

PART 3: SCOPE OF WORK

Document reference	Title
C3.1	This cover page
C3.2	<i>Employer's Service Information</i>
C3.2	<i>Contractor's Service Information</i>

C3.1: EMPLOYER'S SERVICE INFORMATION

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1 Works Information

1.1 Executive summary

The *works* are for the provision of Electrical Maintenance and Repairs of domestic power circuits at Majuba Power Station both in normal installations governed by SANS 10142-2 and in classified areas which are governed by SANS 60079 for three years.

The work to be conducted by the contractor encompasses the following:

- Maintenance and rewiring (if required) of all domestic power electrical distribution boards (also known as lighting distribution boards) and associated circuits (plugs, light switches, lights etc.) across Majuba Power Station in accordance with SANS 10142-2 for installations which are not situated in classified areas.
- Maintenance of all luminaires including high masts across Majuba Power Station.
- Maintenance and repairs on 380V Welding sockets
- Maintenance and repairs of all 220V electrical plugs
- Issuing of COCs for work conducted (on request by the employer)
- Maintenance and repairs of electrical installations situated in areas that are classified according to IEC 60079-10-1/IEC 60079-10-2 and conducting inspections (detailed, visual etc.) as required by the standard.
- Provide a master installation electrician to issue COCs accompanied with a 2 yearly inspection report for the certification of Majuba Power Station's hazardous installations.
- Provide support for Majuba Power Station to send equipment to a SANAS accredited lab to obtain IA certificates that certifies equipment to work in specific classified areas in accordance with section 9 subsection 3 of the electrical machinery regulations in the Occupational Health and Safety Act.
- Maintain the inventory list for each classified area as per the existing Hazloc files.
- Provide and install signage to indicate classified areas as per the standard, clearly stating what zone the area is classified as and warning signs warning against carrying flammable substances in those areas.

This contract caters for all domestic and electrical installations in hazardous areas situated at Majuba Power Station (e.g., hydrogen station, common plant, battery rooms, coal stock yard etc.)

NB: For Safety reasons prior to the outage of any unit the contractor shall ensure that all lighting, welding sockets and plugs in that unit are repaired and are fully functional.

1.2 Employer's requirement for the service

1.2.1 Electrical Boundaries

All Electrical work related to the above plants.

All lighting boards, distribution boards (DB's), 220V power outlets, lighting and welding sockets in the relevant plant areas are included.

Maintenance, repairs to and/or replacement of the following are included from the contract: All office buildings lighting and plugs in these areas, workshop and stores building and all MV and LV substations, units 1 to 6 and office buildings, security gate, site kitchen, medical Centre, and fire station.

This scope furthermore encompasses maintenance of electrical installations in areas that have been classified in accordance with section 9 of the electrical machinery regulations. Majuba Power Station currently has the following areas that have been classified:

- Battery Rooms U1 to U6
- Petrol/Diesel Filling Station
- 10 000-ton silos (10,20,30)
- LPG Gas tank
- LP Gas Storage Area below lab
- H2 Plant
- Coal Conveyors and Bunkers
- Incline coal conveyors
- Unitized H2 Plant
- Tippler Pit Head End
- Tippler Area and Incline
- Coal Reclaim Tunnel
- Laboratory Flammable Store
- Coal Laboratory

The scope of the contractor includes maintenance of electrical installation in the abovementioned classified areas in accordance with the relevant standards for Hazardous Area Classifications (Dust and Gas). The contractor should also provide support in terms of certifying equipment as Atex equipment in a SANAS accredited lab and provide certification to the employer to ensure that equipment has been correctly certified to work in those specific classified areas.

1.2.2 Maintenance Scope and Philosophy

The Contractor will perform Electrical maintenance of all domestic power (lighting and plugs) in the station according to Employer approved schedules and according to the Occupational health and safety act, relevant SANS standards and any other standards that may be applicable.

The contractor shall also on an as required basis provide services to maintain areas that have been classified in accordance to SANS 60079-10-1 and SANS 60079-10-2 by conducting periodic inspections on these areas and submitting inspection sheets as evidence thereof and issue COCs for compliant installations. The contractor shall be furthermore required to inform/warn the employer in the event that there has been changes to electrical equipment installed in hazardous areas and assist in updating the equipment lists for affected installations.

1.2.3 Running maintenance

Running maintenance/ inspections is seen as the Weekly/Daily walk downs that will be done by the Contractor. During these walk downs the *Contractor* will do inspections while the plant is in operation. All defects or potential failures will be recorded in SAP as a base for recording. The Inspections will be documented by the Contractor.

The lighting plugs and welding sockets defects will be listed, and corrective actions will be planned according to the priority of the defects. The detailed planning of critical/major activities, together with QCP's and risk assessments will be done by the Contractor and approved by the Contract Supervisor. Where Permits to Work are required, the work will be planned with the Production Manager of Majuba P/S via the Contract Supervisor.

a) Planned maintenance.

Planned maintenance schedules initiated by Employer will be followed to prevent any potential breakdowns or failures of equipment. This schedule contains a list of Planned Maintenance schedules currently in the SAP system. Changes can be made during the duration of the contract.

b) Corrective Maintenance

All unpreventable and unforeseen plant failure occurrences, replacement of damaged conductors and equipment are included.

c) Condition based maintenance / monitoring.

The purpose of the Reliability Centered Maintenance (RCM) and Condition Based Maintenance is to enable the monitoring of the performance, physical condition, and potential failure modes of equipment. Majuba Engineering department performs most of the Condition Based Monitoring (CBM). A list of CBM work orders will be included in the above-mentioned list of planned maintenance work instructions.

The maintenance contract requires that the lighting, welding sockets and plugs systems are maintained according to a defined maintenance program developed by the Employer. With each and all system the planned maintenance activities are listed with periods at which stage the activity is to be carried out. The scope of work will focus on a specific plant area & equipment. This program is dynamic, and the Contractor will be responsible for it being updated according to the RCM process.

The Employer has a planning system called SAP PM, which records all corrective maintenance identified and all planned maintenance schedules. All of the Employer's documentation will be used in each and every activity performed on the respective plant with accurate information of the required actions undertaken to restore the system back to working condition. All PM's completed to be verified and approved by contract supervisor. All man-hours, staff used, material used, corrective or planned actions taken must be recorded on the corrective maintenance (CM) or planned maintenance (PM) documentation which is forwarded to the Planning Division for recording.

Majuba Power Station reserves the right to do quality checks at any time. It will be the philosophy of this contract that if a problem is identified while carrying out an inspection, a defect is raised to rectify the problem as corrective maintenance.

All scheduling activities will be undertaken by the planning schedulers - corrective maintenance is also catered for in the same way.

This contract is for both planned and corrective maintenance (breakdowns) and personnel should be provided for abnormal hours in the case of major breakdown that causes a safety risk due to lighting issues during normal operations or during the outage.

This contract includes Daily plant inspections, Minor/Major outages as well as preventative maintenance on extended cold reserve units. The Contractor will assist in implementing minor modifications.

This contract includes Permit to Work requirements.

d) Spares Management

The Employer will provide all the spares required.

2 Specific Duties of the Contractor

Perform preventative and corrective maintenance activities as per laid down guidance below.

2.1 Maintenance and Repairs

Regular inspections as to comply with statutory requirements and construction regulations:

- 2.1.1 All work to comply with all legal safety aspects (refer to 240-55714363 and 240-56356396).
- 2.1.2 All maintenance activities shall be recorded and monitored (SAP PM System).
- 2.1.3 The *Contractor* will identify any need for modifications necessary to enhance the long-term health of the plant.
- 2.1.4 Any other duty as may be felt necessary to enhance the lighting maintenance of Majuba Power Station's Plant will be communicated between the *Employer* and the *Contractor*.
- 2.1.5 When working on lighting circuits, power must be turned off to avoid possible electric shock and test before touch as per Lifesaving rule.
- 2.1.6 Contractor to check the condition of the ballast, igniter, lamp, holder, capacitor wiring and the luminaire when installing or replacing the lamp, replace defective or worn components before operating the lamp.
- 2.1.7 Contractor to check installation according to the component specification and drawing.
- 2.1.8 Contractor to ensure proper cable specifications are followed when doing cable replacement.
- 2.1.9 Contractor to check if the luminaire is properly mounted on the mounting brackets and cable tray supporting brackets.
- 2.1.10 Contractor to check for proper earth leakage protection and breaker rating.
- 2.1.11 Contractor to check earthing to station earth.
- 2.1.12 Contractor to clean the Distribution Boards inside for Ash and Coal Dust.
- 2.1.13 Contractor to clean the lights diffuser inside and outside as per 240-55714363 Generation PS Lighting and Small Power Installation Standard.
- 2.1.14 The *Contractor* will carry out lighting, welding sockets and plug repairs within their scope.
- 2.1.15 Repairs will be carried out during the *Contractor's* normal working hours, unless an emergency has occurred, or the plant is urgently required for operation.
- 2.1.16 Take out permits by checking correctness of the isolations, signing permits to carry out repairs/services and on completion clearing the permits if so required.
- 2.1.17 Perform visual inspections and routine inspections and identify obvious faults/defects and risks.
- 2.1.18 Conduct fault finding utilizing test equipment, drawings / diagrams, and manufacturer's specifications, Identify problematic/faulty components/equipment.
- 2.1.19 Repair/replace faulty equipment as instructed.
- 2.1.20 Removal and replacement of defective wiring.
- 2.1.21 Termination of LV cables and cable glands.
- 2.1.22 Installation of trunking and fixing of old ones (20mm and 25mm diameter).
- 2.1.23 Installation of PVC, galvanized conduit and accessories, one-way, two-way, three-way conduit boxes + cover and screws.
- 2.1.24 Report to supervisor any recurring defects.
- 2.1.25 Initiate appropriate actions to rectify any unsafe activities or plant conditions.
- 2.1.26 Record full technical details related to history of work carried out on notifications/defects and scheduled work or planned maintenance documents prior to submission to the supervisor with special reference to material used, repairs carried out and equipment used.
- 2.1.27 Conduct job observations and peer checks according to procedure (RA/RM/23).
- 2.1.28 Conduct on job training for trainees.
- 2.1.29 Conduct risk assessments on live plant where load losses and trips can occur and mitigate risks.
- 2.1.30 Attend Ad hoc meetings.
- 2.1.31 Attend to Safety and work team sessions.
- 2.1.32 Attend Mass briefing and work stoppages.
- 2.1.33 Attend to equipment care and personal safety.
- 2.1.34 Inspect equipment and report defects and problems to the supervisor.
- 2.1.35 Adhere to SHE requirements.
- 2.1.36 Use the correct personal protective equipment to perform the task.
- 2.1.37 Report unsafe conditions on equipment and in the work area to the supervisor.
- 2.1.38 Clean all equipment and work area daily, after usage.
- 2.1.39 The Contractor will attend a monthly safety meeting to discuss any items arising in connection with the plant maintenance contract with the Contract manager and to complete the assessment.

- 2.1.40 The Contractor will complete PMs and CMs in relation to maintenance and defects.
- 2.1.41 The Contractor will wear a communication device (e.g., cell phone) at all times and respond to calls directed to their attendance to plant defects.
- 2.1.42 The Contractor will service all relevant plant at weekly intervals according to Works management.
- 2.1.43 The Contractor will immediately attend to any plant defect and will only resume routine maintenance after the defect is cleared or if so asked by the *Employer*.
- 2.1.44 The Contractor will accompany the *Contract manager* on a monthly inspection of the relevant plants.
- 2.1.45 Defects will be noted and listed for rectification by the *Contractor*.
- 2.1.46 The Contractor will carry out outage work on relevant plant.
- 2.1.47 Perform any other legitimate activity as required.

3 Working times

3.1 Contractor's regular working hours

The *Contractor* is required to work a minimum of five working days per week on site. Normal Eskom working times will be observed. Attendance registers to be kept to track attendance and submitted weekly to the Eskom contract supervisor.

The Employer's working hours:

Mondays to Thursdays **07:30 to 16:45**
Fridays **07:30 to 12:30**
Excluding Public Holidays.

The Contractor must be available during these hours.

3.2 Overtime

The *Contractor* is required to be available after hours if the need arises. The planned overtime will be managed and authorised by the contract manager. If, for any reason, the *Contractor will* not be available after hours, pre-arrangements need to be made with *Employer*.

- 3.2.1 The *Contractor* shall be available to work overtime to respond to any plant faults or malfunction of the equipment pertaining to the scope of work at any time relevant to their plant after the contractor's working hours.
- 3.2.2 Overtime work, not limited to, shall consist of emergency adjustments, fault finding, joining of cables where appropriate, replacement of parts, pulling of cables, swopping of parts etc. to restore an inoperative or faulty unit to safe and satisfactory service.
- 3.2.3 In the case of any major breakdown, a repair plan of action must be submitted to the *Employer* within 12 hours.
- 3.2.4 Repair work to commence on the exact time agreed between the *Employer* and the *Contractor* on this plan of action. No additional cost to the *Employer* for this service will be acceptable.

4 Constraints on how the Contractor Provides the Works

4.1 Plant Safety Regulations

Sockets

- a) The Employer shall, on request from the Contractor, isolate required plant from all sources of danger as described in the Plant Safety Regulations.
- b) The *Employer* shall, on request, make available a copy of the latest revision of the Plant Safety Regulations to the *Contractor*.
- c) The *Contractor* shall conform to all rules and regulations applicable to Plant Safety and shall complete the Worker's Register prior to working on the plant.
- d) The *Contractor* shall provide at least two people at all times who are authorised as a Responsible Person according to the Plant Safety regulations for accepting of Plant Permits. These people will be required to attend and pass a theoretical course as well as satisfy the examining committee that he/she is competent before being authorised. Similar authorisations from other Business Units will not be applicable.

4.2 Security arrangements

- a) The *Contractor* applies for access permits (*Contractor's* permit) at the Security gate on the start date of the contract. The *Contractor* personnel shall be required to be in possession of an access permit at all times.
- b) In order to assist Protection Services with the issuing of permits and the identification of personnel on site the successful *Contractor* is to supply a list of all personnel that he intends using on site, at least 72 hours prior to entry of the Security Area. This list must be delivered to Protection Services.
- c) The list, identified with the *Contractor's* name, is to contain the following information:
 - Employee name
 - Employee ID Number
 - The *Employer's* Safety Coordinator's signature
 - Contract Manager's signature
 - Certified copy of the first page of the ID book of every employee of the *Contractor*, photocopied to reduce the size to 65%.
- d) Access permits must be returned to protection services when the worker/s leave the site, either after completion of the services, or upon earlier termination of service of a worker during the contract period.
- e) To speed up the process of gaining access to the site, the *Contractor* must compile detailed lists of all tools and equipment (including serial numbers where applicable) to be taken on site before arriving at the Power Station Security gate. An authorised copy of this list must be retained by the *Contractor* - to be used again when the tools and equipment are removed from site after the completion of the services.
- f) Any additional tools or equipment brought to site, or any tools or equipment removed during the contract's period must be reported to protection services and **ALL** lists amended likewise. Gate release permits will NOT be issued for the removal of any tools or equipment not specified on the tool list.
- g) The *Contractor's* visitors and all personnel shall conform at all times to the security arrangements in force at the site. Application forms for visitors must be filled in by the *Contractor's* Site Manager and approved by the Electrical Maintenance Manager, one day before the visit and submitted to the *Employer's* Protection Services office. Visitors will not be allowed on site if the necessary forms are not in the possession of the security staff.
- h) The Chief of Protection Services may, with valid cause, remove any, of the *Contractor's* personnel from the site, either temporarily, or permanently. He may deny access to the site to any person whom, in the opinion of the said Chief of Protection Services, constitutes a security risk.

- i) No unauthorised vehicles will be allowed on site. Only *Contractor's* Vehicles with displayed Contract Vehicle Permits disks will be allowed on site. Contract Vehicle Applications should be directed to the Electrical Maintenance Manager.
- j) The *Contractor* will be restricted to the working areas associated with his place of work. The *Contractor* is forbidden to enter any other areas and must ensure that his employees abide by these regulations.
- k) No recruiting of casual labour may be done on the *Employer's* premises, including the area outside the Power Station Security Gate.

4.3 Transport

The *Contractor* will be responsible for his own transport on site as well as for emergency purposes. No passengers will be allowed on the back of an LDV (bakkie) even if fitted with a canopy. Vehicles must be equipped with safety belts for the driver as well as for all passengers. The contractor must adhere to all speed requirements on the national road as well as on site.

4.4 Requirements for the programme

- a) Programming and planning will be done on a Daily basis between the *Employer* and the *Contractor*. The Daily plan will include corrective and planned maintenance schedules.
- b) When a particular task requires pre-planning, the *Employer* may request a programme from the *Contractor*. The programme to be submitted must be in the form of a logical network (clearly indicating all predecessors and successors of activities), which includes all the activities specified in the scope of work, indicating at least the following:
 - The hour duration of each activity,
 - The working calendar (number of work hours per day, days per week),
 - All known interfaces with other activities of the *Employer* or Others, including scaffolding, lagging, electrical and instrumentation work.
- c) Updating of the plan for the works will be done Daily; more regular updating may be required. The *Employer* will be entitled to change the plan at any time as and when other tasks take precedence.
- d) An activity for which a Corrective or Planned maintenance schedule has been issued, will only be recorded as complete when the form issued for this activity, is returned to the *Employer*, complete with all the relevant details and signatures.

4.5 Services and other things provided by the *Employer*

This section describes what the *Employer* is to supply, specifically for the purpose of the works. The *Contractor* is to supply everything else required to provide the works.

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

- a) All spares will be supplied by the *Employer* unless requested otherwise; it will become a compensation event to the *Contractor*.
- b) Scaffolding, lagging removal and replacement of lagging will be provided by the *Employer*.

4.5.2 Equipment provided by the *Employer*

- a) Overhead cranes
- b) The *Employer* is entitled to withdraw use of the said Equipment, should proper care not be ensured.
- c) All equipment used to supply the *Service* is supplied by the *Contractor*, unless specified in the contract.

4.5.3 Site services and facilities

4.5.3.1 Contractor's yard

- a) The *Contractor* is to establish a Site yard in the location indicated by the *Employer*. Permission will be granted once the *Contractor* provides an accepted layout plan. Expected site yard size 40 by 40 meters.
- b) The *Contractor* will be responsible for supplying all the required buildings including separate venues for eating, ablution and office work.
- c) The *Contractor* will ensure that all the required services are connected and that the relevant building codes and by laws are adhered to.
- d) Site Establishment will only be assessed for payment once a Certificate of Compliance issued by a duly Authorised person is provided to the *Contract manager*.

4.5.4 Provided by the Contractor

The *Contractor* is to supply all the personal protective equipment, transport, accommodation, tools, special tools, equipment, and consumables to perform all the required tasks on site.

4.5.5 Spares, consumables, and PPE (arc flash clothing only)

Unless stated or where it is otherwise indicated all electrical spares will be supplied by the *Employer*.

The *Contractor* will be responsible for all free issue material control functions, including but not limited to receipt, checking, off-loading, taking temporary possession and proper storage of all materials, as well as returning any unused or refurbishable items to the Supervisor.

The *Contractor* supplies all tools and equipment needed to maintain the plant. The *Employer* will supply tools in exceptional cases (e.g., Meggers etc.) with the authorisation of the Electrical Supervisor or Electrical Maintenance Manager.

It is the *Contractor's* duty to ensure that all tools utilised in the plant, e.g., fluke, Meggers etc., are calibrated before use. Tools supplied by the employer in exceptional cases, prior receipt, ascertain they are calibrated as well.

The *Contractor* shall make provision for spark-free tools which are suitable to be used in Hazardous Locations.

The *Contractor* supplies and maintains all Personal Protective Equipment (PPE) to his employees free of charge. The *Contractor* ensures that all PPE are in a good state and will immediately replace defective or inefficient PPE. All PPE issued to the *Contractor's* employees shall bear the SABS mark of approval.

4.5.6 Use of the Employer's Equipment

Should the *Contractor* require use of any of the *Employer's* Equipment, including compressed air, electricity, and water supply and lifting equipment, it must be requested via the *Service's Manager*.

The *Employer* shall be entitled to withdraw use of the said Equipment, should proper maintenance and cleanliness not be ensured. In that event, the *Contractor* shall be obliged to provide the necessary Equipment at his own cost.

The *Contractor* will be responsible for the repair, replacement, or correction as necessary of any and all items of plant and / or materials supplied by the *Employer* which are damaged and / or lost whilst in the *Contractor's* custody and control.

The *Contractor* Site Manager must ensure that any one of his employees or Subcontractor, operating hoist equipment belonging to the *Employer*, is authorised by the *Employer*.

4.5.7 Accommodation and catering

The *Contractor* will be responsible for the provision of accommodation to his personnel – the *Employer* does not provide accommodation.

The *Contractor* or any of his employees or subcontractors will be allowed to use the *Employer's* dining facilities.

The *Contractor* or any of his employees or subcontractors may also buy take away meals from the fast foods' outlet on Site at own costs.

4.5.8 Office and Toilet Facilities

The *Employer* may provide the *Contractor* access to office and toilet facilities where available, however the responsibility remains with the *Contractor*.

Eskom will provide the workspace and computer equipment required for the work management key persons to execute their scope.

Sanitary services, water, compressed air and electricity shall be provided by Eskom at fixed points on the plant.

4.5.9 Medical Facilities

The *Contractor* provides a First Aid service to his employees and subcontractor. In the case where these prove to be inadequate, as in the event of a serious injury, the *Employer's* Medical Centre and facilities will be available.

Outside the *Employer's* office hours, the *Employer's* First Aid Services will only be available for serious injuries and life-threatening situations.

The *Employer* shall be entitled, however, to recover the costs incurred, in the use of the above *Employer's* facilities, from the *Contractor*.

4.5.10 Refuse Disposal (general and Lights)

The *Employer* will provide and empty special colour coded bins for refuse disposal.

The *Contractor* will be responsible for refuse bins for his/her own site.

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

For the full duration of the services, the *Contractor* is responsible to keep the work area clean of any rubble, and to place all refuse into the bins provided.

Used lights to be kept in the boxes provided for this purpose by the employer until environmental departments disposes them in an appropriate manner.

5 Service Level Table

The following table depicts the level of performance required of the *Contractor*. Should the *Contractor* be unable to meet these requirements, Low Service Damages will be claimed from the *Contractor*.

Table 2: Service Level Table for Low Service Damages

No.	Description	Employer's Requirement	Damages payable by Contractor
1	Contractor's Safety file	Two weeks before start of work	R500.00 per day without safety file.
2	Approval of safety file	Approval ASAP after contract award or within 1 (one) week of contract start date. Safety plan must contain all current and relevant information and needs to be reapproved when documents change or at least on each contract anniversary.	R500.00 per day without approved safety file.
3	Safety file Audit	Every 30 days after approval of initial file until work for specific outage is complete.	R5000.00 per day of file not audited
4	Authorisation of Personnel	Within 6 Months of contract start date provided there is a PSR course available within this duration.	R750.00 per day without an Authorised Person.
5	Non-Attendance of meetings	Every listed meeting to be attended	R500.00 per incident without an apology.
6	Excessive Task Duration	Within the time specified by Contractor's plan as approved By the Contract Manager.	R500.00 per hour of extended Duration or 10% of the monthly contract value whichever value is lower
7	Scheduled Compliance	More than 95%	1% of monthly contract value
8	PM compliance	More than 98%	1% of monthly contract value
9	Statutory work order violation	No violations	5% of monthly contract value
10	P1 work order not closed within 24 hours	Less than 1 outstanding	R1000 for each one per month
11	P2 work order not closed within 24 hours	Less than 3 outstanding	R1000 for each one per month
12	Safety Work orders not attended to within 24 hours	No violations	1% of monthly contract value
13	Work order back log	No more than 30 outstanding	R100 for each outstanding
14	Planning information not submitted as required	Work executed without Approved Plan	1% of monthly contract value
15	Plant Failure after returning from Maintenance work and rework	No Delays when returning plant to service or rework	R500.00 per hour of extended Duration or 10% of the monthly contract value whichever value is lower
16	Reaction to Breakdowns	Permit must be requested within 30 minutes and be correct.	R500.00 per hour of delay in requesting permit 10% of the monthly contract value whichever value is lower
17	Maintenance crew on work site in time	Maintenance crews to be on the job within 30 minutes of permit issue. With all the correct tools.	R500.00 per hour of delay in team being on site, 10% of the monthly contract value whichever value is lower

18	Non-availability of staff to provide service	Service has to be given on a continuous basis on the commencement of a contract	5% of the total repair cost per occurrence.
19	Supervision	No Supervision and Management during high-Risk break downs	limited to 10% of the contract value
20	Contract (NCR) given 3 times in 6 weeks	Contractor to deliver the service as per the contract scope	R1 000.00 per occurrence.
21	Inspection reports	Monthly	R1000.00 per occurrence
22	Daily progress report	After Every Shift	R1000.00 per occurrence
23	Technical report and data pack	Within 7 days of completion of the services	R1000.00 per occurrence

6 Supplier Development & Localisation

Supplier Development and Localisation, as a poverty alleviation and job creation initiative, has identified Government spending on infrastructure- such as Power Station construction- as a key area of intervention, and Eskom, as a State-Owned Enterprise, is required to set Local Content, black economic Empowerment (LBS, BWO and SBE) and Skills Development targets and minimums as key evaluation criteria in tenders/contracts it awards.

Table 3: SD&L requirement

Criteria	Total Target (%)
Local Content to South Africa	100%

The company shall maintain or improve upon their current B-BBEE Contribution level for the duration of the contract. The supplier will be required to submit a new B-BBEE certificate within 3 months, should ownership of the company change during the life of the contract.

SD&L retention – 2%.

7 Requirement s and Qualifications of Key Persons

The Key Persons must meet the Eskom requirements as per the Eskom job profile (Appendix A):

The *Contractor's* Site Manager shall ensure that only competent persons be allowed to work on plant which may cause production losses or safety risk. The Electrical Maintenance Manager shall be entitled to verify the qualifications of The *Contractor*.

The *Contractor's* supervisors must be knowledgeable about the conditions and scope of work contained in this contract and capable of executing the scope of work.

The contract manager and supervisor must have NEC knowledge.

7.1 *Contractor's* management, supervision, and key people requirements

- a) The *Contractor* shall appoint a trained Site Supervisor who shall manage all contract and technical related issues. Proof of experience and qualifications of the *Contractor* site Supervisor must be submitted within one week of the contract start date. Change to this key person shall be communicated in writing within one Month of such change to the *Service Supervisor*.
- b) The *Contractor* site Supervisor to be available after hours telephonically. Where the *Contractor* site Supervisor is not available due to excessive hours worked, leave or Illness a suitably qualified alternate must be made available.
- c) The *Contractor* site Supervisor must be able to communicate satisfactorily in English and have formal education as per Eskom Job description requirements. If at any time, it is found that the *Contractor* site Supervisor ability to either supervise the workers, practice good communication skills (verbal or written) or exercise competency is lacking, the *Service Supervisor* may give instruction for the removal of such person from site.
- d) If applicable, the *Contractor* Quality Control Technicians shall be trained and meet all requirements as per attached Job Profile (Appendix A). Proof of qualifications and experience of the Quality Control Technicians must be submitted before the contract start date.
- e) The *Contractor* shall ensure that all artisans and supervisors become authorized, in terms of the Eskom Plant Safety Regulations (PSR) within 6 months of the contract start date. This authorisation is obtained by attending a course which includes written evaluations (allow 10 days duration) and undergoing a verbal evaluation (1 to 2 hours) within three months after course results indicate that the candidate has passed. As authorisations are valid for two years only, the *Contractor* must ensure that their personnel are re-authorized before the authorisation lapses. The necessary training and evaluations will be provided by Majuba free of charge and the *Contractor* employees must be available to attend when the course is scheduled.
- f) All key people undertaking work shall be appropriately trained, Qualified, Skilled, and competent to perform such work and proof thereof must be submitted. Incidence of poor-quality work and non-adherence to site regulations and procedures will prompt the Employer to request the immediate and permanent removal of such person from all site activities.
- g) Qualification and Qualified, are to be interpreted according to the minimum requirement as per the Occupational Health and Safety Act firstly and then Eskom's "job profile" for positions within the Contractor's organizational structure and be supported by Eskom's "Recruitment and selection procedure" Unique Identifier: 32-1023.

7.2 Contractor's management, supervision, and key people Qualifications

7.2.1 Qualifications of Supervisory personnel

- a) The desired Qualifications for the Supervisor is a B-Degree in any of the engineering disciplines or in Quality management.
- b) The minimum Qualifications for the Supervisor are a National Diploma in any of the Engineering Disciplines or in Quality Management.
- c) The proven track record and verifiable experience in Power Plant Operations for the Supervisor and his officers.
- d) The qualifications for the officers are a National Diploma or equivalent plus a recognised trade test in electrical. The qualifications should be recognised by the SAQA.
- e) CV's are to be submitted to the *Contract Manager* for all recommended key persons.
- f) Key persons are to be approved by the *Contract Manager*, and no changes to key persons may be permitted without the approval of the Employer.
- g) The minimum requirement as per the attached job profiles will apply.

7.2.2 Qualifications of Key person (Lights, plugs and welding sockets):

Key Person	Estimated Quantity	Minimum Qualification	Related Experience

Supervisor	1	National Diploma (Engineering Discipline)	5 years plant related experience
Master Installation Electrician	1	B-Tech/ National Higher Diploma in Electrical/Mechanical Engineering at NQF 7 with 360 credits plus Master Installation Electrician registration.	5 Years Power Plant experience in an Electrical Environment.
Electricians	5	N3 – Electrical with Trade Test	2 years plant related experience
Semi-skilled	5	N1 – Electrical	1-year related experience

8 Performance Measures

Performance of the key persons will be tracked on a weekly and monthly basis. The following KPI s in table 4 will be used:

Table 4: KPIs

KPI	Performance Measure	Details
SHE requirements	Zero tolerance	
Scheduled Compliance	More than 95%	
PM compliance	More than 98%	
Statutory work order violation	No violations	
P1 work order not closed within 24 hours	Less than 1 outstanding	
P2 work order not closed within 72 hours	Less than 3 outstanding	
Safety Work orders not attended to within 24 hours	No violations	
NCRs	Not more than 1 per month	

9 Management strategy and start up.

9.1 Compulsory Meetings

The Contractor will attend all the relevant technical and quality related meetings. (Venue, time, and date will be confirmed). With prior notification, the services of the Contractor can also be required at other meetings.

The Contractor will be represented by at least the supervisor for all relevant meetings i.e., should additional personnel be required, they are to accompany the supervisor.

9.2 Management meetings

The Contract Manager shall arrange a monthly meeting at a time to suit attendance by both Contract Manager and the Contractor for every month throughout the service period. The meetings shall be chaired by the contract Manager as and when required. All meetings shall be recorded using the Employer's attendance register and minutes taken. 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.

In the meeting the contract Manager and the Contractor shall review the previous month's actions and responsibilities in terms of the contract, decide what corrective actions are to be taken (if any), and by whom the contract requires them to be taken and by what time; review, agree and sign a summary listing of work carried out during the month under review which shall contain as a minimum:

- a) safety incidents for the month,
- b) authorisation of personnel,
- c) a schedule of any major incidents or unplanned work,
- d) outstanding invoices to the Contractor,
- e) any substantial disagreements between the Contact Manager and the Contractor and any disputes notified in terms of the contract,
- f) the Contractor's general comments on the work done during the month under review,
- g) the Contract manager general comments on the work done during the month under review,
- h) any notable achievements,
- i) any contractual or commercial issues,
- j) Defect notifications raised during month,
- k) Low service damages during the course of the month.
- l) review future work and add items to the Accepted Plan for any future non routine work.
- m) review relationships between representatives of both Parties and attempt to address any adverse issues through the action plan; and
- n) Review any opportunities that can be explored to capitalise on value arising from this contract.

The Contract manager shall prepare a monthly report in the form of minutes of the above referenced meeting, ensure that both he/she and the Contractor have agreed and signed the minutes of the meeting as proof of acceptance.

The *Site Contract manager* will chair and schedule the site meetings. *The meeting schedule is as follows:*

Table 6: meeting schedules

Name	Frequency	Attendance by relevant Employer's personnel:	Attendance by relevant Contractor's personnel:
Contract Kick-off	Once off	<i>Site Contract manager</i> , Plant area supervisor/manager and/or other necessary representatives.	<i>Contractor</i> , Core crew complement and/or other necessary representatives.
Early Warning	As and when notified by either party	<i>Site Contract manager</i> , Plant area supervisor/manager and other relevant personnel.	<i>Contractor</i> and other relevant personnel.
Technical and/or non- conformance	At least once every 3 months	<i>Site Contract manager</i> , Plant area supervisor/manager, Plant Engineer and other relevant personnel.	<i>Contractor</i> and other relevant personnel.
Safety Incidents	For each occurrence	Safety Representative, <i>Site Contract manager</i> , Plant area supervisor/manager and other relevant personnel involved.	<i>Contractor</i> Safety Representative, Contractor and other relevant personnel.

Contractor Monthly Safety Meeting	Monthly	Proof of meeting to be submitted to the <i>Site Contract manager</i> .	<i>Contractor</i> Safety Representative, Contractor, and other relevant personnel.
Monthly Employer Safety Meeting	Monthly	Meeting chaired by <i>Employer</i>	<i>Contractor</i>
Section Meeting	Daily	<i>Site Contract manager</i> , Plant area supervisor/manager and/or other necessary representatives.	<i>Contractor</i> and/or other necessary representatives.
Scope freeze meeting	weekly	<i>Site Contract manager</i> , Plant area supervisor/manager and/or other necessary representatives.	<i>Contractor</i> and/or other necessary representatives.
Planning meeting	weekly	<i>Site Contract manager</i> , Plant area supervisor/manager and/or other necessary representatives.	<i>Contractor</i> and/or other necessary representatives.
Prioritization meeting	Daily	<i>Site Contract manager</i> , Plant area supervisor/manager and/or other necessary representatives.	<i>Contractor</i> and/or other necessary representatives.
Scope clarification meetings	After scope freeze	<i>Majuba Power Station, Specific conference room TBA</i>	<i>Site Manager, System Engineer, Outage coordinator and Quality Inspectors</i>
Outage Kick-off meeting	Month before outage	<i>Majuba Power Station, Specific conference room TBA</i>	<i>Site Manager, Outage coordinator</i>
Overall Outage contract progress and feedback	Daily at 15:00	<i>Majuba Power Station, Specific conference room TBA</i>	Employer, Contractor, and Supervisors
Daily outage meeting	Daily at 09:30	<i>Majuba Power Station, Production boardroom (U4 16m level)</i>	<i>Site Manager, System Engineer, Outage coordinator and Quality Inspectors</i>
Outage Safety meeting	Weekly on Wednesday at 14h00	<i>Majuba Power Station, Production boardroom (U4 16m level)</i>	<i>Safety Officer</i>
Post-mortem meeting	At task order completion	<i>Majuba Power Station, Specific conference room TBA</i>	<i>Site Manager, System Engineer, Outage coordinator and Quality Inspectors</i>
Assessment meeting	Between 20 – 25 th of each successive month	<i>Majuba Power Station, Specific conference room TBA</i>	<i>Site Manager, Outage coordinator, Contract manager</i>

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 *Contract 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.

10 Police clearance

- a) All Contractor personnel to undertake Police clearance.
- b) Clearance certificates to be provided to the Contract manager at least 2 weeks before commencement of work.
- c) The Contract manager reserves the right to refuse entry to all persons whose criminal records indicate that their presence on site might create an unsafe and insecure environment to Majuba Power Station.
- d) The following website can be used to guide the process.
http://www.saps.gov.za/services/applying_clearance_certificate.php

11 Documentation control

Correspondences are in writing. Formal correspondence to be on the letterhead of the organisation and addressed to the relevant person.

Each Task Order, Assessment and Defect Notification must have a unique number for ease of identification.

All Communications will be filed and kept on site at all times as it is crucial to have the correct communication structures. These communication documents should at all times adhere to the NEC 3 Term Service Contract communication requirements.

The Contractor will provide a six-monthly report on the plant status of the equipment. All materials used should be SANS/Eskom standard compliant.

11.1 Documents required from the supplier.

Documentation required from the Contractor includes but no limited to the following:

- a) Daily timesheets/attendance register
- b) Six monthly reports on the plant status
- c) Detailed list of all tools and equipment
- d) Inspection reports
- e) Daily progress report (number of defects closed per day can be obtained from planners)
- f) Technical report and data pack
- g) Risk assessments and QCP's
- h) CV's and Qualifications for all recommended key persons
- i) Invoices
- j) PPE issue register (240-130377832)
- k) Medical reports
- l) Clearance certificates

12 Invoicing and payment

- a) Within one week of receiving a payment certificate (contract assessment) from the *Contract 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 *Contract manager's* payment certificate.
- b) The *Contractor* shall address the tax invoice as per issued Task Order and shall include on each invoice the following information:
 - i. Name and address of the Contractor and the Contract manager;
 - ii. The contract number and title;
 - iii. Contractor's VAT registration number;
 - iv. The Employer's VAT registration number 4740101508;
 - v. Description of service provided for each item invoiced based on the Price List;
 - vi. Total amount invoiced excluding VAT, the VAT and the invoiced amount including VAT;
- c) The *Contractor* only invoice in accordance with the amount due on the signed off assessment. The assessment will be verified to correlate with man hours booked on SAP, to ensure that hours paid for are worked for. Invoices are to be forwarded directly to invoiceseskomlocal@eskom.co.za in PDF format, who will perform three-way matching between the SAP 45-document, the service entry, and the invoice (SAP 51-document) before payment is made. The invoice cannot be processed for payment unless all three these documents are in agreement. (Note that matching can only be done once the service entry has been approved).
- d) If there is Cost Price Adjustment (CPA) applicable to the contract, the *Contractor* must 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 the CPA issues. The CPA tables must be attached to the service entry by the Eskom *Contract manager*.

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

13.1 Information and other things

All documents, procedures and systems developed to improve Quality Management at Majuba, to be handed over to the *Employer* at the end of the contract period.

13.2 Management of work done by Task Order

13.2.1 Requirements for each Task Order

A monthly Task Order is required for all work carried out under or in connection with this contract. The *Contractor* personnel report to the Eskom sections supervisors on a daily basis.

13.2.2 *Contractor* unable to supply resources

If the *Contractor* becomes unable to supply the resources required to complete a Task Order by the Task Completion Date, he shall immediately notify the matter to the *Contract manager* as an early warning. The notification shall include recommendations as to how the work can be completed by the Task Completion Date.

13.2.3 Emergency work

- a) Emergency work is work required when normal administration cannot be achieved and permits the *Contractor* to start work on a verbal instruction. The Task Order is confirmed in writing within 24 hours.

- b) The *Contract manager* may at any time instruct the *Contractor* orally, followed up in writing, to carry out work which is of an emergency nature, including work which the *Contractor* may require a subcontractor to undertake. The *Contractor* puts the work into effect.
- c) Where there is emergency work, whether it is a Task Order or compensation event driven emergency, the following process to be managed by the *Contract manager* and *Contractor* within 24 hours.
 - i. A Task Order is put in place to allow work to start immediately, and to continue for long enough to get the final SOW, quality requirements and programme in place.
 - ii. An identified team is to agree to a timetable for finalising the final SOW, quality requirements, and Programme.
 - iii. This team is also to be immediately tasked to ensure a preliminary SOW, quality requirements and Programme.
- d) In the case of a sudden equipment failure, the *Contractor* shall immediately conduct a preliminary investigation including a damage report with recommendations for repair and submit it to the *Contract manager*.
- e) For all planned work, the Contractor must request approval from the Contract manager before work commence. A planned work application form (Appendix D) needs to be completed and approved by all relevant parties before commencement. Failure to comply will result in non-payment.
- f) A Call out / Emergency overtime form (Appendix C) must be complete and signed by all relevant parties if the Contractor personnel gets call out afterhours for emergencies.
- g) For overtime during outages, an application for Outage Overtime sheet (Appendix d) to be completed and approved before the start of the Outage activity.

14 Health and safety, the environment and quality assurance

14.1 Health and safety risk management

The *Contractor* shall comply with the health and safety requirements that follow:

14.1.1 General

- a) To ensure compliance, a monthly audit will be conducted on the Contractor Safety file.
- b) The Contractor must report to the Contract manager the total man hour's work on the last day of each consecutive month.

14.1.2 Eskom Life Saving Rules

Five Life Saving Rules have been developed that will apply to all Eskom employees, agents, consultants, and *Contractors*.

- a) **Rule 1: Open, Isolate, Test, Earth, Bond, And/or insulate before touch** - that is any plant operating above 1000 V.
- b) **Rule 2: Hook up at heights** - no person may work at height where there is a risk of falling.
- c) **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.
 - Eskom takes a "ZERO TOLERANCE" attitude to drivers and passengers who do not wear safety belts when driving in any vehicle on Eskom Business and/or on Eskom premises. The violation of this very important safety rule as well as any safety rule while performing work for or on behalf of

Eskom may result in Eskom terminating your obligation to perform work in terms of your contract with Eskom.

- All occupants must wear their safety belts properly and must never put the shoulder belt under their arm or behind their backs. Drivers and all passengers must buckle-up at all times for the sake of themselves and their families.

d) **Rule 4: Be sober** -no person is allowed to work under the influence of drugs and alcohol.

e) **Rule 5: Use a permit to work** – where an authorization limitation exists, no person shall work without the required permit to work.

14.1.3 Plant Safety Regulations

- a) The *Contractor* site Supervisor and Technicians must be authorised according to the Eskom Plant Safety Regulations (PSR) as an Authorised Supervisor (AS). Such authorisation shall be obtained within 6 months of starting at Majuba, and maintained thereafter. Training will be supplied by the *Employer* with no additional cost to the *Contractor*. Failure on first attempt, the *Contractor* employee will be allowed to rewrite for a second attempt. Failure after the second attempt will be at the cost of the *Contractor*.
- b) The *Contractor* must supply all their technicians, where the requirement is to enter substations to witness work with Category 2 Arc flash suits. These are to be supplied at the *Contractors* cost.

14.1.4 Fire Precautions

- a) Any tampering with the *Employer's* fire equipment is strictly forbidden.
- b) All exit doors, fire escape routes, walkways, stairways and stair landings and access to electrical distribution boards must be kept free of obstruction and is not be used for work or storage at any time. Firefighting equipment must remain accessible at all times.
- c) In case of fire, report the location and extent of the fire to Electrical Operating Desk at 017 799 3803 and it is expected that the *Contractor* shall take the necessary action to safeguard the work area in order to prevent injury and spreading of fire.
- d) All Hot Work on site must be done as per the Hot Work Procedure, SERV/FIRE/02

14.1.5 Reporting of incidents

- a) The *Employer* follows an incident prevention policy which includes the investigation of all incidents 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 and have his own incident reporting system which is compatible to the site system. The *Service Manger* must be informed immediately of all safety incidents including fatalities, medicals, first aids and near misses. Any damage to property or equipment must be reported to the *Service Manger* as soon as reasonably practicable but not later than 4 hours after the incident. A Summary of the Incident is to be submitted to the *Service Manger* within 4 hours of the Incident.
- b) NOTE: The above-mentioned reporting does not relieve the *Contractor* of his legal obligation to report 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 and to perform investigations of all incidents.
- c) The *Contractor* must provide the Safety Risk Officer with a monthly safety statistics report by the first working day of every month, even if no incidents have occurred.

14.1.6 Vehicle Safety

- a) Drivers, passengers and pedestrians must obey safety requirements in terms of the National Road Traffic Act, No 93 of 1996, as amended, including other relevant provincial or local requirements.

- b) All drivers must possess a valid, national driver's licence of the correct category/class, must not be under the influence of alcohol or other drugs which will impair the senses and must be authorised by the Contractor to drive the company vehicle.
- c) All vehicles must be roadworthy and vehicle specifications must include at least front airbags for the driver and the front passenger and an anti-lock braking system (ABS).
- d) All vehicles must be driven with due consideration for personnel and property. A maximum speed limit of 40 km/hour will be adhered to on the premises at all times.
- e) Transportation of passengers on the back of open or closed light delivery vehicles (LDVs), trailers, trucks or any other form of transportation is not allowed. It is a legal requirement for all Employers to provide safe transportation of all employees both on and off site.
- f) No person may be transported in the back of vehicles closed by means of canopies, unless provided with factory-fitted or manufactured-approved, proper seating and safety belts, i.e. crew cabs.
- g) Drivers and others entering Majuba Power Station will be subjected breathalyser testing.
- h) The driver/s must ensure that their passengers are seated and wear seatbelts at all times.
- i) Tools and equipment in vehicles must always be properly secured.

14.1.7 Health and Safety Arrangements

- a) The *Contractor* shall comply with the guidelines set out in the Majuba Standard BIA/RM/STD/01 titled "Safety, Health and Environmental specification to be met by *Contractors*"
- b) The *Contractor* must ensure that all his personnel attend a Health and Safety Induction Course prior to starting with the works. A one hour course will be provided free of charge by the *Employer* and will be valid for the duration of one year. It is the *Contractor's* responsibility to make an appointment for the induction and ensure that re-induction is done timeously.
- c) Safety Risk Management has the right and authority to visit and inspect the *Contractor's* workplace or site establishment to ensure that tools, machinery and equipment comply with the minimum safety requirements.
- d) The *Contract manager* shall be entitled to instruct the *Contractor* to stop work, without penalty to the *Employer*, where the *Contractor's* personnel fail to conform to safety standards or contravene health and safety regulations. The *Employer's* Representative is entitled to instruct the *Contractor* to discipline his employees, to enforce disciplinary action and to submit a report to the *Employer's* Representative. The *Contractor* shall implement additional health and safety precautions wherever necessary.
- e) The following Health & Safety requirements should be complied with:
 - i. The *Contractor* is required to supply a Certificate of Competency for his/her employees if the work will be done under the following conditions:
 - Confined Spaces
 - Heights
 - Heat stresses
 - Cold stresses
 - ii. The *Contractor* to provide the *Employer* with a signed register as proof of free issue of adequate Personal Protective Equipment (PPE) to be used by his/her employees (preferably SABS approved). Additionally, the Contractor shall provide overalls for his staff with clearly identifying motifs depicting the company name.

- iii. Sub-contractors - the principal contractor must request approval for the use of any sub-contractor. Proof must be given to Eskom that the sub-contractor/s have the necessary competence and resources to carry out the work safely and to ensure that due care of the environment will be exercised.
- iv. Medical certificate of fitness shall be issued by a Registered Occupational Health Medical Practitioner only.
- f) The *Contractor* appoints a person, qualified in accordance with the SHE Requirements, as the liaison with the Eskom Safety Officer for all matters related to health and safety and this person shall be contactable telephonically 24 hours a day.
- g) The *Contractor* confirms that it has been provided with sufficient written information regarding the health and safety arrangements and procedures applicable to the Services to ensure compliance with it and all employees, agents, Subcontractors, or mandatories with the SHE Requirements while providing the Works in terms of this contract. As such, the *Contractor* confirms that this contract and the relevant Eskom Regulations referred to in this contract constitute written arrangements and procedures between the *Contractor* and the *Employer* regarding health and safety for the purposes of section 37(2) of the OHSA.

14.1.8 Company Branding

- a) The Contractor shall provide all overalls (when needed) for his staff with clearly identifying motifs depicting the company name.

14.1.9 Special requirements

- a) The Work area includes the coal stock yard and tippler, The Site Rule is that all persons entering the Coal stock yard and Tippler area will wear reflective vests or jackets. Reflective Strips on the over although innovative are not sufficient. Any person discovered not wearing appropriate reflective clothing will be requested to leave Site.

14.1.10 Exposure to Silica

- a) The Risk of exposure to Silica is high. The *Contractor* is responsible for ensuring that ALL employees working on the Coal plant wear appropriate SABS approved dust mask and that they are used correctly.
- b) The *Contractor* is to ensure that Lung X-rays are performed on an annual basis and that the reports are issued by a Medical Doctor Qualified to recognise Silica related dust Lung ailments or Diseases for all their personnel that are doing work on the Coal plant.
- c) The above reports must be submitted to the *Employees Medical Centre* for verification.

14.2 Environmental constraints and management

All Legislative, Eskom and Majuba environmental policies are to be adhered to:

14.2.1 Environmental requirements

The *Contractor* will be required to ensure that all works are carried out as per the **ISO 14001** standard and **Majuba's Environmental Policy, 32-727 and Waste management Policy, RA/ENV/06**. The following environmental requirements are complied with at all times:

- a) Zero liquid effluent discharge.
- b) No chemicals will be dumped into the station drains or on the premises.
- c) No oil or waste will be dumped in an unauthorised area or unlicensed waste site.
- d) Asbestos will be handled and stored according to Act 15 of 1973 (Hazardous Substances Act).

- e) No materials or waste will be burnt on site. Hazardous substances shall be handled and stored according to the hazardous substances Act no 15 of 1973. No effluent shall be discharged into the public streams.
- f) Contractors activities/services shall be carried out as per the above procedures and BIA/RM/STD/01

14.2.2 New Environmental Legislation

The *Contractor* will be responsible for complying with any new environmental requirements, relevant to the Services Information that may come into effect as part of Majuba Power Station's Environmental Management System (EMS) during the duration of this contract.

14.2.3 Existing Environmental Legislation

In order to protect Eskom's environmental interests whenever a product or service is provided by a *Contractor*, the *Contractor* complies with all relevant and appropriate environmental legal requirements contained in governmental notices, laws and regulations promulgated by the central and provincial governments.

14.2.4 Liability

The *Contractor* accepts all responsibilities, accountabilities and liabilities associated with such legal requirements, unless specifically excluded from a contract by a mutually acceptable written agreement.

14.2.5 Hazardous substances

If a product is classified as a hazardous substance, a material safety data sheets (MSDS) must accompany delivery/use. In accordance with the Occupational Health and Safety Act (OHSA), Act 85 of 1993 section 10 and 11. If any hazard is identified by the *Contractor*, he must immediately inform the *Employer*.

14.3 Quality assurance requirements

The *Contractor* must possess an accredited Quality Management System. A pre-approved Quality Control Plan (QCP) is to be used for the tasks at hand.

14.3.1 Quality Requirements

The *Contractor* will additionally comply with the *Employer's* Quality Requirements as specified in (MAN/200001, MAINT/ADM 100 53, MAINT/ADM 100 59, MAINT/ADM 100 58 and standard **MAINT/ADM 100 81**. This includes the *Contractor's* ISO 9001 Registration Certification of Compliance.

14.3.2 Contract Quality Plan

The *Contractor* prepares a Contract Quality Plan, for acceptance by the *Employer*. Any changes to the accepted Document shall be submitted as a proposed revision for acceptance.

The *Contractor* prepares an index of Quality Control Plans as per scope of work. The Quality Control Plans to be submitted to the *Contract manager*, who will in consultation with Engineering-, Quality Department and Authority review, insert intervention Points and approve. Work may not commence until the plans are approved. Any Quality Control Plan that's been revised due to change of operation to be re-submitted for approval by all parties.

14.3.3 Quality Control Documents

All quality control documentation must be submitted to the Project Manager/ *Employer's* Representative/ *Employer's* Agent within two weeks after contract award for written approval.

15 Procurement

15.1 Minimum requirements of people employed

- a) Proof of the *Contractor's* personnel competency in terms of Regulation 18 (5 and 6) of the OHS Act is required by the *Employer* (Refer to section 9 and section 14 for requirements).
- b) All Artisans are qualified and in possession of a valid trade test certificate.
- c) The *Contractor* will provide trained personnel for the implementation of all work.
- d) The *Contractor* remunerates his employees at not less than the proclaimed statutory wage (Minimum Wages Act). Failure in this regard will result in non-performance and therefore immediate termination of the contract.
- e) In order to fully evaluate a tender, the *Contractor* is to submit an organogram, which is to include the relevant skills levels.
- f) According to the SKILLS DEVELOPMENT ACT 97 OF 1998, the following definition for artisans and trades are emphasised:
 - Artisan means a person that has been certified as competent to perform a listed trade in accordance with this Act. (Definition of "artisan" inserted by section 1(a) of Act 37 of 2008)
 - Trade means an occupation for which an artisan qualification is required in terms of section 26B. (section 1(i) of Act 37 of 2008)
- g) Section 26C section 2 (a) states the following – "No person, whether employed or self-employed, may hold themselves out to be qualified as an artisan in a listed trade unless that person is registered as an artisan in terms of subsection (1)"
- h) With reference to the Act, all personnel are adequately qualified for the task to be performed. Qualifications of all staff to be submitted to the *Service Manger* two weeks prior to commencement of work and approval of qualifications of staff to be granted within one week of receipt of qualifications.
- i) The *Contractor* submits requests to change any pre-approved staff together with proof of qualifications for approval prior to changing the staff.

15.2 Supplier Development and Localisation Plan

"Local to site" means all areas that fall within the Dr Pixley Ka Seme Municipal area.

The *Contractor* is required:

- a) To provide a high-level Supplier Development & Localisation implementation plan which stretches for the duration of the contract within one month after contract award.
- b) To provide an explanation and action plan for deviation from the proposed plan
- c) The *Contractor* is also required to submit its Human Resource Plans indicating the number of new jobs that would be created or retained due to this project.
- d) The *Contractor* is required to procure general labour from Dr Pixley Ka Seme. Only skilled and professionals would be procured from outside of Dr Pixley Ka Seme Municipality Area.
- e) The Candidates for Skills Development would be sourced from Dr Pixley Ka Seme first, then Mpumalanga, before the rest of RSA.

- f) The candidates may be developed directly by the supplier, through the suppliers' own supply network or through the SETA accredited training providers.
- g) Candidates are to be currently unemployed graduates from FET (Further Education and Training) colleges, universities, or matriculates. These candidates shall also be representative of the population demographics of Mpumalanga province.
- h) The *Contractor* submits proposals to the *Employer* for acceptance on how he will employ and train local labour in the following positions:

Refer to SDL Matrix Subcontracting

15.2.1 Preferred subcontractors

All subcontractors need to be approved by the *Contract manager* before the subcontractor gets to site.

15.2.2 Subcontract documentation, and assessment of subcontract tenders

The *Contractor* prepares subcontract documentation. The use of the NEC system is recommended on how subcontract tenders are to be issued, received, assessed, and awarded.

15.3 Plant and Materials

15.3.1 Specifications

None

15.3.2 Correction of defects

Audit findings and Non-Compliance Report findings to be completed and closed within 7 working days.

15.3.3 Contractor's procurement of Plant and Materials

All equipment used to supply the *Service* is supplied by the *Contractor*, unless specified in the contract.

15.3.4 Tests and inspections before delivery

It's a requirement from the *Employer* for the *Contractor* to do off site inspections. Pre-approval from the *Contract manager* must be obtained before inspection date.

16 Working on the Affected Property

16.1 Employer's site entry and security control, permits, and site regulations.

The Entry to site is only approved once the following is adhered to:

- a) The *Contractors* Safety file is to be approved by the *Employer's* Safety department.
- b) All personnel must undergo screening for Criminal records and outstanding warrants.
- c) Site-specific induction is to be done by all personnel.
- d) Refer to the General Works information.

16.2 People restrictions, hours of work, conduct and records

16.2.1 Time Clocking

- a) The Contractor uses a biometric time clocking system.
- b) No clocking will result in non-payment. If a person clocked in but not out or did not clock in, but clocked out, the person will not receive payment for that specific day.

- c) Proof of clocking to be submitted to the *Contract manager* from files directly generated from the clocking system (no manual intervention).
- d) During GO's, MGO's and IR's costing with supporting timesheets is provided every two weeks together with a forecast for future invoicing.

16.2.2 Hours of work

- a) Normal working hours is Eskom working hours:

- Monday to Thursday **07:30 - 16:45**
- Fridays **07:30 - 12:30**

- b) Outage or maintenance opportunities working hours are:

- Monday to Sunday 07:00 - 19:00 or as required by the SOW (might require 24-hour shifts)
- c) Overtime rules are adhered to as determined by the Department of Manpower.
- d) All Timesheets are to be kept for records purposes i.e., man-hours worked safely etc.
- e) Other hours will be determined as per critical path activities during outages and maintenance opportunities.
- f) Overtime to be approved by the *Contract manager*.
- g) Daily time sheet must be kept up to date of normal and overtime worked at all times.
- h) During Maintenance opportunities, the *Contractor* will be compensated for travelling as per the agreed contract rates.

16.3 Health and safety facilities on the Affected Property

There is a medical station on site and a fire and rescue service for assistance with serious incidents and treatment of all serious injuries during normal working hours. Emergency services are available during normal working hours by dialling 9222 from any site phone or else 017 799 2138 (medical centre) 017 799 3192 (fire and rescue) and also available after hours by dialling 9222 from any site phone or else contacting the Electrical Operating Desk (EOD) at 017 799 3803 (all hours). However, the *Contractor* is expected to handle all minor incidents in-house by providing a first aider and a first aid kit.

16.4 Environmental controls, fauna & flora

All Legislative, Eskom and Majuba environmental policies are to be adhered to.

The Contractor will be required to ensure that the Service is carried out as per the **ISO 14001** standard and **Majuba's Environmental Policy, BIA/ENV/04 and Waste management Policy, BIA/ENV/01**. The following environmental requirements are complied with at all times:

- a) Zero liquid effluent discharge.
- b) No chemicals will be dumped into the station drains or on the premises.
- c) No oil or waste will be dumped in an unauthorised area or unlicensed waste site.
- d) Asbestos will be handled and stored according to Act 15 of 1973 (Hazardous Substances Act).
- e) No materials or waste will be burnt on site. Hazardous substances shall be handled and stored according to the hazardous substances Act no 15 of 1973. No effluent shall be discharged into the public streams.

- f) Contractors' activities/ services shall be carried out as per the above procedures and BIA/RM/STD/01.

16.5 Records of Contractor's Equipment

The Contractor will bring a typed list of all his equipment and tools (with serial numbers, wherever possible). This list needs to be approved by the Security office before the items are taken onto site on each occasion. Equipment that is not listed on a tool/equipment list cannot be removed from site. Equipment and vehicles left on site is done so at the Contractor's own risk.

16.6 Control of noise, dust, water, and waste

16.6.1 Waste Disposal

Waste is to be disposed of in bins supplied by Eskom – yellow bins for general waste and red bins for hazardous waste and as specified in point 6.5.6 above.

16.6.2 Noise

Noisy equipment and tools emitting noise more than 105dB (A) may not be supplied/utilised by the supplier.

16.7 Tests and inspections

16.7.1 Description of tests and inspections

It's the requirement that the Contractor do all tests and Inspections as per Service Information.

16.7.2 Materials facilities and samples for tests and inspections

As per Service Information

17 Drawings

The drawings are available at the documentation centre on request.

18 Relevant Documents

The following Employer documents are relevant for this contract and can be made available on request.

Procedure Number	Revision	Title
32-727	-	SHEQ Policy
RA/ENV/06	-	WASTE MANAGEMENT
MAN/200001	-	QUALITY CONTROL MANUAL
MAINT/ADM 100 53	-	QUALITY CONTROL REQUIREMENT FOR MAINTENANCE ACTIVITIES
MAINT/ADM 100 59	-	QUALITY REQUIREMENTS FOR MAINTENANCE CONTRACTS
MAINT/ADM 100 78	-	MAINTENANCE GROUP QUALITY POLICY
MAINT/ADM 100 81		QUALITY REQUIREMENT FOR ENGINEERING AND CONSTRUCTION WORK.
32-1034	-	ESKOM PROCUREMENT AND SUPPLY CHAIN MANAGEMENT PROCEDURE

23-726	-	SHE REQUIREMENTS FOR ESKOM COMMERCIAL PROCESS
32-136	-	CONTRACTOR HEALTH AND SAFETY REQUIREMENTS
32-296	-	INTEGRATED SHE ORGANISATION; ROLES AND RESPONSIBILITIES AND STATUTORY APPOINTMENTS
240-62196227	-	LIFE-SAVING RULES
32-418	-	WORKING AT HEIGHTS
240-56356396	-	EARTHING AND LIGHTNING PROTECTION STANDARD
240-55714363	-	GENERATION PS LIGHTING AND SMALL POWER INSTALLATION STANDARD
32-345	-	ESKOM VEHICLE SAFETY SPECIFICATIONS
240-130377832		PPE ISSUE REGISTER
RA/RM/23		WRITTEN SAFE WORK PROCEDURE AND PLANNED JOB OBSERVATIONS

APPENDIX A: Job Profiles

1. Designation: Supervisor

Job Mission / Purpose: To perform supervisory activities.

Functional Outputs / Activities:

1.1 Perform Supervisory Activities

- 1.1.1 Determine priorities and delegate activities.
- 1.1.2 Advise staff queries and problems encountered.
- 1.1.3 Implement and maintain the performance management system.
- 1.1.4 Verify compliance to statutory and Eskom requirements, identify and address deviations.
- 1.1.5 Coordinate and control all activities to achieve set KPI's. Identify possible short falls and initiate actions to correct.
- 1.1.6 Mentor and informally coach staff.

1.2. Co- ordinate maintenance work plans in sub section.

- 1.2.1 Influence and implement proposed plans taking into account high priority defects, production targets, plant availability, unplanned maintenance, staff, contractors and spares availability etc.
- 1.2.2 Consolidate actions /activities, cancel or accelerate activities.
- 1.2.3 Investigate work not completed.
- 1.2.4 Enhance the maintenance business processes by utilizing the computerized maintenance management systems.

1.3. Enforce Permit to Work System

- 1.3.1 Do job observations and check compliance to legislative requirements and implement corrective actions.
- 1.3.2 Explain the procedure for the job and all risks involved to staff. Check that staff apply the correct permit practices.

1.4. Co-ordinate the Safety Risk Management Programme

- 1.4.1 Conduct inspections of all tools, protective clothing and equipment used by the staff. Give guidance on how to use equipment in correct and safe manner.
- 1.4.2 Hold daily toolbox talks.
- 1.4.3 Conduct regulator plant inspections.
- 1.4.4 Attend and actively participate in the statutory monthly safety meetings.
- 1.4.5 Conduct / participate in incident investigations and compile investigation reports.
- 1.4.6 Develop / implement safe work procedures.

1.5. Control the Execution of Maintenance Activities

- 1.5.1 Propose modifications to optimize maintenance practices and costs by determining risks, impact and compatibility with existing systems components.
- 1.5.2 Pro-actively identify potential risks and implement actions to mitigate.
- 1.5.3 Analyse work methods to improve productivity.
- 1.5.4 Perform / check / control job observations.
- 1.5.5 Initiate and control investigations of recurring plant problems in sub section.
- 1.5.6 Verify that maintenance activities meet quality requirements. Identify and correct non-compliance.

1.6. Perform Administrative Activities

- 1.6.1 Compile and review procedures, work practices etc.
- 1.6.2 Provide technical advice for the purchasing of materials/spares. Compile specifications when required and do technical evaluations.

1.7. Co-ordinate and Control Contract Work

- 1.7.1 Verify that contractors comply with certification requirements.
- 1.7.2 Verify that equipment meets specification requirements.
- 1.7.3 In case of any non-compliance, initiate specific action.
- 1.7.4 Check that work performed is in accordance with contract / standards / requirements. Identify and address non-compliance.
- 1.7.5 Check that services provided are as per contract requirements.

- 1.7.8. Perform any other legitimate activity as required.

1.8 Minimum Qualifications

Grade 12 + 3 Technical

1.9 Related Experience

5 years

1.10 Skills / competencies required (includes internal training)

- 1) Supervisory Skills
- 2) Planning Skills
- 3) Scheduling Skills
- 4) Computer Literate
- 5) HV / LV Authorisation
- 6) SHE Knowledge
- 7) NEC Knowledge
- 8) QC Knowledge
- 9) Knowledge of General Maintenance Processes and Systems

2. Designation: Snr Advisor Electrical Compliance

Job Mission/ Purpose: To provide the organisation with objective assurance on hazardous location compliance to statutory requirements and technical expertise by providing direction and guidance on the testing of electrical equipment and issuance of the certificate of compliance.

2.1. Key Performance Areas (summary of functional outputs):

2.1.1. Provide hazardous location (HazLoc) compliance assurance by:

- a) Driving and leading hazardous location assessment and classification.
- b) Compiling the hazardous location classification report for each hazardous location at a power station within a cluster.
- c) Providing guidance on the initial detail inspection before the equipment is energised and checking correctness of the paperwork submitted by the service provider.
- d) Exercising general control as per Electrical Installation Regulation (EIR) 5.(4).
- e) Leading the team at power stations to conduct hazardous location risk assessments, testing equipment and issuing the certificate of compliance.
- f) Performing hazardous location plant inspections to identify obvious faults, defects, deviations and anomalies.
- g) Conducting fault finding utilising test equipment, drawings, diagrams, manufacturer specifications and identifying problematic or faulty components and equipment.
- h) Reviewing hazardous location zones and reassessing area classifications.
- i) Recording full details and technical related history of work carried out on notifications, defects and scheduled work.
- j) Preparing planned maintenance documentation with special reference to repairs carried out, material and equipment used prior to submitting to the supervisor.

- k) Performing tests, correcting deviations from standards and complete relevant documentation regarding Electrical Certificate of Compliance (COC).
- l) Developing a documented list with recommended tools to be used in hazardous locations and procedures for calibration of equipment.
- m) Ensuring the service provider issue a certificate of compliance for repaired, modified equipment and new installations in the hazardous location.
- n) Conducting two yearly detailed plant maintenance inspection for the Hazloc.
- o) Ensuring compliance with legislation, standards, policies, strategies and Eskom compliance policies and directives.

2.1.2. Ensure equipment and employee safety by:

- a) Driving the inspection of equipment and reporting defects and problems to management.
- b) Adhering to safety, health and environment (SHE) requirements.
- c) Recommending corrective actions e.g., to replace non-compliance equipment.
- d) Reporting unsafe conditions on equipment in the hazardous areas to management.
- e) Liaising with relevant departments to investigate problem areas requiring team involvement.

2.1.3. Conduct quality control inspection by:

- a) Leading the team on inspections, identifying, reporting and correcting non-compliance.
- b) Ensuring hazardous location (HazLoc) files are complete and up to date.
- c) Ensuring hazardous location records are updated on the data management system.

2.1.4. Provide hazardous location on job training by:

- a) Conducting hazardous location awareness training.
- b) Coaching relevant employees by providing on job training.
- c) Conducting job observation and demonstration.
- d) Training and assessing trainees on maintenance tasks.
- e) Assisting the hazardous location functional practitioner to achieve business unit compliance.

2.1.5. Investigate recurring defects by:

- a) Reviewing previous findings and taking additional measures/actions.
- b) Recommending corrective actions/modifications.
- c) Participating in plant modification projects.

2.1.6. Assist and advise relevant employees on maintaining hazardous location compliance by:

- a) Ensuring maintenance processes are implemented, routine maintenance conducted, procedure compliance, interpretation of drawings and specifications, etc.
- b) Identifying and inspecting hazardous work areas.
- c) Ensuring the usage of appropriate methods and techniques for risk assessments and audits.
- d) Identifying and advising on resolutions for spares/equipment problems.
- e) Advising the hazardous location site committee on relevant requirements.

2.1.7. Attend hazardous location related meetings by:

- a) Attending hazardous location committee meetings.
- b) Conducting adhoc meetings with the functional practitioner, functional compliance officer and compliance manager.
- c) Attending safety and work team sessions.
- d) Providing mass briefing sessions.

- e) Attending compliance management forum meetings.
- f) Participating in plant modification processes at the Site Change Control Committee meetings.

2.1.8. Coordinate and control allocated team activities by:

- a) Allocating activities and follow up on progress.
- b) Providing technical problem resolutions.
- c) Conducting quality control inspections.
- d) Completing relevant documentation.
- e) Performing other legitimate activities as required.
- f) Conducting reviews and audits at various sites.
- g) Ensuring the hazardous location compliance dashboard is up to date.
- h) Coordinating work performed by competent employees working in the hazardous location in a cluster.

2.2. Minimum Qualification Requirements:

- B Tech/National Higher Diploma in Electrical/Mechanical Engineering at NQF7 with 360 credits plus Master Installation Electrician registration.

2.3. Related Minimum Experience:

- 5 Years Power Plant related experience and experience in an electrical environment.

3. Designation: Senior Technician – Quality Control

Job Mission / Purpose: To perform maintenance quality control activities.

Functional Outputs / Activities:

3.1 Co-ordinate and Control Quality Control Activities

- 3.1.1 Review and approve quality control plans taking into account high priority defects, production targets, plant availability, unplanned maintenance, staff, contractors and spares availability etc.
- 3.1.2 Approve “stop work” orders if quality and safety standards are compromised.
- 3.1.3 Review and approve identified quality deficiencies.
- 3.1.4 Control the close-out of quality deficiencies by reviewing and approving initiatives, proposals or corrective actions for improvements.
- 3.1.5 Prioritize activities for quality control verifications.
- 3.1.6 Implement and control QC processes by reviewing all documentation and system information and validate information to maintain accurate data.
- 3.1.7 Perform / check / control job observations.

3.2. Perform Physical Inspections on Maintenance Activities

- 3.2.1 Perform inspections and determine if standards are met. Identify and report non-compliances. Recommend possible changes to maintenance standards or practices.
- 3.2.2 Assess, monitor and report good and sub-standard work practices.
- 3.2.3 Verify that documentation conform to requirements and standards by reviewing work packages, maintenance plans, procedures and modification packages according to the relevant administrative controls. Identify and report non-conformances.
- 3.2.4 Conduct external inspections of suppliers and products for conformance to specifications.

3.3. Provide Professional Advice on Quality Control

- 3.3.1 Provide advice and assistance with regards to procedures and work practice improvements.
- 3.3.2 Provide advice with regards to rules, regulations and code requirements.
- 3.3.3 Liaise with line sections with regard to queries.
- 3.3.4 Conduct presentations / training on quality control practices.

3.4. Perform Administrative Activities

- 3.4.1 Check that all QC documentations are updated and correct.
- 3.4.2 Compile, review and/or approve procedures, standards and checklists as per delegation.
- 3.4.3 Trend and report Quality Deficiencies.

3.5. Co-ordinate and Control Contract Work

- 3.5.1 Verify that contractors comply with quality requirements
- 3.5.2 Verify that equipment meets specification requirements.
- 3.5.3 In case of any non-compliance, initiate specific action.
- 3.5.4 Check that work performed is in accordance with contract / standards / requirements. Identify and address non-compliances.
- 3.5.5 Check that services provided are as per contract requirements.
- 3.5.6 Perform any other legitimate Activity as required.

3.6. Minimum Qualifications

- Grade 12 + 3 Quality Management Qualification or Technical

3.7. Related Experience

- 3-5 years

3.8. Skills / competencies required (includes internal training):

- a) Maintenance Processes and Systems
- b) Maintenance Policy and Standards
- c) Quality Control and Quality Assurance
- d) Computer Literacy
- e) NEC Knowledge
- f) PSR Knowledge
- g) ORHVS Knowledge
- h) Communication Skills
- i) SHE Knowledge

4. Electrician

Job Mission / Purpose: To maintain and repair all electrical equipment

Functional Outputs / Activities:

Key performance areas:

- Perform preventative and corrective maintenance activities as per laid down guidance
- Attend meetings
- Attend to equipment care and personal safety

4.1. Perform preventative and corrective maintenance activities as per laid down guidance by:

- 4.1.1. Taking out permits by checking correctness of the isolations, signing permits to carry out repairs / services and on completion clearing the permits. Performing visual inspections and routine inspections and identify obvious faults / defects and risks.
- 4.1.2. Conducting fault finding utilizing test equipment, drawings / diagrams and manufacturer's specifications. Identifying problematic / faulty components / equipment.
- 4.1.3. Repairing / replacing faulty equipment as instructed. Reporting to supervisor any recurring defects.
- 4.1.4. Initiating appropriate actions to rectify any unsafe activities / or plant conditions.
- 4.1.5. Recording full details, technical and cost related history of work carried out on notifications / defects and scheduled work / planned maintenance documents prior to submission to the supervisor with special reference to material used, repairs carried out and equipment used.
- 4.1.6. Conducting job observations and peer checks according to procedure. Conducting on job training.
- 4.1.7. Conducting risk assessments on live plant where load losses and trips can occur and treating risks.

4.2. Attend meeting by:

- 4.2.1. Sectional morning meetings.
- 4.2.2. Ad hoc meetings.
- 4.2.3. Safety and work team sessions.
- 4.2.4. Mass briefing

4.3. Attend to equipment care and personal safety by:

- 4.3.1. Inspecting equipment and reporting defects and problems to the supervisor.
- 4.3.2. Adhering to SHE requirements.
- 4.3.3. Using the correct personal protective equipment to perform the task.
- 4.3.4. Reporting unsafe conditions on equipment and in the work area to the supervisor.
- 4.3.5. Cleaning all equipment and work area daily, after usage.

4.4. Minimum qualification requirements

- Grade 12 / N3 and Trade Test (NQF Level / Equivalent)

4.5. Related experience

- 2 Years Apprenticeship Training

4.6. skills/competencies required (including internal training)

- a) Communication
- b) Computer Literacy
- c) Basic Health And Safety Knowledge
- d) Authorized as Responsible Person (PSR)

- e) Plant Safety Regulations
- f) High Voltage Regulations
- g) Valid Driver's License

5. Semi-skilled Person

Job mission / purpose: To perform maintenance activities on plant and equipment.

Key performance areas:

- Carry out maintenance activities on domestic circuits
- Carry out semi-skilled maintenance activities
- Carry out semi-skilled transformer maintenance activities
- Carry out battery maintenance activities
- Carry out semi-skilled board maintenance activities
- Assist with cleaning activities

5.1. Carry out maintenance activities on domestic circuits by:

- 5.1.1. Obtaining a LAR and follow lock-out procedure.
- 5.1.2. Performing fault finding on defective domestic plug circuits by utilizing a basic drawing and a multimeter.
- 5.1.3. Replacing faulty circuit breakers
- 5.1.4. Carrying out polarity checks on plug circuits
- 5.1.5. Carrying out earth leakage tests and record findings
- 5.1.6. Providing written information of corrective action taken to repair the defective lights and plugs on notifications and work orders
- 5.1.7. Completing notifications and work orders
- 5.1.8. Doing physical inspections and identifying lights out of order.
- 5.1.9. Performing fault finding on defective lights by utilizing a basic drawing and a multi meter, replacing light fittings when necessary
- 5.1.10. Obtaining material required to perform corrective action on defective lights and plugs
- 5.1.11. Cleaning and repairing electrical lighting junction and distribution boxes.
- 5.1.12. Digging cable trenches lay electrical cables and backfill trenches.
- 5.1.13. Disposing of electrical lamps and tubes as per procedure

5.2. Carry out semi-skilled maintenance activities by:

- 5.2.1. Stripping motor into its various parts.
- 5.2.2. Cleaning the parts of the motor.
- 5.2.3. Replacing the bearings.
- 5.2.4. Reassembling the motor.
- 5.2.5. Painting the motor when required.
- 5.2.6. Completing a motor breakdown report

5.3. Carry out semi-skilled transformer maintenance activities by:

Performing inspections and identifying which breathers require silica gel replacement.

- 5.3.1. Replacing silica gel in breathers as required.
- 5.3.2. Replacing oil in breather oil containers.
- 5.3.3. Reporting any oil leaks observed.
- 5.3.4. Assisting with maintenance activities on transformer
- 5.3.5. Acting as access controller only. (Not clean conditions)

5.4. Carry out Battery maintenance activities by:

- 5.4.1. Obtaining a limited access register or permit to carry out battery maintenance.
- 5.4.2. Utilizing basic battery test equipment applicable to different type of batteries (meter, hydrometer, thermometer, battery testing module, insulated tools etc.) to carry out daily tasks.

- 5.4.3. Checking on daily basis according to preventative maintenance schedules the voltage, specific gravities, temperatures, condition and electrolyte levels on all lead-acid and alkaline batteries on site.
- 5.4.4. Filling up battery water levels when required.
- 5.4.5. Cleaning all batteries and battery room floors.
- 5.4.6. Reporting all defects and conditions to supervisor.
- 5.4.7. Assisting with, battery discharge tests and moving batteries when required and under supervision

5.5. Carry out semi-skilled board maintenance activities by:

- 5.5.1. Cleaning boards of dust ingress.
- 5.5.2. Verifying electrical connections for tightness.
- 5.5.3. Cleaning floors.

5.6. Assist with cleaning activities by:

- 5.6.1. Cleaning the workshop.
- 5.6.2. Repainting workshop floor demarcated areas.
- 5.6.3. Assisting with housekeeping in workshop.

5.7. Minimum qualification requirements

- Grade 10 / RPL Equivalent qualification

5.8. Related experience

Years or Related Experience as EMO / Utility man

5.9. Skills/competencies required (including internal training)

- a) Basic safety
- b) Hand skills
- c) Workshop tools
- d) Communication
- e) Basic cutting
- f) Hand tools
- g) Valid driver's license (National and Eskom)
- h) Assessment as per approved assessment document
- i) Qualified HV REGS

APPENDIX B: Planned work application form

	<h3>APPLICATION FOR PLANNED OVERTIME</h3>
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DEFINITION	DAILY MINIMUM REST PERIODS	WEEKLY MINIMUM REST PERIODS	DAILY LIMITS	WEEKLY LIMITS
Pre-arranged overtime as authorised and scheduled by the manager before commencement of the overtime, as per business requirements.	12 consecutive hours applicable plus one of the following: (refer weekly minimum rest periods)	36 consecutive hrs or 60 hrs every two weeks if 36 hours were not granted.	4 hours overtime (Employee is allowed to work more than 4hrs on Sat/Sun/Pub Hol. Adhere to all applicable daily & weekly rest periods)	15 hours per week

DEPARTMENT:	SECTION:
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Name	Unique Nr	Designation	Planned Hours worked to date for the applicable month	Remaining Planned Hrs for the applicable month <i>(Limit 45hrs)</i>	Date to be worked	Time From (eg: 08:00)	Time To (eg: 10:00)	Nr of Hours to be worked (eg: 2)

Short description of task(s) to be performed:	Motivation to perform the task(s) outside normal working hours:

Note: *Line Manager / Group Manager not to approve if hours worked to date and remaining hours are not completed. For a total of => of 60 hours Planned Overtime booked and/or in contravention of Rest Period, or 35 Standby Period Exceeded - to be authorised by Group Manager & Power Station Manager*

	REQUEST BY	SUPPORTED BY	AUTHORISED BY	PSM Approval
Signature				Rest Period Contravened / +>60hrs Planned OT
Name in Print				
Designation	SUPERVISOR	LINE MANAGER	GROUP MANAGER	POWER STATION MANAGER

APPENDIX C: Call out/emergency overtime sheet

	CALL OUT/EMERGENCY OVERTIME LOG SHEET
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DEFINITION	DAILY MINIMUM REST PERIODS	WEEKLY MINIMUM REST PERIODS	DAILY LIMITS	WEEKLY LIMITS
Can be claimed only if the work is to be done without delay and which provision could not be made for, and can not be performed during ordinary work. (Call-outs are seen as Emergency Overtime).	8 hours rest for every 24 hours period, of which 6 hours should be, consecutive - provided no rest period of at least 6 hours before call-out.	36 Consecutive hours every 2 weeks.	No Limits, except compliance with minimum rest periods	Weekly rest periods

DEPARTMENT:		SECTION:		DATE:	
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EMPLOYEE:	UNIQUE NUMBER:
Total hours worked for Current Week:	Total nr. of Standby's for Current Week: 0
Total hours worked for Current Month:	Total nr. of Standby's for Current Month: 0

CALL OUTS	STAY ON <i>(indicate rest period)</i>		1 st CALL <i>(indicate rest period)</i>		2 nd CALL <i>(indicate rest period)</i>		3 rd CALL <i>(indicate rest period)</i>		4 th CALL <i>(indicate rest period)</i>	
	STAY ON	REST PERIOD	1 st CALL	REST PERIOD	2 nd CALL	REST PERIOD	3 rd CALL	REST PERIOD	4 th CALL	REST PERIOD
TIME FROM										
TIME TO										
TOTAL HRS										

Call Out <i>Refer to Call Outs above Stay On / 1st Call / 2nd Call / 3rd Call / 4th Call</i>	Plant	Short description of task(s) performed:	SAP Notification Nr	Shift Manager	Time task(s) completed

	REQUESTED BY	SUPPORTED BY	AUTHORISED BY	PSM Approval 35 Standby Periods Exceeded
Signature				
Name in Print				
Designation		LINE MANAGER	GROUP MANAGER	POWER STATION MANAGER
Date				

APPENDIX D: Application for outage overtime

	APPLICATION FOR OUTAGE OVERTIME
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DEFINITION	DAILY MINIMUM REST PERIODS	WEEKLY MINIMUM REST PERIODS	DAILY LIMITS	WEEKLY LIMITS
Pre-arranged maintenance and commissioning of the plant in the specific period. Overtime per week: 10 hrs Add. OT 40hrs work week: 5 hrs Add. OT - ministerial: 29 hrs	12 consecutive hours applicable	36 consecutive hours every 2 weeks	Not more than 12 hours overtime per day (incl. overtime worked) for longer than 8 weeks	44 hours per week

DEPARTMENT:	SECTION:	SAP NOTIFICATION NR:
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Name	Unique Nr	Designation	Outage Hours worked to date for the applicable month	Remaining Outage Hours for the applicable month	Date to be worked	Time From (eg: 08:00)	Time To (eg: 10:00)	Nr of Hours to be worked (eg: 2)

Short description of task(s) to be performed:	Motivation to perform the task(s) outside normal working hours:

Note: Line Manager / Group Manager not to approve if hours worked to date and remaining hours are not completed.

	REQUEST BY	SUPPORTED BY	AUTHORISED BY	PSM Approval
				Contravention of Rest Period
				PSM Approval
				35 Standby Periods Exceeded
Signature				
Name in Print				
Designation	SUPERVISOR	LINE MANAGER	GROUP MANAGER	POWER STATION MANAGER