

	<b>Scope of Work</b>	<b>Camden Power Station</b>
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**Title: PROVISION OF SPARE PARTS AND  
SERVICES FOR CAMDEN POWER  
STATION GENERATORS LECTRODRYER  
BAC-50 HYDROGEN DRYERS ON AN “AS  
AND WHEN REQUIRED BASIS” FOR A  
PERIOD OF 60 MONTHS**

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## PART 3: SCOPE OF WORK

Document reference	Title	No of pages
	Cover page	1
C3.1	<i>Employer's Service Information</i>	29
C3.2	<i>Contractor's Service Information</i>	0
	Total number of pages	30

## C3.1: EMPLOYER’S SERVICE INFORMATION

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## 1 Description of the service

### 1.1 Executive overview

This contract is for the provision of Turbine Generator H2 dryer system maintenance and spares for units 1 – 8 at Camden Power Station. The objective is to ensure that the BAC-50 Hydrogen dryer is maintained as per the original equipment manufacturer’s maintenance schedule specification. In this process, the intension is to increase the safety of the dryers and provide increased monitoring of the hydrogen dew points inside the generator for trending purposes.

### 1.2 Employer’s requirements for the service

The services should include:

- The purpose of this service information is to ensure that the BAC-50 Hydrogen dryers are in a reliable operational condition and meet the Eskom safety requirements. As a pre-requisite:
  - The contractor is to do a walk down of the plant after contract award to establish and determine the current plant status, any alarms and defects that will require spares for maintenance.
  - Once the defects have been identified, the contractor shall put a comprehensive plan in place to proactively fix all the defects or obtain the required spares from the Camden H2 Dryer (BAC-50) Original Equipment Manufacture to be able to replace the defective components.
- Major services and monthly inspections to be conducted over the contract period. NB: Detailed tasks and spares required at minimum are all as listed under the BoQ on Section 5.2.
- If any special spare is required apart from the employer’s list, the contractor will inform the employer immediately or as soon as they become aware of those spares.
- Comprehensive maintenance reports, Certificate of Compliance, investigation reports, process quality plans and check sheets and commissioning check sheets, are to be produced timeously within 1 weeks of completion of each service.
- There will be a performance monitoring assessment that will take place for 2 weeks commencing from the handover date after the service of a unit to evaluate the dryer for optimal performance. Should there still be any defects present in this period or dryer malfunction, the contractor is to repair and correct the defect as part of the service, at no additional costs.

**Table: 1**

	Activity	Responsibility	Quality plan sheets
<b>Major Services at Minimum.</b>			
1	H2 dryer CO2 purging and permit issue	Eskom & Contractor	Contractor to supply gas and purge the dryer. Eskom to isolate the plant and issue PTW.
2	Open top and bottom header flanges tower 1 & 2	Contractor	Record findings on QCP
3	Remove desiccant tower 1 & 2	Contractor	Record findings on QCP
4	Remove motor tower 1 & 2	Contractor	Record findings on QCP
5	Remove and test heater element tower 1&2	Contractor	Record findings on QCP
6	Clean tower 1&2 vessel, top and bottom header flanges	Contractor	Record findings on QCP
7	Open oil vapour filter and remove carbon media	Contractor	Record findings on QCP
8	Flush oil vapour filter	Contractor	Record findings on QCP
9	Open dryer diaphragm valves inspect clean and test	Contractor	Include condition inspection report

**Provision of spare parts and services for Camden  
Power Station generators Lectrodryer BAC-50  
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	Activity	Responsibility	Quality plan sheets
10	Flush dryer cooling water pipework with high pressure cleaner. Ensure that all station main CW lines tapping points are free from any blockages.	Contractor	Record findings on QCP
11	Service 4-way valve and actuator	Contractor	Ensure the valve and actuator are fully functional
12	Service and test the air supply system, pressure, filter solenoid system	Contractor	Ensure that the control air system is fully functional, has the correct air pressure, is free of air leaks and the air filter is replaced
13	Service/flush the cooling water system and unclog all blockages	Contractor	Ensure that the cooling water system is fully functional, has the correct flow, is free of water leaks and free of blockages.
14	Remove dryer pressure indicators	Contractor	Record findings on QCP
15	Re-install dryer pressure indicators	Contractor	Record findings on QCP
16	Remove dryer temperature indicators	Contractor	Record findings on QCP
17	Re-install dryer temperature indicators	Contractor	Record findings on QCP
18	Clean dryer externally and clean control box enclosure	Contractor	Record findings on QCP
19	Check, tighten all electrical connections and ensure glands, fittings and covers are properly sealed and in order.	Contractor	Record findings on QCP
20	Calibrations, repairs and replace of pressure indicators	Contractor	Issue certificates
21	Calibrations, repairs, replace of temperature gauges	Contractor	Issue certificates
22	Calibrations, repairs and replace of PLC Controller & Panel touch pad - display screen	Contractor	Issue certificates
23	Install desiccant and heater tower 1&2	Contractor	Check heater resistance at terminal stud to ensure no short-to-ground exists
24	Re-install motor tower 1&2	Contractor	Verify motor resistance readings
25	Box up dryer system ensure all connections and joint/flanges are all tight	Contractor	All flange gaskets to be replaced - tower flange, interconnecting pipes, etc.
26	Perform leak check on dryer system and repair leaks	Contractor	Record findings on QCP
27	Clean and test liquid level detector system	Contractor	Record findings on QCP
28	Clean and test oil vapour filter panel	Contractor	Record findings on QCP
29	Test blower motors tower 1 and 2 IR bearing and resistance test	Contractor	Record findings on QCP
30	Clean and calibrate inlet and outlet dew point probes. Replace if required.	Contractor	Record findings on QCP
31	Commission dryer	Contractor	Confirm the setting of the reactivation flow by recording the bed Outlet temperature, cooler outlet

	Activity	Responsibility	Quality plan sheets
			gas temp and bed temp two hours into the heating step
32	Conduct soap test to ensure no H2 or air leaks when the H2 dryer system is in operation.	Contractor	Issue tightness certificates
33	Carry out Dryer 2-week performance evaluation commencing from date of commissioning certificate.	Contractor	Capture the findings on the QCP/PQP
34	Attend all emergency plant breakdown within 12 – 48Hrs.	Contractor	Provide Service Report

## 2 Monthly Plant Inspection at Minimum.

1.	If required, obtain permission from Ops to purge the H2 dryer system with CO2 for PTW application request	Contractor/ Eskom	If Required - Contractor to supply gas and purge the dryer. Eskom to isolate the plant and issue PTW.
2.	Inspect and monitor electrical panel to ensure good operating indications of Hygrometers, Temperature controllers, PLC Controller & Panel touch pad - display screen. If defects are found, obtain the PTW and fix the plant.	Contractor	PQP/ Quality check sheets required.
3.	Service the water tramp to ensure sufficient condensation drainage.	Contractor	Record findings on QCP
4.	Inspect, Calibrations, repair and/or replace all pressure gauges/indicators. Replace if required.	Contractor	Record findings on QCP
5.	Inspect, Calibrations, repair and replace of temperature gauges/ indicators and replace if required.	Contractor	Record findings on QCP
6.	Visual inspect and tighten all electrical connections and glands external from the main control box.	Contractor	Record findings on QCP
7.	Flush cooling water pipework with high pressure cleaner and ensure sufficient flow. On Completion, ensure all valves are left in an open position.	Contractor	Ensure that the cooling water system is fully functional, has the correct flow, is free of water leaks and free of blockages.
8.	Inspect carbon media tank set up	Contractor	Record findings on QCP
9.	Inspect oil vapour filter	Contractor	Record findings on QCP
10.	Clean the entire H2 dryer plant externally to be free of any dust accumulation and any debris which may affect system operation.	Contractor	Send pictures to Eskom Supervisor and Capture the information on the PQP/QCP
11.	Soap tests all diaphragm valves for any leaks. Replace if required.	Contractor	Issue inspection report on diaphragm condition
12.	Ensure all connections and joint/flanges external are tight with no possible H2/air leaks.	Contractor	All flange gaskets that were opened to be replaced
13.	Ensure all valves are set in correct operating positions	Contractor	Record findings on QCP
14.	Visit control desk at Control room to check for any standing alarm. Ensure local and DCS readings do align. Immediately attend if any.	Contractor	Ensure SAP defects notification is loaded and signed off on completion.

	<b>Activity</b>	<b>Responsibility</b>	<b>Quality plan sheets</b>
15.	Perform leak test/check (H2 and Air) on dryer system and immediately repair leaks if any.  <b>NB: Use Hydrogen detector/sniffer to locate H2 leaks.</b>	Contractor	Issue tightness certificates
16.	Clean and test H2 liquid level detector system if not blocked.	Contractor	Issue tightness certificates
17.	Maintain housekeeping around the H2 dryer plant.	Contractor	
18.	Immediately report any plant defects which require to be planned for future to Eskom Supervisor	Contractor	Capture the information on the PQP/QCP.
19.	Record both H2 dew points and tower bed temperatures readings with OEM specifications.	Contractor	Capture the information on the PQP/QCP and service report
20.	Clear the permit to work and ensure the dryer is back in-service without any alarm before leaving site.	Contractor	Record findings on QCP
21.	Ensure final QCP/PQP is issued to Eskom Supervisor within 24 hrs after the service.	Contractor	Issue final QCP/PQP to Eskom service manager

## 2.1 Interpretation and terminology

The following abbreviations are used in this Service Information:

<b>Abbreviation</b>	<b>Meaning given to the abbreviation</b>
PQP/QCP	Process Quality Program/Quality Control Plan
SOW	Scope of work
OEM	Original Equipment Manufacturer
EMD	Electrical Maintenance Department
BoQ	Bill of Material
PTW	Permit to Work

## 3 Management strategy and start up

### 3.1 Management meetings

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

The *Service Manager* arranges a kick-off meeting after contract award. This can be done before the commencing of the first service. Normally, the *Service Manager* and the *Contractor* (and any other co-opted members) attend the meeting. The meeting is chaired by the *Service Manager* who is also responsible for drafting and circulation of the minutes.

Typically, the following items are discussed:

- i. Scope/Commercial
  - Scope review clarification
  - Permits for hot work

- QCPs
- Safety induction training arrangements for the maintenance team
  
- ii. Organizational structures
  - *Employer* organization
  - *Contractor* organization
  - Management of Subcontractor/s (quality and material supply)
  - Parent company involvement (define the roles and responsibilities)
  - Focal points of contract: *Employer (Service Manager) – Contractor* (Person to be named)
  - *Contractor* Organogram with emphasis on site bound personnel
  
- iii. Security
  - Access arrangements.
  - Access permits (personnel, laptops, etc.)
  - Cameras and cell phones with cameras
  
- iv. HR & IR
  - Working hours
  - Accommodation and meals if required
  
- v. Safety, Health and Environment
  - Health and Safety Plan
  - Site procedures (e.g. emergency preparedness, etc.)
  - *Employer* Safety Officer/s
  - *Contractor* Safety Officer/s
  - PPE
  - Emergency telephone numbers
  
- vi. Quality Management
  - Quality Management Plan
  
- vii. Risk Management
  - Risk meetings
  
- viii. Accepted Programme and Activity Schedule

The *Service Manager* is to hold a risk register meeting (Clause 16.2) as and when required. This could be used to discuss safety, compensation events, subcontracting, overall co-ordination and other matters of a general nature. Separate meetings for specialist activities such as planning and activities of a technical nature may also be warranted

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*. 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.

### **3.2 Contractor’s management, supervision and key people**

This section describes an organogram that is to be put in place from the *Contractor* showing his people and their lines of authority / communication

The organogram distinguishes between the various types of labour (i.e. skilled, unskilled etc.) and the position level as well as indicate the structure and responsibilities during the different phases. As a minimum it addresses the following:

- Project management
- Documentation management
- Configuration management
- Planning and programming
- Site management
- QA / QC
- Safety
- Technical Clarification
- Design / Engineering
- Procurement
- Manufacturing
- Erection and Installation
- Commissioning
- Acceptance Tests

### **3.3 Documentation control**

Before the plant is placed in service the Contractor is to certify that it is properly isolated in terms of PSR and in safe condition before the actual work can commence.

Official contractual communication, i.e. instructions, etc., will take place only between the contractor and the project manager. The communication media of choice will be by email addressed to the correct recipient. This may be a message in the email itself, supported by any relevant attachments. Any other recipients may be copied in communication emails.

The interface design for the added safety features is to be submitted in hard copy and electronic format. The submissions include any software simulations that were performed by the contractor to realize the design. The design is to remain the property of the employer.

All drawings related to the system that might change with possible upgrades of the safety features are to be updated and approved by engineering before implementation. This new drawing shall be registered with Eskom Documentation centre with latest revision.

PQP documentation, including any updates and signatures, will remain the responsibility of the contractor to ensure that hold points (Employer Inspections) are adhered to.

Operation manuals, maintenance manuals, spares list, and all other related documentation will be submitted to the employer by the contractor with each installation that is completed.

### 3.4 Invoicing and payment

Within one week of receiving a payment certificate from the *Service Manager* in terms of core clause 51.1, the *Contractor* provides the *Employer* with a tax invoice showing the amount due for payment equal to that stated in the *Service Manager's* payment certificate.

The *Contractor* shall address the tax invoice to [invoiceseskomlocal@eskom.co.za](mailto:invoiceseskomlocal@eskom.co.za)

and include on each invoice the following information:

Name and address of the *Contractor* and the *Service Manager*.

The contract number and title;

*Contractor's* VAT registration number;

The *Employer's* VAT registration number.

Description of service provided for each item invoiced based on the Price List.

Total amount invoiced excluding VAT, the VAT and the invoiced amount including VAT;

Banking details (Bank, Branch, Branch code, Account No).

### 3.5 Insurance provided by the *Employer*

The *Employer's* Insurance Policies can be viewed on the following website:

<http://www.eskom.co.za/c/101/insurance-policies-procedures/>.

The *Employer's* Insurance Policies is reviewed and may be revised annually on the annual insurance policy maturity date at the end of March each year when the *Contractor* is advised to inform himself of such updates on the above website. Claims procedures and claim forms are also available from this website. If Marine insurance is applicable, the procedure for initiation of this insurance cover is also available from this website.

### 3.6 Training workshops and technology transfer

The *Contractor* provides training for the *Employer's* personnel on the new safety systems that will be installed in the plant as part of the contract directly applicable to the *works*. Training for Operating, Maintenance and Engineering staff is to takes place on site.

Practical hands-on training during the whole contract implementation forms an integral part of the training process. This includes training of the maintenance personnel on how to carry out first-line maintenance on the plant. The *Contractor*, together with the employee shall develop a training schedule with the consideration of staff constraints and shows these dates in the accepted programme.

**Training to be provided by the employer and contractor:**

Minimum Requirements – Safety Training	Contractor	Eskom
First Aid Training - level one	X	
Confined space training	X	X
Working at heights	X	
Risk assessment training	X	
Hazardous Location Training	X	
Medical fitness certificate	X	

Minimum Requirements – Safety Training	Contractor	Eskom
<b>Power Station Training provided (required)</b>		X
Power Station Site Safety Induction		X
HIRA Training	X	
Site Coaching –prepare for authorisation		X
Eskom Plant Safety Regulation Training		X
Basic firefighting course	X	

### 3.7 Things provided at the end of the *service period* for the *Employer’s* use

#### 3.7.1 Equipment

All Eskom equipment's/ spares in position of the contractor.

#### 3.7.2 Information and other things

Drawings and other relevant documentations.

### 3.8 Management of work done by Task Order

A task order includes:

A detailed description of the work in the task order  
 A priced list of items of work in the Task in which items taken from the Price List are identical  
 The starting and completion dates for the Task  
 The amount of the delay damages for the late completion of the Task and  
 The total of the Prices for the Task

## 4 Health and safety, the environment and quality assurance

### 4.1 Health and safety risk management

Health and Safety requirements that the *Contractor* shall comply with include:

#### 4.1.1 Detailed costing for Health and Safety

- Based on the overall scope of work/ service to be performed – compulsory.
- Demonstration of an adequate health and safety management system that the Service Provider has:
  - Does the service provider have a documented health and safety management system?
  - provide proof
- Examples of the above include (but are not limited to), where applicable:
  - Notification to Commence Construction Work

The Principal *Contractor* shall, on receipt of the letter of appointment from the *Client*, before commencement of on-site activities, notify the Provincial Director of the Department of Labour of commencement of construction work as defined in Construction Regulations of the Occupational Health & Safety Act.85 of 1993

A copy of the notification letter acknowledged by the DOL shall be forwarded to the Agent and *Client* and a copy also kept on the H&S file on site.

- Compensation for Occupational Injuries and Diseases

The Principal *Contractor* shall submit a letter of good standing with the Compensation Commissioner or Insurer at tender stage. The letter of good standing shall be valid throughout the project period. The *Client* shall at regular intervals of time carry out inspections to ensure that the letter of good standing remains valid throughout the project period.

- Appointments

The Principal *Contractor* shall after consideration of the risks involved in the work, make relevant Occupational Health and Safety appointments as stipulated in the OHSA, before commencement of site operations and submit to the *Client* as part of the H&S Plan.

- Competency for Principal *Contractor's* responsible people

The Principal *Contractor* shall compile and maintain a current register/inventory of all supervisory and management personnel appointed to the construction Site. The inventory shall include H&S and professional competencies for each person appointed. The inventory shall be submitted to the *Client* for approval at tender stage as part of the H&S plan.

- Organogram

A site organogram clearly defining the reporting structure and legal appointment structure shall be drawn up and submitted by the Principal *Contractor* to the *Client* as part of the H&S plan at tender stage.

- Hazard Identification and Risk Assessment (HIRA)

Using the scope of works provided as part of the tender enquiry documents, the *Contractor* shall compile and submit a HIRA at tender stage with proposed control measures. The HIRA shall indicate in general the type of H&S hazards and risks anticipated in the project and shall in broad terms indicate the proposed control measures to eliminate or minimise the identified risks.

The *Contractor* shall ensure that a detailed HIRA is performed by a competent person before commencement of construction work, and it shall form part of the H&S plan to be submitted to the *Client* for approval.

HIRA is an on-going process, and a review shall be submitted whenever there are changes in the scope and/or process. The Health and Safety Representative(s), the Health and Safety Committee members and *Contractor's* Representative shall be members of the HIRA team and shall ensure that all the identified hazards and risks are appropriately controlled and reviewed.

The *Contractor* shall be responsible for making sure that all employees under his control are conversant with the content of the HIRA, as well as putting in place appropriate measures to either eliminate or reduce the risks.

The HIRA must take into consideration the baseline risk assessment that will have provided by the *Client*.

- Health and Safety (H&S) Plan

The Principal *Contractor* shall develop, compile and submit, at tender stage for approval by the *Client*, a composite H&S Plan as per the *Client's* specifications.

- Health and Safety Training

The Principal *Contractor* shall conduct a training needs analysis on receipt of the letter of appointment from the *Client*. The training needs analysis shall be updated before every major work change and every six months for the duration of the contract. The training conducted on each project shall be three-fold, namely:

Induction – the Principal *Contractor* shall ensure that all his employees undergo H&S induction based on the legislative requirements, *Client*'s specification and his H&S Plan before starting work on site.

Awareness – the Principal *Contractor* shall continuously conduct on site toolbox talks, display posters and contract statistics regularly and before any hazardous work takes place.

Competency – the Principal *Contractor* shall, based on his HIRA and training needs analysis nominate relevant persons to be sent on appropriate courses. The Principal *Contractor* shall make available at the *Client*'s request copies of certificates of training.

All records of training attendance, contents of training and training certificates shall be kept in the site H&S file and readily available on request by the employer.

- Documentation

The Principal *Contractor* shall keep and maintain H&S records to demonstrate compliance to legal requirements, the H&S specification, as well as any other Eskom requirements. All documents shall be available for inspection by the *Client*, Agent and the DOL.

- Monitoring and Evaluation

Inspections - The Principal *Contractor* shall carry out inspections as prescribed by legislation, the H&S Plan and the *Client* H&S specification. The Principal *Contractor* shall keep records of all inspections.

Internal Audits - the Principal *Contractor* shall conduct regular H&S audits at least once a month to ensure compliance to OHSA and H&S specification. Records of audits shall be kept on site and non-conformances reported.

External Audits - the Principal *Contractor* shall ensure that regular external H&S audits are conducted to ensure compliance to H&S legislation. External audits shall be carried out by competent persons or company. All documentation held by the Principal *Contractor* shall be available for inspection by the *Client*.

- Reporting, Recording and Investigation of Accidents and Incidents

All accidents and incidents must be reported, recorded and investigated in accordance with the OHSA and Eskom procedure 32-95. The Principal *Contractor* shall report all accidents and incidents to the *Client* within 24 hours. The Principal *Contractor* shall allow the *Client* to participate in any investigation linked to any activity within the scope of the construction project. The Principal *Contractor* shall keep an on-site record of all incidents reported in the form of OHSA GAR Annexure 1. In the case of accidents/incidents, Eskom may conduct an independent investigation. The *Client* will provide the Principal *Contractor* with 32-95 procedure.

- Emergency Preparedness

The Principal *Contractor* shall, in consultation with the *Client*, develop and submit to the *Client* an emergency response plan from a review of potential emergency scenarios before commencement on site which will include, but not be limited to:

- Escape procedures and routes
- Employee accounting systems after emergency

- Rescue and medical duties
- Means and procedures for reporting emergencies
- Persons to be contacted for information
- Emergency alert systems
- Contact list of emergency service providers

The emergency plan shall include training of employees to deal with such emergencies and shall form part of the H&S plan. The Principal *Contractor* shall advise the *Client* or his agent within 24 hours of any site emergency occurring together with the action taken.

## **4.1.2 Client’s Considerations and Management Requirements**

### **4.1.2.1 Injury Statistics**

The Principal *Contractor* shall report monthly injury statistics to SRM on the first of every month and in the case where the first is on the weekend then it must be reported on the first working day of the month.

### **4.1.2.2 Client’s audits**

The *Client* will from time to time conduct audits of the Principal *Contractor’s* activities to ensure compliance with *Client’s* requirements and specification.

### **4.1.2.3 Permits and Authorizations**

The Principal *Contractor* shall ensure that a written work permit and/or authorisation are obtained from the *Client* prior to commencement of any work to be done on the plant. When completing the application for a permit to work, the responsible person shall ensure that any special requirements, such as hot work, or working in a confined space, is stated in the application.

All work permit requests must be accompanied by a method statement stating:

- The scope of work to be undertaken
- Work program with detailed timelines share with Eskom supervisor
- Identification of hazards and risk assessment of the proposed work
- Mitigation strategies to control, reduce or eliminate the identified hazards
- Safe Working procedure
- Training strategies for employees
- Equipment to be used
- Process for evaluation of employees’ physical and psychological fitness
- Other information deemed necessary, as stipulated in the Plant Safety Regulations and Operating Regulations for High Voltage Systems.

### **4.1.2.4 Public Health and Safety Information**

The Principal *Contractor* shall ensure that each person visiting a site shall be made aware of the dangers likely to arise from on-site activities and the precautions to be taken to avoid or minimise those dangers. Appropriate health and safety signage shall be always posted.

### **4.1.2.5 Medical Surveillance Program**

Where Principal *Contractor* employees are exposed to occupational health hazards and risks that may have adverse effects to their health and/or lead to occupational diseases e.g. inhalation of dusts, exposure to noise, etc., the Principal *Contractor* shall establish a medical surveillance program. The

program shall include all high-risk occupations as specified in the Construction regulations i.e. crane operators, construction vehicles, mobile plant operators,

Medical screening shall be conducted by an Occupational Health Practitioner with either the SA Health Profession’s Council or SA Nursing council. Medical screening shall be conducted as per the following frequencies:

- Pre-employment
- Periodic medical screening
- Post-employment and

When the scope of work or individual’s medical condition (which has the potential to affect their ability to perform their duties) changes.

#### **4.1.2.6 Non-compliance and Penalties**

Eskom will view the following at-risk behavior in a very serious light:

- Disregarding any requirements contained in OHSA, this document, site specific health and safety requirements and plan.
- Performing an unsafe act or creating an unsafe condition that could pose a danger to themselves or to others.
- A Principal *Contractor* allowing any of their employees or subcontractor’s employees (including casual labourers, or labour broker employees) to work on any site without ensuring that each employee has received proper access and training.

If any of the above (inclusive but not limited to) are noted, it may result in cancellation of the contract.

#### **SAFETY NOTIFICATION CAMDEN POWER STATION GMR 2.1**

The following services as a compliance and notification instruction with reference to the OSHACT, Act 85 of 1993 and any amendments thereto; BCEA and LRA of South Africa.

All safety related incidents (Category A, B & C, Fire incidents; Usage of Fire Extinguishers and Near misses) shall be immediately reported to Camden Power Station Safety Risk Management Personnel.  
All Category C Incidents shall be immediately notified to the Outage Manager, either telephonically or in person.

All personnel are allowed to wear Safety Harnesses while walking in the plant if they are secured properly onto the person and no loose sections of the Harnesses drags on the floors, gratings, etc. where it can get caught and restrict a person’s movement. Harnesses are not allowed in any lift.

During working on elevated positions all personnel shall wear Safety Harnesses attached to lifelines or secured as per Contractors Fall Protection Plan, which each Contractor shall have written and available on site for perusal, as and when required.

All Safety Harnesses shall comply with SABS EN 362:1992; 363:1992; 365:1992; 364:1992 Codes of Practice.

In terms of Section 16.1 of the OSHACT, “Every chief executive officer shall as far as reasonably practicable ensure that the duties of his Employer as contemplated in the Act, are properly discharged”. Basically, every employee, permanently/temporary/part-time/sub-contracted onto the CAMDEN site shall be treated as an “employee” in terms of the Act whilst under your “direct supervision and care”.

All Employees as stated above in 5 have a right to “free issue” of safety equipment, which shall be supplied to them prior to commencement of the work. The equipment shall comply to the relevant SABS standards and shall be in proper working condition, clean and undamaged whilst working on the CAMDEN Site.

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In terms of the BCEA and LRA all employees shall be afforded a fair minimum wage, including allowances for meals and transport, if not provided, which has been agreed and set by the relevant Bargaining Councils, which form part of the Acts.

All employees shall be granted 3 breaks during the 12-hour shift (1x15 minute break in the morning; 1x30 minute lunch break midday; and 1x15 minute break in the afternoon). Refreshments or meals shall be provided or be the responsibility of the Contractor (Employer). Employees cannot be allowed to work without having proper meals or refreshments.

All Contractor employees entering the Camden Power Station site shall be medically fit. A certificate shall be issued by a Registered Occupational Health Worker who carried out the full medical examination. Basically, a full evaluation (Red Ticket) shall be done and those that pass these examinations shall be allowed to work on Camden Power Station.

In terms of Section 8.2 & 18.3 of the OSHACT, Employers shall ensure employees working at Camden Power Station are trained in the hazards associated with the tasks and the precautionary measures are taken in the interest of health and safety. The responsibility shall include compliance and adherence to the Eskom Plant Safety Regulation, Permit to work system and Emergency Care.

All Contractors to ensure that the Camden Power Station Emergency Alarm is activated for serious injuries and the injured shall not be moved by the Contractors staff unless in a condition which threatens the injured or other parties' life. Movement of injured persons (employees) shall be done by a trained First Aider, who shall always be at the site during the work phase.

All Contractors shall send a Safety Officer/ Representative to all Safety Meetings arranged by the Power Station.

Safety Officers shall be at site or as reasonably practical to ensure that all hazards risks are identified and corrective actions is taken.

All Employers shall ensure that all employees disregarding a safety instruction is not allowed to be a risk to the contractor, Camden Power Station or other parties whilst on this site. The appropriate disciplinary action shall be taken against these employees.

The Contractor shall have daily toolbox talks, periodic site inspections, job observations, risk assessments, safety equipment checks and safety talks with all employees.

Safety induction will be done by the Power Station on prior arrangements but is not the minimum requirement. Induction and hazards training shall be done by the Contractor.

In terms of section 37.2 of the OSHACT, you the Contractor will ensure compliance with all requirements of the OSHACT and any instruction/ notification that enhances those requirements.

All Contractors to ensure that a Safety Manual is completed prior to working on site and the relevant appointees are fully conversant with their responsibilities are trained /competent in these requirements, training proof is available, and appropriate re-training is done.

Contractors to ensure that all staff, whether permanent/non-permanent/ supplied by Labour Broker are competent in their relevant disciplines that they are employed/contracted in and all proof of training, experience, etc. is available and is current. Appropriate re-training shall have been done.

Due to all staff being under the “direct supervision and control” of yourself, they shall and will be treated as an ‘employee’, as defined in the OSHACT, Act 85 of 1993.

All equipment, welding panels, compressors, pneumatic tools, electrical equipment shall comply with a relevant SABS Code of practice and all documentation related to this shall be made available as and when required, except for welding panels which shall only be connected by Camden Electrical Department with a certificate of Compliance submitted prior to request. All pneumatic tools shall have had an inspection covering condition of pressure components, including piping, spring loaded bolts, safety devices and controls. A certificate must

be issued by the hire company to the Main/Sub-Contractor confirming the tool is in a good and acceptable working condition. Proof of inspection must be issued by the Hire Company to lesser prior to bringing onto Camden Power Station Site.

#### COMPLIANCE TO 5 IDENTIFIED LIFE SAVING RULES (CARDINAL RULES)

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

No person may work on any electrical network unless:  
He/she is trained and authorised as competent for the task to be done;  
A pre-task risk assessment to identify all risks and hazards has to be conducted prior to any work commencing;  
An equipotential zone is created for each worker on the job site by earthing, bonding, and/or insulating according to approved procedures;  
all conducting material is connected together, all staff on site wear electrical safety shoes, and insulating techniques are applied according to standards; and  
the authorised person (team leader) has certified and shown all team members the apparatus is safe to work on.

##### RULE 2: HOOK UP AT HEIGHTS

Working at heights is defined as any work performed above a stable work surface or where a person puts himself/herself in a position where he/she exposes himself/herself to fall from or into.

No person may work at height where there is a risk of falling unless:  
A pre-task risk assessment to identify all risks and hazards has to be conducted prior to commencing any work at height;  
he/she is appropriately trained;  
he/she is appropriately secured during ascending and descending; and  
he/she is using an approved fall arrest system where applicable.

##### RULE 3: BUCKLE UP

No person may drive any vehicle on Eskom business and/or on Eskom premises:  
unless the driver and all passengers are wearing seat belts.

##### RULE 4: BE SOBER

No person is allowed to work under the influence of drugs and alcohol.  
“Under the influence” means the use of alcohol, drugs, and/or a controlled substance to the extent that;  
the individual’s faculties are in any way impaired by the consumption or use of the substances; or the individual is unable to perform in a safe, productive manner; or  
the individual has a level of such substances in his/her body that corresponds to or exceeds accepted medical/legal standards; or  
the individual has a level of alcohol in his/her body that is greater than 0.02% blood alcohol concentration. This includes any level of an illegal substance in the body, 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 the Plant Safety Regulations, Operating Regulations for High Voltage Systems (ORHVS) etc.

No plant is to be returned to service without the cancelation of all permits on that plant in accordance with procedures.

NB: 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 the work according to relevant standards and procedures.

Please ensure that these rules are understood and communicated with the urgency that they deserve. If any of these rules are unclear or the consequences not understood, please do not hesitate to discuss it with Eskom.

We would like to continue our current partnership and therefore urge your support in the implementation and upholding of these rules.

## **4.2 Environmental constraints and management**

The management and staff at Camden Power Station are committed to generate low-cost power without compromising its responsibility towards the natural environment. Camden Power Station management has decided to implement and align its environmental management system in compliance with SABS ISO 14001:1996 as a means of managing impacts to and ensuring continual improvement of the environment in which it operates.

The Contractor needs to comply with ISO 14001 on environmental management.

### **The environmental policy for Camden Power Station is set out below:**

- We are committed to sustainable development and will actively work to reduce the impact on the natural environment resulting from the power generation process.
- We commit to continual improvement in our performance and aspire to minimum harm to people and the environment.

### **Whenever we conduct our business, we will:**

- Develop, implement and maintain an environmental management system that is consistent with internationally recognised standards.
- Effectively and efficiently manage the natural resources required to generate electrical power.
- Comply with the requirements of environmental legislation and adhere to Eskom’s corporate policies and procedures on environmental management.
- Set and achieve targets, that include preventing pollution, to address our environmental aspects and impacts.
- Develop our people and provide resources to meet our targets.
- Communicate and engage with our employees, clients, regulatory authorities and suppliers to build relationships based on integrity, honesty, openness and involvement to meet the requirements of this policy.
- Increase environmental sensitivity and awareness among station management, employees and the community and achieve active involvement of all parties, with respect to environmental matters.

### **And promote Camden Power Station and Eskom as environmentally responsible organisations to outside parties.**

We will review and report our progress regularly and ensure this policy remains relevant to the needs of our stakeholders. We will be satisfied when we achieve our targets toward minimum harm to people and the environment, and are valued by our clients and the communities in which we work

## **Refuse Disposal**

The Contractor is responsible to keep the work area clean of any rubble.

All waste introduced and/or produce on the Employers premises by the Contractor for this contract, is 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 Act 1994 Ref: ISBN0621 – 16296-5.

The Employer provides colour coded bins for the refuse disposal.  
The Employer empties these bins.

Contractor keeps the work area clean of any rubble, and places all refuse into bins provided.

The Contractor ensures that all workers under his control strictly adheres to the correct use of refuse bins:

- Maroon bins:                 - Scrap metal only
- White bins:                 - Lagging and general household rubbish
- Yellow bins:                - Ash, dust, coal dust and sand

### **4.3 Quality assurance requirements**

The contractor shall comply with the quality procedures and codes relevant for each task Order. Also, a PQP is to be submitted by the contractor for each SOW for a particular outage based on the task order issued. The PQP documentation is to be discussed and accepted by the employer 2 weeks before any work commences for a particular outage.

As a minimum, the PQP for the contractor should include hold points on all safety related clearances, i.e HV permit issued before work commences.

#### **4.3.1 Quality management system**

The Contractor provides the complete QA&QC documentation including that of his Subcontractor(s), for all Plant, Material and Equipment, in compliance with SANS 9001:2008 Edition 4, “Quality Management Systems - Requirements”, and the *Employer’s* standard GGS 0462 Rev 1 “Quality Requirements for Engineering and Construction Works in Generation”.

The *Contractor* further ensures that the Subcontractor(s) programmes comply with the requirements of the Works Information.

The *Contractor* notifies the *Service Manager* of any changes to the Quality System and obtains agreement prior to implementation on existing orders and contracts, or sub orders and subcontracts.

#### **4.3.2 Quality documents submitted after the contract date**

The *Contractor* submits a fully detailed Quality Assurance Programme (QAP) for acceptance by the *Project Manager* within four weeks of the *Contract Date*.

The documents submitted by the *Contractor* shall include the following:

- Copy of the Quality Manual
- Copy of the Quality System Procedure
- Copy of the Contract Quality Management Plan
- Copy of Quality Control Plans
- Copy of the proposed index of the QA/QC, inspection and test records

The *Contractor* will further submit the following documents during the course of the contract:

- Non-conformance reports (NCR’s) raised by the *Contractor*
- Notification of any planned changes to the *Contractor’s* quality manual, quality system procedures, contract quality management plan or quality plan for acceptance by the *Service Manager* prior to implementation
- Concession/production permit applications and supporting documentation

- Data books and/or data packages

#### **4.3.3 Contract quality management plan requirement**

The *Contractor* prepares a contract quality management plan that, where appropriate, indicates the following:

- Indicates the interface with the *Contractors* quality system and applicable documents such as procedures and work instructions
- Establishes communication channels between the *Contractor* and the *Project Manager* in respect of quality and the integration of such with the prescribed contract communication channels
- Indicates how specific subcontractors will be monitored
- Identifies items or activities for which quality control plans will be prepared
- Identifies the specifications, drawings and acceptance criteria for material for which quality control plans are not required
- Identifies the areas or processes requiring special controls
- Identifies the *Contractor's* Management Representative and personnel responsible for the control of quality activities and their relationship to the *Contractor's* management structure
- Identifies the documents which are to be submitted to the Service Manager
- Indicates the *Contractor's* quality monitoring programme

The *Contractor* periodically updates the contract quality management plan to reflect changes in any of the above details. The frequency of such updates is determined by the Service Manager but will not be greater than one year.

#### **4.3.4 Quality control plan**

The *Contractor* quality control plans cover inspection and test proposals for items or activities to be supplied as part of the *works*.

The quality control plan indicates the following as appropriate:

- The identification of the item
- The material
- A list of the sequence of operations including inspections and tests
- The identification of the specification, drawings or procedures for each operation
- The acceptance criteria with reference to the appropriate technical specification, in-house, national or international standard and relevant clause number
- The inspections and tests the *Contractor* has nominated for hold and witness points and it is shown in the Accepted Programme.
- During contract execution no actions to provide the *Works* are implemented at any of the *working areas* before the relevant quality control plans and procedures are accepted by the *Service Manager*.
- Proof of the *Contractor's* personnel competence in terms of Reg 18 (5 and 6) of the OHS Act is submitted to the *Service Manager* for acceptance prior to the commencement of any work on Site and is shown in the Accepted Programme.

Quality control plans with hold and witness points are supplied to *the Service Manager* for his review and acceptance 15 days before the start of each of the following phases and or stages and it is shown in the Accepted Programme for modifications:

- i. Investigation phase
- ii. Design and engineering phase
  - Technical clarification stage.

- Design freeze stage
- iii. Production engineering phase
  - Procurement, fabrication and delivery stage.
- iv. Construction and erection phase.
- v. Commissioning phase
  - Commissioning stage.
- vi. Operational test phase.

#### **4.3.5 Access to the *Contractor’s* and subcontractor(s) premises and facilities**

The *Contractor* and/or its subcontractor gives access to the *Supervisor* and/or the Authority/Agency and the Regulator where appropriate to their premises and facilities at reasonable times to conduct quality assessments, audits, surveillances and inspections to establish compliance with the contractual requirements.

#### **4.3.6 Inspection and testing**

The *Contractor* gives at least 72 hours advance notification to the *Supervisor* or the Authority for inspection/test and hold or witness points, which require their attendance. The *Contractor* confirms readiness for inspection at least 24 hours prior to the test.

The *Contractor* ensures that all work has been fully inspected, accepted and documented prior to requesting any inspection by the *Supervisor*. On-Site Services will be inspected as per the approved Inspection and test plan for site services.

#### **4.3.7 Quality records**

The *Contractor* prepares and submits to the *Service Manager* an Index of QA/QC and inspection and test records prior to the commencement of work.

The *Project Manager* determines which documents are to be submitted during the performance of work and reviews the index and request changes if required. The *Contractor* conforms to the Index approved by the *Service Manager*

The *Contractor* ensures all records identify the items, equipment and/or activities to which they pertain and collates indexes and securely stores the records in such a manner that they are readily retrievable.

The *Contractor* implements appropriate administrative controls to limit access to prevent inadvertent loss of or damage to records.

The *Contractor* stores all quality records. The *Contractor* only destroys or discards quality records with the approval of the *Service Manager*.

The *Contractor* presents on completion of the works all quality records in the form of a data package. The package is indexed and shows the entire contents.

#### **4.3.8 Standard Specifications**

- The *Contractor* will abide by the SHE requirements of Camden Power Station. The risk is the responsibility of the contractor and will be managed by the *Service Manager* in conjunction with the contractor. The OHASA, Eskom’s current safety standards, ISO14001, health and environmental procedures and policies shall be adhered to at all times.
- PER (Pressure equipment regulations)

- Eskom Hydrogen Standard 240-56227413
- ASME B31.1
- SANS 10086-1
- SANS 60079-14
- SANS 10108

## **5 Procurement**

### **5.1 People**

#### **5.1.1 Minimum requirements of the people employed by the contractor:**

The requirements required to complete the work:

- The training and certification requirements remain valid for the duration of the contract (Hazardous location and relevant technical Lectrodryer training) for every technical personnel.

**1 x Electrician:** Camden Specific for all callout and scheduled maintenance services.

- a) Minimum qualification: Technical N3/Matric with valid trade test as Electrician. Please attach CV, Trade test certificates and highest qualifications.
- b) Provide valid training certificate for explosion prevention techniques for electrical installations in explosive atmospheres.
- c) Lectrodryer training (BAC-50 Fast degas, skid systems and R series air dryers' installation, operation and maintenance course certificates obtained.
- d) Valid national driver's license

**1 x Gas Practitioner:** Camden Specific for all callout and scheduled maintenance services.

- a) Technical N3/Matric or equivalent in Electrical or Mechanical studies.
- b) Gas Concepts & Installer with SAQCC GAS registration. Provide valid certificate of conformity for Hydrogen Gas Installations in Accordance with the Occupational Health & Safety Act, 85 of 1993 Regulation (17) of the Pressure Equipment Regulations, 2009.
- c) A valid authorization Gas Practitioner's card.
- d) Driver's License code 10 (C1).

**1 x Assistant:** Camden Specific for all callout and scheduled maintenance services.

- a) Minimum Qualification: Grade 10 or higher.
- b) Provide valid training certificate for basic knowledge in explosion prevention techniques of electrical equipment in explosive atmosphere (Hazloc).
- c) Lectrodryer training (BAC-50 Fast degas, skid systems and R series air dryers' installation, operation and maintenance courses.

**NB:** All documents/ certificates shall be certified and valid at the time of tender submission.

The contractor submits a request to change any pre-approved staff together with equivalent proof of qualifications for approval prior to changing the staff.

## 5.2 Plant and Materials

### 5.2.1 Eskom Warehouse

All spares available at the Employers' warehouse to carry out the service will be supplied by the Employer as per the contract agreement. The Contractor is issued free of charge, and the Contractor cannot claim for free issued equipment.

All other parts and materials not available shall be supplied by the contractor after submitting quotations for acceptance by the Service manager.

#### 5.2.1.1 Spares List (BoQ) – Minimum Spares required for BAC-50 Lectrodryers system

<u>ITEM No:</u>	<u>ITEM DESCRIPTION</u>	<u>UOM</u>	<u>5 YEARS FOR QUANTITIES</u>
1.	DESICCANT 50LBS PER TOWER 100LBS PER BAC-50 D40107-050	Kg	2400
2.	CARBON MEDIA FILTER D53254	EA	128
3.	ELECTRIC HEATER ELEMENT D53251	EA	64
4.	2-WIRE ELECTRICAL FEEDTHROUGH GLAND FOR HEATER ELEMENT D39014	EA	64
5.	3 WIRE ELECTRICAL FEEDTHROUGH GLAND FOR MOTOR ELEMENT D39013	EA	64
6.	1/2 HP BLOWER MOTOR D35508	EA	64

**Provision of spare parts and services for Camden  
Power Station generators Lectrodryer BAC-50  
Hydrogen Dryers on an “as and when required basis”  
for a period of 60 months**

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7.	BLOWER MOTOR WHEEL STOP COLLAR D71119	EA	64
8.	BLOWER MOTOR WHEEL D79890	EA	64
9.	1" 4-WAY VALVE TOP SEAL REPAIR KIT D57427	EA	24

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10.	1" DIAPHRAGM VALVE DIAPRAGMS D57021	EA	144
11.	1/2" DIAPRAGM VALVE DIAPHRAGMS D57021	EA	144
12.	CONTROL AIR FILTER D52309	EA	24
13.	LIMIT SWITCH D35159	EA	24
14.	SOLENOID VALVE D37518	EA	24
15.	DRYER TOWER TYPE J THERMOCOUPLE D56122	EA	48
16.	PURGE SYSTEM REGULATOR D58821	EA	24
17.	PURGE SYSTEM PRESSURE INDICATOR D52764	EA	24
18.	PURGE SYSTEM DIFFERENTIAL PRESSURE SWITCH D55808	EA	24
19.	TOWER PRESSURE INDICATOR D99087	EA	32
20.	DRYER TEMPERATURE INDICATOR D99088	EA	24
21.	ATHENA TEMPERATURE CONTROLLER D56120 1/16 DIN PANEL MOUNT	EA	48
22.	TEMPERATURE GAUGE INDICATOR (0-300Deg/C) D99088-1	EA	48

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23.	TEMPERATURE GAUGE INDICATOR (-20 to 100 Deg/C) D99088-2	EA	48
24.	HEATER CONTACTOR D36630	EA	48
25.	MOTOR STARTER PROTECTOR D36629-KIT	EA	48
26.	CURRENT RELAY D36621	EA	24
27.	HEATER CIRCUIT BREAKER 15 A D38234	EA	24
28.	CONTROL CIRCUIT BREAKER 2.5 A D38233	EA	24
29.	MAIN TRANSFORMER CIRCUIT BREAKER D 98112	EA	16
30.	DRYER HMI AB PRE PROGRAMMED LECTRODRYER P/N D3694	EA	12
31.	DRYER PLC AB PRE PROGRAMMED P/N D36966 (MICROLOGIX 1100, #1763-L16AWA)	EA	12
32.	REPLACEMENT SENSOR PROBE ONLY - 36632-001	EA	16
33.	MTS 6 HYGROMETERS (DEW POINT METERS) - D36632-001- SET	EA	16
34.	FLOW METER TECHFLUID GLASS TUBE VA METER - MODEL 2340N/0630/DR	EA	24

**NB:** Any spare item deemed relevant for the Lectrodryer BAC-50 plant maintenance, which is not covered from the table above, the contractor shall add it on his or her BoQ. The item/s will be considered for tender pricing evaluation.

### **5.2.2 Correction of defects**

The *Contractor* is to provide the complete list of spares with all documents to be handed over. In addition, the spares list that forms part of the maintenance contract are to be provided by the employer through Eskom stores as and when required as part of the works. The contractor shall indicate immediately as soon as he/she becomes aware or 24Hrs in advance to Eskom Supervisor if any spare item will be needed to attend plant defect notification.

### **5.2.3 Contractor's procurement of Plant and Materials**

The *Employer* requires warranties from suppliers to be in favour of the *Employer*. Also includes requirements for vendor data which the *Employer* may need after Completion of the whole of the *works*.

There shall be a minimum of 3-years guarantee on the PLC controller and touch pad display screen to be installed on the Hydrogen dryer system at Camden Power Station.

### **5.2.4 Tests and inspections before delivery**

The Employer may request witnessing testing and calibration of equipment at approved SANAS laboratories for acceptance of goods before delivery.

## **6 Working on the Affected Property**

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

All site access is controlled through the designated access gate.

The Contractor is informed of the access procedure through Site regulations and that such procedures may change depending on the prevailing security situation.

The Contractor shall provide and install barricades and warning devices to ensure that that equipment and persons are not exposed to danger or to prevent access to dangerous areas.

All welding, flame cutting and grinding work shall be properly screened to protect persons from arc flashes or eye injuries.

All grating shall be covered with an adequate protection screening when welding or flame cutting in the vicinity is undertaken strictly with the Employer's Directive SP SER 003.

All vehicles must be driven with due consideration for personnel and property. A maximum speed limit of 40 km/h will be always adhered to on the premises.

The Employer follows an accident prevention policy that includes the investigation of all accidents involving personnel and property. This is done with the intention of introducing control measures to prevent a recurrence of the same incident. The Contractor is expected to co-operate fully to achieve this objective. The Service Manager must be informed within 24 hours of any injuries or damage to property or equipment.

This report does not relieve the Contractor of his legal obligation to report certain incidents to the Department of Labour, or to keep records in terms of the Occupational Health and Safety Act, and Compensation for Occupational Injuries and Diseases Act.

## **6.2 People restrictions, hours of work, conduct and records**

Camden working hours are as follows:

- Lunch time is between 12:00 until 12:30. Work starts at 07:15 daily, knock off time is 16:30 from Monday to Thursday and 12:15 on Friday.
- Works will be done during working hours to minimize cost.
- Overtime shall be avoided as far as practical possible.

## **6.3 Cooperating with and obtaining access from Others**

- The Contractor shall notify the Employer of his requirements at least one week in advance to arrange for the Permit to Work applications for a specified future date to execute the works.
- The Contractor does not execute any work, unless signed up into the required workers registers of the Employer.
- The Contractor cooperates with others in the execution of the work.
- All outage work shall be done in accordance with an approved engineering scope of work and PQP/QCP.

## **6.4 Records of Contractor's Equipment**

Records are to be kept of Equipment on Site including whether it is owned or hired. Should the Contractor require to use mobile crane, forklift and scaffold to notify the Project Manager 24 hours in advance

## **6.5 Site services and facilities**

### **6.5.1 Provided by the Employer**

#### **Contractor's Yard**

A site for the Contractor's yard is provided by the Employer. A written request, indicating the Contractor's requirements in locality and area of storage, office and Workshop sites is submitted to the Service Manager as soon as possible after the Contract Date.

#### **Potable water**

Potable water for construction purposes is also available free of charge. Any installation is for the Contractor's account.

#### **Meals**

Meals on site for the Contractor's personnel are not available. To be arranged by the Contractor

#### **Sanitary Facilities**

Sanitary facilities are provided by the Employer.

#### **General**

The Contractor is to comply with all Site requirements and instructions. The onus is on the Contractor to ensure his familiar with the Employer's Site regulations and Inspections.

#### **Fire Protection**

The Contractor is to comply with requirements of Eskom Standard NWS 1494 Revision 4 "Fire prevention and protection of Contractor's premises on Engineering Sites" and of Site Regulations pertaining fire protection. (NWS 1494 Revision 4).

### **Fire Precautions**

Any tampering with the Employers fire equipment is strictly forbidden. All exit doors, fire escape routes, walkways, stairways, and stair landings must be kept free of obstruction, and not to be used for work or storage at any time. Firefighting equipment must remain accessible at all times.

### **Plant Safety Regulation**

The Employer shall on request from the Contractor isolate required plant from all sources of danger as described in the Plant Safety Regulation. The Contractor shall conform to all rules and regulations applicable to plant safety and shall ensure their names are entered into the worker register prior to working on the plant.

### **Induction training to employees**

No person will be issued with an access permit without proof that the person did attend the local Camden Power Station induction course.

A one-day access permit will be issued for persons attending the induction course. It is the Contractors responsibility to arrange with the Project Manager one week in advance for the course booking.

### **Supply of the construction power**

#### **Conditions of the supply for Erection**

To comply with the Electrical Installation Regulations under the Occupational Health and Safety Act, no 85 of 1993 the following requirements are to be met before electricity is supplied it is expected that the Contractor is in possession of a valid certificate of compliance. Your electrical installation is inspected and tested by an accredited person to ensure that it complies with the requirements of the Occupational Health and Safety Act, no 85 of 1993 and the code of Practice for wiring of premises, SABS 0142. After you have obtained the certificate of compliance, the Employer is to inspect your electrical installation and if satisfied, it is connected and supplied from the construction supply.

The Contractor provides at his own expense all temporary wiring and cabling to lead power from the Employers supply points, to where it is required, maintain same and remove on completion. These points of supply are the points designated by the Project Manager.

#### **Warning:**

Phase rotation may change during power breaks. Contractors are responsible to check rotation of their equipment before recommencing work.

#### **Application for supply**

A standard “Application for Power” form is completed and submitted to the Project Manager at least two weeks before a power supply is required. The Employer guarantees the continuity of power supply for a minimum 26 out of 30 days.

#### **Cost of supply**

There is no charge for electricity used for construction purposes and no connection fee is levied for the point of supply.

#### **6.5.2 Provided by the Contractor**

The Contractor provides, erects and maintains for own use, adequate size office accommodation and stores together with such drainage, lighting, heating and hot and cold-water services as may require in the area designated by the Service Manager.

The Contractor is to dismantle and clear off site all such temporary structures and associated foundations and infra-structure.

## 6.6 Tests and inspections

### 6.6.1 Description of tests and inspections

All tests and inspections to be as per the commissioning procedure agreed upon by the contract manager and the contractor. This also included checks defined in the process quality plans.

### 6.6.2 Materials facilities and samples for tests and inspections

All materials and facilities required for tests and inspections to be made available by the contractor.

## 7 List of drawings

### 7.1 Drawings issued by the *Employer*

Camden Power Station. Unit 1-8 H2 dryer Panel Wiring Circuit Diagram. Doc No: 0.36/20258

## 8 Acceptance

This document has been seen and accepted by:

Name	Designation

## 9 Revisions

Date	Rev.	Compiler	Reason for change
18/03/2025	02		Updated for the new 5 years contract
21/12/2021	01		New 3 years contract

## 10 Development Team

- Technical Support
- Electrical Engineering
- Electrical Maintenance

## 11 Acknowledgements

- N/A