

PART 3: SCOPE OF WORK

Document reference	Title	No of pages
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C3.2	<i>Contractor's Service Information</i>	
	Total number of pages	

C3.1: EMPLOYER'S SERVICE INFORMATION

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1 Description of the service

1.1 Executive overview

Matimba Power Station is equipped with a High-Fidelity Training Simulator System (referred to as the *Simulator*) replicating the layout and operation of a real generating unit. The purpose of the *Simulator* is to train new operators, retrain current operators as well as simulating the operational behaviour of a generating unit under certain conditions. It is therefore imperative that the *Simulator* is 99% available and reliable for training and testing.

The purpose of this contract is for the *Contractor* to provide human resources with the required skills and knowledge to perform maintenance and administrative activities on the *Simulator* and associated equipment to ensure maximum availability of the *Simulator*.

1.2 Interpretation and terminology

The following abbreviations and terminology are used in this Service Information:

Abbreviation	Meaning given to the abbreviation
AC	Alternating current
COC	Certificate of Compliance
CPA	Cost Price Adjustment
FSS	Finance Shared Services
GR	Good Receipt
HMI	Human Machine Interface
HVAC	Heating, ventilation, and air conditioning
IC	Initial Condition
KKS	Kraftwerk-Kennzeichensystem
NEC	New Engineering Contract
NEMA	National Environmental Management Act
OHS	Occupational Health and Safety
PDF	Portable Document Format
PPE	Personal Protective Equipment
RDE	Rheinmetall Defence
SHE	Safety, Health and Environment
SQL	Structured Query Language
UPS	Uninterruptable Power Supply
VAC	Voltage Alternating Current
VAT	Value Added Tax

1.3 Employer's requirements for the service

1.3.1 Overview of the Simulator

1.3.1.1 Simulator Components

The *Simulator* is based on a SEMS XP/7 simulation system developed by Rheinmetall Defence (RDE). It consists of several hardware and software components as listed below. These components will form part of the service provider's scope of work.

Component	Description	Operating System and/or Manufacturer	Main Software Components (if applicable)
ME Clients	Computer workstations visualizing the Mauell ME-VIEW3 Turbine HMI. Interact with ME Server.	Windows XP	<ul style="list-style-type: none"> PVSSII 3.1 (Developed by Mauell)
OM Clients	Computer workstations visualizing the Siemens OM650 Unit HMI. Interact with Simulation Server	Windows 7	<ul style="list-style-type: none"> RDEOMCLIENT Microsoft SQL Server Compact
Instructor Station	Computer workstation for managing training exercises. Start, stop, pause etc.	Windows 7	<ul style="list-style-type: none"> PSC (Process Supervisor Client) GLCad Microsoft SQL Server Compact Microsoft SQL Server
Engineering Station	Computer workstation for engineering activities related to the Simulator System. Modification of source code, creation of initial condition models (IC)	Windows 7	<ul style="list-style-type: none"> GLCad Database Manager Microsoft SQL Server Compact Microsoft SQL Server Microsoft Visual Studio 9.0 Microsoft Visual SourceSafe
IO Server	Computer server responsible for simulating the EDS 801 SIM based hardwired operator panels. Interact with Simulation Server	Windows Server 2008 R2	<ul style="list-style-type: none"> SimIO
ME Server	Computer server responsible for distributing information between the ME Clients and the Simulation Server.	Windows XP Professional	<ul style="list-style-type: none"> PVSSII 3.1
Simulation Server	Computer server responsible for the processing of all mathematical models.	Windows Server 2008 R2	<ul style="list-style-type: none"> SEMSXP (Simulator Main Process) OM Archive Microsoft SQL Server Compact Microsoft SQL Server Microsoft Visual Studio 9.0
Sound Client	Computer workstation responsible for simulating background unit sounds	Windows 7	
Tube Leak Client	Computer workstation visualizing the Tube Leak Detector System. Interacts with Simulation Server	Windows 7	
Sootblower Client	Computer workstation for visualizing the Sootblower System. Interacts with Simulation Server	Windows 7	
SSC Video Client	Computer workstation for visualizing the SSC video feed. Standalone system	Windows 7	

Component	Description	Operating System and/or Manufacturer	Main Software Components (if applicable)
EDS 801 SIM hardware	DIN mounted hardware to provide input or output interfaces between the IO Server and the hardwired operator panel. The hardwired operator panel consists of several gauges and buttons allowing the operator to monitor and operate sections of the plant without a computerized HMI	EDS	
Audio-visual system	Video recording system to capture the actions of the learners	HIK vision	
Telephone mimic system	System to mimic the telephone system present at each unit control room	Panasonic	
Printers (excluding consumables)	Network printers connected to Simulator network to allow printing from OM Clients, Engineering Station and Instructor Station	HP	
Alarm Response mimic system	System to mimic the alarm response system installed at each unit control room	System Automation and Management	
System Documentation and Drawings			

1.3.1.2 Excluded Components/Systems

The *Simulator* is situated in a building specifically built for the system as well as other training requirements. Within this building, the below listed systems are present. These systems will not form part of the *Contractor's* scope of work. The *Contractor* will however provide support such as the safe shutdown of the *Simulator* to prevent damage to the *Simulator* and associated equipment.

These systems include the following:

- 220 VAC UPS System
- Fire Detection System
- Radio Communication System
- HVAC System

1.3.2 Requirements for the *service*

1.3.2.1 Duties of the *Contractor*

1. The *Contractor* shall be responsible for the provision of all maintenance and administrative activities required to ensure a 99% or greater availability and reliability of the *Simulator*. This includes activities on all the hardware and software components related to the *Simulator* as listed in section 1.3.1.1, but exclude activities directly related to the components/systems listed in section 1.3.1.2. Activities include the following:
 - a. Backups and software inventory of all computerized equipment and equipment with configuration
The *Contractor* shall be responsible for managing the backups and software inventory of all computerized equipment applicable to the *Simulator*. This is to ensure a quick recovery in the event

of a data loss incident. Backups shall comply with the Management of Plant Software Standard, 240-56355910.

- b. Daily inspections and rectifying of faults and issues
The *Contractor* shall be responsible for conducting daily inspections on the Simulator to ensure that faults are identified and rectified. All defects affecting the availability of the Simulator must be reported to the Employer's Simulator Instructor immediately. Faults directly related to the Simulator and associated equipment shall be rectified by the *Contractor*. The *Contractor* shall be required to complete daily check sheets indicating the status of the *Simulator* as well as to capture any issues found during such inspection.
- c. Daily *Simulator* readiness
The *Contractor* shall be responsible for ensuring that the *Simulator* is always in a ready state for training purposes during normal working hours. This includes activities such as start-up and safe shutdown of the *Simulator*. Outside normal working hours, the *Contractor* shall ensure that the Simulator is in a ready state only on request in advance of 48 hours from the Simulator Instructors.
- d. Fault finding and corrective maintenance
The *Contractor* shall ensure that unexpected break downs are attended to and return the *Simulator* to a ready for training state. The Contractor shall further be responsible to compile, and be kept updated, a spares list with quantities of all the spares required to ensure a 99% availability and reliability of the Simulator. This spares list shall be made available to the *Service Manager*.
- e. Cleaning of *Simulator* and associated equipment
The *Contractor* shall be responsible for cleaning of all equipment to ensure reliability.
- f. House keeping
The *Contractor* shall be responsible for housekeeping of the *Simulator*, the offices and storage area assigned to the *Contractor*. Domestic cleaning services will be provided free of charge by the Employer.
- g. Assistance with modifications/changes and upgrades related to the simulator.
The *Contractor* shall be expected to assist with any modifications and or upgrades that might be planned during the service period.
- h. Working hours
The *Contractor* shall be expected to be on site during the following hours:
07:00 to 16:30 (with lunch break of 45 minutes) from Monday to Thursday and from 07:00 to 12:00 on a Friday. During weekends, after-hours and public holidays, the *Contractor* shall be expected to be on site within 45 minutes of a call out to attend to a defect. Upon arrival on site the *Contractor* shall report to the Simulator Instructor. This is to ensure that problems and issues with the Simulator is attended to that might arise during training activities outside normal working hours. The *Contractor* can expect to work a maximum of 120 hours overtime per annum.
- i. Reporting on *Simulator* condition and performance
The *Contractor* shall be required to submit a report to the *contract supervisor* on the 21st of every month or the next working day. This report will include availability factor of the *Simulator*, breakdowns occurred during report period, and feedback related to all activities (a) to (h).

2. The *Contractor* shall be required to interact with other functions within Matimba Power Station to ensure maximum availability of the *Simulator*. This includes the following functions:

- Training function (The main user of the Simulator)
- Electrical function (Maintenance on the electrical system)
- Air conditioning (Maintenance on the HVAC system)
- Engineering function (Owner of the Simulator)

1.3.2.2 Requirements of personnel

The *Contractor* shall provide two employees to perform the services as described in section 1.3.2.1. All potential employees shall be interviewed and approved by the Employer prior to appointment by the *Contractor* of such individuals. Each employee shall have the following experience and working knowledge:

- Minimum 5 years of working experience in maintaining and administrating a simulator system based on RDE SEMS XP/7, both hardware and software components. Contactable references must be provided to verify this requirement.
- Minimum 5 years working experience in maintaining EDS 801 SIM hardware equipment. Contactable references must be provided to verify this requirement.
- Minimum 2 years of working experience in maintaining and administrating Mauell PVSSII 3.1 software and hardware components. Contactable references must be provided to verify this requirement.
- Sound working knowledge of Windows applications, including the installation of Windows Operating systems, configuration of settings etc.
- Sound working knowledge in replacing and maintaining hardware components of Computer Workstations and Servers.
- Sound working knowledge on computer network administration and maintenance.

1.3.3 Contract boundaries

The *service* provided by the *Contractor* shall only be applicable to the *Simulator* and its associated hardware and software components as listed in section 1.3.1.1. The *Contractor* shall not be expected to perform any direct maintenance activities on the excluded systems/components as listed in section 1.3.1.2.

1.3.4 General conditions of the *service*

- a. The *Employer* shall not be responsible for training of the *Contractor* on the in-depth operation of the current *Simulator*. Should the *Contractor* require training it shall be at the cost of the *Contractor*.
- b. The *Contractor's* key persons are to provide maintenance and administration training to appointed persons by the *Employer* on the *Simulator*. Monthly progress feedback shall be given to the contract supervisor during assessment.
- c. Should the current *Simulator* be upgraded or replaced during the *service period*, the *Contractor* shall be expected to provide maintenance and administration services on the new *Simulator*. Training shall be offered to the *Contractor* in this case.
- d. All site regulations shall be adhered to with regards to safety and environmental.
- e. The *Contractor* is required to conduct himself at all times in a proper and orderly manner whilst on the Employer's premises.
- f. The *Contractor* shall comply with all local and statutory labour laws and agreements and shall promptly attend to any labour grievances that may arise. The *Contractor* shall not remunerate his employees at less than the proclaimed statutory wage. Failure in this regard will result in non-performance and therefore immediate termination of the contract.
- g. If the *Contractor* does not correct a defect in a manner which minimizes the adverse effect on the *Employer* or others, the *Employer* may, after first notifying the *Contractor*, have the defect corrected by other people and the *Contractor* pays the *Employer's* costs of the correction.
- h. All transport and accommodation shall be the responsibility of the *Contractor*.

1.4 Low performance damages/assessment sheet

The *Contractor* shall be subjected to low performance penalties/key performance indicators as indicated in the table below:

Item No.	Description	Employer's Requirements	Damages paid by Contractor
1	Training time lost due to late arrival on a call out	<i>Contractor</i> shall be on site within 45 minutes to attend to a problem with the <i>Simulator</i>	1% of monthly contract base cost per hour of delay or part thereof of training time lost after 45-minute period has lapse.

Item No.	Description	Employer's Requirements	Damages paid by Contractor
2	Findings related to the <i>Contractors</i> scope recorded during an Employer conducted audit.	Zero audit findings on activities (a) to (h)	1% of monthly contract base cost per finding
3	Backups not available	The <i>Contractor</i> shall be responsible to manage the backups and software inventory of all computerized equipment applicable to the Simulator. This is to ensure for a quick recovery in the event of a data loss incident. Backups shall comply to the Management of Plant Software Standard, 240-56355910.	1% of monthly contract base cost per hour of delay (or part thereof) due to unavailability of a backup. Example: The IO server lost its hard drive while Simulator was in use. The <i>Contractor</i> need to restore from previous backup. If backup is not available, the clock will start running until Simulator is available again for training. If backup is available, clock will not run
4	Standing defects without valid reason why it cannot be corrected	The <i>Contractor</i> shall be responsible for conducting daily inspections on the Simulator to ensure that faults are identified and rectified. All defects affecting the availability of the Simulator must be reported to the Employer's Simulator Instructor immediately. Faults directly related to the Simulator and associated equipment shall be rectified by the <i>Contractor</i> .	1% of monthly contract base cost for each standing defect without valid reason as to why it cannot be corrected.
5	Training time lost due to Simulator not in a ready state during normal working hours	The <i>Contractor</i> shall be responsible for ensuring that the Simulator is always in a ready state for training purposes during normal working hours. This includes activities such as start-up and safe shutdown of the Simulator. Outside normal working hours, the <i>Contractor</i> shall ensure that the Simulator is in a ready state only on request in advance of 48 hours from the Simulator Instructors	1% of monthly contract base cost per hour of delay or part thereof of training time lost due to Simulator not in a ready state.

2 Management strategy and start up.

2.1 Management meetings

Meetings are held monthly between the *Service Manager* and the *Contractor* (and any other co-opted members). The *Contractor* is represented, at each meeting, by the appropriate members of the staff.

The venue for these meetings is as determined by the *Service Manager*. The *Service Manager* writes the minutes of meetings.

Any action of the *Service Manager* or *Contractor* implied in the minutes of meetings with contractual implications is confirmed by means of a separate communication given in accordance with this Works Information and NEC.

The *Contractor* reports the overall progress and as a minimum requirement, the following is addressed:

- Health, safety and quality management
- The progress of any other relevant activities
- To discuss any technical or commercial issues
- Problem areas or concerns.

Regular meetings of a general nature may be convened and chaired by the *Service Manager* as follows:

Title and purpose	Approximate time & interval	Location	Attendance by:
Service Kick-Off Meeting	Once, before contract start	Matimba Power Station	<p>Contractor's Service Manager and other attendees at the discretion of the <i>Contractor</i>.</p> <p>Employer's Service Manager and other attendees at the discretion of the Employer.</p>
Status Report, Assessment and Risk Management Review Meeting	Monthly	Matimba Power Station	<p>Contractor's Service Manager and other attendees at the discretion of the Contractor.</p> <p>Employer's Service Manager and other attendees at the discretion of the Employer.</p>

Meetings of a specialist nature may be convened as specified elsewhere in this Service Information or if not so specified by persons and at times and locations to suit the parties, the nature and the progress of the *service*. Such meetings should not prejudice the Employer in terms of cost, quality and schedule. Records of these meetings shall be submitted to the *Service Manager* by the person convening the meeting within five days of the meeting.

All meetings shall be recorded using minutes or a register prepared and circulated by the person who convened the meeting. Such minutes or register shall not be used for the purpose of confirming actions or instructions

under the contract as these shall be done separately by the person identified in the *conditions of contract* to carry out such actions or instructions.

2.2 Contractor's management, supervision and key people

The *Contractor* shall provide two employees to perform the services as set out in section 1.3.2.1. The employees shall be required to be on site during normal working hours. At least one employee shall be required to be on standby on request of the *Employer* outside normal working hours. It shall not be expected from the Contractor to have a dedicated Service Manager full time on site, one of the employees appointed to perform the services can be appointed as the Service Manager. If the Contractor decides to appoint a dedicated Service Manager, it will be for the Contractor's own account.

2.3 Documentation control

2.3.1 Document Management

To portray a consistent image, it is important that all documents used within the service period follow the same standards of layout, style and formatting as determined by the Employer. The *Contractor* is required to submit documents as electronic in .pdf format and hard copies and are delivered to the *Service Manager* with a transmittal note.

The Employer has a minimum of four working days to review and consolidate review comments for documentation submitted by the *Contractor*. The *Contractor* also has a minimum four working days to respond and / rectify as per the comments by the Employer.

2.3.2 Plant Identification and Labelling

Plant Identification for the Simulator Components is based on the KKS coding system, and the Employer undertakes the coding in line with its standards. If required, the KKS coding is applied and cross referenced to all arrangement drawings, schematics, wiring diagrams, instructions, and manuals and where practical to spare parts list/manuals.

The contractor will not be responsible for any new plant labelling. Should a plant item with a label attached to it be replaced by the Contractor during the service period, the Contractor shall be responsible for the transfer of the label from the original item to the new item.

2.4 Health and safety risk management

2.4.1 General

In carrying out its obligations to the Employer in terms of this contract, which obligations include, amongst others, to provide the services; using Plant, Materials and Equipment; and whilst at the site for any reason, the *Contractor* is the "Employer" in terms of the Occupational Health and Safety Act, No. 85 of 1993, in respect of its activities and in relation to its employees, agents, Subcontractor/s and mandatories.

The *Contractor* does not consider itself under the supervision or management of the Employer with regard to compliance with the Safety Health and Environmental requirements.

Furthermore, the *Contractor* does not consider himself to be a subordinate or under the supervision of the *Service Manager* in respect of these matters. The *Contractor* is responsible for the supervision of its employees, agents and mandatories and takes full responsibility and accountability for ensuring that they are competent, aware of the Safety Health and Environmental requirements, whilst executing the services in accordance with the Safety Health and Environmental requirements.

The *Contractor* ensures compliance with, amongst others:

- The provisions of the Occupational Health and Safety Act, No. 85 of 1993 and all applicable regulations (as amended), binding in terms thereof
- The latest versions of standards, procedures, specifications, rules, systems of work and requirements of the Employer, copies of which are provided to the *Contractor* on request.
- The Health and Safety Plan prepared by the *Contractor* in accordance with the Employer's Safety Health and Environmental Specification – 240-149136837 and requirements.

- The provisions of the National Environmental Management Act (as amended) and all regulations in force from time to time in terms of that Act,

The *Contractor* ensures that its employees, agents and mandatories comply with the provisions of the Occupational Health and Safety Act, No. 85 of 1993, and all applicable regulations binding in terms thereof as well as the Employer's Safety Health and Environmental Specification - 240-149136837 whilst making use of plant, materials and equipment and whilst at the Site for any reason whatsoever.

The *Contractor* implements a comprehensive health and safety management system, based on the OHSAS 18001 requirements for utilisation at the project.

The *Contractor* appoints a person, qualified and competent in accordance with the safety health and environmental requirements, as the liaison with the Employer's Project Safety, Health and Environment Manager/Officer or delegated person for all such matters as pertaining related to safety, health and the environment. The *Contractor* ensures that such a person is contactable 24 hours a day and is registered with a registered professional council approved by the Principal Director of the Department of Labour, as per the requirements of the latest Construction Regulations, inclusive of all exemptions and amendments pertaining thereto.

The *Contractor* hereby indemnifies the Employer and holds the Employer harmless in respect of any and all loss, costs, claims, demands, liabilities, damage, penalties or expenses that may be made against the Employer and/or suffered or incurred by the Employer (as the case may be) as a result of, any failure of the *Contractor*, its employees, agents and mandatories to comply with their obligations, and/or the failure of the Employer to procure the compliance by the *Contractor*, its employees, agents and/or mandatories with their responsibilities and/or obligations in terms of or arising from the Occupational Health and Safety Act, No. 85 of 1993.

The *Contractor* acknowledges that he is fully aware of the requirements of all requirements and undertakes to employ only people who have been duly authorised in terms thereof and who have received sufficient safety training to ensure that they can comply therewith.

The *Contractor* undertakes not to do, or not to allow anything to be done which will contravene any of the provisions of the Act, Regulations or Safety and Operating Procedures.

The *Contractor* shall appoint a person who will liaise with the *Employer* Safety Officer responsible for the premises relevant to this contract. The person so appointed shall on request:

- Supply the Employer Safety Officer with copies of minutes of all Health and Safety Committee meetings, whenever he is required to do so.
- Supply the Employer Safety Officer with copies of all appointments in respect of Employees employed on this contract, in terms of the Act and Regulations and shall advise the Employer Safety Officer of any changes thereto.

Employer may, at any stage during the currency of this agreement be entitled to:

- Do safety audits at the *Contractor's* premises, its workplaces and on its Employees.
- Refuse any Employees or agent of the *Contractor* access to its premises if such person is found to commit any unlawful act or any unsafe working practice or is found to be not authorised or qualified in terms of the Act.
- Issue the *Contractor* with a work stop order or a compliance order should Employer become aware of any unsafe working procedures or conditions or any non-compliance with the Act, Regulations and Procedures by the *Contractor* or any of its Employees or agents. Stoppages of this nature will not constitute a compensation event.

2.4.2 Mandatory Agreements

The *Contractor* confirms that:

- In terms of sections 37(1) and 37(2) of the OHSA, the Employer is relieved of any and all of its responsibilities and liabilities pertaining to the activities performed by the *Contractor* (and its employees,

agents and mandatories) relating to the works; the use of plant, materials and equipment; and whilst at the Site for whatsoever reason.

- b) The *Contractor* confirms that, in terms of the Construction Regulations, Regulation 6, it is hereby mandated as the designer and must perform all duties required of a designer. (This will be applicable only where the *Contractor* is required to do design work as part of their Scope).

The *Contractor* confirms that he has been provided with sufficient information regarding the health and safety arrangements applicable to the services, the use of Plant, Materials and Equipment, as well as at the Site.

In addition, the *Contractor* ensures that:

- Prior to the *Contractor* commencing with any operations/ activities relating to the works and/or prior to gaining access to the Site, the *Contractor* concludes a written mandatory agreement with the Employer in terms of Section 37(2) of the OHSA and 5(1)(k) under the construction regulations. The agreement constitutes a record of the written arrangements and procedures between the *Contractor* and Employer regarding health and safety.
- As far as is reasonably practicable, the safety and absence of risks to health in connection with the production, processing, use, handling, storage or transport of articles or substances is maintained.
- As far as is reasonably practicable, all hazards pertaining to the health and safety of persons and harm to the environment that are attached to any work which is performed, any article or substance which is produced, processed, used, handled, stored or transported and any plant or machinery which is used in its business, is clearly identified and, as far as is reasonably practicable, further establishes what precautionary measures should be taken with respect to such work, article, substance, plant or machinery in order to protect the health and safety of persons and or harm to the environment, and provides the necessary means to apply such precautionary measures;
- Such information, instructions, training and supervision as may be necessary to ensure, as far as is reasonably practicable, the health and safety at work of its employees, agents and mandatories is provided.
- As far as is reasonably practicable, no employee, agent and transports any article or substance or operates any plant or machinery, unless the precautionary measures contemplated in paragraph 2.3.3, or any other precautionary measures which may be prescribed have been taken.
- Such measures as may be necessary in the interest of health and safety and the environment are enforced.
- Work is performed and that plant, materials or equipment is used under the direct supervision of a person trained to understand the hazards associated with it and who has the authority to ensure that precautionary measures required by the Employer are implemented; and
- All employees are informed of the scope of their authority as contemplated in OHSA.

2.4.3 Health and Safety Obligations

In addition to the mandatory agreements, the *Contractor*:

- Ensures that all statutory appointments (as required in terms of the Occupational Health and Safety Act, No. 85 of 1993 and all applicable regulations binding in terms thereof, as amended) and other appointments required in terms of the Employer's Safety Health and Environmental Specification – 240-149136837 and SHE Requirements Procedure (32-726) are in place and that all appointees are cognisant of their duties and responsibilities in terms of such appointments.
- Ensures that such appointees execute their duties and responsibilities as required by such an appointment.
- Ensures that all personnel brought by itself onto site (including employees of *Contractors*) are suitably qualified and trained for the performance of the task, duties and functions, which are allocated to them.
- Immediately reports any occupational or other injuries, near miss events, property damage, environmental related incidents as well as any potential threat to the health and safety of individuals at the works or on the site, as soon as he becomes aware thereof, to the *Service Manager*; Complies with the Employer's Occupational Health and Safety Incident Management Procedure – 32-95 and Environmental Incident Management Procedure – 240-133087117 relating to the reporting and investigation of incidents. The classification of incidents contained in such document are considered final and are applied by the *Contractor* relating to any incidents/ injuries relating to its employees, agents, *Contractors* and mandatories whilst on Site.
- Conducts a risk assessment regarding the utilisation of PPE and thereafter ensure that PPE of good quality is issued (at its own cost) to its employees, agents, *Contractors* and mandatories prior to such

individuals accessing the site, alternatively performing activities related to the works at the site, as specified in the Eskom PPE Specification - 240-44175132.

2.4.4 Eskom Life Saving Rules (240-62196227)

RULE 1: OPEN, ISOLATE, TEST, EARTH, BOND, AND/OR INSULATE BEFORE TOUCH

With the aim to ensure a safe electrical work environment, no person may work/operate on, around or near any electrical network, line or apparatus, electrically connected to the power system and/or electrically charged and/or not electrically charged unless:

- a) He/she is trained and authorised as competent for the task to be done
- b) There is a valid permit to work, where required
- c) A pre-task risk assessment to identify all risks and hazards has been conducted prior to any work commencing
- d) He/she follows the requirements on OPEN, ISOLATE, TEST, EARTH, BOND and/or INSULATE BEFORE TOUCH, correctly based on applicable/related standards, procedures and outcome of risk assessment fit for the type of work or task to be performed
- e) The authorised person (team leader) has certified and physically shown all team members that the apparatus is safe to work on
- f) He/she makes the specific electrical environment safe prior to performing the work; and
- g) All the appropriate PPE (including face shield and insulated gloves for low voltage work) are worn.

RULE 2: HOOK UP AT HEIGHTS

Working at height is a significant part of work in Eskom Holdings and is regarded as a high-risk activity, and as a result all precautions must be taken to prevent incidents while working at height. Wherever reasonably practicable, preference must be given to the performance of work at ground level as opposed to work in an elevated position. Where work in an elevated position is necessary, the requirements in this document shall apply.

No person may work at height where there is a risk of falling unless:

- a) He/she is medically fit to work at height
- b) A pre-task risk assessment to identify all risks and hazards has been conducted prior to commencing any work of this nature
- c) He/she is appropriately trained as determined by the risk assessment
- d) He/she is appropriately secured during ascending and descending; and
- e) He/she is using an Eskom approved fall arrest system where applicable.

RULE 3: BUCKLE UP

Where required, the proper wearing of seat belts for any driver, operator and passenger is mandatory in all vehicles/equipment when driving and/or travelling for Eskom business purposes. The driver is obligated to ensure that he/she as well as all passengers are properly seated and wearing their seatbelts at all times while being transported in the vehicle, as per Eskom specifications.

Note: This rule is applicable on any road or parking lot, irrespective of the speed, and when the vehicle moves in a forward or backward direction.

RULE 4: BE SOBER

No person who is under the influence or who appears to be under the influence of intoxicating liquor or drugs will be permitted to enter or remain on an Eskom site or conduct Eskom business or drive/operate a vehicle/equipment for Eskom business purposes.

This includes any level of alcohol or the presence of any drugs, controlled substances, and/or illegal substances in the body that impairs or could impair mental and physical functioning, irrespective of when the substance was used.

RULE 5: ENSURE THAT YOU HAVE A PERMIT TO WORK

Where an authorisation limitation exists, no person shall work without the required Permit to Work (PTW), which is governed by for example the:

- a) Plant Safety Regulations; or
- b) Operating Regulations for High Voltage Systems (ORHVS); or
- c) Any other activity where a permit is required.

No plant is to be returned to service without the cancellation of all permits on that plant in accordance with procedure, unless permission is granted for a particular plant to be returned to service with permits still open, like in the case of redundant systems.

NOTE: In the case of live work, a “live work declaration form” is to be completed by the authorised person, who is the person responsible for the safe execution of work according to relevant standards and procedures. Outline the key principles or rules to support the implementation of the standard statement.

2.4.5 Health and Safety Plan (Construction Regulations)

The following will be required after contract award:

The *Contractor* shall compile a Health and Safety Plan, filed in a Health and Safety File, comprising of the following:

- Proof of the contracting company's own Health and Safety Policy
- Proof of appointments, assignments and designations as required in terms of the Occupational Health and Safety Act, No 85 of 1993
- Proof of Risk Assessments regarding Hazards identified and proof of training of own employees regarding controls derived from the risk assessment
- Proof of Safe Work Procedures that derived out of the Risk Assessments
- Proof of the contracting company's own Emergency Plan that will deal with their own emergencies on site
- Proof of a Fall Protection Plan, if required to perform work at elevated levels developed by a competent person appointed by the contracting company
- Proof of “Notification to perform Construction Work” – a copy of the notification addressed to the Department of Labour as required Regulation 3 of the Construction Regulations
- Proof of an Induction Program (it is advised that the Matimba SHE Rules as a Guide) and an attendance register signed by its employees prior the commencement of any construction work on site
- Proof of the contracting company's employees Medical Fitness Certificate. (Must still be valid – one year. May only have been issued by an occupational health practitioner)
- Proof of *Contractors* weekly Health and Safety Rep Inspections regarding its own site and where detached work is performed
- Proof of Personal Protective Equipment (PPE) issued to *Contractor's* employees
- Proof of contracting company's Accident/Incident Reporting and Investigation System
- Proof of checklists and where applicable test certificates, regarding *Contractor's* tools, equipment, machinery, mobile equipment, vessels under pressure and any other applicable checks required by the Act
- A “Section 37(2) Agreement with Mandatory” needs to be drawn up by the Employer and co-signed by the *Contractor* before work can commence
- The Safety Officer employed by Matimba Power Station will audit these Health and Safety Plans to ensure compliance with the provisions of the Act.
- In terms of Clause 4 (b) of the Construction Regulations, the Employer points out the hazards or risks that is associated with the works, as indicated in Appendix B, to the *Contractor*. The hazards or risks it are however not limited to this list.

2.5 Environmental constraints and management

2.5.1 Waste Management

All waste management activities, which includes procurement of control measures, handling and disposal or processing of all waste forms generated on the *Contractor's* site, are conducted according to Matimba Power Station Waste Management Procedure – PS/244/001, and all requirements of the Employer as per the Environmental Management Programme All costs associated with waste management are the responsibility of the *Contractor*.

2.5.2 Hazardous Waste

All waste introduced to and/or produced on *Employer's* Premises by the *Contractor* for the service period, must be handled in accordance with the minimum requirements for the Handling and Disposal of hazardous waste in terms of Government Legislation as proclaimed by the Department of Water Affairs and Forestry 1994 Ref.: BN0621-16296-5. (A copy of this document is available at the Power Station for reference purposes).

No hazardous waste may be stored for a period of more than 90 days on the Matimba premises. Ensure that all hazardous waste is disposed of at a licensed Class H disposal site. A copy of the hazardous waste disposal certificate is submitted to the *Service Manager*.

2.5.3 Environmental Management

The *Contractor* shall adhere to all requirements as set out in 240-146112716: Environmental management requirements for *Contractors*.

The *Contractor* conforms to all requirements dictated in the document as well as the National Environmental Management Act (NEMA, Act No. 107 of 1998) and the National Environmental Management Waste Act (NEMWA, Act No. 59 of 2008). This is achieved by undertaking inspections, audits, monitoring and reviews, conducted internally by the *Contractor* and externally by the *Service Manager*.

Matimba has an Environmental Policy, PP/240/001, to which the *Contractor* and his employees must adhere. It is the responsibility of the *Contractor* to ensure that he obtains copies of the Matimba Environmental Policy, the legal register applicable to his area of responsibility, the aspect register and the Matimba procedures (applicable to the *Contractor's* area of responsibility) and to familiarize themselves on such procedures, within 30 days from the date of commencement of work at Matimba, to assist the *Contractor* and his/her employees to prevent pollution and to comply with legislative requirements. Copies of the above-mentioned documents shall be obtained from the *Service Manager* or Environmental Officer on the first day prior to commencement of work at Matimba. The *Contractor* shall submit proof to the Environmental Officer of Matimba that he and his employees has done all the necessary training on procedures and Policies supplied to them and that they do understand the contents of the procedures, registers and policies and will adhere to them at all times.

The non-adherence to the Matimba Environmental policy and rules could result in the termination of this contract.

2.6 Invoicing and payment

There are no additional requirements to the invoicing and payment clauses in Section 5 of the core clauses.

At each assessment interval, the *Contractor* submits to the *Service Manager* a forecast rate of invoicing that includes all the expected payments by the Employer to the *Contractor* on a month-by-month basis.

The *Contractor* addresses the tax invoice to Eskom Holdings SOC Ltd and include on each invoice the following information:

- The registered name of the *Contractor*
- The VAT registration number of the *Contractor*
- The address of the *Contractor*
- The Employer's contract number
- The VAT registration number of the Employer
- The value of the invoice split into payments as per the activity schedule as indicated in the Price Lists.
- Any retention monies to be deducted from the invoice
- Any interest payable
- Escalation formula used where applicable

All invoices in PDF format are emailed directly from your system to an Eskom email address.

- Email addresses for invoice submission: Invoiceseskomlocal@eskom.co.za. The *Service Manager* is copied when submitting invoices.
- All queries and follow up on invoice payments are made by contacting the FSS Contact Centre:
Tel: 011 800 5060 or e-mail: fss@eskom.co.za
- For Foreign invoices, the *Contractor* is required to physically deliver hard copies of original documents to the *Service Manager* even though the *Contractor* has e-mailed those invoices.
- The *Contractor* ensures compliance with the tax Requirement for submitting invoices electronically.
- If there is Cost Price Adjustment (CPA) on your invoice, the Employer recommends that the *Contractor* issue a separate invoice for CPA so that if there are any issues on the CPA the rest of the invoice can be paid while resolving CPA issues.
- The base invoice number needs to be mentioned on the CPA invoice.
- Electronic invoicing does not guarantee payment but ensures visibility of all invoices and ensures that no invoices get lost. If the Goods Receipt (GR) is not done the invoice is parked and the system automatically sends an e-mail to the *Service Manager* to do the goods receipt. This is also tracked by the Employer through the parked invoice report.
- The *Contractor* can request a parked invoice report from the Finance Shared Services (FSS) Contact Centre which can then be followed up and corrected. The *Contractor* is allowed to forward the details of invoices corrected to the FSS Contact Centre.

2.7 Contract change management

There are no additional requirements to the compensation event clauses in Section 6 of the core clauses.

2.8 Insurance provided by the *Employer*

There are no additional requirements to the Core Clause 8.

2.9 Training workshops and technology transfer

The Employer shall not be responsible for training of the Contractor on the in-depth operation of the current Simulator. Should the Contractor require training it shall be at the cost of the Contractor. Should the current Simulator be upgraded or replaced during the service period, the Contractor shall be expected to provide maintenance and administration services on the new Simulator. Training shall be offered to the Contractor in this case.

The Contractor's key persons are to provide maintenance and administration training to appointed persons by the Employer on the Simulator. Monthly progress feedback shall be given to the contract supervisor during assessment.

2.10 Design and supply of Equipment

The *Contractor* shall provide all equipment necessary to perform the scope of work as set out in section 1.3.2.1. This includes, but not limited to, the following:

- Office equipment
- Hand tools and other special tools

Any additional equipment (excluding spares) required to perform the services shall be for the Contractor's own account.

2.11 Things provided at the end of the *service period* for the *Employer's* use

2.11.1 Equipment

None

2.11.2 Information and other things

Any procedure, working instruction, knowledge base, check sheet, or any other information compiled by the *Contractor* during the *service period*, and which is related to the execution of the scope of work, shall remain the property of the *Employer*. The *Contractor* shall be required to hand this information over at the end of the *service period*.

3 Procurement

3.1 People

3.1.1 Minimum requirements of people employed

All people employed to perform the services shall have South African Citizenship or a valid workers permit if not South African nationals. Refer to section 1.3.2.2 for the requirement of personnel that will perform the services. Superiors should have experience in the magnitude of the work as described throughout the Employers Service Information.

3.2 Subcontracting

No subcontracting will be allowed.

3.3 Plant and Materials

3.3.1 Specifications

This contract is for the provision of services only. The contract will however make provision for the procurement of low value items such as computer or network components, for which the contractor will be compensated. In each case, approval shall be obtained from the Service Manager prior the procurement of such items, and the following will be applicable:

All new parts and materials shall be free from defects. No reconditioned parts and/or materials are regarded as new under any circumstances. Any procurement of reconditioned equipment (as required during the service period due to obsolescent of installed equipment) must be approved by the Service Manager.

It is the responsibility of the *Contractor* to ascertain the condition of any used equipment or materials, transport to site, corrosion protection, as well as any spares compatibility issues that may present itself in the future.

The *Contractor* does not use parts or materials which are generally recognised as being unsuitable or otherwise to be avoided for the purpose for which they are intended.

Only components of high reliability are utilised, with a proven operating history, to enable the Plant to achieve required reliability and availability. Parts and material design, engineering and manufacture accord with the best modern practice applicable to high-grade products of the type to be furnished, so as to ensure the efficiency and reliability of the works and the strength and suitability of the various parts for the works.

Parts and materials withstand ambient conditions and the variations of temperature arising under working conditions without distortion, deterioration or undue strains in any part.

All parts are made accurately, and where practicable, to standard gauges so as to facilitate replacement and repairs. Like parts are interchangeable.

No repair of defective parts and/or materials is permitted without the *Service Manager's* acceptance and any such repair, if accepted, is carried out in accordance with the Employer's requirements.

3.3.2 *Contractor's* procurement of Plant and Materials

The *Contractor* supplies and uses suitable and sufficient tools and equipment as may be required to carry out the service efficiently.

The *Contractor* at all times provides protection for all tools and equipment from damage or loss due to weather, fire, theft, unexplained disappearance or similar.

The *Contractor* at all times protects from damage, due to the *Contractor's* service, all plant and materials and equipment and all items on the site that are the property of the Employer or Others.

3.3.3 Plant & Materials provided "free issue" by the *Employer*

None

4 Working on the Affected Property

4.1 *Employer's* site entry and security control, permits, and site regulations

The *Contractor* shall ensure compliance with the following:

- Matimba Power Station Health and Safety Standards as per Matimba Power Station Health & Safety Specifications for *Contractors* (PA/270/003).
- Compliance with Eskom & Matimba No Smoking Policy
- Adhere to the OHS Act 85 of 1993
- All staff will undergo Safety Induction, presented by Matimba Risk Management Department
- Adhere to Eskom Life Saving Rules at all times
- The *Contractor* must conform to the access control requirements as set out in the document called "Health and Safety Practices for *Contractors* at Matimba Power Station".
- The *Contractor* must conform to the requirements set out in the document called "Eskom Environmental Practices and Standards".
- Names and Identity numbers are required seven working days before the contract starts. Photo copies of Identity documents are also required. This must be arranged with the Employer's Representative.
- Lost permits will be paid for by the *Contractor* to Protective Services at a cost of R30-00 per lost permit.
- Only work vehicles with an approved permit will be allowed on site. No private vehicles will be allowed on site.
- Arrangements must be made with the Employer's Representative well in advance to allow sub-*Contractors* on site.
- The transport of any equipment onto site must be declared and documented at Protective Services in order to facilitate the future removal thereof.

4.2 Access to Site

Access to the site is controlled and it is governed by the terms and conditions lay down by Matimba Power Station security officials. The proposed site will be shown to the *Contractor* during the site meeting or clarification meeting by the Employer.

All *Contractor* employees who will require access to site for any period longer that 5 working days will be required to undergo induction.

All *Contractor* employees who will require an access permit to site must be in possession of a Police Clearance Report (SAP91)

The *Contractor* liaises with the Matimba SHE Practitioner/Officers for Safety Induction prior work to commence.

After Induction the *Contractor* will be issued with a copy of the attendance register for the induction attended. This proof of induction will be used by the Employer to verify attendance prior to signing the Personal Site Access document.

The *Contractor's* employees take the signed site access documents to security reception official in order to finalize their site access.

The *Contractor* ensures that all its employees carry their site access forms with them all the time.

All individuals entering site is subjected to alcohol testing on a daily basis.

The *Contractor* submits his application for vehicle permit to the *Service Manager*. The personnel and vehicles entering and leaving the site are subjected to routine searches.

The *Contractor* ensures that a tool list is available on the day of arrival and that all tools and equipment that will later be removed from site are captured on the tool list. The tool list is handed over to the Reception Security official that will stamp the tool list. The tool list is kept safe and used when tools need to be remove from site.

4.3 Housekeeping

Working areas are cleaned daily. All electrical cables and hoses are routed so as not to cross over floors and walkways. All equipment is packed neatly without interference to access.

4.4 Restrictions to access on Site, roads, walkways and barricades

Restrictions and hours of work may apply at Matimba Power Station. The *Contractor* keeps records of his people on site which the *Service Manager* have access to at any time. These records may be required in the event of a compensation event for assessment purpose or other cause.

4.5 Health and safety facilities on Site

The Medical Station is available on site during normal working hours. The afterhours emergency telephone number is 014-763-8311 or from an internal phone the extension is 5000 that can be phoned for assistance.

Fire protection and rescue services are available on site 24 hours per day.

The *Contractor* provides a First Aid service and SHE representative to his employee. In the case where these prove to be inadequate, like in the event of a serious injury, the Employer's Medical Centre and facilities may be available. Outside the Employer's office hours, the Employer's First Aid Services are only available for serious injuries and life-threatening situations. The Employer recovers the costs incurred, in the use of the above Employer's facilities, from the *Contractor*.

4.6 Publicity and progress photographs

The taking of photographs at Matimba Power Station is restricted and subject to the acceptance of the *Service Manager*. In the event that photographs are required for reporting or progress, an application for a camera permit must be submitted to the *Service Manager* for approval by the Power Station General manager.

4.7 Contractor's Equipment

The *Contractor* provides all equipment that is required to perform the service.

The *Contractor* ensures that all his equipment remains within the allocated working area.

The *Contractor* ensures that any staff, labour, or equipment moving outside his allocated construction site does not obstruct the normal operation of the power station.

Any additional access routes required are coordinated with the *Service Manager*.

All equipment used by the *Contractor* in performing the service comply with the General Machinery Regulation 4 of the Occupational Health and Safety Act (Act 85 of 1993).

Any electrical equipment, or appliances, used by the *Contractor* conforms to the applicable OHS Act safety standards and is maintained in a safe and proper working condition. The *Service Manager* has the right to stop the *Contractor's* use of any electrical equipment, or appliance, which, in the opinion of the *Service Manager*, does not conform to the foregoing. Inspection of equipment/appliance will be done as required by OSH Act.

The *Contractor* shall register all their equipment and declare all their belongings at the security gate upon arrival. Unregistered belongings upon arrival will not be allowed to be removed offsite.

If applicable, all transport i.e., Tractors, Trucks, L.D.V.'s is for the *Contractor's* own account

Accommodation is for the *Contractor's* own account.

All tools must be provided by the *Contractor* for the works.

All office equipment must be provided by the *Contractor* for the works.

Any special tools and equipment to be used on site for the execution of the service is the responsibility of the *Contractor*.

The employer will not assist the *Contractor* with the off-loading of any equipment or material.

4.8 Equipment provided by the Employer

No Equipment will be supplied by the Employer.

4.9 Site services and facilities

4.9.1 Site Yard

The Contractor will be supplied with an office furnished with two chairs and desks for the duration of the service period. Any additional furniture need by the Contractor shall be for the Contractor's own account. At the end of the service period, only the furniture supplied by the Contractor shall be removed from site.

The office shall be kept clean and tidy at all times, this includes all workshops and storage areas under the control of the Contractor. Maintenance of the yard is the Contractors responsibility and is for the Service Managers acceptance.

4.9.2 Supply of Electricity

Electricity is made available free of charge from power points which are indicated by the *Service Manager*. Only 220 (AC) Volt is available on request. All points of supply requested by the *Contractor* are provided in terms of quantity and location at the discretion of the *Service Manager*.

No guarantees of power supply quality are given, and power supply breaks of some duration may occur without warning. Planned outages are also a possibility. The *Contractor* makes arrangements at his own expense to improve continuity and quality of power where necessary for any reason and no claim of any nature relating to power failures is considered.

No connection is made to the permanent installation at Matimba Power Station without the prior acceptance of the *Service Manager*.

The power supply is managed in accordance with the latest revision of the Eskom safety regulations i.e.:

- a) 32-846, Operating Regulations for High-Voltage Systems
- b) 36-681, Generation Plant Safety Regulations
- c) COC for the site installation is required prior to power being switched on.

4.9.3 Lighting

Lighting will be available at the *Contractor's* work site. If lighting is needed at an area where the Employer's provided lighting cannot reach, temporary lighting should be provided at the *Contractor's* own account. This temporary lighting shall be in accordance with the requirements of the OHS Act as amended.

4.9.4 Water

Potable water will be available at dedicated points for use by the Contractor free of charge. The *Service Manager* does not guarantee continuity of supply and the *Contractor* makes his own provision for standby supplies to maintain continuity of work. Claims of any nature relating to discontinuity of water supply shall not be considered and entertained.

4.9.5 Roads

Main access roads are surfaced, complete and may be used by the *Contractor* with the necessary care. The Employer maintains the Site roads, described above, to a fair condition. Any costs incurred by the *Service*

Manager from damage caused to underground services, structures, etc. as a result of the *Contractor* not using the identified routes is recovered from the *Contractor*.

4.9.6 Sanitary Facilities and Refuse

Sanitary facilities, refuse bins and cleaning services will be supplied by the Employer

A refuse control system will be established by the *Contractor*. All waste and refuse are collected and disposed of as directed by the *Service Manager*, at the Power Station refuse disposal site.

4.9.7 Telecommunications

The *Contractor* will be given a telephone line for internal calling within Matimba Power Station. No network point with internet access will be supplied. Should the *Contractor* require internet access, he/she is to make his own arrangements with relevant authorities.

Should the *Contractor* wish to use radio communication equipment on site, he makes his own arrangements with the relevant authorities. In this case, he is requested to liaise with the head of security at the station to ensure that there is no interference with existing channels or equipment.

5 List of drawings

5.1 Drawings issued by the *Employer*

This is the list of drawings issued by the *Employer* at or before the Contract Date and which apply to this contract.

Drawing number	Revision	Title