will be applied by the *Project Manager* and appointed Construction Health and Safety Agent)
- Names of witness/s; and
- Corrective actions recommended for preventing reoccurrence;
- An action plan detailing the following:
  - Root cause;
  - Remedial actions to address root causes;
  - Responsible person for closing the remedial action;
  - Timeframe allocated for the closing of root causes (not exceeding 21 days); and
  - Actual date of closure of the root cause.

Note 1: Providing the Accident/incident investigation report does not exempt the *Contractor* from providing accident reports required by Statutory Authorities, in particular, the responsibility of the *Contractor* for reporting accidents in accordance with the requirements of the OH&S Act and COID Act.

Note 2: The results of the investigation together with the Root Cause Analysis of the incident and the committee's recommendations for preventative action(s) shall be submitted to the *Project Manager*, within 7 days after the incident occurred unless proof can be given that due to technical or other difficulties, more time is needed. The extension of the submission of incidents investigation reports will solely be at the discretion of the appointed Construction Health and Safety Agent/SHE Manager, and only after consultation with the GCD CMD SHE Management Department.

3.49.4 Review and Analysis of Incidents

The *Contractor* shall also review and analyse all incidents; to establish trends that may indicate deviations from established work standards and safe working procedures/practices. The *Contractor* shall take appropriate corrective action and submit a report to the *Project Manager*.

3.49.5 Close-out of Corrective Actions

The *Contractor* shall ensure that:

- Close-out of corrective actions is documented on an action plan close-out form and all proof of close-outs submitted to the *Project Manager* for verification within 21 days of the incident; and
- Feedback on the status of close out of corrective actions must be communicated at the relevant forums.

3.49.6 General Information Regarding Incidents

The *Contractor* shall ensure that:

- The incident/accident scene is not disturbed to preserve evidence for investigation purposes unless it is done to prevent further injury or for rescue purposes (OH&S Act Section. 24(2) applies);
- The investigation shall begin promptly after the incident/accident; and
- Where applicable and with proper authorization by the *Project Manager* in consultation with the Construction Health and Safety Agent or Manager, photographs are taken of the scene of the incident as well as any equipment involved in the incident.

Note: Workplace Injury and Disease Recording - The purpose of this document should be a guide to the *Contractor* on how to accurately evaluate, define and categorise fatalities, injuries and occupational diseases in a data format for the calculation of performance indicators for health and safety.

3.50 Weekly, Monthly Statistical and Non-statistical Reports

The *Contractor* shall submit on a weekly and monthly basis, a statistical performance report in accordance to the Employer's template:

- Monthly Statistics shall be submitted to the *Project Manager* no later than the last working day of each month;
- Weekly statistics shall be submitted to the *Project Manager* on every Wednesday of the week. If the Wednesday falls on a public holiday, the next working day or as requested by the Client SHE Department;
- The reporting format is indicated on the Project Weekly Statistical Data Capturing Sheet;
- Incidents: Lost time, medical; first aid, near misses, property damage, fires, equipment failure, motor vehicle incidents (work related), theft incidents and occupational diseases reported;

- Manpower numbers per contractor company;
- Actual man-hours worked;
- Life-saving rule breaches;
- Status on incidents investigated and recommendations closed out;
- Status on audits conducted and findings closed out; and
- SHE training interventions.

3.51 Hours of Work

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

The *Contractor* shall notify the *Project Manager* of any work that needs to be performed after hours according to the agreed arrangements. (The notification needs to be submitted timeously.) Where applicable, the notification should include valid proof of the overtime determination letter of acceptance from the Department of Labour for extended overtime.

The *Contractor* shall document and track working and overtime hours and make them available on request to the *Project Manager* and any auditor appointed by the *Project Manager*.

Note 1: A letter of submission to the D.O.L for an extension of overtime will not be deemed as acceptable.

Note 2: Payment made towards the COID Fund will not be deemed as a valid overtime determination letter. Only a letter that has a valid date on will be acceptable.

3.52 Employees Right of Refusal to Work in an Unsafe Situation

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

Refer to Eskom's Employees' Right of Refusal to Work in an Unsafe Situation Procedure 240-43848327. The aim of the procedure is to ensure that an environment is created that promotes zero harm by empowering employees and contractors to take responsibility for their own safety and that of others.

Note 1: The *Contractor* is obliged, as an "employer" in his or her own right, to provide a safe working environment and to halt all activities, related to unsafe acts or conditions that may arise during the course of the construction work. Failure to do so, will be deemed as a breach of contract and legislation, and may be reportable to the DOEL.

Note 2: Should it be determined that the *Contractor*, directly or through Vicarious Liability, has forced or is forcing employees to work in unsafe conditions, all activities will be halted with immediate effect pending the outcome of an investigation, and may be reportable to the DOEL.

3.53 Eskom SHEQ Policy

The *Contractor* shall comply with the requirements of the Eskom Safety, Health, Environment and Quality Policy as contained in document 32-727 as well as its own SHEQ Policy.

3.54 Eskom Life Saving Rules

The *Contractor* shall comply with the requirements of Eskom's Life-saving Rules 39-47 and the relevant Eskom Power Station specific rules.

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

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

These 5 Life-saving rules are as follows:

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

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

3.55 Safety Management Systems

The *Contractor* shall implement a recognised an accredited safety management system. Comprehensive details and requirements of the system shall be submitted to the *Project Manager* for acceptance and monitoring of compliance during internal site audits.

3.56 Designers and Designs

Where mandated within the contract, the *Contractor* shall ensure that:

- Where applicable, it appoints and mandates the designer as per the Construction Regulations of February 2014;
- All appointed designers, as per definition within the Construction Regulations of February 2014, complies with regulation 6 contained therein;

Appointed designers shall ensure:

- The Client SHE Specification is taken into consideration when developing designs;
- Constructability, operability and maintainability of the *works*;
- Constructability assessments are conducted and submitted with the Design Report to the *Project Manager*, and
- Regular inspections are conducted during the construction of the works so as to ensure compliance to design requirements.

Note: Failure of the Designer to comply with these and legislative requirements will be deemed as a breach of legislation and reportable to the DOEL and ECSA.

3.57 Signing-off of the Contract

No project shall be signed off by the *Project* Manager, before the Business Unit or Department has given assurance that no environmental liabilities exist. The responsible person, project leader or environmental advisor shall carry out a physical inspection before acceptance of work done.

No invoice to be processed before work is accepted.

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

3.58 Omissions within this SHE Specification

By developing this SHE specification, the *Project Manager* has endeavoured to address the most critical aspects relating to SHE related issues in order to assist the *Contractor* in adequately providing for the health and safety of employees on site.

Should the *Project Manager* not have addressed all SHE aspects pertaining to the work that is tendered for, the *Contractor* shall include it in the SHE plan and inform the *Project Manager* of such issues when submitting the tender.

This SHE specification does not relieve the *Contractor* of its obligations and liabilities as an “employer” in its own right, in terms of the OHS Act and applicable regulations.

3.59 SHE Costing

The *Contractor* shall ensure that sufficient funding is allocated for Safety, Health and Environmental Management. Costing for environmental matters shall include full rehabilitation of the construction area, to the satisfaction of the ECO, DWS and DEA.

4. Acceptance

This document has been seen and accepted by:

Name	Designation
Neels Steynfaardt	Project Manager: PED Coal Automation Project

Name	Designation
Anzel Hossein	Chief Advisor Project Development
Kgaugelo Sedibeng	Chief Advisor Risk Management

5. Revisions

Date	Rev.	Compiler	Remarks
08 November 2018	1.0	W.S Roux	A New Document

6. Development Team

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

- Bernice Witbooi: OHS Senior Advisor
- Cristiaan Schmidt: OHS Senior Advisor

Appendix A – Eskom Flash Report Template

Eskom	Form	Unique Identifier: Document Type: Revision:	0001 NFM 0

Title: **Incident/Accident Notification Flash Report for Employees/ Contractors/ Members of the Public**

(FLASH REPORT TO BE SUBMITTED BEFORE THE END OF SHIFT OR DAY)
NOTE: One flash report to be completed per incident/accident

SITE/DEPARTMENT:	Grootvlei FFP Project
UNIT/SECTION/PROJECT:	

DATE OF INCIDENT:		TIME OF INCIDENT:		PLACE OF INCIDENT:	

INJURY CLASSIFICATION – Mark the appropriate box with an X

First Aid (FA)		Medical (no shift loss) (MI)		Disabling Injury (shift loss) (DI)		OHS Act Sect 24 (S24)		Occupational Disease (confirmed or unconfirmed) (OD)		Fatality (FT)		Near Miss (NM)		N/A	

INCIDENT CLASSIFICATION / INCIDENT CAUSED BY – Mark the appropriate box with an X

Fire		Explosion		Environmental Contravention		Electrical contact/ Operating Error/ Flash		Crane/Cherry Picker etc.		Crime Related	
Fall		Chemical Spillage		Vehicle Accident		Tree Felling		Moving Machinery		Other	

OTHER (Specify):

ESKOM VOLTAGE INVOLVED:		kV:		NETWORK:	

CLASS OF PERSON'S INVOLVED IN INCIDENT/ACCIDENT – Mark the appropriate box with an X and add company name

EMPLOYEE (EM)		LABOUR BROKER (LB)		PRINCIPLE CONTRACTOR (PC)		SUB-CONTRACTOR (SC)		SUBSIDIARY & JOINT VENTURE		PUBLIC	

	FULL NAME	UNIQUE NUMBER and/or ID Number	Injury Classification	Class of person	Name of Company
1					
2					
3					

FULL NAME(S) OF WITNESS(S)					
1:		2:		3:	
FULL NAME(S) OF DRIVER(S)					
ENTERPRISES DIVISION		THIRD PARTY			
MOTOR VEHICLE(S) REGISTRATION NUMBER(S)					
ENTERPRISES DIVISION		THIRD PARTY			
DETAILED DESCRIPTION OF THE INCIDENT/ACCIDENT INCLUDING THE NATURE OF INJURY (e.g.: laceration or fracture or contusion of RH forearm)					

DATE SET FOR PRELIMINARY INVESTIGATION (Isolation/evidence collection & preservation:					
DATE FOR FORMAL INVESTIGATION (If legal liability is established - book through Eskom legal department e.g. death and occupational diseases)					
REPORTED BY:		DATE:		Phone Number:	
NAME AND CONTACT DETAILS OF OHS ACT 16(2) & MHSA (4.1)					

Appendix B – Rcat Investigation Template

Eskom — Vehicle Accident /Accident /Incident Investigation Report

Unique Identifier:	240-99295190
Doc. Type:	Template
Revision:	1

COMPLETE : BLACK INJURIES-RED / BLACK INCIDENTS-GREEN / BLACK

DETAIL

Name of Employer	Designation of Employer	Ref. No.

BU	Department/District	Section/Depot	Location of accident	Date of accident	Time	Date reported

Name of injured/Person involved	Company Number	ID Number	Occupation	Yrs Service	Male	Female	Age

LOSS

Property Damage	Fatality	Lost Time	Medical	First Aid	Occupational Disease	Assault	Near Miss	Equipment name
								Serial No. / Asset No.
Fire	Explosion	Spillage	Public Liability	Net income Loss	Theft	Off the Job	Other	

INCIDENT

Nature of injury		Accident type		Part of body		Expected Period of Disablement
Sprains	Burns	Struck by	Caught in	Head	Trunk	0 days
Strains	Poisoning	Struck Against	Caught Betw een	Hand	Foot	0 - 13 days
						2 - 4 w eeks
Contusion	Amputation	Fall on same level	Foreign body (eye)	Eye	Back	> 4 - 16 w eeks
						> 16 - 52 w eeks
						52 Weeks
Wounds	Electric shock	Fall diff. level	Vehicle collision	Finger	Internal	Perm. Disbaility
						Fatal
Fractures	Asphyxia - tion	Inhalation absorbtion	Electrical contact	Neck	Arm	
Uncon - sciousness	Multiple	Ionising radiation	Temp. extremes	Leg	Multiple	

Did Incident / Accident arise out of and in the course of normal duties? Yes ☐ No ☐

Reported to D.O.L? Yes ☐ No ☐

Reported to COID? Yes ☐ No ☐

COSTS

Actual/Estimated Damage & Injury Costs

Medical	R
Injured Production Loss	R
Stand-down Time (Non prductive)	R
Equipment Damage	R
Insurance	R
	R

Total Costs R

IMMEDIATE CAUSES

Immediate Causes:What sub-standard acts and conditions contributed directly to this Incident/Accident

☐ Using equipment unsafely	☐ Operating without authority	☐ Defective tools, equipment or substances	☐ Poor lighting
☐ Failure to use protective equipment	☐ Making safety devices inoperative	☐ Hazardous arrangement	☐ Inadequately guarded
☐ Working on moving or unsafe equipment	☐ Operating at unsafe speed	☐ Unsafe clothing	☐ Unsafe design or construction
☐ Taking unsafe position	☐ Distracting, teasing, horseplay	☐ Poor floor condition, badly marked walkways	☐ No PPE provided
☐ Safety regulations ignored	☐ Using unsafe equipment	☐ Poor ventilation	☐ Bad workshop layout
☐ Unsafe loading, placing, mixing	☐ Taking chances	☐ Unguarded	☐ Overcrowding

☐ Other/Specify

ROOT CAUSES

Which Job factors w ere root causes? What did people do or fail to do that directly contributed to this Incident/Accident?

☐ Inadequate work standard	☐ Inadequate ergonomic design	☐ Inadequate planned maintenance	☐ Inadequate spare parts	☐ Unscheduled overtime
☐ Inadequate purchasing standards	☐ Inadequate contractors control	☐ Inadequate planned inspections	☐ Factory over & under production	☐ Wear and tear
☐ Inadequate security standards	☐ Inadequate personnel selection	☐ Inadequate disaster plan	☐ Inadequate leadership & supervision	☐ Raw material problems
☐ Inadequate fire equipment & training	☐ Improper substitution	☐ Congestion,lack of storage place	☐ Unnecessary material handling	☐ Recycling and rework
☐ Abuse or misuse	☐ Tampering	☐ Unauthorised removal	☐ Computer problems	☐ Manufacturing errors
☐ Inadequate tools & equipment	☐ Mechanical Failure	☐ Excessive noise	☐ Excessive vibration	☐ Excessive heat / cold
☐ Inadequate Engineering	☐ Delays	☐ Inadequate man-job specifidations	☐ Inadequate transport facilities	

☐ Other/Specify

Which personal factors w ere root causes? What dit people do or fail to do that directly contributed to this Incident/Accident? Describe

☐ Lack of knowledge	☐ Improper motivation / attitude	☐ Physical or emotional problems	☐ Horseplay	☐ Dermatitis
☐ Lack of skill	☐ Wilfull deviation from requirement	☐ Try to gain or save time	☐ Pneumoconicals	☐ Allergies
☐ Tried to avoid discomfort	☐ Failure to use PPE	☐ Was ill, fatigued or incapacitated	☐ Failure to secure	☐ Excessive overtime
☐ Failure to follow plan or instruction	☐ Stress	☐ Failure to plan	☐ Drug / Alcohol problem	☐ Preceding medical condition

☐ Other/Specify

LACK CONTROL

Which SRM process elements could prevent recurrence or reduce risk?

☐ Building & floors	☐ Compressed gas cylinders/ pressure vessels	☐ Lack of skill	☐ Committee & communication	☐ Hand tools
☐ Pollution: air, ground, water		☐ Statutory appointments	☐ Pre-employment medicals	☐ Fire prevention, protection & emergency response
☐ Colour coding/notices & signs	☐ Good lighting	☐ Safety training	☐ Written safe work procedures	
☐ Ladders, stairs, walkways, scaffolding	☐ Aisles & storage demarcation	☐ Safety specifications	☐ Safety policy	☐ First-aid facilities
☐ Motorised equipment	☐ Machine guarding	☐ Off the job safety	☐ Plant hygiene facilities	☐ Selection & placement
☐ Ergonomics	☐ Lifting gear & records	☐ Ventilation	☐ Scrap & refuse system	☐ Job safety analysis
☐ Accident recording & investigation	☐ Earth Leakage	☐ Good housekeeping	☐ Labelling of switches, isolators & valves	☐ Planned job observation
☐ Safety awareness	☐ Hearing conservation	☐ General electrical installation		☐ Lack of Training
☐ No / outdated standards	☐ No / outdated risk analysis	☐ Personal protective equipment	☐ Hazardous substances control	
☐ Lock-out system & usage	☐ Lack of knowledge	☐ Other/Specify		

CORRECTIVE ACTION

Which SRM process elements could prevent recurrence or reduce risk?

☐ Revise selection & placement	☐ Revise inspection Programme	☐ Issue Loss Announcement
☐ Revise Job Training	☐ Revise job Observation Programme	☐ Correct Order / Housekeeping
☐ Improve compliance with standards	☐ Retrain / Re-instruct Worker	☐ Improve Design
☐ Improved First-Aid training / equipment	☐ Perform Proper Job Analysis	☐ Retrain, Re-instruct others
☐ Install guard or safety device	☐ Job Rules, Revise Issue	☐ Revice Standard Job Procedure
☐ Revise PPE Programme	☐ Post - Warnings	☐ Repair Defect

☐ Other/Specify

PLEASE FAX COPY OF COMPLETED REPORT TO THE PROJECT SHE DEPARTMENT

DESCRIPTION OF ACCIDENT / INCIDENT BY PERSON DESIGNATED THERETO

CAUSES / FINDINGS

1
2
3
4

RECOMMENDATIONS

1
2
3
4

Signature of Designated Investigator	Name print	Date	Designation

EMPLOYERS FOLLOW-UP ACTION TO INSTITUTE CONTROL STEPS TO PREVENT THE RECURRENCE OF SIMILAR INCIDENTS	By whom	Date

Signature of Employer / Designated person	Name print	Date

REMARKS AND RECOMMENDATIONS BY SAFETY COMMITEE

Signature of Chairman of Safety Committee	Name print	Date

WHAT FOLLOW-UP PROCEDURES WERE IMPLEMENTED TO MONITOR THE EFFECTIVENESS OF CORRECTIVE ACTION

Signature of Safety Practitioner	Name print	Date

Signature of Health & Safety Rep.	Name print	Date

Appendix C – Acknowledgement Form for Eskom SHE Rules and other Requirements

Note: A visible copy will be provided with the tender pack.

Eskom	Annexure B: Acknowledgement Form for Eskom SHE Rules and other Requirements	Template Identifier	240-43821804	Rev	6
		Document Identifier	240-77471488	Rev	2
		Effective Date	November 2016		
		Review Date	December 2021		

1. The EPC Contractor is expected to comply to the following documents when working at/rendering a service to Eskom but not limited to the following:
   - a. Eskom Policies, Procedures, Manuals and Standards etc.
   - b. Eskom Life Saving Rules 240-62196227
   - c. Occupational Health and Safety Act(85 of 1993) and its regulations
   - d. The Constitution of the Republic of South Africa (particularly Section 24 of the Bill of Rights).
   - e. Mine Health and Safety Act, 1996 and its regulations.
   - f. Compensation for Occupational Diseases and Illnesses Act 130 of 1993
   - g. Hazardous Substances Act 85 of 1993
   - h. National Environmental Management Act 107 of 1998
   - i. National Water Act 36 of 1998
   - j. National Nuclear Regulator (NNR) Act 1999, Act 47 of 1999
   - k. Other relevant applicable South African legislation (local , provincial and National)
   - l. Applicable South African National Standards (SANS).
   - m. OHSAS 18001:2007, Occupational Health and Safety Management systems
   - n. EMS 14001:2015 Environmental Management Requirement System
   - o. Environmental Management Plan
   - p. Environmental Authorisation
   - q. Licenses/Permits

   Note: Please note that after contract award, it is your responsibility to fully align the company's processes to Eskom's SHE requirements (policies, procedures, standards etc.).
2. Work stoppages that are initiated due to SHE related shall not warrant any financial compensation claim lodged against Eskom.
3. Financial penalties shall be enforced on the EPC Contractor for non-conformance/s (identified for the EPC Contractor and/or its sub-contractor and/or supplier) pertaining to Eskom and/or Statutory SHE requirement/s.
4. Ensure that all employees (contractors/suppliers) undergo the relevant Eskom induction and company's induction
5. Management of Contractors and Suppliers
   - a) The EPC Contractor has to demonstrate to Eskom the process and selection criteria applied when appointing contractors and suppliers.
   - b) The EPC Contractor has to provide notification to Eskom, prior to the appointment of contractors or suppliers for the commencement of work..
   - c) The EPC Contractor has to ensure that contractors and suppliers possess adequate resources and competencies.
   - d) The EPC Contractor is accountable for the management of its contractors or suppliers in order to ensure that the applicable legal and Eskom requirements (that are applicable to the EPC Contractor during contract execution) are complied with by the contractors or suppliers.
   - e) The EPC Contractor shall monitor contractors or suppliers through audits and assessments with regard to SHE compliance during the execution of the work.

Eskom	Annexure B: Acknowledgement Form for Eskom SHE Rules and other Requirements	Template Identifier	240-43821804	Rev	6
		Document Identifier	240-77471488	Rev	2
		Effective Date	November 2016		
		Review Date	December 2021		

   - f) The grounds for the termination of work done by contractors and suppliers shall be provided by the EPC Contractor.
   - g) All non-conformances/non-compliance by the contractors/suppliers (all tiers) to the EPC Contractor shall be dealt with directly with the EPC Contractor in terms of performance and penalty processes.
   - h) Eskom reserves the right to verify this when deemed necessary. The contractor may be instructed to provide copies of testimonials/references and the contact detail of clients (including Eskom) for whom the Company has done previous work of a similar nature

I, the undersigned, hereby acknowledge that I have obtained copies of the above documents and confirm that I fully understand them and the consequences of non-compliance.

Signed at ..... **on** ..... **day of** ..... **20**.....

_____

Name of Authorised person (CEO/Director/ Managing Director)

_____ _____

Signature **Date**

Witness 1 .....

Witness 2 .....

Public

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Appendix D – The Client's Non-Negotiable Conventional Health and Safety Requirements

The following are Minimum OHS related requirements that bidders have to address and respond to when submitting their tender returnable are as follows:

Note: Please complete the following form, and where proof is required, please provide as much detailed information as possible as well as provide copies of the appropriate documentation to supplement information.

Ref.	Eskom Health and Safety Requirements Checklist	Proof required	Yes	No	N/A
1	Provide a signed Annexure B, Acknowledgement form for Eskom SHE Rules and other legislative requirements.	✓			
2	**Organisational structure and contact details of key persons**				
2.1	Provide a copy of your company organogram /structure. (Including roles, responsibility and Accountability)	✓			
2.2	Provide a proposed conventional OHS resource plan for the proposed scope of work. For each position, stipulate the position titles; and the qualifications, competencies & years of related experience that will be required by that position. Please provide this information in an MS Excel format.	✓			
	OHS Management System				
	OHS Management System				
3	Does your Company have an OHSAS certified OHS Management System? If **Yes,** then complete subsections 3.1 – 3.2:				
3.1	Provide a copy of the certification accreditation for OHSAS 18001.	✓			
4	Provide a copy of your SHEQ Policy that is signed by your senior management?	✓			
5	How would you enforce compliance to OHS on the project and amongst contractor companies? Please provide sufficient detail.	✓			
6	How would you deal with companies/individuals that have transgressed OHS requirements? Please provide sufficient detail.	✓			
7	Has your company managed OHS before on a project/similar scope				

Ref.	Eskom Health and Safety Requirements Checklist	Proof required	Yes	No	N/A
	of work to this?				
8.1	If yes, please provide sufficient detail and references and details what role your company played as well as critical success factors for OHS management and OHS statistics. Include details of client's references and information on the work that your company performed.	✓			
9	**Occupational health and wellness**				
9.1	Does your Company have a medical surveillance programme for employees? Please provide sufficient detail on the programme from the time an employee joins until they exit the company.	✓			
10	**Contractor management**				
10.1	Does your Company appoint competent contractors /sub-contractors? (provide sufficient details of selection process and criteria that will be implemented)	✓			
10.2	Explain in detail how you would manage and monitor contractor companies in terms of Health and Safety compliance?	✓			
10.3	Explain in detail how you would manage multiple contractor company interfaces on the project?	✓			
11	**Compliance of the OHS Act 85 of 1993**				
11.1	Does your Company have an OHS Specification that addresses OHS? Provide OHS Requirements for the proposed scope of work that will be issued to the Contractor.	✓			
11.2	Provide a detailed plan how you would fulfil the role of a Client in terms of the OHS Act 85 of 1993	✓			
12	**Hazard identification and risk assessment (HIRA)**				
12.1	Does your Company have procedures in place for conducting hazard identification and risk assessments and for developing and implementing safe systems of work/method statements? Please provide a copy.	✓			
12.2	Does your Company have a competent person appointed to carry out hazard identification and risk assessments? Please provide	✓			

Ref.	Eskom Health and Safety Requirements Checklist	Proof required	Yes	No	N/A
	copies of cv's and details of prerequisite criteria for the selection of such a person.				
12.3	Does your Company have a standard/procedure on the hierarchy of control principles that is applied to the mitigation of risks? Please provide a copy of this standard/procedure.	✓			
12.4	Provide a copy of a typical Health and Safety risk profile for a project like this as well as detailed high level interventions that will be implemented to mitigate the risk.	✓			
12.5	**OHS Operational Controls** What are your company's critical success factors, plans, and requirements in managing high risk construction activities such as: • Civil works • Lifting and rigging • Crane Coordinator • Work at height • Electrical safety • Construction traffic and vehicles etc. Please don't limit response to the above list. Please provide detailed programmes that will be implemented to manage each of the high risk construction activities.	✓			
12.6	What approach would you undertake to understand the cultural factors on a South African Construction Project?	✓			
13	**COID**				
13.1	Is your company registered with COID or with a licensed compensation insurer based on South African legislative requirements and are you still in good standing? If yes, please provide copy of current valid certificate issued by the Compensation Commissioner. If your compensation insurer is not recognised by South African legislative requirements, Provide a detailed plan and timeframes as to how you would obtain the South African recognised insurer.	✓			

Ref.	Eskom Health and Safety Requirements Checklist	Proof required	Yes	No	N/A
14	**Training**				
14.1	Does the Company have an orientation and safety induction programme / policy? Please provide sufficient detail.	✓			
14.2	Does the Company have implemented training arrangements in place to ensure that employees have sufficient skills and understanding to discharge their various duties? This includes refresher training that will keep employees updated on legislation and good health and safety practice. This applies throughout the Company, from top management to trainees. Provide list of training interventions (scope and content)	✓			
15	**Costing for OHS**				
15.1	Provide a detailed costing for OHS- based on the overall scope of work/services to be performed. Please provide this on a MS Excel spreadsheet.	✓			
16	**Occupational Hygiene**				
16.1	Describe in detail how you would implement an occupational Hygiene programme. Provide an outline of the programme as well. (Is it applicable)	✓			
17	**Leadership Accountability to drive OHS culture within organisation. (Visible Leadership)**				
17.1	Describe how and what measures are taken by Senior Leadership to actively drive OHS with employees and contractors. Consider the following Criteria: • Visibility on sites where operations take place. • Interventions that leadership drive specifically on OHS matters. What monitoring mechanisms are in place to verify the above?	✓			
18	**Permit to Work**				
18.1	Describe in detail how you would implement a permit to work system.	✓			
19	**References – Provide references of the least two (2) clients**				

Ref.	Eskom Health and Safety Requirements Checklist	Proof required	Yes	No	N/A
19.1	Past experience with references. Provide the following details per client: Client 1: • Client's name: • Description of works, services, product: • Duration of contract (specify start and end dates): • Value of contract/work/services/product: • Contact telephone number/s: • Number of 'near misses' reported: • Number of lost-time injuries: • Number of disabling injuries: • Number of motor vehicle incidents/accidents: • Number of fatalities: • Number of lost-time injuries: • Largest number of permanent staff members working on the project during the contract period: Client 2: • Client's name: • Description of works, services, product: • Duration of contract (specify start and end dates): • Value of contract/work/services/product: • Telephone number/s: • Number of 'near misses' reported: • Number of lost-time injuries: • Number of disabling injuries: • Number of motor vehicle incidents/accidents: • Number of fatalities: • Number of lost-time injuries: • Largest number of permanent staff members working on the project during the contract period:	✓			

Ref.	Eskom Health and Safety Requirements Checklist	Proof required	Yes	No	N/A
	COMPANY SIGN-OFF I acknowledge that the information provided in this Occupational Health and Safety Questionnaire, as part of the Eskom OHS evaluation process, is true and correct. Company name: …….... Name and surname: …….. Position: …….. Signature: …… Date: ……				
FOR OFFICE USE ONLY					
SCORING:					
A: Each question qualifies a maximum score of three (3) points. Total possible points					
Percentage Score = Actual Score Possible Score x 100 = ___ %					
OHS EVALUATION RESULT – Comply/Not Comply					

Ref.	Eskom Health and Safety Requirements Checklist	Proof required	Yes	No	N/A
NAME OF ASSESSOR: ……					
SIGNATURE: ……..					
DATE: ……..					

Appendix E - Lifting and Rigging Risk Analysis and Inspection Form

Eskom	Lifting and Rigging Risk Analysis and Inspection	Unique Identifier:	240-99280896
		Doc. Type:	Template
		Revision:	1

Location of Lift:		Date of Lift:			
Description of the Load:		Load Weight	Kg		
		Block Weight:	Kg		
		Spreader Weight:	Kg		
		Rigging Weight:	Kg		
		Jib Weight:	Kg		
		Hoist Line Weight:	Kg		
		Total Load: (a)	Kg		

Single Crane:		Tandem Crane:	
Crane Manufacturer:			
Model Number:		Serial/Registration Number:	

Maximum Load Radius:		On Outriggers	Yes		No			
Corresponding Boom Angle:		On Tyres	Yes		No			
Corresponding Boom Length:		On Crawlers	Yes		No			

Lift Will Be:	On Boom		On Jib		Over Side		Over End	

Rated Capacity (b)							
Capacity Margin = (Total Load x Rated Capacity) x 100 =	(a)		X	(b)		=	

Are there underground hazards?	Yes		No	
Are there any soil conditions?	Yes		No	
Will block or crane mats be used?	Yes		No	
Are there fire or explosive hazards within reach?	Yes		No	
Are there electrical hazards within reach?	Yes		No	
Has the permit been obtained?	Yes		No	
Type of Communication	Hand		Radio	

Prepared by:		Position		Signature	
Operator:		Crane type & size		Signature	

Pre-use Inspection and Documentation requirements that must be met before any lift may commence

Is there proof of Operator/Driver license?	Yes		No	
Is there proof of the operator competency training certificate for the specific crane?	Yes		No	
Was a daily inspection done prior to operation/use?	Yes		No	
Is there a valid load certificate?	Yes		No	
Is there a valid 6 monthly inspection by a registered LMI (Registered with ECSA)?	Yes		No	
Was the inspection conducted by a registered LMI registered, with ECSA?	Yes		No	
Is there a valid hook/safety latch/block inspection and are they in good order?	Yes		No	
Is there a valid rope/s test certificate?	Yes		No	
Does the crane computer work?	Yes		No	
Is the SLI/anti too block in good working condition, and cuts out at its limits?	Yes		No	
Is there any hydraulic/oil leaks that could effect the environment?	Yes		No	
Is the safety equipment up to date (Fire Extinguishers/Triangles etc)?	Yes		No	
Are the maintenance records for the specific crane available?	Yes		No	
Are all tyres in a roadworthy condition?	Yes		No	
Are there inspection registers and certificates for all lifting tackle found on the crane?	Yes		No	
Is the equipment free from any defects and safe to use?	Yes		No	
Are all steps/ladders in place for easy access and are they safe to use?	Yes		No	
Is the load charts displayed in the crane cabin?	Yes		No	
Do all lights/strobelights/indicators/reverse hooter work?	Yes		No	
Does the crane have sufficient stopper blocks?	Yes		No	
Is the crane licensed to drive on a public road when necessary?	Yes		No	
Is the crane operator legally appointed?	Yes		No	
Does the crane operator have a valid Eskom medical and induction?	Yes		No	
Does the contractor for the crane have a valid letter of Good Standing?	Yes		No	
Is the responsible supervisor present during the inspection and the lift?	Yes		No	