



## NEC3 Term Service Contract (TSC3)

Between **ESKOM HOLDINGS SOC Ltd**  
(Reg No. 2002/015527/30)

and [Insert at award stage]  
(Reg No. \_\_\_\_\_ )

for **The provision of maintenance service and refurbishment during outages on the Sulphur Trioxide (SO<sup>3</sup>) plant units 4, 5, 6 and Outside plant at Duvha Power Station for a period of 5 years.**

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**CONTRACT No. [Insert at award stage]**

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## **PART C1: AGREEMENTS & CONTRACT DATA**

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[to be inserted from Returnable Documents at award stage]	

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# C1.1 Form of Offer & Acceptance

## Offer

The Employer, identified in the Acceptance signature block, has solicited offers to enter into a contract for the procurement of:

**The provision of maintenance service and refurbishment during outages on the Sulphur Trioxide SO3 plant units 4, 5, 6 and Outside plant at Duvha Power Station for a period of 5 years.**

The tenderer, identified in the Offer signature block, has examined the documents listed in the Tender Data and addenda thereto and by submitting this Offer has accepted the Conditions of Tender.

By the representative of the tenderer, deemed to be duly authorised, signing this part of this Form of Offer and Acceptance the tenderer offers to perform all of the obligations and liabilities of the *Contractor* under the contract including compliance with all its terms and conditions according to their true intent and meaning for an amount to be determined in accordance with the *conditions of contract* identified in the Contract Data.

Options A or C	The offered total of the Prices exclusive of VAT is	R [●]
Option E	The first forecast of the total Defined Cost plus the Fee exclusive of VAT is	R [●]
	Sub total	R [●]
	Value Added Tax @ 15% is	R [●]
	The offered total of the amount due inclusive of VAT is <sup>1</sup>	R [●]
	(in words) [●]	

This Offer may be accepted by the Employer by signing the Acceptance part of this Form of Offer and Acceptance and returning one copy of this document including the Schedule of Deviations (if any) to the tenderer before the end of the period of validity stated in the Tender Data, or other period as agreed, whereupon the tenderer becomes the party named as the *Contractor* in the *conditions of contract* identified in the Contract Data.

Signature(s)

Name(s) \_\_\_\_\_

Capacity \_\_\_\_\_

**For the tenderer:**

\_\_\_\_\_  
*(Insert name and address of organisation)*

Name & signature of witness

Date

Tenderer's CIDB registration number:

<sup>1</sup> This total is required by the *Employer* for budgeting purposes only. Actual amounts due will be assessed in terms of the *conditions of contract*.

## Acceptance

By signing this part of this Form of Offer and Acceptance, the Employer identified below accepts the tenderer's Offer. In consideration thereof, the Employer shall pay the Contractor the amount due in accordance with the *conditions of contract* identified in the Contract Data. Acceptance of the tenderer's Offer shall form an agreement between the Employer and the tenderer upon the terms and conditions contained in this agreement and in the contract that is the subject of this agreement.

The terms of the contract, are contained in:

- Part C1        Agreements and Contract Data, (which includes this Form of Offer and Acceptance)
- Part C2        Pricing Data
- Part C3        Scope of Work: Service Information

and drawings and documents (or parts thereof), which may be incorporated by reference into the above listed Parts.

Deviations from and amendments to the documents listed in the Tender Data and any addenda thereto listed in the Returnable Schedules as well as any changes to the terms of the Offer agreed by the tenderer and the Employer during this process of offer and acceptance, are contained in the Schedule of Deviations attached to and forming part of this Form of Offer and Acceptance. No amendments to or deviations from said documents are valid unless contained in this Schedule.

The tenderer shall within two weeks of receiving a completed copy of this agreement, including the Schedule of Deviations (if any), contact the Employer's agent (whose details are given in the Contract Data) to arrange the delivery of any securities, bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the *conditions of contract* identified in the Contract Data at, or just after, the date this agreement comes into effect. Failure to fulfil any of these obligations in accordance with those terms shall constitute a repudiation of this agreement.

Notwithstanding anything contained herein, this agreement comes into effect on the date when the tenderer receives one fully completed and signed original copy of this document, including the Schedule of Deviations (if any).

Signature(s)

Name(s)

Capacity

**for the  
Employer**

.....  
(Insert name and address of organisation)

Name &  
signature of  
witness

Date

Note: If a tenderer wishes to submit alternative tenders, use another copy of this Form of Offer and Acceptance.

**Schedule of Deviations to be completed by the Employer prior to contract award**

Note:

1. This part of the Offer & Acceptance would not be required if the contract has been developed by negotiation between the Parties and is not the result of a process of competitive tendering.
2. The extent of deviations from the tender documents issued by the Employer prior to the tender closing date is limited to those permitted in terms of the Conditions of Tender.
3. A tenderer's covering letter must not be included in the final contract document. Should any matter in such letter, which constitutes a deviation as aforesaid be the subject of agreement reached during the process of Offer and Acceptance, the outcome of such agreement shall be recorded here and the final draft of the contract documents shall be revised to incorporate the effect of it.

No.	Subject	Details
1	[•]	[•]
2	[•]	[•]
3	[•]	[•]
4	[•]	[•]
5	[•]	[•]
6	[•]	[•]
7	[•]	[•]

By the duly authorised representatives signing this Schedule of Deviations below, the Employer and the tenderer agree to and accept this Schedule of Deviations as the only deviations from and amendments to the documents listed in the Tender Data and any addenda thereto listed in the Tender Schedules, as well as any confirmation, clarification or changes to the terms of the Offer agreed by the tenderer and the Employer during this process of Offer and Acceptance.

It is expressly agreed that no other matter whether in writing, oral communication or implied during the period between the issue of the tender documents and the receipt by the tenderer of a completed signed copy of this Form shall have any meaning or effect in the contract between the parties arising from this Agreement.

**For the tenderer:**

**For the Employer**

Signature \_\_\_\_\_

\_\_\_\_\_

Name \_\_\_\_\_

\_\_\_\_\_

Capacity \_\_\_\_\_

\_\_\_\_\_

On behalf of *(Insert name and address of organisation)*

*(Insert name and address of organisation)*

Name & signature of witness \_\_\_\_\_




\_\_\_\_\_

Date \_\_\_\_\_

\_\_\_\_\_

# C1.2 TSC3 Contract Data

## Part one - Data provided by the *Employer*

Clause	Statement	Data
1	<b>General</b>	
	The <i>conditions of contract</i> are the core clauses and the clauses for main Option:	
		<b>A: Priced contract with price list</b>
	dispute resolution Option	<b>W1: Dispute resolution procedure</b>
	and secondary Options	
		<b>X1: Price adjustment for inflation</b>
		<b>X2: Changes in the law</b>
		<b>X17: Low service damages</b>
		<b>X18: Limitation of liability</b>
		<b>X19: Task Order</b>
		<b>Z: Additional conditions of contract</b>
	of the NEC3 Term Service Contract April 2013 <sup>2</sup> (TSC3)	
10.1	The <i>Employer</i> is (name):	<b>Eskom Holdings SOC Ltd (reg no: 2002/015527/30), a state-owned company incorporated in terms of the company laws of the Republic of South Africa</b>
	Address	<b>Registered office at Megawatt Park, Maxwell Drive, Sandton, Johannesburg</b>
	Tel No.	<b>013 690 0330</b>
	Fax No.	
10.1	The <i>Service Manager</i> is (name):	<b>Victor Thubakgale and Martin Mabena</b>
	Address	<b>Duvha Power Station PO Box 2199 eMalahleni 1035</b>
	Tel	<b>013 690 0839 and 013 690 0256</b>
	Fax	<b>N/A</b>
	e-mail	<b><a href="mailto:thubakmv@eskom.co.za">thubakmv@eskom.co.za</a> and <a href="mailto:MabenaMN@eskom.co.za">MabenaMN@eskom.co.za</a></b>

<sup>2</sup> Available from Engineering Contract Strategies Tel 011 803 3008 Fax 086 539 1902 [www.ecs.co.za](http://www.ecs.co.za)

11.2(2)	The Affected Property is	<b>Duvha Power Station</b>
11.2(13)	The <i>service</i> is	<b>The provision of maintenance service and refurbishment during outages on the Sulphur Trioxide (SO<sub>3</sub>) plant units 4, 5, 6 and Outside plant at Duvha Power Station for a period of 5 years.</b>
11.2(14)	The following matters will be included in the Risk Register	<b>N/A</b>
11.2(15)	The Service Information is in	<b>Part 3: Scope of Work and all documents and drawings to which it makes reference.</b>
12.2	The <i>law of the contract</i> is the law of	<b>the Republic of South Africa</b>
13.1	The <i>language of this contract</i> is	<b>English</b>
13.3	The <i>period for reply</i> is	<b>One day</b>
<b>2</b>	<b>The Contractor's main responsibilities</b>	<b>Data required by this section of the core clauses is also provided by the Contractor in Part 2 and terms in italics used in this section are identified elsewhere in this Contract Data</b>
21.1	The <i>Contractor</i> submits a first plan for acceptance within	<b>4 weeks of the Contract Start Date</b>
<b>3</b>	<b>Time</b>	
30.1	The <i>starting date</i> is.	<b>01 September 2026 or as soon as possible</b>
30.1	The <i>service period</i> is	<b>60 Months (5 Years)</b>
<b>4</b>	<b>Testing and defects</b>	<b>There is no reference to Contract Data in this section of the core clauses and terms in italics used in this section are identified elsewhere in this Contract Data</b>
<b>5</b>	<b>Payment</b>	
50.1	The <i>assessment interval</i> is	<ul style="list-style-type: none"> <li>• <b>25th day of each month for maintenance work.</b></li> <li>• <b>On completion of each task order/sectional completion for Outage work.</b></li> </ul>
51.1	The <i>currency of this contract</i> is the	<b>South African Rand</b>
51.2	The period within which payments are made is	<b>4 weeks.</b>
51.4	The <i>interest rate</i> is	<b>the publicly quoted prime rate of interest (calculated on a 365 day year) charged by from time to time by the Standard Bank of South Africa Limited (as certified, in the event of any dispute, by any manager of such bank, whose appointment it shall not be necessary to prove) for amounts due in Rands and</b>

(ii) the LIBOR rate applicable at the time for amounts due in other currencies. LIBOR is the 6 month London Interbank Offered Rate quoted under the caption “Money Rates” in The Wall Street Journal for the applicable currency or if no rate is quoted for the currency in question then the rate for United States Dollars, and if no such rate appears in The Wall Street Journal then the rate as quoted by the Reuters Monitor Money Rates Service (or such service as may replace the Reuters Monitor Money Rates Service) on the due date for the payment in question, adjusted *mutatis mutandis* every 6 months thereafter (and as certified, in the event of any dispute, by any manager employed in the foreign exchange department of The Standard Bank of South Africa Limited, whose appointment it shall not be necessary to prove.

6	<b>Compensation events</b>	There is no reference to Contract Data in this section of the core clauses and terms in italics used in this section are identified elsewhere in this Contract Data
7	<b>Use of Equipment Plant and Materials</b>	There is no reference to Contract Data in this section of the core clauses and terms in italics used in this section are identified elsewhere in this Contract Data
8	<b>Risks and insurance</b>	
80.1	These are additional <i>Employer's</i> risks	<ol style="list-style-type: none"> <li>1. [●]</li> <li>2. [●]</li> <li>3. [●]</li> </ol>
9	<b>Termination</b>	There is no reference to Contract Data in this section of the core clauses and terms in italics used in this section are identified elsewhere in this Contract Data.
10	<b>Data for main Option clause</b>	
A	<b>Priced contract with price list</b>	
20.5	The <i>Contractor</i> prepares forecasts of the final total of the Prices for the whole of the <i>service</i> at intervals no longer than	<b>6 weeks.</b>
11	<b>Data for Option W1</b>	
W1.1	The <i>Adjudicator</i>	the person selected from the ICE-SA Division (or its successor body) of the South African Institution of Civil Engineering Panel of Adjudicators by the Party intending to refer a dispute to him. (see <a href="http://www.ice-sa.org.za">www.ice-sa.org.za</a> ). If the Parties do not agree on an Adjudicator the Adjudicator will be appointed by the Arbitration Foundation of Southern Africa (AFSA).

W1.2(3)	The <i>Adjudicator nominating body</i> is:	<b>the Chairman of ICE-SA a joint Division of the South African Institution of Civil Engineering and the Institution of Civil Engineers (London) (see <a href="http://www.ice-sa.org.za">www.ice-sa.org.za</a>) or its successor body.</b>
W1.4(2)	The <i>tribunal</i> is:	<b>Arbitration</b>
W1.4(5)	The <i>arbitration procedure</i> is	<b>the latest edition of Rules for the Conduct of Arbitrations published by The Association of Arbitrators (Southern Africa) or its successor body.</b>
	The place where arbitration is to be held is	<b>South Africa</b>
	The person or organisation who will choose an arbitrator	
	- if the Parties cannot agree a choice or	<b>the Chairman for the time being or his nominee</b>
	- if the arbitration procedure does not state who selects an arbitrator, is	<b>of the Association of Arbitrators (Southern Africa) or its successor body.</b>

**12 Data for secondary Option clauses**

<b>X1</b>	<b>Price adjustment for inflation</b>			
X1.1	The <i>base date</i> for indices is	<b>[•].</b>		
	The proportions used to calculate the Price Adjustment Factor are:	<b>proportion</b>	<b>linked to index for</b>	<b>Index prepared by</b>
		<b>65.</b>	<b>[Labour-Actual Labour Cost (field force) where subsistence allowance is paid] Table C3A</b>	<b>[SEIFSA]</b>
		<b>15.</b>	<b>[Transport-Road Freight Costs] Table L2B</b>	<b>[SEIFSA]</b>
		<b>5.</b>	<b>[CPI D4]</b>	<b>[SEIFSA]</b>
		<b>0.</b>	<b>[•]</b>	<b>[•]</b>
		<b>0.</b>	<b>[•]</b>	<b>[•]</b>
		<b>15.</b>	<b>non-adjustable</b>	
		<b>100.00</b>		
<b>X2</b>	<b>Changes in the law</b>	<b>There is no reference to Contract Data in this</b>		

	<b>Option and terms in italics are identified elsewhere in this Contract Data.</b>	
<b>X17</b>	<b>Low service damages</b>	
X17.1	The low <i>service is</i>	<ul style="list-style-type: none"> <li>• R10 000.00 for a gas leak within 6 months on the SO3 system after a repair was carried out by the Contractor.</li> <li>• R10 000.00 should any load losses occur due to proven poor maintenance.</li> <li>• R30 000.00 for any delay work leading to environmental violation (section 30) during opportunity maintenance.</li> <li>• R10 000.00 for any rework done within 6 months due to poor installation or sub-standard</li> <li>• R 30 000 for the first incident and R 50 000 for any consecutive incidents. For an environmental incident (section 30, violation or a contravention) due to proven poor maintenance.</li> </ul> <p>(Excluded are electrical and instrumentation failures, any failures to equipment not serviced by the supplier, failure of components not supplied by the supplier, service work performed using second-hand spares with permission given by the Service Manager, external factors -such as foreign objects coming into contact with the serviced item, poor operating practice, and any other factors that can be shown to be outside the direct control of the supplier. The penalty will only be imposed on the supplier after an investigation and the occurrence is found to be a result of poor maintenance by the supplier.)</p>
<b>X18</b>	<b>Limitation of liability</b>	
X18.1	The <i>Contractor's</i> liability to the <i>Employer</i> for indirect or consequential loss is limited to	<b>R0.0 (zero Rand)</b>
X18.2	For any one event, the <i>Contractor's</i> liability to the <i>Employer</i> for loss of or damage to the <i>Employer's</i> property is limited to	<b>the amount of the deductibles relevant to the event</b>
X18.3	The <i>Contractor's</i> liability for Defects due to his design of an item of Equipment is limited to	<b>The greater of</b> <ul style="list-style-type: none"> <li>• <b>the total of the Prices at the Contract Date and</b></li> <li>• <b>the amounts excluded and unrecoverable from the <i>Employer's</i> insurance (other than the resulting physical damage to the <i>Employer's</i> property which is not excluded) plus the applicable deductibles</b></li> </ul>
X18.4	The <i>Contractor's</i> total liability to the <i>Employer</i> , for all matters arising under	<b>the total of the Prices other than for the additional excluded matters.</b>

	or in connection with this contract, other than the excluded matters, is limited to	<b>The Contractor's total liability for the additional excluded matters is not limited.</b>
		<b>The additional excluded matters are amounts for which the Contractor is liable under this contract for</b>
		<ul style="list-style-type: none"> <li>• <b>loss of or damage to property (other than the Employer's property, Plant and Materials),</b></li> <li>• <b>death of or injury to a person and</b></li> <li>• <b>infringement of an intellectual property right.</b></li> </ul>
X18.5	The <i>end of liability date</i> is	<b>12 months after the end of the service period.</b>
<b>X19</b>	<b>Task Order</b>	
X19.5	The <i>Contractor</i> submits a Task Order programme to the <i>Service Manager</i> within	<b>5 days of receiving the Task Order</b>
<b>Z</b>	<b>The additional conditions of contract are</b>	<b>Z1 to Z14 always apply.</b>

**Z1 Cession delegation and assignment**

- Z1.1 The *Contractor* does not cede, delegate or assign any of its rights or obligations to any person without the written consent of the *Employer*.
- Z1.2 Notwithstanding the above, the *Employer* may on written notice to the *Contractor* cede and delegate its rights and obligations under this contract to any of its subsidiaries or any of its present divisions or operations which may be converted into separate legal entities as a result of the restructuring of the Electricity Supply Industry.

**Z2 Joint ventures**

- Z2.1 If the *Contractor* constitutes a joint venture, consortium or other unincorporated grouping of two or more persons or organisations then these persons or organisations are deemed to be jointly and severally liable to the *Employer* for the performance of this contract.
- Z2.2 Unless already notified to the *Employer*, the persons or organisations notify the *Service Manager* within two weeks of the Contract Date of the key person who has the authority to bind the *Contractor* on their behalf.
- Z2.3 The *Contractor* does not alter the composition of the joint venture, consortium or other unincorporated grouping of two or more persons without the consent of the *Employer* having been given to the *Contractor* in writing.

**Z3 Change of Broad Based Black Economic Empowerment (B-BBEE) status**

- Z3.1 Where a change in the *Contractor's* legal status, ownership or any other change to his business composition or business dealings results in a change to the *Contractor's* B-BBEE status, the *Contractor* notifies the *Employer* within seven days of the change.
- Z3.2 The *Contractor* is required to submit an updated verification certificate and necessary supporting documentation confirming the change in his B-BBEE status to the *Service Manager* within thirty days of the notification or as otherwise instructed by the *Service Manager*.
- Z3.3 Where, as a result, the *Contractor's* B-BBEE status has decreased since the Contract Date the

*Employer* may either re-negotiate this contract or alternatively, terminate the *Contractor's* obligation to Provide the Service.

- Z3.4 Failure by the *Contractor* to notify the *Employer* of a change in its B-BBEE status may constitute a reason for termination. If the *Employer* terminates in terms of this clause, the procedures on termination are P1, P2 and P4 as stated in clause 92, and the amount due is A1 and A3 as stated in clause 93.

## **Z4 Confidentiality**

- Z4.1 The *Contractor* does not disclose or make any information arising from or in connection with this contract available to Others. This undertaking does not, however, apply to information which at the time of disclosure or thereafter, without default on the part of the *Contractor*, enters the public domain or to information which was already in the possession of the *Contractor* at the time of disclosure (evidenced by written records in existence at that time). Should the *Contractor* disclose information to Others in terms of clause 25.1, the *Contractor* ensures that the provisions of this clause are complied with by the recipient.
- Z4.2 If the *Contractor* is uncertain about whether any such information is confidential, it is to be regarded as such until notified otherwise by the *Service Manager*.
- Z4.3 In the event that the *Contractor* is, at any time, required by law to disclose any such information which is required to be kept confidential, the *Contractor*, to the extent permitted by law prior to disclosure, notifies the *Employer* so that an appropriate protection order and/or any other action can be taken if possible, prior to any disclosure. In the event that such protective order is not, or cannot, be obtained, then the *Contractor* may disclose that portion of the information which it is required to be disclosed by law and uses reasonable efforts to obtain assurances that confidential treatment will be afforded to the information so disclosed.
- Z4.4 The taking of images (whether photographs, video footage or otherwise) of the Affected Property or any portion thereof, in the course of Providing the Service and after the end of the *service period*, requires the prior written consent of the *Service Manager*. All rights in and to all such images vests exclusively in the *Employer*.
- Z4.5 The *Contractor* ensures that all his subcontractors abide by the undertakings in this clause.

## **Z5 Waiver and estoppel: Add to core clause 12.3:**

- Z5.1 Any extension, concession, waiver or relaxation of any action stated in this contract by the Parties, the *Service Manager* or the *Adjudicator* does not constitute a waiver of rights, and does not give rise to an estoppel unless the Parties agree otherwise and confirm such agreement in writing.

## **Z6 Health, safety and the environment: Add to core clause 27.4**

- Z6.1 The *Contractor* undertakes to take all reasonable precautions to maintain the health and safety of persons in and about the execution of the *service*. Without limitation the *Contractor*:
- accepts that the *Employer* may appoint him as the "Principal Contractor" (as defined and provided for under the Construction Regulations 2014 (promulgated under the Occupational Health & Safety Act 85 of 1993) ("the Construction Regulations") for the Affected Property;
  - warrants that the total of the Prices as at the Contract Date includes a sufficient amount for proper compliance with the Construction Regulations, all applicable health & safety laws and regulations and the health and safety rules, guidelines and procedures provided for in this contract and generally for the proper maintenance of health & safety in and about the execution of the *service*; and
  - undertakes, in and about the execution of the *service*, to comply with the Construction Regulations and with all applicable health & safety laws and regulations and rules,

guidelines and procedures otherwise provided for under this contract and ensures that his Subcontractors, employees and others under the *Contractor's* direction and control, likewise observe and comply with the foregoing.

- Z6.2 The *Contractor*, in and about the execution of the *service*, complies with all applicable environmental laws and regulations and rules, guidelines and procedures otherwise provided for under this contract and ensures that his Subcontractors, employees and others under the *Contractor's* direction and control, likewise observe and comply with the foregoing.

## **Z7 Provision of a Tax Invoice and interest. Add to core clause 51**

- Z7.1 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 in accordance with the *Employer's* procedures stated in the Service Information, showing the amount due for payment equal to that stated in the payment certificate.
- Z7.2 If the *Contractor* does not provide a tax invoice in the form and by the time required by this contract, the time by when the *Employer* is to make a payment is extended by a period equal in time to the delayed submission of the correct tax invoice. Interest due by the *Employer* in terms of core clause 51.2 is then calculated from the delayed date by when payment is to be made.
- Z7.3 The *Contractor* (if registered in South Africa in terms of the companies Act) is required to comply with the requirements of the Value Added Tax Act, no 89 of 1991 (as amended) and to include the *Employer's* VAT number 4740101508 on each invoice he submits for payment.

## **Z8 Notifying compensation events**

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- Z8.1 Delete the last paragraph of core clause 61.3 and replace with:

If the *Contractor* does not notify a compensation event within eight weeks of becoming aware of the event, he is not entitled to a change in the Prices.

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## **Z9 Employer's limitation of liability**

- Z9.1 The *Employer's* liability to the *Contractor* for the *Contractor's* indirect or consequential loss is limited to R0.00 (zero Rand)
- Z9.2 The *Contractor's* entitlement under the indemnity in 82.1 is provided for in 60.1(12) and the *Employer's* liability under the indemnity is limited to compensation as provided for in core clause 63 and X19.11 if Option X19 Task Order applies to this contract.

## **Z10 Termination: Add to core clause 91.1, at the second main bullet point, fourth sub-bullet point, after the words "against it":**

- Z10.1 or had a business rescue order granted against it.

## **Z11 Ethics**

For the purposes of this Z-clause, the following definitions apply:

**Affected Party** means, as the context requires, any party, irrespective of whether it is the *Contractor* or a third party, such party's employees, agents, or Subcontractors or Subcontractor's employees, or any one or more of all of these parties' relatives or friends,

**Coercive** means to harm or threaten to harm, directly or indirectly, an Affected Party or the

- Action** property of an Affected Party, or to otherwise influence or attempt to influence an Affected Party to act unlawfully or illegally,
- Collusive Action** means where two or more parties co-operate to achieve an unlawful or illegal purpose, including to influence an Affected Party to act unlawfully or illegally,
- Committing Party** means, as the context requires, the *Contractor*, or any member thereof in the case of a joint venture, or its employees, agents, or Subcontractors or the Subcontractor's employees,
- Corrupt Action** means the offering, giving, taking, or soliciting, directly or indirectly, of a good or service to unlawfully or illegally influence the actions of an Affected Party,
- Fraudulent Action** means any unlawfully or illegally intentional act or omission that misleads, or attempts to mislead, an Affected Party, in order to obtain a financial or other benefit or to avoid an obligation or incurring an obligation,
- Obstructive Action** means a Committing Party unlawfully or illegally destroying, falsifying, altering or concealing information or making false statements to materially impede an investigation into allegations of Prohibited Action, and
- Prohibited Action** means any one or more of a Coercive Action, Collusive Action Corrupt Action, Fraudulent Action or Obstructive Action.

Z11.1 A Committing Party may not take any Prohibited Action during the course of the procurement of this contract or in execution thereof.

Z11.2 The *Employer* may terminate the *Contractor's* obligation to Provide the Services if a Committing Party has taken such Prohibited Action and the *Contractor* did not take timely and appropriate action to prevent or remedy the situation, without limiting any other rights or remedies the *Employer* has. It is not required that the Committing Party had to have been found guilty, in court or in any other similar process, of such Prohibited Action before the *Employer* can terminate the *Contractor's* obligation to Provide the Services for this reason.

Z11.3 If the *Employer* terminates the *Contractor's* obligation to Provide the Services for this reason, the amounts due on termination are those intended in core clauses 92.1 and 92.2.

Z11.4 A Committing Party co-operates fully with any investigation pursuant to alleged Prohibited Action. Where the *Employer* does not have a contractual bond with the Committing Party, the *Contractor* ensures that the Committing Party co-operates fully with an investigation.

## Z12 Insurance

### Z 12 .1 Replace core clause 83 with the following:

#### Insurance cover 83

83.1 When requested by a Party, the other Party provides certificates from his insurer or broker stating that the insurances required by this contract are in force.

83.2 The *Contractor* provides the insurances stated in the Insurance Table A from the *starting date* until the earlier of Completion and the date of the termination certificate.

#### INSURANCE TABLE A

Insurance against	Minimum amount of cover or minimum limit of indemnity
Loss of or damage caused by	The replacement cost where not covered by the

the <i>Contractor</i> to the <i>Employer's</i> property	<i>Employer's</i> insurance.  The <i>Employer's</i> policy deductible as at Contract Date, where covered by the <i>Employer's</i> insurance.
Loss of or damage to Plant and Materials	The replacement cost where not covered by the <i>Employer's</i> insurance.  The <i>Employer's</i> policy deductible as at Contract Date, where covered by the <i>Employer's</i> insurance.
Loss of or damage to Equipment	The replacement cost where not covered by the <i>Employer's</i> insurance.  The <i>Employer's</i> policy deductible as at Contract Date, where covered by the <i>Employer's</i> insurance.
The <i>Contractor's</i> liability for loss of or damage to property (except the <i>Employer's</i> property, Plant and Materials and Equipment) and liability for bodily injury to or death of a person (not an employee of the <i>Contractor</i> ) arising from or in connection with the <i>Contractor's</i> Providing the Service	<b><u>Loss of or damage to property</u></b> The replacement cost  <b><u>Bodily injury to or death of a person</u></b> The amount required by the applicable law.
Liability for death of or bodily injury to employees of the <i>Contractor</i> arising out of and in the course of their employment in connection with this contract	The amount required by the applicable law

**Z 12.2 Replace core clause 86 with the following:**

**Insurance by the Employer** 86

86.1 The *Employer* provides the insurances stated in the Insurance Table B

**INSURANCE TABLE B**

<b>Insurance against or name of policy</b>	<b>Minimum amount of cover or minimum limit of indemnity</b>
Assets All Risk	Per the insurance policy document
Contract Works insurance	Per the insurance policy document
Environmental Liability	Per the insurance policy document
General and Public Liability	Per the insurance policy document
Transportation (Marine)	Per the insurance policy document
Motor Fleet and Mobile Plant	Per the insurance policy document

Terrorism	Per the insurance policy document
Cyber Liability	Per the insurance policy document
Nuclear Material Damage and Business Interruption	Per the insurance policy document
Nuclear Material Damage Terrorism	Per the insurance policy document

### Z13 Nuclear Liability

- Z13.1 The *Employer* is the operator of the Koeberg Nuclear Power Station (KNPS), a nuclear installation, as designated by the National Nuclear Regulator of the Republic of South Africa, and is the holder of a nuclear licence in respect of the KNPS.
- Z13.2 The *Employer* is solely responsible for and indemnifies the *Contractor* or any other person against any and all liabilities which the *Contractor* or any person may incur arising out of or resulting from nuclear damage, as defined in Act 47 of 1999, save to the extent that any liabilities are incurred due to the unlawful intent of the *Contractor* or any other person or the presence of the *Contractor* or that person or any property of the *Contractor* or such person at or in the KNPS or on the KNPS site, without the permission of the *Employer* or of a person acting on behalf of the *Employer*.
- Z13.3 Subject to clause Z13.4 below, the *Employer* waives all rights of recourse, arising from the aforesaid, save to the extent that any claims arise or liability is incurred due or attributable to the unlawful intent of the *Contractor* or any other person, or the presence of the *Contractor* or that person or any property of the *Contractor* or such person at or in the KNPS or on the KNPS site, without the permission of the *Employer* or of a person acting on behalf of the *Employer*.
- Z13.4 The *Employer* does not waive its rights provided for in section 30 (7) of Act 47 of 1999, or any replacement section dealing with the same subject matter.
- Z13.5 The protection afforded by the provisions hereof shall be in effect until the KNPS is decommissioned.

### Z14 Asbestos

For the purposes of this Z-clause, the following definitions apply:

- AAIA** means approved asbestos inspection authority.
- ACM** means asbestos containing materials.
- AL** means action level, i.e. a level of 50% of the OEL, i.e. 0.1 regulated asbestos fibres per ml of air measured over a 4-hour period. The value at which proactive actions is required in order to control asbestos exposure to prevent exceeding the OEL.
- Ambient Air** means breathable air in area of work with specific reference to breathing zone, which is defined to be a virtual area within a radius of approximately 30cm from the nose inlet.
- Compliance Monitoring** means compliance sampling used to assess whether or not the personal exposure of workers to regulated asbestos fibres is in compliance with the Standard's requirements for safe processing, handling, storing, disposal and phase-out of asbestos and asbestos containing material, equipment and articles.
- OEL** means occupational exposure limit.
- Parallel Measurements** means measurements performed in parallel, yet separately, to existing measurements

to verify validity of results.

- Safe Levels** means airborne asbestos exposure levels conforming to the Standard's requirements for safe processing, handling, storing, disposal and phase-out of asbestos and asbestos containing material, equipment and articles.
- Standard** means the *Employer's* Asbestos Standard 32-303: Requirements for Safe Processing, Handling, Storing, Disposal and Phase-out of Asbestos and Asbestos Containing Material, Equipment and Articles.
- SANAS** means the South African National Accreditation System.
- TWA** means the average exposure, within a given workplace, to airborne asbestos fibres, normalized to the baseline of a 4-hour continuous period, also applicable to short term exposures, i.e. 10-minute TWA.

- Z14.1 The *Employer* ensures that the Ambient Air in the area where the *Contractor* will Provide the Services conforms to the acceptable prescribed South African standard for asbestos, as per the regulations published in GNR 155 of 10 February 2002, under the Occupational Health and Safety Act, 1993 (Act 85 of 1993) ("Asbestos Regulations"). The OEL for asbestos is 0.2 regulated asbestos fibres per millilitre of air as a 4-hour TWA, averaged over any continuous period of four hours, and the short term exposure limit of 0.6 regulated asbestos fibres per millilitre of air as a 10-minute TWA, averaged over any 10 minutes, measured in accordance with HSG248 and monitored according to HSG173 and OESSM.
- Z14.2 Upon written request by the *Contractor*, the *Employer* certifies that these conditions prevail. All measurements and reporting are effected by an independent, competent, and certified occupational hygiene inspection body, i.e. a SANAS accredited, and Department of Employment and Labour approved AAIA. The *Contractor* may perform Parallel Measurements and related control measures at the *Contractor's* expense. For the purposes of compliance the results generated from Parallel Measurements are evaluated only against South African statutory limits as detailed in clause Z14.1. Control measures conform to the requirements stipulated in the AAIA-approved asbestos work plan.
- Z14.3 The *Employer* manages asbestos and ACM according to the Standard.
- Z14.4 In the event that any asbestos is identified while Providing the Services, a risk assessment is conducted and if so required, with reference to possible exposure to an airborne concentration of above the AL for asbestos, immediate control measures are implemented and relevant air monitoring conducted in order to declare the area safe.
- Z14.5 The *Contractor's* personnel are entitled to stop working and leave the contaminated area forthwith until such time that the area of concern is declared safe by either Compliance Monitoring or an AAIA approved control measure intervention, for example, per the emergency asbestos work plan, if applicable.
- Z14.6 The *Contractor* continues to Provide the Services, without additional control measures presented, on presentation of Safe Levels. The contractually agreed dates to Provide the Services, including the Completion Date, are adjusted accordingly. The contractually agreed dates are extended by the notification periods required by regulations 3 and 21 of the Asbestos Regulations, 2001.
- Z14.7 Any removal and disposal of asbestos, asbestos containing materials and waste, is done by a registered asbestos contractor, instructed by the *Employer* at the *Employer's* expense, and conducted in line with South African legislation.

## C1.2 Contract Data

### Part two - Data provided by the Contractor

Completion of the data in full, according to Options chosen, is essential to create a complete contract.

Clause	Statement	Data
10.1	The <i>Contractor</i> is (Name): Address Tel No. Fax No.	
11.2(8)	The <i>direct fee percentage</i> is The <i>subcontracted fee percentage</i> is	% %
11.2(14)	The following matters will be included in the Risk Register	
11.2(15)	The Service Information for the <i>Contractor's</i> plan is in:	
21.1	The plan identified in the Contract Data is contained in:	
24.1	The key people are: 1 Name: Job: Responsibilities: Qualifications: Experience: 2 Name: Job: Responsibilities: Qualifications: Experience:	
		CV's (and further key person's data including CVs) are in .
<b>A</b>	<b>Priced contract with price list</b>	
11.2(12)	The <i>price list</i> is in	
11.2(19)	The tendered total of the Prices is	<b>R</b>

## PART 2: PRICING DATA

### TSC3 Option A

Document reference	Title	No of pages
C2.1	Pricing assumptions: Option A	2
C2.2	The <i>price list</i>	5



## C2.1 Pricing assumptions: Option A

### How work is priced and assessed for payment

Clause 11 in NEC3 Term Service Contract (TSC3) core clauses and Option A states:

<b>Identified and defined terms</b>	11 11.2	(12) The Price List is the <i>price list</i> unless later changed in accordance with this contract.  (17) The Price for Services Provided to Date is the total of <ul style="list-style-type: none"><li>the Price for each lump sum item in the Price List which the <i>Contractor</i> has completed and</li><li>where a quantity is stated for an item in the Price List, an amount calculated by multiplying the quantity which the <i>Contractor</i> has completed by the rate.</li></ul> (19) The Prices are the amounts stated in the Price column of the Price List. Where a quantity is stated for an item in the Price List, the Price is calculated by multiplying the quantity by the rate.
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This confirms that Option A is a priced contract where the Prices are derived from a list of items of service which can be priced as lump sums or as expected quantities of service multiplied by a rate or a mix of both.

### Function of the Price List

Clause 54.1 in Option A states: "Information in the Price List is not Service Information". This confirms that instructions to do work or how it is to be done are not included in the Price List but in the Service Information. This is further confirmed by Clause 20.1 which states, "The *Contractor* Provides the Service in accordance with the Service Information". Hence the *Contractor* does **not** Provide the Service in accordance with the Price List. The Price List is only a pricing document.

### Link to the *Contractor's* plan

Clause 21.4 states "The *Contractor* provides information which shows how each item description on the Price List relates to the operations on each plan which he submits for acceptance". Hence when compiling the *price list*, the tendering contractor needs to develop his first clause 21.2 plan in such a way that operations shown on it can be priced in the *price list* and result in a satisfactory cash flow in terms of clause 11.2(17).

### Preparing the *price list*

Before preparing the *price list*, both the *Employer* and tendering contractors should read the TSC3 Guidance Notes pages 14 and 15. In an Option A contract, either Party may have entered items into the *price list* either as a process of offer and acceptance (tendering) or by negotiation depending on the nature of the *service* to be provided. Alternatively the *Employer*, in his Instructions to Tenderers or in a Tender Schedule, may have listed some items that he requires the *Contractor* to include in the *price list* to be prepared and priced by him.

It is assumed that in preparing or finalising the *price list* the *Contractor*:

- Has taken account of the guidance given in the TSC3 Guidance Notes relevant to Option A;
- Understands the function of the Price List and how work is priced and paid for;
- Is aware of the need to link operations shown in his plan to items shown in the Price List;
- Has listed and priced items in the *price list* which are inclusive of everything necessary and incidental to Providing the Service in accordance with the Service Information, as it was at the time of tender, as well as correct any Defects not caused by an *Employer's* risk;
- Has priced work he decides not to show as a separate item within the Prices or rates of other listed items in order to fulfil the obligation to complete the *service* for the tendered total of the Prices.
- Understands there is no adjustment to items priced as lump sums if the amount, or quantity, of work within that item later turns out to be different to that which the *Contractor* estimated at time of tender. The only basis for a change to the (lump sum) Prices is as a result of a compensation event.

### **Format of the *price list***

(From the example given in an Appendix within the TSC3 Guidance Notes)

Entries in the first four columns in the *price list* in section C2.2 are made either by the *Employer* or the tendering contractor.

If the *Contractor* is to be paid an amount for the item which is not adjusted if the quantity of work in the item changes, the tendering contractor enters the amount in the Price column only, the Unit, Expected Quantity and Rate columns being left blank.

If the *Contractor* is to be paid an amount for an item of work which is the rate for the work multiplied by the quantity completed, the tendering contractor enters the rate which is then multiplied by the Expected Quantity to produce the Price, which is also entered.

If the *Contractor* is to be paid a Price for an item proportional to the length of time for which a service is provided, a unit of time is stated in the Unit column and the expected length of time (as a quantity of the stated units of time) is stated in the Expected Quantity column.

## C2.2 the *price list*

### Schedule A: Maintenance core crew (normal time rate)

Item nr	Description	No	Unit	Expected Quantity	Rate	Price
1.	Site Supervisor	1	Hr	10380		
2.	Fitter	2	Hr	20760		
3.	Trade Assistant	2	Hr	20760		
4.	Standby allowance	Sum	monthly	60		
5.	Consumables	Sum	monthly	60		
6.	Tools and equipment	Sum	monthly	60		
7.	Transport for employees	1	monthly	60		
8.	Bakkie (for onsite use)	1	monthly	60		
9.	Cellphone allowance	Sum	monthly	60		
10.	SHEQ provision	Sum	yearly	5		
11.	Site establishment	1	once off	Sum		
12.	Site de-establishment	1	once off	Sum		

The total of the Prices

**Note:**

1. Labour hours are based on 173 hours per month. The labour rate to make provision for leave pay as a replacement employee is expected on site to maintain the same compliment while an employee/s are on leave.
2. Consumables includes maintenance supplies, rags, penetrants, lubricants, beverages (tea, coffee, milk) office supplies(paper/stationery) etc. See Appendix B
3. SHEQ provision is inclusive of all costs associated with meeting Eskom's and legal requirements in terms of Safety, Health, Environment and Quality, the safety file preparation and approval, provision of PPE for employees on an annual basis for 5 years.
4. The Transport for employees and bakkie rates to include fuel and other associated costs. Transport for employees to work is based on a 40 km radius per single trip.
5. The standby allowance is a payable to employees on standby per standby period. The supplier must provide a sum per month in the schedule above.
6. Note: Suppliers are to include a separate sheet of the breakdown of items included in the above e.g consumables, SHEQ provision.
7. Supplier provides as a minimum tools and equipment as stated in Appendix A

## Schedule B: Outage/ Non-Core crew

Item nr	Description	No	Unit	Expected Quantity	Rate	Price
13	Supervisor	1	Hr	6720		
14	NDT Technician	1	Hr	3360		
15	Welding Inspector/QC	1	Hr	3360		
16	Safety Officer (part time)	1	Hr	6720		
17	Specialised Welder (A Class)	2	Hr	3360		
18	Boilermaker	2	Hr	3360		
19	Fire Watch	1	Hr	3360		
20	Semi-skilled	4	Hr	3360		
21	Trade Assistant	2	Hr	3360		
22	Pipe Fitter	1	Hr	3360		
23	Fitter	2	Hr	3360		
24	Storeman	1	Hr	1080		
25	Support Engineer	1	Hr	400		
26	Electrician	1	Hr	400		
27	Instrumentation Technician	1	Hr	400		
28	Rigger	1	Hr	1080		
29	Medical exam and PPE for non-crew (per person per year)	1	person/year	150		
30	Tools & equipment	sum	day	150		
31	Welding consumables	sum	Per day	300		
32	Travelling (per shift)		km	14400		

The total of the Prices

Note:

1. The hours are estimates only.
2. Transport is based on 80 km per round trip.
3. Transport rate to include fuel and other associated costs.

PROVISION OF MAINTENANCE SERVICE AND REFURBISHMENT DURING OUTAGES ON THE SULPHUR TRIOXIDE (SO<sup>3</sup>) PLANT UNITS 4, 5, 6 AND OUTSIDE PLANT AT DUVHA POWER STATION FOR A PERIOD OF 5 YEARS.

**Schedule C: Overtime@1.5 (Maintenance)**

Item nr	Description	Qty (Hrs/km)	Rate	Price
33	Supervisor	900		
34	NDT Technician	120		
35	Welding Inspector/QC	120		
36	Safety Officer (part time)	190		
37	Specialised Welder	120		
38	Boilermaker	120		
39	Fire Watch	120		
40	Semi-skilled	290		
41	Trade Assistant	1800		
42	Pipe Fitter	300		
43	Fitter	1800		
44	Travelling (rate per km)	7500		

The total of the Prices

**Schedule D: Overtime@1.5 (Outages/Non-core crew)**

Item nr	Description	Qty (Hrs/km)	Rate	Price
45	Supervisor	400		
46	NDT Technician	300		
47	Welding Inspector/QC	300		
48	Safety Officer (part time)	300		
49	Specialised Welder	300		
50	Boilermaker	300		
51	Fire Watch	300		
52	Semi-skilled	800		
53	Trade Assistant	950		
54	Pipe Fitter	300		

55	Fitter	950		
56	Storeman	300		
57	Support Engineer	90		
58	Electrician	100		
59	Instrumentation Technician	90		
60	Rigger	200		
61	Travelling (rate per km)	7500		

The total of the Prices

**Schedule E: Overtime@2 (Maintenance)**

Item nr	Description	Qty (Hrs/km)	Rate	Price
62	Supervisor	900		
63	NDT Technician	120		
64	Welding Inspector/QC	120		
65	Safety Officer (part time)	120		
66	Specialised Welder	120		
67	Boilermaker	120		
68	Fire Watch	120		
69	Semi-skilled	120		
70	Trade Assistant	1800		
71	Pipe Fitter	120		
72	Fitter	1800		
73	Travelling (rate per km)	7500		

The total of the Prices

PROVISION OF MAINTENANCE SERVICE AND REFURBISHMENT DURING OUTAGES ON THE SULPHUR TRIOXIDE (SO<sup>3</sup>) PLANT UNITS 4, 5, 6 AND OUTSIDE PLANT AT DUVHA POWER STATION FOR A PERIOD OF 5 YEARS.

**Schedule F: Overtime@2 (Outages/Non-core crew)**

Item nr	Description	Qty (Hrs/km)	Rate	Price
74	Supervisor	300		
75	NDT Technician	300		
76	Welding Inspector/QC	300		
77	Safety Officer (part time)	300		
78	Specialised Welder	300		
79	Boilermaker	300		
80	Fire Watch	300		
81	Semi-skilled	500		
82	Trade Assistant	950		
83	Pipe Fitter	300		
84	Fitter	950		
85	Storeman	300		
86	Support Engineer	90		
87	Electrician	100		
88	Instrumentation Technician	90		
89	Rigger	150		
90	Travelling (rate per km)	7500		

The total of the Prices

## Costing for Occupational Health and Safety

Description	quantity	rate	total
<b>TRAINING AND COMPETENCY</b>			
First Aider (1)			
Designation Employer (Site Manager with OHS/SHE Legal Liability Training)			
Supervisor (SHE Training)(1X )- Legal Liability			
OHS Representatives (more than 20 employees or risk based)			
Incident Investigator (X1)			
Mobile Plant Operators (if applicable)			
Fire fighting level one( X1)/ After appointment on site all employees to attend Fire Demo (provided by the Client)			
Fall Protection planner (x1) & All employees to work at heights must be trained by an Accredited facility.			
Risk Assessor (1X)			
<b>sub-total</b>			
<b>PERSONAL PROTECTIVE CLOTHING (For each employee per annum/ month); SABS &amp; CI APPROVED</b>			
Safety Boots (x1 pair)			
Two or one piece Overalls (x2) chemical proof type			
Reflective vest (x2)			
Hard hat with a chin strip with a company logo (x1)			
Safety gloves (applicable for the type of duty) (x2 pair) per Month			
Safety Goggles/ glasses (applicable for the type of duty) (x2)			
Disposable Dust mask FFP2 Type (each to be replaced after contamination)			
Hearing protection (x1)sans approved (Earmuffs/earplugs /Variphone			
Winter coats/jackets			
Rain coats (If applicable)(x1)			
<b>OTHER CONTENTS</b>			
First Aid Box (Including all relevant required items) (x1)			
Fire extinguisher (x1 for the vehicle & x1 for the offices x1 for when conducting Hot work activities)			
Medical Surveillance (For all employees on site) including labour broker (valid for 12 months)			
List of Occupational Hygiene surveys/ risk assessment: - COST APPLICATION <ul style="list-style-type: none"> <li>• Exposure risk assessment- addressing all relevant stressors</li> <li>• Ergonomics Risk Assessment</li> <li>• Monitoring surveys: Hazardous Chemical Agents, Noise, Ventilation/ Indoor air quality &amp; Illumination to be conducted.</li> </ul>			
Site Establishment (ablution & Kitchen facilities/offices/workshop/stores/parking areas/safety and directive signs/taps etc)			
<b>sub-total</b>			

The total of the Prices  
The



## C3.1: EMPLOYER'S SERVICE INFORMATION

### 1 Description of the service

#### 1.1 Executive overview

The service is the maintenance of the Sulphur trioxide (SO<sup>3</sup>) plant on units 4, 5, 6 and the Common/Outside plant at Duvha Power Station during normal maintenance and planned outages for a period of 5 years. Maintenance includes monitoring, testing, inspecting, overhaul and repairs of equipment. The maintenance services is equipment overhauls, repairs, planned maintenance, routine maintenance, monitoring, testing, lubricating or greasing of plant, cleaning to access the component/equipment for maintenance, recommissioning of plant and other actions necessary for restoring the equipment to its optimum operating condition. The service is the supply of skilled labour, equipment and tools to carry out maintenance.

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

- The *Contractor* provides qualified labour to carry out corrective and preventive maintenance activities.
- The *Contractor* provides tools, gear, equipment and consumables to carry out the work.
- The *Contractor* ensures the safety of own personnel, other contractors and Eskom employees in the vicinity of the works by complying with the OHS Act No.85 of 1993 and its Regulations.
- The *Contractor* plans and executes the work and provides a detailed plan for each unit outage and weekend maintenance opportunities.
- The *Contractor* performs quality control on own work as per pre-approved control plans.
- The *Contractor* performs work within the specified period and to the acceptable quality standard.
- The Contractor is required to have a minimum of 2 RP's (Responsible Person) as per the Eskom's Plant Safety Regulations within four months from the contract start date. The course will be provided free of charge by Duvha Power Station. It remains the Contractor's responsibility to book his personnel for the training.
- The works also includes the decommissioning and re-commissioning, removal, dismantling as well as making good of areas affected by the removal thereof. All redundant equipment to be removed by the Contractor.
- The Contractor is required to take permit to work for other contractors for short term projects.

The provision of maintenance service and refurbishment during outages on the Sulphur Trioxide (SO<sup>3</sup>) plant units 4, 5, 6 and Outside plant at Duvha Power Station for a period of 5 years.

### **1.2.1 Maintenance site core crew**

The service provider provides a site crew comprising of a:

1x Site Supervisor

2x Mechanical Fitters

2x Trade Assistants

- This crew will be required to perform maintenance work on a day-to-day basis and on call-out for failures after normal working hours. Maintenance includes monitoring, testing, inspecting, overhaul and repairs.

### **1.2.2 Standby and callouts**

The service provider shall ensure availability of personnel to attend to breakdowns outside of normal hours. The standby person attends to call-outs outside of normal working hours:

Supervisor

or

Fitter

The call-out hours will be based on the entering the gate and on completion of the work. Call-outs traveling is limited to 30 min in each direction (1 hr in total) per call-out.

### **1.2.3 Short UCLF/PCLF maintenance opportunities**

The station is granted short maintenance opportunities to attend to repairs that cannot be attended to on load. During these opportunities the supplier will be required to provide additional resources for the duration of the opportunity, these resources will be required to carry out repairs on a 24-hour basis.

### **1.2.4 Day to day activities performed by the Service Provider**

- a) The contractor will be required to work the same Eskom hours which are 07:00 to 16:15 on Mondays to Thursdays and 07:00 to 12:00 on Fridays.
- b) The contractor to attend morning meetings with Eskom Service/Contract manager whatever the case maybe,
- c) The contractor performs daily inspections/checks on the SO<sub>3</sub> skids (inclusive of all its components and equipment) on unit 4 to 6 installed on 16ml, 57ml and outside plant.
- d) The contractor performs daily inspections on the molten sulphur common plant at the outside plant 0ml,
- e) The contractor records and submit all notable findings from inspections to the service/contract manager,
- f) The contractor repairs/ fixes all the defects on the plant within allowable duration (repairs program will be requested or required for all critical work),
- g) The contractor collects weekly scheduled work orders from Eskom Service/ Contract manager and execute work as per work order and submit back,
- h) The contractor report back all the weekly work orders to Eskom Service/Contractor upon completion,

- i) The contractor ensures that weekly schedules and planned maintenance (PM) compliance targets are met,
- j) The contractor ensures that all the priority 1 (P1) and priority (P2) work orders are closed out within a day or 2 of defect notification,
- k) The contractor performs standby duties as per Eskom Service/ Contract manager's requirements,
- l) The contractor performs housekeeping on all the plants associated with the SO<sub>3</sub> gas generating plants.
- m) The contractor performs monthly inspections and maintenance on the following equipment: process air blowers, process air filters, SO<sub>3</sub> lances, SO<sub>2</sub> cooler fans, sulphur supply and offloading pumps.
- n) The contractor will be required to submit weekly plant inspection check sheets

### **1.2.5 The Contractor shall carry out the following activities as and when requested by Eskom Service/ Contract manager:**

- a) The contractor may be requested to be present during the weekdays or weekends for the offloading of molten sulphur into the sulphur bulk storage tank,
- b) The contractor may be requested to issue a scope of work showing duration for any breakdown that will emerge in the plant,
- c) The contractor may be requested to assist operating in the swapping of sulphur supply pumps,
- d) The contractor may be requested to overhaul/ repair valves, sulphur supply and the offloading pumps on site,
- e) The contractor will from time-to-time grease and rotate sulphur offloading pumps in the Eskom stores as specified by the relevant work instruction,
- f) The contractor will be responsible for painting of the plant/components in-situ and after overhauling

### **1.2.6 The Scope of work consists of the following:**

The activities are categorized according to the subsystems as detailed below

#### **Sulphur Trioxide (SO<sub>3</sub>) gas generating plants on Unit 4, 5 and 6 located on 16ml.**

##### **1.2.6.1 Molten Sulphur Supply and Burner system:**

###### **i) Molten Sulphur Hand Isolating Valve**

- Repair any sulphur leaks on the valve housing,
- Repair and stop any steam leaks on the steam jackets and jumpers,
- Replace or fix the isolating valve if it is passing – *Eskom to supply replacement valve,*
- Replace the valve handle if broken or missing.

###### **ii) Molten Sulphur Auto Block Valve**

- Remove the valve actuator,
- Refurbish the valve,
- Repair/ replace the leaking steam jacket and jumpers,
- Replacement of the faulty valve,
- Overhaul the auto-block valve,
- Remove the valve positioner.

The provision of maintenance service and refurbishment during outages on the Sulphur Trioxide (SO<sup>3</sup>) plant units 4, 5, 6 and Outside plant at Duvha Power Station for a period of 5 years.

**iii) Molten Sulphur supply Control Valve**

- Remove the valve positioner,
- Remove the valve position feedback loop,
- Remove the valve actuator,
- Refurbish the valve.

**iv) Sulphur Burner vessel**

- Remove burner outlet flange bolts,
- Separate burner outlet flanges to inspect the gaskets,
- Remove burner inlet flange lid for inspections,
- Perform thicknesses test on burner vessel shell. Note – Written report to be submitted with findings. (Contractor to supply steel for patch work if required)
- Perform thicknesses test on burner outlet pipe. Note – Written report to be submitted with findings. (Contractor to supply steel for patch work if required)
- Perform inspection on vessels, internal inspection and brick matrix. Note – Written report to be submitted with findings.
- Repair refractory lining on the inside of the burner vessel,
- Effect any necessary repairs on the sulphur burner vessel if required,
- Remove burner outlet pocket thermocouple for inspection,
- Clean all the flanged areas when the vessel is opened,
- Renew gasket and replace burner inlet and outlet flange using stainless steel (S/S) bolts,
- Use approved gasket material for the gaskets on the inlet and outlet flanges of the burner vessel.

**1.2.6.2 SO<sub>2</sub> Gas Cooling system:**

**i) SO<sub>2</sub> Cooler fan**

- Uncouple the motor – Permit must be in force,
- Remove fan housing inlet plate assembly,
- Undo and remove taper-lock that secures impeller to motor shaft.
- Remove the impeller,
- Clean fan impeller and fan casing,
- Perform visual crack inspection test on impeller - Report findings and repair any defects,
- Check for free fan movement – no interference and correct clearances (Engineering to give clearance specifications)
- Replace fan housing inlet plate assembly – install sealing material between housing and plate,
- Align fan motor assembly and tighten hold-down bolts,
- Test run fan – Check that fan rotation and vibrations are correct – Balance, if necessary, (Eskom to supply specifications).

**ii) SO<sub>2</sub> Cooler Valve**

- Remove and inspect the valve,
- Clean flanges and replace gasket,
- Renew all gaskets and replace valve,
- Process air block valve,
- Remove the actuator,

- Support pipe work,
- Overhaul valve and actuator. Note – if valve body is damaged or spares not available replace valve with new type.
- Clean all flanges,
- Check that the valve operates freely (does not interfere with pipe work) by moving through 90° by hand,
- Inspect all the wiring and connection lugs and repair, if necessary,
- Test valve operation to ensure correct stroke and indications.

### iii) SO<sub>2</sub> Cooler line.

- Remove the SO<sub>2</sub> cooler airflow control valve positioner and instrument air pipes,
- Remove SO<sub>2</sub> cooler valve actuator,
- Support cooler inlet pipe and remove flow control valve,
- Overhaul flow control valve,
- Clean flanges and install new gaskets - Replace flow control valve if necessary. Note – Ensure the valve is correctly orientated,
- Remove, inspect and replace, if necessary, the rubber connector - Contractor to supply the rubber,
- Inspect all the wiring and connection lugs and repair, if necessary,
- Grind open the SO<sub>2</sub> cooler pipe housing,
- Inspect and replace SO<sub>2</sub> cooler internal stainless-steel piping if necessary- Contractor to supply stainless steel pipe insert/spool piece. ,
- Replace the piping. Refer to 1.2.6.7 below

## 1.2.6.3 Process Air System:

### i) Process air blower

- Change oil and re-grease the blower on a 3-monthly basis,
- Uncouple motor from the blower,
- Remove coupling guard,
- Split and overhaul coupling,
- Check for oil leaks on blower,
- Drain oil from blower Non-Drive End (NDE) side,
- Renew oil in blower – *(fill up to the middle of the oil level indicator)*,
- Grease the Drive End (DE) bearing through grease nipple. *Note – when re-greasing, the old grease will be forced out of the vents which must always be open.*
- Replace the blower and re-align motor. *(Alignment certificate and vibration report required)*
- Box-up coupling & replace guard,
- Inspect and report on condition of process air pressure relief valve,
- Remove process air blower pressure relief valve,
- Send relief valve away for re-calibration (55kPa - 8PSIG)-*Safety certificate required,*
- Clean relief valve and pipe flanges,
- Renew gaskets between valve and process air pipe work and replace valve
- Check condition of rubber connection piece and clamps – *replace if necessary (Contractor to supply).*

### ii) Process Air Filters.

- Change the auxiliary and cylindrical filters when blocked or defected,
- Open and clean filters monthly and report any findings,
- Check that all the solenoids are pulsing,

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- Repair any air leaks on the pulsing system,

#### 1.2.6.4 SO<sub>2</sub> to SO<sub>3</sub> Gas Converter vessel.

##### i) SO<sub>3</sub> Converter vessel.

- Perform externally inspections on the converter vessel- Do thickness test on shell on grit of 200mm around the vessel. Note - Written report to be submitted with findings. Contractor to supply steel for patch repairs,
- Remove dilution air piping on converter vessel and inspect stub for corrosion,
- Remove stub, - (Contractor to supply new stub and backing plate)
- Replace stub, Note – Dye-pen to be done on welding (Follow M&M procedure)
- Open converter vessel top lid,
- Remove quartz filter if required,
- Assess the condition of the catalyst inside the converter vessel and report on condition of catalyst,
- Remove and replace catalyst- (Sift size of +6mm grit to be used)- Replacement to be done in consultation with System Engineer,
- Clean all flanges and clean inside stainless grating,
- Replace the flanged opening lid and fit the new gaskets with stainless steel bolts.

##### ii) SO<sub>3</sub> Gas injecting Lances.

- Unblock and clean all gas injector lances,
- Remove and replace damaged injector lances,
- Repair or assist in replacing the thermocouples,
- Replace the injector lance protection plate.

##### iii) Auxiliary Steam supply Valves and steam Lines AT 57ml;

- Verify that the steam pressure is always set at 800kPa,
- Repair any steam leaks on the steam lines,
- Check that the steam pressure gauge is functional,
- Perform inspections and report defects,
- Remove and replace steam valves if defective

#### 1.2.6.5 Sulphur Common / Outside plant located outside unit 6 on 0ml;

- Perform inspections on all equipment and report defects
- Ensure daily that the steam supply to the steam rack is open and supplying required pressure (+- 450kPa),
- Ensure sulphur offloading jacketed piping steam line supplying steam in the offloading piping is open all the time and in a functional condition,
- Remove and install sulphur offloading pump and sulphur supplying pumps,
- Inspect and repair all the steam leaks on the steam rack and report any defects,
- Inspect and maintain all the sulphur jacketed piping system and report any defects,

- Grease and adjust the gland follower on the sulphur supply pumps monthly and report any defects,
- Inspect the molten sulphur storage tank and report any defects,
- Ensure that all the temperature and pressure gauges are installed and functional on the steam rack and the bulk storage tank,
- Clean any and remove all sulphur solidified spillages and dispose-off into designated skips,
- Inspect and maintain molten sulphur discharge valves on the supply pump,
- Inspect, unblock and clean both the long and short vent pipes on the sulphur bulk storage tank,
- Ensure the plant is clean and the handrails are painted with correct colour coding,
- Inspect the tank bund wall and report any defects,
- Ensure that the bund wall drain valves are installed and functional,
- Ensure that all the required warning signs and boards are always installed and visible,
- Ensure that the emergency water fountain at the sulphur common plant is functional and not leaking water.
- Report all lagging and cladding issue to service/contract manager.
- Report any defect on the plant, that is control and instrumentation, electrical, civil and mechanical,
- Report any lighting issue around the plant to the service / contract manager.

#### **1.2.6.6 Process Air dilution Valve**

- Remove the valve actuator, and positioner
  - Refurbish the valve
  - Replacement of the faulty valve,

#### **1.2.6.7 Welding Requirements**

The SO<sub>2</sub> cooling pipe is made of 316L stainless steel and from time to time it requires to be welded. The following requirements will apply on all welding work:

1. A Level 1 welding inspector to oversee the repair
2. Adherence to the Eskom Standard for Welding Requirements (Attached)
3. NDT Requirements: Dye Pen through Eskom approved NDT providers.

### **1.3 Interpretation and terminology**

The following abbreviations are used in this Service Information:

<b>Abbreviation</b>	<b>Meaning given to the abbreviation</b>
PSR	Plant Safety Regulations
RP	Responsible Person in terms of Eskom's Plant Safety Regulations
SO <sub>3</sub>	Sulphur trioxide
SO <sub>2</sub>	Sulphur dioxide
CM	Corrective Maintenance
PM	Planned Maintenance
PSR	Plant Safety Regulations
Overhaul/ service	Strip, clean, inspect, replace worn parts/components, re-assemble and pressure test if required

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NDT	Non-Destructive Testing
SHEQ	Safety, Health, Environment, and Quality
QCP	Quality Control Plan (QCP: Quality Control Plan or Inspection and Test Plan)
PPE	Personal Protective Equipment
QC	Quality Controller
UCLF	Unplanned Capability Loss Factor
PCLF	Planned Capability Loss Factor

#### 1.4. Specifications

Title	Date or revision	Tick if publicly available
<b><u>General Specifications:</u></b>		
Occupational Health and Safety Act 85 of 1993 and its regulations		✓
Basic Conditions of Employment Act		✓
Generation Plant Safety Regulations (240-150642762)		Available from the service manager
Safety, Health and Environmental Specifications for Contractors (SAS 0012)	Rev 8 or latest revision	Available from the service manager
Generation Plant Safety Regulations 36-681		Available from the service manager
Work in Confined Spaces (SAP0006) Rev 8	Rev 8 or latest revision	Available from the service manager
Hot Work Instruction (HMP0014)	Hot Work Instruction (HMP0014)	Hot Work Instruction (HMP0014)
<b><u>Technical specifications:</u></b>		
<ul style="list-style-type: none"> <li>Supply Contract Quality Requirements Specification (QM58)</li> </ul>		Available from the service manager
<ul style="list-style-type: none"> <li>ASME 8</li> </ul>		
<ul style="list-style-type: none"> <li>ISO 3834</li> </ul>		
<ul style="list-style-type: none"> <li>BS 9606</li> </ul>		
<ul style="list-style-type: none"> <li>BS 15614</li> </ul>		
<ul style="list-style-type: none"> <li>BS 15609</li> </ul>		
<ul style="list-style-type: none"> <li>Standard for welding requirements on Eskom Plant (240-106628253)</li> </ul>		Available from the service manager

<ul style="list-style-type: none"> <li>• Eskom NDT personnel approval for quality related special processes on Eskom Plant Standard (240-83539994)</li> </ul>		Available from the service manager
<ul style="list-style-type: none"> <li>• Requirement for NDT on Eskom Plant Standard (240-83540088)</li> </ul>		Available from the service manager

## 2 Management strategy and start up.

### 2.1 Contractor's management, supervision and key people

Key person's requirements:

The contractor shall provide a site supervisor or a project manager to supervise, monitor, control and co-ordinate all activities during the execution of this contract

#### Site Supervisor

- Apprentice trained with a mechanical trade test or a National N Diploma/National Diploma in Mechanical Engineering
- Supervisory training/qualification
- Ability to communicate
- Safety/Legislation training, e.g OSH Act, Legal liability, HIRA, Labour relations
- Minimum five years' experience on an SO3/chemical plant for a trade test candidate or three years on an SO3/Chemical plant for a National Diploma candidate.
- Computer literate
- Ability to obtain Authorisation as a 'Responsible Person' in terms of the Plant Safety Regulations at Duvha Power Station
- Evaluation, analysing and decision-making skills
- Manage and lead the team to ensure proper adherence to the contract scope and execution of all work by the team
- Preparing and completion of quality control plans and perform first line quality control
- Control daily activities
- Prioritise and allocate work
- Monitor progress and report on progress
- Provide advice in respect to plant problems and possible solutions
- Assist with recommissioning of plant and perform tests and inspections as required.
- Perform plant inspections, identify defects and initiate corrective actions including closing of such defects.

#### Quality Controller

- Minimum 3 years' experience as a Quality Inspector/Supervisor
- SAIW Level 1 Fabrication and Welding Inspector
- Understanding and knowledge of Quality and other Management Systems as applicable to the business
- Articulate quality standards/codes/specifications for team/section
- Provide input to the development of QCPs, Contract Quality Plans (CQPs) and Inspection & Test Plans (ITPs)

#### Artisans

- Fitters: Apprentice trained with a trade test and training on SO3 Plant fault finding and repair required.
- Minimum two years' experience on an SO3/chemical plant.

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- Ability to obtain Authorisation as a ‘Responsible Person’ in terms of the Plant Safety Regulations at Duvha Power Station
- Safety training

**Welders**

- Welders: Qualified according to BS 9606

**2.2 Management meetings**

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

Title and purpose	Approximate time & interval	Location	Attendance by:
Kick Off meeting	1 week before contract start date	HMD Boardroom	<i>Employer, Contractor</i>
Green area meeting	07h25-07h50 Mondays- Thursdays	HMD/ MS Teams	<i>Employer, Contractor</i>
Contractors’ SHEQ meeting	Monthly	Duvha Power Station	<i>Employer’s Rep / Contractor’s Reps / Project Manager</i>
Overall contract progress and feedback meeting	Bi-Monthly	HMD/ MS Teams	<i>Employer, Contractor</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 *Service Manager* by the person convening the meeting within five days of the meeting.

All meetings shall be recorded using minutes or a register prepared and circulated by the person who convened the meeting. Such minutes or register shall not be used for the purpose of confirming actions or instructions under the contract as these shall be done separately by the person identified in the *conditions of contract* to carry out such actions or instructions.

**2.3 Documentation control**

- Data package after all the work has been finished to be submitted within one week after the repairs
- All procedures, work instructions, forms and all contractual communications must be controlled for the duration of the contract.
- All procedures, work instructions, forms and all contractual communications must be controlled for the duration of the contract.
- The following will appear on all controlled documentation as a title page, page header or page footer:
  - Title
  - Document Unique identifier
  - Revision number, original documents will be noted as revision 0. All subsequent revisions will be number sequentially (1, 2, 3, 4....)
  - Revision date
  - Date when document was changed. This date will change with each revision
  - Effective date.
  - Date when document first came into use. This date will not change as the document is revised.

- Inspection reports to be compiled and submitted within two weeks.
- Data packages after all the work has been finished to be submitted within one week after the repairs.
- On completion of the contract all documents, records and files relating to the project/contract need to be submitted to the Service Manager for record keeping.

## 2.4 Invoicing and payment

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

The *Contractor* shall address the tax invoice to

\_\_\_\_\_ and include on each invoice the following information:

- Name and address of the *Contractor* and the *Service Manager*;
- The contract number and title;
- *Contractor's* VAT registration number;
- The *Employer's* VAT registration number 4740101508;
- Description of service provided for each item invoiced based on the Price List;
- Total amount invoiced excluding VAT, the VAT and the invoiced amount including VAT;
- (add other as required)

Add procedures for invoice submission and payment (e. g. electronic payment instructions)

## 2.5 Training workshops and technology transfer

Duvha Power Station will from time-to-time schedule Plant Safety Regulations training; it is responsibility of the *Contractor* to book his personnel for the training.

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

### Documentation

- On completion of the contract all documents, records, data books and files relating to the project/contract need to be submitted to the Service Manager for record keeping.

### Materials

- All materials provided to the contractor must be returned to the Service Manager

## 2.7 Management of work done by Task Order

- The Service Manager(s) issues a Task Order to the Contractor which specifies clearly the work to be provided, additional specifications and procedures and any other constraints the Contractor complies with in providing the Works. The Task Order is issued before the Contractor Provides the Work.
- The Service Manager(s) issues Task Orders to the Contractor in a timely manner that allows the Contractor to properly plan the work within the time periods stated on the Task Order.
- The Service Manager(s) issues to the Contractor any information relative to the Employer's need and circumstance surrounding forecast future work required from the Contractor. This information allows the Contractor to provide staff in a cost effective and efficient manner.

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## 2.8 Emergency work /callouts

- The Service Manager(s) may issue a verbal instruction to the Contractor to undertake emergency work. This verbal instruction is later confirmed in writing.
- The Contractor, without the prior issue of a Task Order, but upon the verbal instruction of the Site Service Manager, Provides the Work in an emergency. This may entail the Contractor securing a sub-Contractor to carry out the work.

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

### 3.1 Health and safety risk management

The Contractor's personnel is to undergo Safety Induction Training at Duvha Power Station prior to commencement of this contract and all the relevant Documentation is to be approved by Safety Officials and the Project Manager before any activities can be started on site.

- The Contractor shall comply with the health and safety requirements contained in SAS0012: Safety, Health and Environmental Specification for Contractors (latest revision obtainable from the Service Manager).
- The Contractor submits all the documents as indicated in the Safety, Health & Environmental Specifications relevant to the work to Safety Risk Management before the induction course.
- Training and Competency Records with regard to the skills he uses to carry out the works or any other works in the Employers premises.
- Compensation Commissioner records and proof of registration.
- Records and documentation with regard to any sub-contractor or labour-only contracts he places or uses to carry out the works or any other works in Employers premises.
- Personal Protective Equipment and Safety Equipment Inspection, training and competency records and documentation.
- Employment contracts for all sub-contractor or labour-only contracts.
- Compliance to a Safety System, such as NOSA or any other system that is similar in nature.
- Records of all incidents or accidents, and vehicle accidents, incurred during execution of this works or any other works in the Employers premises.
- Records of all man-hours, including sub-contractors or labour-only contracts, the Contractor spends on the Employers premises.
- Written Safe Work Procedures for all hazardous tasks the Contractor executes on the Employers premises.
- A Fall Protection Plan for all elevated work the Contractor does on the Employers premises.
- Environmental Plan and awareness training.
- Induction training records of his staff by himself/herself.
- Minimum wage compliance for the different skills and to which Bargaining Council compliance is made to and proof of membership, if any.
- Risk Assessment of this type of works
- Proof of authorisation/accreditation from Department of Labour and or other Statutory Body for this type of works, if applicable
- Emergency Evacuation and Rescue Plan for the hazardous tasks related to the works.
- The Contractor submits all the documents as indicated in the Safety, Health & Environmental Specifications relevant to the works to Safety Risk Management before the induction course. Training and Competency Records regarding the skills he / she uses to carry out the works or any other works on the Employer's premises.
- The induction course is presented by the Safety Risk Department at Duvha Power Station. The Contractor makes arrangements with Safety Risk Management at telephone number 013-690-0143.
- Records and documentation with regard to any sub-contractor or labour-only contracts he places or uses to carry out the works or any other works on Employer's premises.

- The LAR is for the person in charge of the plant to maintain control over activities taking place on his plant that are not covered by the Plant Safety Regulation and Operating Regulations for High Voltage Systems.
- Activities that are allowed to be carried out under the LAR must not require a permit and must satisfy the following criteria:
  - i. There is no risk of trip
  - ii. There is no personal danger
  - iii. No plant isolation is required
  - iv. Activity duration is less than 12 hours
  - v. Activity must be performed by a skilled person
- It is very important that the person who plans to do an activity on a plant under the LAR informs the person in charge of the plant (WTP Controller on the panel or SPO at WTP) of what will be done. This means verbally telling the person in charge of the plant what will be done and not just signing the LAR book. The LAR book must also be signed.
- Contractor shall at all times comply to Eskom's Life Saving Rules, which are:
  - i. Open, isolate, test, earth, bond, and or isolate before touch.
  - ii. Hook up at heights.
  - iii. Buckle up.
  - iv. Be sober.
  - v. Ensure you have permit to work.

Duvha Power Station's additional lifesaving rules.

  - vi. Wear correct PPE at all times.
  - vii. Report all incidents.

The *Contractor* shall comply with the health and safety requirements contained herein

### **3.2 Environmental constraints and management**

The Contractor shall comply with the environmental requirements contained in SAS0012: Safety, Health and Environmental Specification for Contractors (latest revision obtainable from the Service Manager).

- A Project specific Environmental Management Plan – focusing on identifying only project specific environmental risks and their mitigation measures (as per scope of work)
- An Emergency Preparedness and Reaction Plan for Chemical Spillages
- Training for the handling of hazardous substances
- Please provide the service provider with the following environmental procedures: a. ENVP0005 – Work Instruction for Waste Management b. ENVP0031 – Environmental Specifications for Contractors. c. Hydrocarbons management Work instruction (ENVP0030)
- The Contractor shall comply with the environmental criteria and constraints stated in Annexure ENVP 0016: Procedure for environmental handling of waste including redundant and obsolete equipment.
- Refuse Disposal
- The Employer will provide special colour coded bins for refuse disposal. The Employer will empty these bins.
- The Contractor ensures that all workers under his control strictly adhere to the correct use of refuse bins:
- Maroon bins: - Scrap metal only
- White bins: - Lagging and general household rubbish
- Yellow bins: - Ash, dust, coal dust and sand
- For the full duration of the Works, the Contractor is responsible to keep the work area clean of any rubble, and to place all refuse into the bins provided

The *Contractor* shall comply with the environmental criteria and constraints stated herein

### **3.3 Quality assurance requirements**

- All work is carried out under the supervision of an experienced supervisor.
- QCP /Checklist/ ITP (Quality Control Plans) to be in place for all work carried out on site.

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- The Contractor complies with the Employer's Quality Requirements as specified in Eskom Supplier Quality Management Specification (QM58) and the Duvha P/S Maintenance Quality Procedure MGM0001.
- Design code: ASME 8
- ISO 3834 certification
- The Contractor, when using materials that require compliance with a standard specification. The Contractor shall, if so ordered, furnish the Engineer with certificates showing that the material/s do comply.
- Standard for welding requirements on Eskom Plant (240-106628253)
  
- Where specified, materials shall bear the official mark of the appropriate standard.

## 4 Plant and Materials

### 4.1 Specifications

The contractor shall adhere to the following standards listed below:

- OHS&A: Occupational Health and Safety Act: Act 85 of 1993.
- GGSS 0423: Low Pressure Valves.
- 36-775: Control of Plant Construction, Repair and Maintenance Welding Activities
- BS EN 13480: Metallic Industrial Piping Standard
- DIN EN ISO 15614: Piping Standard (WPQR)
- DIN EN ISO 15609: Piping Standard (WPS)
- DIN EN ISO 9606: Piping Standard (WQ)
- 36-505 Personnel and Entities Performing Welding Related Special Processes on the Employer Plant
- 32-631 Eskom approval of personnel performing quality related special processes on Eskom Plant
- SANS 1123:2011 Pipe Flanges

### 4.2 Plant & Materials provided "free issue" by the Employer

- The Employer will supply all the necessary spares required to execute the Works. Once these are handed over to the Contractor, the Contractor is responsible for collection of these, safe transportation from Eskom stores and ensuring safeguarding of these.

### 4.3 Equipment provided by the Contractor

- The Contractor must supply all tools and equipment that are needed for the entire contract period.
- The Contractor provides his/her own lifting equipment and welding machines
- The Contractor provides his/her own personal gas monitors for carrying out work in confined spaces

## **5 Working on the Affected Property**

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

- a) The contractor applies for access permits for all works exceeding four (4) weeks via the Project Manager, who will co-ordinate this.
- b) The Contractor applies for Contractor's Permits for all his employees and/or subcontractors at the Security gate, at least 24 hours prior to entry of the Duvha Power Station Security Area.
- c) The Contractor completes the specific form in the Duvha Power Station Contractors Safety Manual, listing all of the personnel that he intends using on site.
- d) The completed list, identified with the Contractor's name, contains the following information:
  - Employee Name
  - Employee ID Number
  - Eskom Safety Co-ordinator signature
  - Eskom Project Manager signature
  - Validity Date
- e) No permits are issued to personnel who have not attended safety induction.
- f) The Contractor photocopies the first page of the ID book of every one of his employees; reduced to the size 65%.
- g) This completed list, together with the photocopies of the ID books is delivered to Protective Services for the preparation of the Contractor's Permits.
- h) The Contractor allows at least 24 hours for the preparation of the security permits, before he collects the permits from the Protective Services offices.
- i) The Contractor's personnel are required to be in possession of a Contractor's Permit at all times inside Duvha Power Station.
- j) All Contractors' permits are submitted back to Protective Services when the workers leave the site after completion of the works. Failure to return the permits will result in a R25,00 penalty for each non returned permit.
- k) The Contractor compiles detailed Tool Lists (obtainable from Protective Services) of all tools and equipment to be taken on site before arriving at the power station.
- l) Authorised copies of these lists are retained to be used again when the tools and equipment is removed from site.
- m) The Contractor's visitors and all personnel conform to the security arrangements that are in force at Duvha Power Station.
- n) Application forms for visitors are filled in by the Contractor's Site Manager and approved by the Project Manager and submitted to the Employer's Protective Services office one day prior to the visit.
- o) Visitors will not be allowed on site if the necessary forms are not in the possession of security staff.
- p) The Chief Security Officer may, with valid cause, remove any of the Contractor's personnel from site, either temporarily or permanently. He may deny access to the site to any person whom, in the opinion of the said Chief Security Officer, constitutes a security risk.
- q) 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 are directed to the Project Manager for consideration and approval.
- r) The Contractor is restricted to the Site. The Contractor is forbidden to enter any other areas, and ensures that his employees abide by these regulations.
- s) Parking inside the power station is strictly forbidden, except for loading purposes.
- t) No recruiting of casual labour may be done on Eskom premises, including the area outside the Power Station Security Gate.
- u) Security personnel may search any premises, property or person within the security area of Duvha Power Station
- v) No Photographic equipment will be allowed within the security area of the Power Station without obtaining permission.
- w) Application forms for such permission is available from the Protective Services offices.
- x) Any person found in possession of such equipment will be prosecuted in terms of the National Key Point Act

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

The provision of maintenance service and refurbishment during outages on the Sulphur Trioxide (SO<sup>3</sup>) plant units 4, 5, 6 and Outside plant at Duvha Power Station for a period of 5 years.

The Contractor personnel to work the same working hours as Eskom personnel which are: Mondays to Thursday's 7:00 – 16:15, and Fridays 07:00 – 12:00.

The labour is supplied for 173 hours per month. The Contractor must ensure availability of personnel for standby and call outs when required during the weekends and or after normal working hours.

It is very important that the Service Provider keeps records of his people working including those of his Subcontractors. The Service Manager shall have access to them at any time. These records may be needed when assessing compensation events.

The Contractor needs to ensure that personnel on leave are replaced, and the same core crew compliment is maintained all year round.

### **5.3 Health and safety facilities on the Affected Property**

#### **5.3.1 Medical Facilities**

- The *Contractor* provides a First Aid service to his employees and subcontractors. In the case where these prove to be inadequate, like 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 are only available for serious injuries and life-threatening situations.
- The *Employer* recovers the costs incurred, in the use of the above *Employer's* facilities, from the *Contractor*

### **5.4 Equipment provided by the *Employer***

- a) Should the Contractor need to use of any of the Employer's Equipment, including compressed air, electricity, water supply and crane, it must be specified by the Service provider. The Employer does not guarantee continuity of supply of any of these items.
- b) The Employer allows the Contractor to use Overhead Cranes and Hoists, provided the Contractor's employee is an authorised Lifting Machine operator.
- c) The Employer provides scaffolding; the request shall be made through the Service manager or his/ her representative.
- d) 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.
- e) The Contractor is responsible for the repair, replacement or correction as necessary of all pieces of tools and equipment supplied by the Employer which are damaged and / or lost whilst in the Contractor's custody and control.
- f) The Service Provider's site supervisor must ensure that any one of his employees or Sub-Contractor, operating hoist equipment belonging to the Employer, is authorised by an Accredited Company and retraining is done annually.
- g) A copy of this accredited and valid training certificate must be given to the Employer's Service manager, who will then arrange access for usage.

### **5.5 Site services and facilities**

#### **5.5.1 Provided by the *Employer***

- a) Potable Water Supply
  - Potable water is available at the existing points.
- b) Electrical Power Supply

- Power is available at the existing points.
  - The Contractor provides his own portable 380V electrical distribution boards, and supply cables to and from the boards, for all his power supply requirements to execute the works.
  - Contractors' Electrical Distribution Boards complies with OHSA as referred to in the Electrical Installation Regulations and the Electrical Machinery Regulations.
  - Each board brought onto site must have a Certificate of Compliance issued by an accredited person.
  - The Employer connects distribution boards to a 380V three-phase AC power supply, only after the Contractor has submitted the valid Certificate of Compliance.
  - All Contractors' Electrical Distribution Boards are earthed to the steel structure of the plant
- c) Toilet Facilities
- The Employer provides the Contractor access to existing toilet facilities. The Contractor is to provide this facility should the existing facilities not be within reasonable distance from the working area.
- d) Catering Facilities
- The Contractor may buy take away meals from the fast foods' outlet on Site

### **5.5.2 Provided by the Contractor (Site establishment)**

The contractor should provide facilities they deem necessary in executing the work. Refer to SAS0012: Safety, Health and Environmental Specification for Contractors for guidance on facilities required for general safety.

- a. The Contractor provides his own portable 380V electrical distribution boards, and supply cables to and from the boards, for all his power supply requirements to execute the works.
- b. Contractors' Electrical Distribution Boards complies with OHSA as referred to in the Electrical Installation Regulations and the Electrical Machinery Regulations.
- c. Each board brought onto site must have a Certificate of Compliance issued by an accredited person.
- d. The Contractors' electrical distribution boards are installed at the works on a time negotiated with the project manager, prior to the possession date.
- e. The Contractor provides Staff Catering facilities.
- f. The Contractor maintains the yard and provides a hygienic working environment.

## **5.6 Control of noise, dust, water and waste**

- a) The Service provider shall take all responsible measure to minimise any dust nuisance, pollution of stream and inconvenience to or interference with public as a result of the execution of the works.
- b) Remove all rubble and dispose to appropriate facility according to Duvha waste management procedure (EVP0005)

## **5.7 Tests and inspections**

### **5.7.1 Description of tests and inspections**

- The Contractor conducts performance test after installation in the presence of the Service Manager or his/her representative according to the QCP, the end user's and functional requirements.
- All work must be inspected and approved by the Service Manager or his/her representative before it may be covered up.

The provision of maintenance service and refurbishment during outages on the Sulphur Trioxide (SO<sup>3</sup>) plant units 4, 5, 6 and Outside plant at Duvha Power Station for a period of 5 years.

## APPENDIX A

### Minimum tools and equipment required

Item no	Description	Quantity
1	Fitters' toolbox set	2 off
2	Gasket sheet cutter	1 off
3	Portable drilling machine	1 off
4	Portable grinder	1 off
5	Infrared gun thermometer	1 off
6	1.5m heavy duty crowbar	2 off
7	10m and 20m Extension cords	2 each
8	30m extension cord	1 off
9	Pipe/tube bender up to 9-12mm	1 off
10	Pipe/tube cutter 9-12mm	1 off
11	Lifting equipment and tackles	
	1 ton Lever hoist	2 off
	2 ton x 2m nylon sling	3 off
	1.5 ton x 1.2m nylon sling	2 off
	2 ton x 3m nylon sling	3 off
	1 ton x 1m wire sling	2 off
	1.5 ton Chain block	2 off
	1.5 ton bow and D shackle	2 off each
	3 ton geared crawl	1 off
12	Workshop workbench vice	2 off
13	Ring slogging spanners 30,32,36,46,48,55mm	2 off each
14	Open end slogging spanners 55mm	2 off
15	Heavy duty Impact wrench	1 off
16	Safety harness	For each employee working at heights
17	Flood light	4 off
18	Welding machine	2 off
19	Cutting and heating torch with bottles	1 off
20	Bearing puller	1 off
21	8lb Sledgehammer with sando rubber handle	1 off
22	Portable gas monitor	1 off

## APPENDIX B

### Minimum consumables required

Item no	Description
1	Oil rags
2	Cleaning solvents
3	Welding rods
4	Penetrating spray
5	Grease gun
6	Beverages (tea, coffee, milk, sugar)
7	Office supplies (paper/stationery, etc)