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| Eskom | **Procurement SOW** | **Technology** |

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| Title: | **Boiler Isolating Valves Refurbishment at Majuba Power Station**<br><br>**5-year contract**<br>**PR -** | Revision: | **0** |
| | | Total Pages: | **17** |
| | | Disclosure Classification: | **CONTROLLED DISCLOSURE** |

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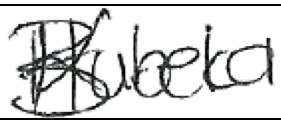
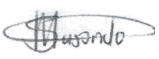
|  |  | |
| **B Kubeka**<br>**Initials and Surname**<br><br>**Outage Co-ordination**<br>**Designation** | **Ntokozo Nyathi**<br>**Initials and Surname**<br><br>**Engineer Boiler Valves**<br>**Designation** | **Rejoyce Ramphadi**<br>**Initials and Surname**<br><br>**Senior Advisor Quality Engineer**<br>**Designation** |
| Date: 2023/06/29 | Date: 2023/06/29 | Date: |

| Accepted by Procurement | Authorised by senior engineering | Approved by Outage line manager |
|---|---|---|
| | | |
| **Tina Bezuidenhout**<br>**Initials and Surname**<br><br>**Procurement Manager**<br>**Designation** | **Sipho Masondo**<br>**Initials and Surname**<br>  <br>**Boiler Senior Engineer**<br>**Designation** | **Lulama Matiwane**<br>**Initial and Surname**<br>  <br>**Outage execution line manager**<br>**Designation** |
| Date: | Date: 29/06/2023 | Date: 2023/07/14 |

# PART 3: SCOPE OF WORK

| Document reference | Title | No of pages |
|---|---|---|
| | This cover page | 1 |
| C3.1 | *Employer*'s Service Information | 15 |
| C3.2 | *Contractor*'s Service Information | TBA |
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# C3.1: *EMPLOYER*'S SERVICE INFORMATION

## Contents

# 1 Description of the service

## 1.1 Executive overview

The Service is for the insitu refurbishment of the Isolating valves on the Boiler plant level 1 plant of Majuba Power Station for period of 5 years,which includes de-assembly, cleaning, inspecting, lapping reassembling of valves and lastly mechanical stroke checking. The scope will be executed following Eskom 240-84979413 Maintenance and Repair of High Temperature and High Pressure Valves and Fittings Standard.

## 1.2 *Employer*'s requirements for the service

The Service is the refurbishment of the Isolating valves on the Boiler plant of Majuba Power Station. The following are to be performed for each valve

### 1.2.1 Preparation work.

1, Plant-walk and positive identification of valves to be conducted.
2. Valves and Actuators to be tagged.
3. Scaffold requirements to be submitted to the contract manager or identified representative
4. QCP's to be drafted and approved.
5. Lifting equipment to be certified and anchor points verified to be sufficient.

### 1.2.2 Removal of actuator

1. Remove and uncouple actuator from the plant
2. A component checklist, which is to be attached to the QCP, is signed by the *Contractor* upon removal of the actuator.

### 1.2.3 Open, Clean and Inspection of valve – Record the findings

1. Strip, clean and inspect all components
2. Inspect valve components for any wear or damage.
3. NDT to be requested on valve seat and critical components when required. To be provided by the *Employer*.
4. The contract manager or identified representative will be notified as soon as wear or damage is recorded. The contract manager or identified representative will then notify the System Engineer and Quality Representative to conduct inspections. The *Employer* will provide spares for badly damaged revolving nuts, bearings, bolts/studs/nuts and spindle assemblies.
5. The *Contractor* will replace spares damaged as a result of poor workmanship or negligence.

### 1.2.4 Replacement of soft spares

1. Replace gaskets and packing rings
2. All gaskets and packing to be of to align to Eskom 240-84979413 Maintenance and Repair of High Temperature and High Pressure Valves and Fittings Standard. Broken or lost parts by the *Contractor* will be replaced by the *Contractor.*

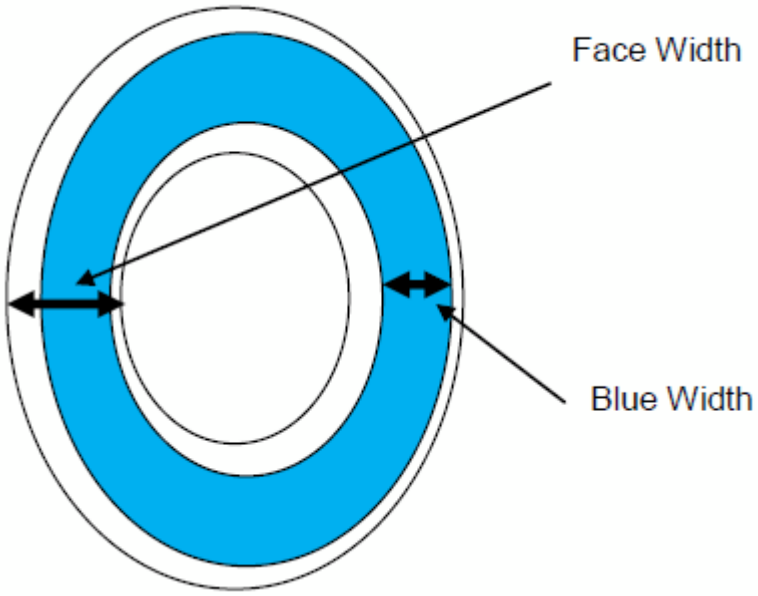
### 1.2.5 Repairs

If a valve component is identified as damaged and repairable/reverse-engineerable. The *Service Manager* will request the *Contractor* for a budget quote to repair or reverse engineer. Once the *Service Manager* accepts the budget quote the *Service Manager* will issue a task order for the compensation. The *Contractor* will be responsible to oversee the repair process of valves.

### 1.2.6 Lapping and blueing

1. Lap seats with appropriate lapping paste.
2. Blue test (using mechanical blue) achieve at least an 80% sealing surface (witnessed by QC or engineering)

3. Clean the spindle and body seat properly to remove all lapping compound. A form of a cleaning solution like alcohol may be used.
4. The procedure below will indicate how a globe valve spindle seat is blue checked.
   - Apply a very thin even layer of mechanical blue to the spindle seat.
   - Lower the spindle seat to the body seat but ensure it does not touch the body seat until aligned.
   - Apply even pressure on the spindle seat and rotate the seat 90° without moving the seat up, down, left or right. Then rotate the seat back 90° to its original position.
   - Remove the spindle seat and inspect both seats for blue rub-off and blue transfer from the spindle seat to the body seat respectively.
   - If the transfer to the body seat is 100% (blue contact around seat surface) then the blue may be cleared off.
   - Clean the seats thoroughly by using a cleaning solution.
   - Apply a very thin even layer of mechanical blue to the valve body seat.
   - Lower the clean spindle seats until it aligns with the body seat and then only allow the two seat faces to touch.
   - Apply an even pressure on the seat to ensure uniform blue results.
   - Turn the seat 90° in one direction without moving the spindle seat up, down, left or right. Then turn it back 90° to its original position.
   - Carefully remove the spindle seat from the body seat and inspect the blue results
   - If a 100% (blue contact around seat surface) then blue transfer are transferred to the spindle seat then the seat is lapped satisfactory.
   - After this inspection the valve may be boxed up.
5. The procedure below will indicate how a wedge and parallel slide valve seat is blue checked:
   - Follow same steps as above except that for the wedge gate valve the wedge is not turned 90° it is only applied pressure and removed.
6. The acceptance criteria for the blue checks
   a. Lapping plate to surface table: =100%
   b. Wedge and parallel slide gate valves: >/=80%
   c. Globe valves: 100% (Checked both ways around)
7. The Blue % identification:
   a. Face Width
   b. Blue Width




8. The Blue percentage can be determined by using the following formulae:
   % Blue = (Blue Width) / (Face Width) X 100
   If there is an area where the seat does not blue in accordance with the acceptance criteria then the System Engineer must be contacted to make a final decision.

### 1.2.7 Re-assembly

1. Re-assemble valve as (per procedure)
2. Suitable grease to be used. (approved by the Contract manager).
3. Actuator is installed with all components and the “removal checklist” will be signed again to confirm replacement of all components.
4. *Contractor* witnesses stroking by Eskom C&I and sign off the QCP.
5. *Contractor* cleans the area of work.

### 1.2.8 Reports

Report contains the at least the following:
1. QCP per valve
2. Condition of valve
3. Stellite condition of seat
4. Components that were replaced
5. Record all components that need to be replaced
6. Recommendations for the next outage
7. Gasket material specifications
8. Action taken to do repairs

### 1.2.9 Commissioning

The *Contractor* is on site during light up (estimated 3 days) where all valves will be inspected and leaking glands and seals attended to. Were issues are identified and cannot be attended to defects will be raised and the *Contractor* would be notified when an opportunity arises to correct the defect.

## 1.3 Quality Control Plans

1. The *Contractor* compiles Quality Control Documents and gets it approved by the relevant personnel as prescribed in the Supplier Quality Management Requirement.
2. Each valve needs to have its own QCP, identified by KKS number, with the activities to be performed
3. The work does not commence unless the CQP and QCP’s are approved by the System Engineer prior to commencement.
4. The works is not considered complete, if all hold points on these documents are not signed by all parties.
5. In the event that the hold and witness points are not adhered to, the *Contractor* performs the work again at the *Contractor’s* own account
6. If there is any weld repair to be done then the *Contractor* needs to ensure that a weld package is submitted to the relevant welding engineer that includes the WPS of the work to be done as well as the welder’s qualification.

Boiler Isolating Valve lists

Refer to spreadsheet pertaining to Boiler Isolating valves

### 1.3.1 5-Year Outage Plan

The 5-year outage plan is documented in the table below. Due to rescheduling performed on a continuous basis, the plan might change from time-to-time. The latest updates can be obtained from the *Service Manager* when required.

| OutageID | Outage Code | Station | Unit | Planned/Actual Start Time | Planned/Revised End Time | Outage Description | Status | Planned Duration |
|---|---|---|---|---|---|---|---|---|
| 19091 | MJ01UIR-10-08-2023 | Majuba | 1 | 2023/08/10 00:00:00 | 2023/09/06 23:59:00 | IR | ROLLSCHED | 28.00 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 19093 | MJ06UMO-08-12-2023 | Majuba | 6 | 2023/12/08 00:00:00 | 2024/03/16 23:59:00 | Mini GO and Boiler Scope | ROLLSCHED | 100.00 |
| 19095 | MJ05UIN-21-12-2023 | Majuba | 5 | 2023/12/21 00:00:00 | 2024/01/03 23:59:00 | BTI | ROLLSCHED | 14.00 |
| 19087 | MJ02UIR-01-04-2024 | Majuba | 2 | 2024/04/01 00:00:00 | 2024/04/28 23:59:00 | Interim repairs | ROLLSCHED | 28.00 |
| 19097 | MJ03UGO-09-05-2024 | Majuba | 3 | 2024/05/09 00:00:00 | 2024/09/05 23:59:00 | GO and C&I Upgrade | SCHED | 120.00 |
| 19098 | MJ06UIN-20-05-2024 | Majuba | 6 | 2024/05/20 00:00:00 | 2024/06/02 23:59:00 | BTI | SCHED | 14.00 |
| 19096 | MJ04UIR-23-05-2024 | Majuba | 4 | 2024/05/23 00:00:00 | 2024/06/19 23:59:00 | Interim Repairs | SCHED | 28.00 |
| 21919 | MJ01UIN-21-08-2024 | Majuba | 1 | 2024/08/21 00:00:00 | 2024/09/03 23:59:00 | Boiler inspection | SCHED | 14.00 |
| 21920 | MJ05UIR-27-04-2025 | Majuba | 5 | 2025/04/27 00:00:00 | 2025/05/24 23:59:00 | IR | SCHED | 28.00 |
| 21924 | MJ06UIR-31-07-2025 | Majuba | 6 | 2025/07/31 00:00:00 | 2025/08/27 23:59:00 | IR | SCHED | 28.00 |
| 19092 | MJ02UIN-01-08-2025 | Majuba | 2 | 2025/08/01 00:00:00 | 2025/08/14 23:59:00 | BTI | SCHED | 14.00 |
| 21925 | MJ01UGO-05-09-2025 | Majuba | 1 | 2025/09/05 00:00:00 | 2026/01/02 23:59:00 | GO | SCHED | 120.00 |
| 21922 | MJ04UIN-10-02-2026 | Majuba | 4 | 2026/02/10 00:00:00 | 2026/02/23 23:59:00 | Boiler inspection | SCHED | 14.00 |
| 21927 | MJ03UIR-07-03-2026 | Majuba | 3 | 2026/03/07 00:00:00 | 2026/04/10 23:59:00 | IR | SCHED | 35.00 |
| 21930 | MJ02UIR-13-04-2026 | Majuba | 2 | 2026/04/13 00:00:00 | 2026/05/17 23:59:00 | IR & Hydro | SCHED | 35.00 |
| 21921 | MJ02UGO-15-09-2026 | Majuba | 2 | 2026/09/15 00:00:00 | 2027/01/12 23:59:00 | GO | SCHED | 120.00 |
| 21926 | MJ05UIN-23-11-2026 | Majuba | 5 | 2026/11/23 00:00:00 | 2026/12/06 23:59:00 | BTI | SCHED | 14.00 |
| 21929 | MJ06UIN-26-02-2027 | Majuba | 6 | 2027/02/26 00:00:00 | 2027/03/11 23:59:00 | BTI | SCHED | 14.00 |
| 21931 | MJ01UIN-04-07-2027 | Majuba | 1 | 2027/07/04 00:00:00 | 2027/07/17 23:59:00 | BTI | SCHED | 14.00 |
| 21928 | MJ04UGO-24-08-2027 | Majuba | 4 | 2027/08/24 00:00:00 | 2027/12/21 23:59:00 | GO | SCHED | 120.00 |
| 21933 | MJ03UIN-21-09-2027 | Majuba | 3 | 2027/09/21 00:00:00 | 2027/10/04 23:59:00 | BTI | SCHED | 14.00 |

## 1.4 Interpretation and terminology

The following abbreviations are used in this Service Information:

| Abbreviation | Meaning given to the abbreviation |
|---|---|
| CIOID | Compensation for occupational injuries and diseases |
| GO | General Overhaul |
| HP | High Pressure |
| HSSD | Half Station Shut Down |
| IN | Boiler Inspection |
| IR | Intermediate Repairs |
| IV | Isolating Valve |
| LP | Low Pressure |
| MGO | Mini General Overhaul |
| NEC | New Engineering Contract |
| NDT | Non Destructive Testing |
| NRV | Non Return Valve |
| MS | Microsoft |
| SOW | Scope of Work |
| TBA | To be advised |

# 2 Management strategy and start up

## 2.1 Flexibility with the start of outages

1. The outage start date is stated on the Task Order
2. Movement to Outage dates can take place due to the country's demand for electricity
3. Any movement to Outage dates is to be communicated in writing by the *Service Manager* at least 48 Hours before outage start. Notification of change to the outage date to the *Contractor* before 48 Hours to the outage start date will have no claims for compensation
4. A new Task Order is to be issued, which specifies the revised Outage start date as soon as the new start date is available
5. The *Contractor* will be entitled to claim actual accommodation, travel and staff expenses incurred if the *Contractor* receive notification of outage movement within 48 hours of the original start date as agreed upon in the latest Task Order revision

## 2.2 The *Contractor*'s plan for the *service*

The *Contractor* submits a program in MS Project / Primavera format (confirmation required upfront)
The program includes:

a. Activities
b. Durations in hours
c. Predecessors

d. Successors
e. Total float
f. No constraints (linking to be done properly)
g. No resources
h. No unnecessary calendars (remove all)
i. No empty lines

Daily feedback on progress required for duration of each task order program

The *Contractor* draws up a Quality Control Plan prior to commencement of the work, for approval by the *Employer*. The *Employer* and the *Contractor* agrees on hold and witness points.

## 2.3 Management meetings

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

| **Title and purpose** | **Approximate time & interval** | **Location** | **Attendance by:** |
|---|---|---|---|
| Risk register and compensation events | When need arises | Contract manager's Office | *Employer*, *Contractor* |
| Progress and feedback | Daily at 08:00 (15 Min duration) | Office | *Employer*, *Contractor* and Supervisors |
| Daily outage meeting | Daily at 09:30 (1Hour & 30 min duration) | Majuba Power Station, Production boardroom (U4 16m level) | Site Manager, System Engineer, Outage coordinator and Quality Inspectors |
| Safety meeting | Weekly on Wednesday at 14h00 | Majuba Power Station, Production boardroom (U4 16m level) | Safety Officer |
| Post mortem meeting | At task order completion | Majuba Power Station, Specific conference room TBA | Site Manager, System Engineer, Outage coordinator and Quality Inspectors |
| Scope clarification meetings | After scope freeze | Majuba Power Station, Specific conference room TBA | Site Manager, System Engineer, Outage coordinator and Quality Inspectors |
| Outage Kick-off meeting | Week before outage | Majuba Power Station, Specific conference room TBA | Site Manager, Outage coordinator |
| Assessment meeting | At end of each outage | Majuba Power Station, Specific conference room TBA | Site Manager, Outage coordinator, *Service Manager* |

2. Meetings of a specialist nature may be convened at times and locations to suit the Parties. Records of these meetings shall be submitted to the *Service Manager* by the person convening the meeting within five days of the meeting.
3. All meetings shall be recorded using minutes or a register prepared and circulated by the person who convened the meeting. Such minutes or register shall not be used for confirming actions or instructions under the contract as these shall be done separately by the person identified in the *conditions of contract* to carry out such actions or instructions.

## 2.4 *Contractor*'s management, supervision, and key people

**The key persons are:**

| Key persons of *Contractor* | | | | |
|---|---|---|---|---|
| Designation | | | | |
| Name | | | | |
| Experience | | | | |
| Tel | | | | |

1. The *Contractor*'s Site Manager ensures that only competent persons be allowed to work on plant. The *Service Manager* is entitled to verify the qualifications of the *Contractor*.
2. 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.
3. The *Employer* may, having stated reasons, instruct the *Contractor* to remove a key person. The *Contractor* then arranges that, after one day, the key person has no further connection with the work included in this contract.
4. The *Contractor* may not replace any of the key persons, without prior written request and approval thereof from the *Employer*.

## 2.5 Police clearance

1. All *Contractor* personnel to undertake Police clearance. Certificates to be provided to the *Service Manager* at least 2 weeks before commencement of work.
2. The *Service 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.
3. The following website can be used to guide the process. http://www.saps.gov.za/services/applying_clearence_certificate.php

## 2.6 Supplier Development and Localisation Requirements

### 2.6.1 Recruitment of General Labour

1. The *Contractor* recruits 100% of all new recruits, of general labour from Dr Pixley Ka Seme local municipality, using the recruitment form provided by the department of labour. Contact details and application forms will be provided by the *Service Manager* on request
2. In an event that new recruits are not from the defined Dr Pixley Ka Seme municipality, the *Contractor* needs to provide proof that the local municipality could not provide such individual.
3. The *Contractor* needs to update the *Employer* as well as the department of labour, in the event that there is a change in the staff compliment e.g. dismissal, resignation, etc.
4. The *Contractor* submits an updated monthly job statistics on the 1st day of each month, using the reporting template that is provided by the *Service Manager*.

### 2.6.2 Transporting of Staff

1. If the *Contractor* does not have his own transportation, the *Contractor* use transportation sourced from the Dr Pixley Ka Seme local taxi association. Contact details of the Chairpersons of the different associations will be provided by the *Service Manager* on request.

### 2.6.3 Small, Micro, Medium Enterprises

1. The *Contractor* supports local Small, Micro and Medium Enterprises by purchasing your material locally where such material is available

### 2.6.4 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

1. To provide a high level Supplier Development & Localisation implementation plan which stretches for the duration of the contract within one month after contract award.
2. To provide an explanation and action plan for deviation from the proposed plan.
3. 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.
4. 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.
5. The Candidates for Skills Development would be sourced from Dr Pixley Ka Seme first, then Mpumalanga, before the rest of RSA.
6. The candidates may be developed directly by the supplier, through the suppliers' own supply network or through the SETA accredited training providers.
7. The *Contractor* submits proposals to the *Employer* for acceptance on how he will employ and train local labour in the following positions:

    - Refer to the matrix in the SDL requirements document

## 2.7 Management of work done by Task Order

1. Task Orders are issued per outage one month prior to the start of an outage
2. The Task Order includes the scope of work for the specific outage.
3. A Task Order is the instruction to commence work.
4. No work shall commence until a Task Order is issued and has been finalised and accepted and signed by both the *Employer* and *Contractor.*
5. All work will be issued on a Task Order system. The Work Order, Purchase Requisition and Purchase Order will be created via the SAP PM system.
6. Task Orders are issued for all activities. Assessment of work will be conducted after work complete.

## 2.8 Contract change management

1. The *Service Manager* issues a Task order to the *Contractor* to authorise the execution of work.
2. In the event where it is identified that there is additional work to be done outside the scope of work on the Task Order, the *Contractor* will give the *Service Manger* an early warning with a written quotation.
3. If agreed, the *Service Manager* issues a revised Task Order or additional Task Order.
4. The *Contractor* starts the work on the starting date of the task order.
5. The Task Order is signed by both the *Service Manager* and the *Contractor* before work commences.

## 2.9 Low Service Damages

1. The low service damages will be applicable if the performance of one or more valves cause a load loss, either partial or total. The following process and damages will apply:
    a. The defect(s) will be reported to the *Contractor* as soon as the *Employer* becomes aware of the defect(s).
    b. An opportunity will be arranged by the *Employer* for the repair and the *Contractor* will be notified at least 24 hours in advance of the opportunity to repair the defect(s).
    c. If the inspection confirms that, the defect(s) is/are because of poor quality from the *Contractor*'s work performed, a 1% damage of the total value of task orders raised for that outage per day will apply, until the defect(s) is/are resolved. The damages are capped at a maximum of 10% of the total of the task orders raised for that outage.
2. It is the *Contractor*'s responsibility to keep the Safety file up-to-date (audited on a monthly basis for the duration of the contract) to cater for short notice call-outs for defects
3. Refer to Appendix A for additional Low Service damages

## 2.10 Documentation control

1. The *Contractors* safety file will be hand over to the *Service Manager* after each outage
2. All NEC standard forms should be used eg. Task orders, Early Warnings, Defect certificates and Assessments.
3. The *Contractor* is responsible to plan the supply of the documentation during the various project stages and to provide the documentation in accordance with the *Contractor* Document Submission Schedule (CDSS). A document is thus any written or pictorial information describing, defining, specifying or certifying activities, requirements, procedures or results.
4. The *Contractor* submits all documentation on a formal transmittal form to the *Service Manager.*
5. All manuals, documents, drawings and engineering documentation shall be presented in British English in both software and hardware.
6. 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.
7. Safety files to be submitted and approved before maintenance and outage work commence as per client requirements, two weeks in advance.
8. Planned Outage Scope of work to be issued to *Contractor* from the client five months in advance.
9. Budget quotation for outage work to be submitted one week after SOW submission/SOW clarification.
10. Compensation for Occupational Injuries and Diseases (COID) Certificate and letter of good standing must be valid at all times and submitted to the *Service Manager* at each anniversary of the contract
11. Two hard copies of a detailed report is submitted to the Service Manger, which contains general info on the condition of the valves, inspection reports on the condition of equipment and all refurbished / replaced components. An Electronic copy of all reports to be provided on CD/ Flash disk

***Contractor* Document Submission Schedule (CDSS)**

| **Document Name/Description** | **Date/Time documents to be submitted** |
|---|---|
| A programme in MS Project or Primavera format as referred to document number (240-85065548) | One week after receipt of Task Order |
| Baseline risk assessment | One week after receipt of Task Order |
| QCP's | One week after receipt of Task Order |
| *Contractor*'s Safety file | Two weeks before start of work |
| Inspection report | 24 hours after stripping/inspection activity |
| Daily progress report | After Every Shift |
| Technical report and data pack | Within 7 days of completion of the services |
| Safety file Audit | Every 30 days after approval of initial file until work for specific outage is complete. |

## 2.11 Invoicing and payment

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

2. The *Contractor* shall address the tax invoice to
   Accounts Payable Services
   Eskom Holdings SOC Limited
   Majuba Power Station
   Private Bag 9001
   Volksrust
   2470

   and include on each invoice the following information:

   a. Name and address of the *Contractor* and the *Service Manager;*
   b. The contract number and title;
   c. *Contractor*'s VAT registration number;

d. The *Employer*'s VAT registration number 4740101508;
e. Description of service provided for each item invoiced based on the Price List;
f. Total amount invoiced excluding VAT, the VAT and the invoiced amount including VAT;
g. The Service Entry and/or Goods Receipt number issued by the *Service Manager* after the Assessment was captured on SAP.

# 3 Health and safety, the environment and quality assurance

## 3.1 Health and safety risk management

The *Contractor* complies with the health and safety requirements contained in the General Works Information.

## 3.2 Environmental constraints and management

The *Contractor* complies with the environmental requirements contained in the General Works Information.

## 3.3 Quality assurance requirements

The *Contractor* complies with the quality requirements contained in the General Works Information.

# 4 Procurement

## 4.1 People

### 4.1.1 Minimum requirements of people employed

1. All Semi-skilled personnel are in possession of valid school senior certificate.
2. All Artisans are either qualified and in possession of a valid trade test certificate or in possession of a competency certificate issued by the OEM. 2 years minimum experience required.
3. All Supervisors are qualified and in possession of a valid diploma and must have undergone supervisory training from a reputable institution. 2 years minimum experience required.
4. All project managers, site managers and project leaders must have undergone training in contracts management (e.g. NEC3), any discipline (e.g. construction, civil, mechanical, electrical, C&I), managerial course (e.g. project management, etc.) from reputable institutions. 2 years minimum experience required.
5. The *Contractor* will provide trained personnel for the implementation of all work.
6. 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.

To fully evaluate a tender, the *Contractor* is to submit an organogram, which is to include the relevant skills levels.

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)

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)"

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.

The *Contractor* submits requests to change any pre-approved staff together with proof of qualifications for approval prior to changing the staff.

**Supervision**

*Contractor* to have a supervisor on site at all times

#### 4.1.2 Key Competencies and Experience

##### 4.1.2.1 Supervisors and/or Project Managers/Supervisors:

1. Capability to read and interpret drawings.
2. Ability to read and understand scopes of work.
3. Technically competent on the use Microsoft Packages (excel, outlook, Microsoft word). Proof of training required.
4. Knowledge of how to generate inspection/ refurbishment reports.
5. Maintain high standards despite pressing deadlines.
6. Demonstrates knowledge of Valve refurbishment, skills, equipment and procedures.
7. Is alert in a high-risk environment; follows detailed procedures and ensures accuracy in documentation and data
8. At least 2 years valve refurbishment and Supervisory/Project management experience

##### 4.1.2.2 Valve fitters

1. Ability to use/operate the required equipment/tools
2. Maintain high standards despite pressing deadlines.
3. At least 2 years valve refurbishment experience

##### 4.1.2.3 Semi-Skilled

1. At least 1 year valve refurbishment experience

## 4.2 Subcontracting

#### 4.2.1 Preferred subcontractors

All subcontractors need to be approved by the *Service Manager* before the subcontractor gets to site.

#### 4.2.2 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.

#### 4.2.3 Skills Development

The *Contractor* complies with the skills development requirements contained in the SDL requirements section.

## 4.3 Plant and Materials

#### 4.3.1 Specifications

All materials used are as per the OEM specifications. It is the *Contractor's* responsibility to have the information available, if verifications needs to be made.

#### 4.3.2 Correction of defects

Refer to 2.9 Low Service Damages on page number 12

#### 4.3.3 Plant & Materials provided "free issue" by the *Employer*

1. Scaffolding, lagging removal and replacement of lagging will be provided by the *Employer*.

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

1. All soft spare kits are supplied by the *Contractor*.
2. All tools and equipment used to refurbish the plant are supplied by the *Contractor*.

# 5 Working on the Affected Property

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

The Entry to site is only approved once the following is adhered to:
1. The Contractors Safety file is to be approved by the *Employer*'s Safety department.
2. All personnel must undergo screening for Criminal records and outstanding warrants
3. Site-specific induction is to be done by all personnel.
4. Refer to the General Works information

### 5.1.1 Permits

1. The *Contractor* will ensure that he/she is informed of all the requirements of Eskom's Plant Safety Regulations and ORHVS and that he/she at all times comply to the requirements of these Regulations.
2. The *Contractor* provides Authorised Supervisor(s) in terms of the Plant Safety Regulations.
3. The *Contractor* trains enough staff to cover for leave periods as well as night shifts, if required. Training will be provided by Eskom Majuba and is done according to a schedule, thus arrangements need to be made with the *Service Manager* well in advance.
4. At least two supervisors should be authorised within 3 months of contract award.

## 5.2 People restrictions, hours of work, conduct and records

### 5.2.1 Time Clocking

1. The *Contractor* uses a biometric time clocking system.
2. No clocking will result in non-payment of hourly based, accommodation and travelling expenses.
3. 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.
4. Proof of clocking to be submitted to the *Employer* from files directly generated from the clocking system (no manual intervention)

### 5.2.2 Hours of work

1. Normal Eskom working hours are:
    a. Monday to Thursday **07:30 - 16:45**
    b. Fridays **07:30 - 12:30**
2. Outage working hours are :
    a. Monday to Friday **07:00 - 19:00**
3. Overtime rules are adhered to as determined by the Department of Manpower.
4. All Timesheets are to be kept for records purposes i.e. man-hours worked safely etc.
5. Other hours will be determined as per critical path activities during outages/breakdowns.
6. Daily time sheet must be kept up to date of normal and overtime worked at all times.
7. All overtime worked must comply with Eskom rest period requirements.

## 5.3 Records of *Contractor*'s Equipment

1. The *Contractor* to declare all equipment and tools via a pre-set up list at the main entrance, where removal permit will be issued by Security personnel.
2. *Contractor* need to have a list of inventory of their equipment on site. Proof of site entrance needs to be provided before equipment can be removed from site.

## 5.4 Equipment provided by the *Employer*

1. Overhead cranes and Hoists are situated in certain areas in the plant and available should the *Contractor* require to use them.
2. The *Employer* is entitled to withdraw use of the said Equipment, should proper care not be ensured.

## 5.5 Site services and facilities

### 5.5.1 Provided by the *Employer*

1. Toilets at the four corners of the power station
2. Power points where available, own cables to be routed
3. Water points, where available
4. Compressed air (Service air), where available
5. NDT services, to be pre-arranged with the *Service Manager*
6. Site establishment area.

### 5.5.2 Provided by the *Contractor*

1. Containers, for dressing rooms, office and dining
2. Tools, equipment and consumables
3. Portable 380V electrical distribution boards, and supply cables to and from the boards for all his power supply requirements to execute the services.
    a. *Contractor*s' Electrical Distribution Boards complies with OHSA as referred to in the Electrical Installation Regulations and the Electrical Machinery Regulations. Each board brought on site has a certificate of compliance issued by an accredited person.
    b. The *Contractor*s' Electrical Distribution Boards must be installed at a time negotiated with the Electrical Maintenance Manager, or prior to the possession date. Distribution boards will be connected to a 380V three phase AC power supply by the *Employer*, only after the *Contractor* has submitted the valid certificate of compliance.
    c. All *Contractor*s' Electrical Distribution Boards are earthed to the steel structure of the plant.
4. Accommodation
5. Transport
6. Office furniture, equipment and stationary
7. Meals. The *Contractor* or any of his employees or subcontractors may buy take away meals from the fast food outlet on site, if available.
8. Telecommunications
9. Everything else necessary for providing the Service.

# 6 List of drawings

## 6.1 Drawings issued by the *Employer*

All relevant drawings are available on request from the Majuba Documentation Centre.

# Annexure A: Table of low service damages (X17)

| **Low Service Damage Description** | **Value of Low Service Damages** | **Limit of Low Service Damage** |
|---|---|---|
| Service delaying the Outage Critical Path agreed schedule (Delaying other *Contractor*(s) from starting/completing their work) | 0.25% per total value of the Task orders for the outage per day | Limited to 5% of the total value of the Task Order(s) for the outage |
| Service delays not finishing as per agreed upon project plan submitted and approved by the *Service Manager* | 0.25% per total value of the Task Order(s) for the outage per day | Limited to 5% of the total value of the Task Order(s) for the outage |
| Submission of documents not as per agreed upon Contract Document Submittal Schedule in this service agreement | 0.25% per total value of the Task Order(s) for the outage per day | Limited to 5% of the total value of the Task Order(s) for the outage |
| Non-response of NCR within 3 days | 0.25% per total value of the Task Order(s) for the outage per day | Limited to 5% of the total value of the Task Order(s) for the outage |
| Handover of completed data books per outage within 7 days from outage completion. | 0.25% per total value of the Task Order(s) for the outage per day | Limited to 5% of the total value of the Task Order(s) for the outage |
| Personnel not adequately qualified as per 4 Procurement | 0.25% per total value of the Task Order(s) for the outage per day | Limited to 5% of the total value of the Task Order(s) for the outage |
| Defect(s) is/are because of poor quality from the *Contractor's* work performed as per paragraph 2.9 | 0.25% per total value of the Task Order(s) for the outage per day | Limited to 5% of the total value of the Task Order(s) for the outage |