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|  | SHE SPECIFICATION LOW /MEDIUM RISK SHE SPECIFICATION | |
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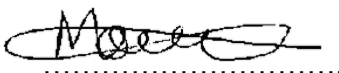
Title: Kriel Power Station Automatic
Voltage Regulator Upgrade for
Unit 1,2,3& 5 for a period of 34
months

Unique Identifier: 240-73418055

Contract Reference Number:

Compiled by

Authorized by



Neo Molwantwa
Safety Officer



Kgomotso Ngweye
Project Manager

Date: 05/09/2022

Date: 05/09/2022

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1. INTRODUCTION

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

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

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

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

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

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

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

2. SUPPORTING CLAUSES

2.1 SCOPE

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

2.1.1 Purpose

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

2.1.2 Applicability

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

2.2 NORMATIVE/INFORMATIVE REFERENCES

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

2.2.1 Normative

- [1] Basic Conditions of Employment Act No 75 of 1997.
- [2] Occupational Health and Safety Act and Regulations No 85 of 1993.
- [3] National Environmental Management Act 107 of 1998.
- [4] 32-136 Contractor Health and Safety Requirements

2.2.2 Informative

- [1] Tobacco Products Control Act 83 of 1993 (Updated 2011.05.19)
- [2] SANS 1186 Symbolic Safety Signs
- [3] Constitution of the Republic of South Africa No 108 of 1996

2.2.3 Definitions

| Definition | Explanation |
|---|---|
| Appointed contractor | Means a contractor appointed by the principal contractor |
| Baseline risk assessment | (32-520) baseline operational risks refer to the health and safety risks associated with all standard processes and routine activities in the business |
| Client | Eskom representative (Internal – Asset Owner), also referred to as the contract administrator/custodian or agent or project manager (as defined in the contract). He/she is the person responsible for ensuring that the works or services are executed in terms of the contract, as well as adherence to legislation pertaining to the contract. |
| Competent person | (OHS Act) means any person having the knowledge, training, experience, and qualifications, specific to the work or task being performed, provided that, where appropriate, qualifications and training are registered in terms of the South African Qualifications Authority Act, 1995 (Act No. 58 of 1995) |
| Contractor – includes appointed contractor | means an employer as defined in section 1 of the Act who performs contract work and includes principal contractors |
| Consultant | means a person providing professional advice |
| Duty of care to the environment | (32-136) anybody who causes or has caused or may cause significant pollution or degradation of the environment must take reasonable measures to prevent such pollution or degradation from occurring, continuing, or recurring. If such harm to the environment is authorised by law or cannot reasonably be avoided or stopped, such person must minimise and rectify such pollution or degradation of the environment |
| Employee | (OHS Act) means, subject to the provisions of subsection (2), any person who is employed by or works for an employer and who receives or is entitled to receive any remuneration or who works under the direction or supervision of an employer or any other person |
| Employer | (OHS Act) means, subject to the provisions of subsection (2), any person who employs or provides work for any person and remunerates that person or expressly or tacitly undertakes to remunerate him/her, but excludes a TES (ex labour broker) as defined in section 1(1) of the Labour Relations Act 1956 (Act No. 28 of 1956) |
| Eskom requirements | a) Eskom requirements flowing from directives, policies, standards, procedures, specifications, work instructions, guidelines, or manuals |
| Hazard | (OHS Act) means a source of, or exposure to, danger |
| Hazard identification | (OHS Act) means the identification and documenting of existing or expected hazards to the health and safety of persons, which are normally associated with the type of construction work being executed or to be executed |
| Health and safety file | (OHS Act) means a file or other record, containing the information in writing required by the construction regulations. |
| Health and safety plan | (OHS Act) means a site, activity or project specific document plan in accordance with the client's health and safety specifications. |
| Health and safety specification | (OHS Act) means a site, activity or project specific document prepared by the client pertaining to all health and safety requirements related to construction work. |
| Health and safety requirements | means comprehensive health and safety requirements for a contract, project, site, and scope of work. This specification is intended to ensure the health and safety of persons, both workers and the public, and the duty of care to the environment. The health and safety requirements must be specific to each contract, project, site, and scope of work |
| Organisation | may be defined as a group of individuals (large or small) that is cooperating under the direction of executive leadership in accomplishment of certain common objects |

| Definition | Explanation |
|-----------------------------|---|
| Principal contractor | (In the text of this document) Means an employer, as defined in section 1 of the OHS Act, who intends to tender for or has signed a contract with Eskom for services rendered. |
| Responsible Manager | Is a Manager of a department, section or operating/business unit who has been appointed as part of the Eskom delegation of authority process with the aim to assist the applicable 16(2) assigned person in executing his/her duties in terms of the Occupational Health and Safety Act |
| Risk assessment | (OHS Act) means a programme to determine any risk associated with any hazard at a construction site in order to identify the steps needed to be taken to remove, reduce, or control such hazard. |
| Service provider | any private person or legal entity that provides any service(s) to Eskom for compensation |
| The Act | (OHS Act) means the Occupational Health and Safety Act No. 85 of 1993, as amended, and the Regulations thereto |
| Visitor | Any person visiting a workplace with the knowledge of, or under the supervision of, an employer. |

2.2.4 Classification

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

2.3 ABBREVIATIONS

| Abbreviation | Description |
|-----------------|---|
| BU | Business Unit |
| CE | Chief Executive |
| COID Act | Compensation for Occupational Injuries and Diseases Act |
| DoL | Department of Labour (Inspection and Enforcement services – Provincial office) |
| EP | Emergency Preparedness |
| GAR | General Administrative Regulations |
| GSR | General Safety Regulations |
| MSDS | Material Safety Data Sheets |
| OHS Act | Occupational Health and Safety Act and Regulations, 85 of 1993 |
| SABS | South African Bureau Standard |
| SANS | South African National Standard |

2.4 RELATED/SUPPORTING DOCUMENTS

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

3. DOCUMENT CONTENT

3.2 SCOPE OF WORK

1. The Contractor provides all the design services for the works, including design of plant, materials layout, all interfaces and additional cabling requirements. These will include but is not limited to general arrangement, single lines, ac and dc key diagrams, cabling terminations, cable block diagrams, cable schedules and input-output (I/O) lists.
2. The Contractors' design interfaces with the Generator Protection panels, SCADA system and the unit DCS.
3. The Contractor provides and designs the communication network for the works, including the HMI, switches and fibre optic cables.

The following designs will be required from the Contractor:

1. A detailed design which has the following packages:
 - a. The final drawings (electrical and mechanical) of the complete excitation system to be submitted
 - b. General layout drawing of the panels,
 - c. Single line diagram of the solution,
 - d. Block diagram of the system,
 - e. Panel internal wiring drawing,
 - f. Termination schedules,
 - g. Manuals
 - h. Software program and the necessary software to review the program, this should include all licence required for the full use of the software.
 - i. Transfer functions of the system in the time and frequency domain, and
 - j. All specifications of the proposed equipment to be used
 - k. A complete factory acceptance testing procedure
 - l. A complete on-site inspection check list
 - m. An erection check list
 - n. A complete cold commissioning procedure
 - o. A complete site acceptance testing procedure
 - p. A complete hot commissioning testing procedure
 - q. Maintenance Plan must be in line with station maintenance strategy.

3.3 LEGAL COMPLIANCE

3.3.1 Section 37(2) (Legal) Agreement

- a) A section 37(2) agreement must be signed between Eskom Kriel and the principal contractor at the time of awarding the contract.

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

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

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

3.3.2 Hazardous Work by Children (Child Labour)

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

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

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

3.3.3 OHS Act

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

3.3.4 Legislative Compliance

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

- The Constitution of the Republic of South Africa (particularly Section 24 of the Bill of Rights).
- Occupational Health and Safety Act 1993 (Act 85 of 1993) and its Regulations.
- Compensation for Occupational Injuries and Diseases Act.

3.3.5 Eskom requirements

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

3.3.6 Appointment of a Contractor

The principal contractor will be appointed by Eskom Kriel on the awarding of the contract and will be responsible and accountable for all legislative and Eskom Kriel requirements for the duration of the contract.

3.3.7 Appointment of sub-contractors

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

Note: Copies of contractor appointments must be kept in the respective SHE file.

3.3.8 SHE Policy

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

The principal contractor and all appointed contractors, if already not in place, will be required to compile an organisational SHE policy in line with their SHE responsibilities. The policy must be signed by the organisation's CE or the appointed assistant to the CE OHS Act Section 16(2). The policy must be displayed in a prominent place within the workplace. A copy of the policy must be filed in the contractor SHE files and attached as an annexure in the SHE Plan.

3.3.9 COID

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

3.4 APPOINTMENTS

The relevant statutory appointments shall be made in accordance with the requirements of the OHS Act which includes the requirement of a competent person being appointed in the relevant roles. The statutory appointments should include but not limited to: First Aider, incident investigator, risk assessor.

3.5 RISK ASSESSMENTS

It is a legal requirement in terms of Section 8 (2)(d) of the OHS Act for an employer to carry out risk assessments, to establish which risks and hazards are attached to the health and safety of persons due to any work which is performed, any article or substance which is, handled, stored, transported. A risk assessment is defined as an identification of the hazards present in an organisation and an estimate of the extent of the risks involved, taking into account whatever precautions are already being taken. It is essentially a three stage process:

- identification of all hazards;
- evaluation of the risks;
- Measures to control the risks.

Risk assessments are required to be maintained. This means that significant changes to a process or activity, or any new process or activity should be subjected to a risk assessment and that if new hazards come to light during the work process, then these should also be subjected to risk assessments. Risk assessments for long term processes should be periodically reviewed and updated. Method statements or written safe work procedures are an effective method as information and record of the way jobs / tasks must be performed. Daily or issue based or task specific or on the job risk assessments must be conducted at the place where work is to be performed/ conducted to allow managers and employees to assess any inherent risks that could have been overlooked during the initial risk assessment or any changes that might have occurred in a period of absence. For example if a job / task is extended over a day or halted due to inclement weather.

3.6 INCIDENT INVESTIGATION

All incidents shall be investigated in terms of OHS Act General Administrative Regulations 8 and 9 and where injuries as contemplated in sections 24 and 25 have been sustained, be reported to the Department of Labour.

Contractors shall use the standard General Administrative Regulation Annexure 1 "Recording of an Incident" form for all incident investigation reports. The objective of incident investigation, should not only be a legal requirement, but should establish why and how the incident occurred and find out the real root cause of the incident and to decide on precautionary measures that are required to address the root cause to prevent any further recurrences of the same or similar incidents.

3.7 EMERGENCY MANAGEMENT

The art of emergency preparedness and response is to minimise the effects of any emergency and to restore normal activities as soon as practical. Periodic emergency drills must be undertaken to test the effectiveness of the plan. This must be recorded and provided on request.

3.8 AUDITING

3.8.1 Approval and compliance of principal contractor SHE plan

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

NB: ALL THE LOW/MEDIUM RISK CONTACTORS WILL BE AUDITED ON QUATERLY.CONTRACTORS ARE CATEGORISED BY THE USE OF ANNEXURE A: SUPPLIER RISK CATEGORY

4. OTHER PROJECT SPECIFICATIONS

5. AUTHORIZATION

6. REVISIONS

| Date | Rev. | Compiler | Remarks |
|-------------|------|----------|--|
| August 2015 | 0 | F Poee | This provides the initial SHE specification requirements that must be met by the relevant contractors who have been awarded a contract for the work to be performed for Eskom. |
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