

PART 3: SCOPE OF WORK

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C3.1: EMPLOYER'S SERVICE INFORMATION

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1 Description of the service

1.1 Executive overview

The Service is the refurbishment of Welland and Tuxhorn Control Valves on the Boiler and Turbine plants at Majuba Power Station during outages. Each valve must be returned with a signed test certificate.

The following valves are included:

1. Feed Regulating Control Valves
2. Feed Regulating Leak off Valves
3. Feed Regulating leak off valve power packs
4. Reheater Spraywater Control Valves
5. Attemperator Spray Regulating Valves
6. HP Bypass spraywater Control Valves
7. Circulating System Control Valves
8. Quick Drain Control Valves
9. Auxiliary Steam Control Valves
10. Blowdown Vessel Control Valves

1.2 Employer's requirements for the service

1. The Service is the Refurbishment of Welland Tuxhorn Control valves at Majuba Power Station, during outages, which includes stripping, cleaning, inspecting, lapping and reassembling of valves.
2. The service includes the refurbishment of the HP Bypass actuators
3. The *Contractor* supplies all the soft spares and consumables required for all valves. Gaskets and Packings to be quality checked by system engineer/ appointed quality inspector.
4. These activities are explained in more details from 1.2.2 onwards for each valve. Not all valves are refurbished during each outage, some may be sent before the outage due to the duration they require.

1.2.1 Quality Control Plans

1. The *Contractor* compiles Quality Control Documents and gets it approved by the Eskom System Engineer and the Majuba Quality department or Inspection Authority.
2. Each valve needs to have its own QCP, identified by KKS number, with the activities to be inspected, in detail and also indicate specification for each valve activity
3. The work does not commence unless the 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.
7. The supplier must indicate on their contract quality plan on how they will handle the customer property as well as the preservation of those components

1.2.2 Removal of actuator

1. Remove and uncoupled 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. Clean and inspect all components
2. Inspect seat for any wear
3. Inspect bonnet, gland follower and valve stem for any wear and excessive damage.

4. Inspect valve plug and machine if necessary
5. Inspect guide bush, gland bush, key, intermediate ring and cooling jacket. Replace if necessary
6. Inspect cage for any wear and excessive damage
7. The condition of valves will be inspected by the System Engineer/Quality and *Contractor* after stripped and cleaned.
8. The Employer will provide spares for badly damaged revolving nuts, bearings and spindle assemblies.

1.2.4 Replacement of soft/hard spares

1. Replace gaskets and packing rings
2. Replace all bolts
3. Replace/repair valve stem where necessary
4. All pressure seals to be replaced with new ones
5. All valve glands to be replaced with new ones.
6. Broken or lost part by the *Contractor* will be replaced by the *Contractor*

1.2.5 Lapping, blueing and NDT

1. Lap seat with appropriate lapping past
2. Lap valve seat and blue the seat, to be witness by the Engineer and the 3rd party
3. NDT valve body, valve seat and coupling blocks (service provided by the *Employer*, *Contractor* to request in advance)

1.2.6 Re-assembly and Re-installation of actuator

1. Re-assemble valve as (per procedure)
2. Actuator is installed with all components and the removal checklist to be signed again.
3. *Contractor* witnesses the setting of regulating supply pressure done by Eskom C&I
4. *Contractor* seats the valve with Eskom mechanical personnel and C&I personnel.
5. *Contractor* witnesses stroking by Eskom C&I and sign off the QCP.
6. *Contractor* cleans the area of work.

1.2.7 Commissioning of valves

1. Commissioning of valves including stroking (time and position), function check and hot commissioning
2. Stroke check the valve ensuring to set the open and close time duration to +/-10s
3. Eskom commissioning procedures to be used
 - Procedure MAINT/QCP-002/C&I - Stroke check of actuators, valves, dampers, slide gates, etc. including junction and splitter boxes
 - Procedure MAINT/CIP 101 65

1.1.1 Reports

Report must contain 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 during next outage
6. Recommendations for the next outage
7. Gasket material specifications
8. Action taken to do repairs

1.1.2 Re-tightening of glands

The *Contractor* re-tightens glands after two weeks of unit being on load, where leakage is evident. The Employer reports the number of valves that needs to be attended to and the appropriate time for work to be done.

1.2.8 Valve list

Below, contains a list of all at Welland Tuxhorn Control Valves at Majuba Power Station. Please note that not all valves will necessarily be refurbished during each outage

Table 1: Welland and Tuxhorn valve list

No	Description	Part	QTY per outage	DN	PN	Design Temperature (°C)	Design Pressure (MPa)	Material	W&T TYPE No.
	Feedwater Valves								
1.	Feed Regulating Control Valves								
1.1.	LAB41/43 AA001 Valve Refurbishment	Valve	2	150	400	160	42	20MnMoNi55	0.4891
1.2.	LAB41/43 AA001 Body Gasket	Soft Spares	2	150	400	160	42	P75K	0.4891
1.3.	LAB41/43 AA001 Seat Gasket	Soft Spares	2	150	400	160	42	P75K	0.4891
1.4.	LAB41/43 AA001 Gland Packing	Soft Spares	2	150	400	160	42	Merkel 5660	0.4891
2.	Feed Regulating Leak-Off Valves								
2.1.	LAB11/21/35 AA216 Valve Refurbishment	Valve	3	150	400	200	32.2	SA105	0.4891
2.2.	LAB11/21/35 AA216 Body Gasket	Soft Spares	3	150	400	200	32.2	Graph Lock/ P55K	0.4891
2.3.	LAB11/21/35 AA216 Gland Packing	Soft Spares	3	150	400	200	32.2	4140 STL/ Merkel PTFE	0.4891
2.4.	LAB11/21/35 AA216 Seat Gasket	Soft Spares	3	150	400	200	32.2	Graph Lock/ P55K	0.4891
2.5.	LAB11/21/35 AA216 Powerpack Refurbishment	Power Pack	3	150	400	200	32.2	SA105	0.4891
	Boiler Plant								
3.	Reheater Spraywater Control Valves								
3.1.	LAF11/12/13/14 AA001/2 Valve Refurbishment	Valve	8	50	250	200	20	C22.8	0.48905
3.2.	LAF11/12/13/14 AA001/2 Body Gasket	Soft Spares	8	50	250	200	20	1.4541GB 7A	0.48905
3.3.	LAF11/12/13/14 AA001/2 Gland Packing	Soft Spares	8	50	250	200	20	Pure Graphite	0.48905

No	Description	Part	QTY per outage	DN	PN	Design Temperat ure (°C)	Design Pressure (MPa)	Material	W&T TYPE No.
3.4.	LAF11/12/13/14 AA001/2 Seal Gasket	Soft Spares	8	50	250	200	20	1.4541GB 7A	0.48905
4.	Attemp 2 Sprw Reg Valve								
4.1.	LAE21/22/23/24 AA001 Valve Refurbishment	Valve	4	65	250	264	23.2	13CrMo44	0.48903
4.2.	LAE21/22/23/24 AA001 Body Gasket	Soft Spares	4	65	250	264	23.2	1.4541GB 7A	0.48903
4.3.	LAE21/22/23/24 AA001 Gland Packing	Soft Spares	4	65	250	264	23.2	Pure Graphite	0.48903
4.4.	LAE21/22/23/24 AA001 Seal Gasket	Soft Spares	4	65	250	264	23.2	1.4541GB 7A	0.48903
5.	Attemp 3 Sprw Reg Valve								
5.1.	LAE31/32/33/34 AA001/2 Valve Refurbishment	Valve	4	65	250	264	23.2	13CrMo44	0.48904
5.2.	LAE31/32/33/34 AA001/2 Body Gasket	Soft Spares	4	65	250	264	23.2	1.4541GB 7A	0.48903
5.3.	LAE31/32/33/34 AA001/2 Gland Packing	Soft Spares	4	65	250	264	23.2	Pure Graphite	0.48903
5.4.	LAE31/32/33/34 AA001/2 Seal Gasket	Soft Spares	4	65	250	264	23.2	1.4541GB 7A	0.48903
6.	HP Bypass control valve								
6.1.	LBF11/12/13/14 AA001 Valve Refurbishment	Valve	4	200/40 0	400	545	19.3	10CrMo91 0/13CrMo 44	0.48904
6.2.	LBF11/12/13/14 AA001 Actuator Refurbishment	Actuator	4	200/40 0	400	545	19.3	-	0.48904
6.3.	LBF11/12/13/14 AA001 Body Gasket	Soft Spares	4	200/40 0	400	545	19.3	1.4541/Gr aphit	0.48904
6.4.	LBF11/12/13/14 AA001 Gland Packing	Soft Spares	4	200/40 0	400	545	19.3	Graphite	0.48904
6.5.	LBF11/12/13/14 AA001 Seat Gasket	Soft Spares	4	200/40 0	400	545	19.3	1.4541/Gr aphit	0.48904
7.	HP Bypass spraywater control valve								

No	Description	Part	QTY per outage	DN	PN	Design Temperat ure (°C)	Design Pressure (MPa)	Material	W&T TYPE No.
7.1.	LAE41/42/43/44 AA001 Valve Refurbishment	Valve	4	100	400	264	23.2	13CrMo44	0.48904
7.2.	LAE41/42/43/44 AA001 Body Gasket	Soft Spares	4	100	400	264	23.2	1.4541/Gr aphit	0.48904
7.3.	LAE41/42/43/44 AA001 Gland Packing	Soft Spares	4	100	400	264	23.2	Graphite	0.48904
7.4.	LAE41/42/43/44 AA001 Seat Gasket	Soft Spares	4	100	400	264	23.2	1.4541/Gr aphit	0.48904
8.	Circ System Control Valve								
8.1.	HAG10AA001 Valve Refurbishment	Valve	1	300	500	375	23.2	13CrMo44	0.489
8.2.	HAG10AA001 Body Gasket	Soft Spares	1	300	500	375	23.2	Pure Graphite	0.489
8.3.	HAG10AA001 Gland Packing	Soft Spares	1	300	500	375	23.2	Pure Graphite	0.489
8.4.	HAG10AA001 Seat Gasket	Soft Spares	1	300	500	375	23.2	Pure Graphite	0.489
9.	Quick Drain Control Valves								
9.1.	HAG41/42 AA001 Valve Refurbishment	Valve	2	250	23.7	416	21.4	13CrMo44	0.48901
9.2.	HAG41/42 AA001 Body Gasket	Soft Spares	2	250	23.7	416	21.4	Pure Graphite	0.48901
9.3.	HAG41/42 AA001 Gland Packing	Soft Spares	2	250	23.7	416	21.4	Pure Graphite	0.48901
9.4.	HAG41/42 AA001 Seat Gasket	Soft Spares	2	250	23.7	416	21.4	Pure Graphite	0.48901
10.	Aux Steam Control Valves								
10.1.	QLB11 AA001/2/3 Valve Refurbishment	Valve	3	200/ 300	160/ 40	350	5.35	13CrMo44	0.48907
10.2.	QLB11 AA001/2/3 Valve Body Gasket	Soft Spares	3	200/ 300	160/ 40	350	5.35	1.4541GB 7A	0.48907
10.3.	QLB11 AA001/2/3 Valve Gland Packing	Soft Spares	3	200/ 300	160/ 40	350	5.35	Pure Graphite	0.48907
11.	Blowdown Vessel Control Valve								
11.1.	LCL01 AA001 Valve Refurbishment	Valve	1	400	16	100	1.6	C22.8	0.48906

No	Description	Part	QTY per outage	DN	PN	Design Temperat ure (°C)	Design Pressure (MPa)	Material	W&T TYPE No.
11.2.	LCL01 AA001 Body Gasket	Soft Spares	1	400	16	100	1.6	1.4541/Gr aphit	0.48906
11.3.	LCL01 AA001 Gland Packing	Soft Spares	1	400	16	100	1.6	Pure Graphite	0.48906
11.4.	LCL01 AA001 Seat Gasket	Soft Spares	1	400	16	100	1.6	.4541/Gra phit	0.48906

1.2.9 5-Year Outage Plan

The 5-year outage plan is documented in the table below (as per status of October 2021). The plan is provided for planning purposes only and it should be noted that these dates change from time-to-time. The latest updates can be obtained from the Service Manager.

Unit	Actual/Planned Start Time	Planned/Revised End Time	MW Loss	Outage Description	Planned Duration
5	2022/01/29 00:00:00	2022/05/08 23:59:00	669	Mini GO	100
2	2022/03/24 00:00:00	2022/04/06 23:59:00	612	BTI	14
6	2022/11/18 00:00:00	2023/02/25 23:59:00	669	Mini GO	100
4	2022/12/09 00:00:00	2023/01/03 23:59:00	669	HSSD	26
5	2022/12/10 00:00:00	2023/01/04 23:59:00	669	HSSD	26
1	2023/03/01 00:00:00	2023/03/28 23:59:00	612	IR	28
5	2023/10/13 00:00:00	2023/10/26 23:59:00	669	BTI	14
2	2024/04/01 00:00:00	2024/04/28 23:59:00	612	Interim repairs	28
3	2024/05/09 00:00:00	2024/07/18 23:59:00	612	GO	71
6	2024/05/20 00:00:00	2024/06/02 23:59:00	669	BTI	14
4	2024/05/23 00:00:00	2024/06/20 23:59:00	669	Interim Repairs	29
1	2024/08/21 00:00:00	2024/09/03 23:59:00	612	Boiler inspection	14
5	2025/04/27 00:00:00	2025/05/24 23:59:00	669	IR	28
6	2025/07/31 00:00:00	2025/08/27 23:59:00	669	IR	28
2	2025/08/01 00:00:00	2025/08/14 23:59:00	612	BTI	14
1	2025/09/05 00:00:00	2025/11/06 23:59:00	612	GO	63
3	2026/01/16 00:00:00	2026/02/19 23:59:00	612	IR	35
4	2026/02/10 00:00:00	2026/02/23 23:59:00	669	Boiler inspection	14

1.3 Interpretation and terminology

The following abbreviations are used in this Service Information:

Abbreviation	Meaning given to the abbreviation
BYP	Bypass
CIOID	Compensation for occupational injuries and diseases
CV	Control Valve
GO	General Overhaul
HP	High Pressure
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
P	Pressure
SOW	Scope of Work
SUPL	Supply
TBA	To be advised

2 Management strategy and start up.

2.1 Flexibility with the start of outages

1. The outage start date is communicated on the Task Order.
2. If an outage is moved by seven days from the latest communicated start date, the Service Manager can still communicate movement of the outage start date, without receiving standing time claims

2.2 The Contractor's plan for the service

1. 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
 - j. Daily feedback on progress required for duration of each task order program
2. 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	Weekly on Thursday at 10h00	Majuba Power Station, Specific conference room TBA	Employer, Contractor
Overall Outage contract progress and feedback	Daily at 08:30	Majuba Power Station, Specific conference room TBA	Employer, Contractor and Supervisors
Daily outage meeting	Daily at 09:30	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

Title and purpose	Approximate time & interval	Location	Attendance by:
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

- 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.
- 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 *Contractor's* Site Manager ensures that only competent persons be allowed to work on plant. The Employer's Service Manager is 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 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.
- The Contractor may not replace any of the key persons, without prior written request and approval thereof from the Employer.

2.5 Police clearance

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

2.6 Supplier Development and Localisation Requirements

2.6.1 Recruitment of General Labour

- 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
- 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.
- 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. 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. 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
8. 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, Assessments with all supporting documentation will be used for work required

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. The Contractor to be notified immediately of the Unit trip. An opportunity will be arranged by the Employer for the repair and the Contractor will be notified at least 12 hours in advance of the opportunity to repair the defect(s).
 - d. 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
4. The NCR will be raised for any non-conformities and will form part of the KPI.

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 LP Bypass and HP Bypass, 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 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 activity

Daily progress report	After Every Shift
Technical report and data pack	Within 7 days of completion of the services

2.11 Invoicing and payment

1. Assessment will be done 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
Volkstrust
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;

3 Health and safety, the environment and quality assurance

3.1 Health and safety risk management

3.1.1 Eskom Life saving rules (Directive 32-421)

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

Rule 1: Open, Isolate, Test, Earth, Bond, And/or Insulate before touch - that is any plant operating above 1000 V.

Rule 2: Hook up at heights - no person may work at height where there is a risk of falling.

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.

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

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

Consequences of violating a Life saving rules

It must be highlighted that Eskom takes a ZERO TOLERANCE stance to violation of these rules and will therefore, push for a sanction of dismissal during a disciplinary hearing.

3.1.2 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 Manager* must be informed immediately of all safety incidents including fatalities, medicals, first aids and near misses. Any damage to property or equipment must also be reported as soon as reasonably practicable but not later than the end of the shift or **within 8 (eight) hours**.
- 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 (document format will be supplied by the *Employer*).

3.1.3 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 passenger vehicle specifications must include **at least a front airbags for the driver and 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 prohibited. It is a legal requirement for all employers to provide safe transportation of all employees both on and off site.
- f) Drivers and passengers entering Majuba Power Station are subjected to compulsory breathalyser testing.
- g) The vehicle driver/s must ensure that their passengers are seated and wear seatbelts at all times.

3.1.4 Barricading / Screens and Scaffolding

- a) The *Contractor* is responsible to ensure that working areas are adequately barricaded off and warning signs displayed to ensure that people and plant are not exposed to danger and access to work areas is prevented.
- b) The *Employer* is responsible for supplying scaffolding and barricading with at least 24 hour notice required for planned work or promptly for emergency work. Tampering, adjustment, moving or dismantling of any approved scaffold is not allowed – this may only be done by the scaffolding service provider.
- c) The *Contractor* contacts the scaffolding service provider (Kaefer Thermal) directly on extension 3658 or to page this number by dialling 017 799 3473 from any site phone, for barricading or scaffolding requirements. The *Contractor* must however ensure that such barricading or scaffolding will not hamper or impair any other person or activity.

3.1.5 General Health and Safety

- a) The *Contractor* complies with the Construction Regulations, Occupational Health & Safety Act 85 of 1993 and 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* firstly prepares and submits a safety plan to the Eskom Safety Risk Officer, with all requested documents, as soon as possible after the contract is awarded or **within one week** of the contract start date, at the latest. The Safety Risk Officer shall request corrections, if necessary, for the safety plan to be approved and the *Contractor* shall need to make the necessary corrections and get approval. The safety plan must always be available on site and produced upon request.

See **BIA/RM/STD/01** for all relevant details or contact the Safety Risk Officers at Majuba Power Station:

Johan Botha - 017 799 3445
Sichaba Molefe - 017 799 3196
Amanda Thwala - 017 799 2810

- c) The *Contractor* ensures that all his personnel attend a Health and Safety Induction Course prior to starting the *service*. This course is provided free of charge by the *Employer* and is 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.
- d) 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.
- e) The *Employer's* representatives are 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 *Service Manager* is entitled to instruct the *Contractor* to perform disciplinary investigations, to enforce disciplinary actions and to submit a report to the *Service Manager*. The *Contractor* shall implement additional health and safety precautions, over and above those specified by the *Employer*, wherever necessary or possible.
- f) The following Health & Safety requirements are to be complied with:
- o Medical certificate of fitness can only be issued by a Registered Occupational Health Medical Practitioner.
 - o The *Contractor* supplies a Certificate of Competency and relevant medical reports for his/her employees if any work will be done under the following conditions:
 - **Confined Spaces**
 - **Heights**
 - **Heat stresses**
 - **Cold stresses**
 - o Sub-contractors - Proof must be given to Eskom that the sub-contractor/s comply with all the *Contractor's conditions of contract* and that Sub-contractors have the necessary competence and resources to carry out the work safely and ensure that due care of the environment will be exercised.
- g) 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.
- h) The *Contractor* trains and appoints adequate first aiders and keeps first aid equipment.
- i) The *Contractor* confirms that the *Employer* has provided with sufficient written information regarding the health and safety arrangements and procedures applicable to the *service* to ensure compliance with it and all employees, agents, Subcontractors or mandataries with the SHE Requirements while providing the *service*, in terms of this contract.
- j) Contracts include, in terms of Section 37(2) of the OHS Act, an agreement to ensure compliance by the mandatory with the provisions of the Act.

3.2 Environmental constraints and management

The *Contractor* complies with all legislative, Eskom and Majuba environmental policies.

- 3.2.1 The *Contractor* ensures that all works are 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:
- o Zero liquid effluent discharge.
 - o No chemicals will be dumped into the station drains or on the premises.
 - o No oil or waste will be dumped in an unauthorised area or unlicensed waste site.

- Asbestos will be handled and stored according to Act 15 of 1973 (Hazardous Substances Act).
 - 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.
 - *Contractors' activities/services* shall be carried out as per the above procedures and **BIA/RM/STD/01**.
- 3.2.2 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.
- 3.2.3 The *Contractor* is responsible for complying with any new environmental requirements, relevant to the Service Information that may come into effect as part of Majuba Power Station's Environmental Management System (EMS) during the duration of this contract.
- 3.2.4 The *Contractor* also accepts all responsibilities, accountabilities and liabilities associated with such legal requirements, unless specifically excluded from a contract by a mutually acceptable written agreement.
- 3.2.5 If a product is classified as a hazardous substance, material safety data sheets (MSDS) must accompany delivery and 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*.
- 3.2.6 Waste is to be disposed of in bins supplied – yellow bins for general waste and red bins for hazardous waste, including oily rags.
- 3.2.7 Noisy equipment and tools emitting noise more than 105dB (A) may not be supplied/utilised by the *Contractor*.
- 3.2.8 The *Contractor* shall not introduce machinery or work methods which generate pollution eg using compressed air to blow-down plant and equipment or machinery leaking oil.

3.3 Quality assurance requirements

- 3.3.1 The *Contractor* complies with the *Employer's* Quality Requirements as specified in Standard **BIA/QA/STD/01**.
- 3.3.2 Majuba Power Station has quality assurance and quality control procedures in place. The *Contractor* liaises with the quality control department to become familiar with quality documents and procedures used on site and may recommend changes for improvement, wherever possible.
- 3.3.3 The *Contractor* maintains a high standard of workmanship, as expected by the *Employer* and shall comply with any quality assurance and quality procedures implemented by the *Employer*.
- 3.3.4 The *Contractor* prepares quality control procedures (QCP's) for all types of work to be undertaken, **within 6 (six) weeks** of the contract start date. These are approved by the *Employer* and signed off by all the parties when work is completed.

3.4 Other Requirements

The *Contractor* complies with the following:

- 3.4.1 The *Contractor* works under the direction instructions of the *Employer* or such appointed person/s who may give instruction, without transgression of the contract, any approved or authorised legislation or regulations, including the Occupational Health and Safety Act and the Eskom Plant Safety Regulations.
- 3.4.2 The non-compliance of the *Contractor* in terms of safety and quality requirements is claimable as Low Service Damages by the *Employer*. It is the *Contractor's* responsibility to clarify all requirements beforehand and ensure that full compliance is maintained during the contract period.
- 3.4.3 The *Contractor* complies with all local and statutory labour laws including the Labour Relations Act (LRA), Basic Conditions of Employment Act (BCEA), Unemployment Insurance Fund (UIF) etc. and agreements and shall promptly attend to any labour grievances that may arise. Failure to comply to any relevant legislation will result in non-compliance and therefore, lead to immediate termination of the contract.

4 Procurement

4.1 People

4.1.1 Minimum requirements of people employed

Personnel used by the *Contractor* to Provide the Service shall have all the competencies, qualifications and experience as stipulated in the Service Information. Proof of training, qualifications and relevant authorisations and registrations are supplied to the *Service Manager* before persons may perform the *service*.

LABOUR	Minimum number of people
• Site Management	1
• Supervisor	3
• Administration staff	1
• Safety Officer	1

SKILL	RELATED EXPERIENCE	MINIMUM QUALIFICATION
• Site Management	5 years Related experience	National Diploma (Technical)/NQF4-5/N5-6/Mechanical Trade
• Supervisor	2 years Related experience	GRADE 12 / N 3
• Administration staff	1 year Related experience	Grade 12
• Safety Officer	2 year Related experience	SAMTRAC or equivalent

CV's together with proof of qualifications are to be provided with the tender for the following:

- Site Manager
- Supervisors
- Administration staff
- Safety Officer

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

4.3.2 Correction of defects

Refer to 2.9 Low Service Damages on page number 14

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 is supplied by the *Contractor*.
2. All tools and equipment used to refurbish the plant are supplied by the *Contractor*.

4.3.5 The *Contractor* complies with all relevant standards for the *service*, including those listed below.

Table 4: Applicable Site Specifications

Number	Title	Year / Revision
GGR 0992	Eskom Plant Safety Regulations	2007 Rev 2
MAINT/MMD/103 74	Lifting and rigging	2017 Rev 4
None	Criteria for Approval of Rigging Work	2011 Rev 3
BIA/QA/STD/01	MPS Quality requirements	2009 Rev 0
BIA/RM/STD/01	MPS Safety, Health and Environmental specification to be met by <i>Contractors</i>	2011 Rev 1
BIA/ENV/04	MPS Environmental Policy	2006 Rev 2
BIA/ENV/01	MPS Waste management Policy	2006 Rev 3
None	Criteria for Work at Heights	2007 Rev 3
32-421	Eskom Cardinal Rules Directive	2010 Rev 0
OHS Act	Occupational Health & Safety Act 85 of 1993	1993 and subsequent amendments.
32-95	OHS incident Management procedure	Rev 9

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 working hours is Eskom working hours:
 - a. Monday to Thursday **07:30 - 16:45**
 - b. Fridays **07:30 - 12:30**
2. Outage working hours is :
 - 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. Overtime to be approved by the *Service Manager*.
7. Daily time sheet must be kept up to date of normal and overtime worked at all times.
8. 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
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

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. *Contractors'* 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 *Contractors'* 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 *Contractors'* 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)	1% per total value of the Task orders for the outage per day	Limited to 10% 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 <i>Service Manager</i>	1% per total value of the Task Order(s) for the outage per day	Limited to 10% 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	1% per total value of the Task Order(s) for the outage per day	Limited to 10% of the total value of the Task Order(s) for the outage
Non-response of NCR within 3 days	1% per total value of the Task Order(s) for the outage per day	Limited to 10% 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.	1% per total value of the Task Order(s) for the outage per day	Limited to 10% of the total value of the Task Order(s) for the outage
Personnel not adequately qualified as per 4 Procurement	1% per total value of the Task Order(s) for the outage per day	Limited to 10% of the total value of the Task Order(s) for the outage
Defect(s) is/are because of poor quality from the <i>Contractor's</i> work performed as per paragraph 2.9	1% per total value of the Task Order(s) for the outage per day	Limited to 10% of the total value of the Task Order(s) for the outage