

# NEC3 Term Service Contract (TSC3)

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

**and** **[Insert at award stage]**
**(Reg No. _____ )**

**for** **Rubber lining of pipes & vessels on as and when required basis for Duvha Power Station for a period of 5 years..**

---

| **Contents:** | | **No of pages** |
|---|---|---|
| **Part C1** | **Agreements & Contract Data** | **[●]** |
| **Part C2** | **Pricing Data** | **[●]** |
| **Part C3** | **Scope of Work** | **[●]** |

---

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

# PART C1: AGREEMENTS & CONTRACT DATA

**Contents:**


| | | No of pages |
|---|---|---|
| C1.1 | Form of Offer and Acceptance | [●] |
| | [to be inserted from Returnable Documents at award stage] | |
| C1.2a | Contract Data provided by the *Employer* | [●] |
| C1.2b | Contract Data provided by the *Contractor* | [●] |
| | [to be inserted from Returnable Documents at award stage] | |
| C1.3 | Proforma Guarantees | [●] |

# 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:

**Rubber lining of pipes & vessels on as and when required basis for 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** |
| | Sub total | **R** |
| | Value Added Tax @ 15% is | **R** |
| | The offered total of the amount due inclusive of VAT is[1] | **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: .....

[1] 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 | **General** | |
| | The *conditions of contract* are the core clauses and the clauses for main Option: | |
| | | **A: Priced contract with price list** |
| | dispute resolution Option | **W1: Dispute resolution procedure** |
| | and secondary Options | |
| | | **X1: Price adjustment for inflation** |
| | | **X2 Changes in the law** |
| | | **X17 Low service damages** |
| | | **X18: Limitation of liability** |
| | | **X19: Task Order** |
| | | **Z: *Additional conditions of contract*** |
| | of the NEC3 Term Service Contract April 2013[2] (TSC3) | |
| 10.1 | The *Employer* is (name): | **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** |
| | Address | **Registered office at Megawatt Park, Maxwell Drive, Sandton, Johannesburg** |
| | Tel No. | **013 297 9831** |
| | Fax No. | |
| 10.1 | The *Service Manager* is (name): | **Phindile Sibeko** |
| | Address | **Duvha Power Station<br>P O Box 2199, Witbank 1035** |
| | Tel | **013 295 9197** |
| | Fax | **086 2660 443** |

[2] Available from Engineering Contract Strategies Tel 011 803 3008 Fax 086 539 1902 www.ecs.co.za

| | | |
|---|---|---|
| | e-mail | **@eskom.co.za** |
| 11.2(2) | The Affected Property is | **Duvha Power Station** |
| 11.2(13) | The *service* is | **Rubber lining of pipes & vessels on as and when required basis for Duvha Power Station for a period of 5 years.** |
| 11.2(14) | The following matters will be included in the Risk Register | **None.** |
| 11.2(15) | The Service Information is in | **Part 3: Scope of Work and all documents and drawings to which it makes reference.** |
| 12.2 | The *law of the contract* is the law of | **the Republic of South Africa** |
| 13.1 | The *language of this contract* is | **English** |
| 13.3 | The *period for reply* is | **One (1) week** |
| 2 | **The *Contractor*'s main responsibilities** | **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** |
| 21.1 | The *Contractor* submits a first plan for acceptance within | **Four (4) weeks of the Contract Date** |
| 3 | **Time** | |
| 30.1 | The *starting date* is. | **TBC** |
| 30.1 | The *service period* is | **5 years** |
| 4 | **Testing and defects** | **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** |
| 5 | **Payment** | |
| 50.1 | The *assessment interval* is | **After completion of every Task order.** |
| 51.1 | The *currency of this contract* is the | **South African Rand** |
| 51.2 | The period within which payments are made is | **Weeks (5) week after completion of assessment** |
| 51.4 | The *interest rate* is | **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**<br><br>**(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 | **Compensation events** | **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 | **Use of Equipment Plant and Materials** | **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 | **Risks and insurance** | |
| 83.1 | The *Employer* provides these insurances from the Insurance Table | **as stated for "Format TSC3" available on** *http://www.eskom.co.za/Tenders/InsurancePolicies Procedures/Pages/EIMS_Policies_ From_1_April_2014_To_31_March_2015.aspx* **(See Annexure A for basic guidance).** |
| 83.1 | The *Employer* provides these additional insurances | **as stated for "Format TSC3" available on** *http://www.eskom.co.za/Tenders/InsurancePolicies Procedures/Pages/EIMS_Policies_ From_1_April_2014_To_31_March_2015.aspx* **(See Annexure A for basic guidance)** |
| 83.1 | The minimum amount of cover for insurance against loss and damage caused by the *Contractor* to the *Employer*'s property is | **the amount of the deductibles relevant to the event described in the "Format TSC3" insurance policy available on** *http://www.eskom.co.za/Tenders/InsurancePolicies Procedures/Pages/EIMS_Policies_ From_1_April_2014_To_31_March_2015.aspx* |
| 83.1 | The minimum amount of cover for insurance in respect of loss of or damage to property (except the *Employer*'s property, Plant and Materials and Equipment) and liability for bodily injury to or death of a person (not an employee of the *Contractor*) arising from or in connection with the *Contractor*'s Providing the Service for any one event is: | **whatever the *Contractor* deems necessary in addition to that provided by the *Employer*.** |
| 83.1 | The minimum limit of indemnity for insurance in respect of death of or bodily injury to employees of the *Contractor* arising out of and in the course of their employment in connection with this contract for any one event is: | **As prescribed by the Compensation for Occupational Injuries and Diseases Act No. 130 of 1993 and the *Contractor's* common law liability for people falling outside the scope of the Act with a limit of Indemnity of not less than R500 000 (Five hundred thousand Rands)..** |
| **9** | **Termination** | **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** | **Data for main Option clause** | |
| **A** | **Priced contract with price list** | |
| 20.5 | The *Contractor* prepares forecasts of the final total of the Prices for the whole of the *service* at intervals no longer than | **Six (6) weeks.** |
| **11** | **Data for Option W1** | |
| W1.1 | The *Adjudicator* | **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 www.ice-sa.org.za). 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 *Adjudicator nominating body* is: | **the Chairman of ICE-SA a joint Division of the South African Institution of Civil Engineering and the Institution of Civil Engineers (London) (see www.ice-sa.org.za ) or its successor body.** |
| W1.4(2) | The *tribunal* is: | **arbitration** |
| W1.4(5) | The *arbitration procedure* is | **the latest edition of Rules for the Conduct of Arbitrations published by The Association of Arbitrators (Southern Africa) or its successor body.** |
| | The place where arbitration is to be held is | **Johannesburg South Africa** |
| | The person or organisation who will choose an arbitrator<br>- if the Parties cannot agree a choice or<br>- if the arbitration procedure does not state who selects an arbitrator, is | **the Chairman for the time being or his nominee of the Association of Arbitrators (Southern Africa) or its successor body.** |
| **12** | **Data for secondary Option clauses** | |
| **X1** | **Price adjustment for inflation** | |
| X1.1 | The *base date* for indices is | |
| | The proportions used to calculate the Price Adjustment Factor are: | |

| **proportion** | **linked to index for** | **Index prepared by** |
|---|---|---|
| **50%** | **Labour C3A per Hour** | **SEIFSA** |
| **30%** | **CPI D4** | **SEIFSA** |
| **5%** | **Transport L2B** | **SEIFSA** |
| **15%** | **non-adjustable/ Fixed** | **SEIFSA** |
| **100%** | | |

| | | |
|---|---|---|
| **X2** | **Changes in the law** | **There is no reference to Contract Data in this Option and terms in italics are identified elsewhere in this Contract Data.** |
| **X17** | **Low service damages** | |
| **X17.1** | The low service is | |
| | R 3000 up to a maximum total of R 100 000 over the contract period. | Should an oil leak or a water leak occur within six months of operation after a gearbox, valve, pump or any other component replacement carried out by the Contractor. |
| | R 10 000 up to a maximum total of R 100 000 over the contract period. | For rework due to poor installation or sub-standard work e.g re-aligning a pump after installation due to high vibrations. |
| | R 20 000 up to a maximum total of R 500 000 over the contract period. | Should any load losses occur due to proven poor maintenance. |
| | 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.<br><br>(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.) |
| X18.1 | The *Contractor*'s liability to the *Employer* for indirect or consequential loss is limited to | **The contract value** |
| X18.2 | For any one event, the *Contractor*'s liability to the *Employer* for loss of or damage to the *Employer*'s property is limited to | **the amount of the deductibles relevant to the event described in the "Format TSC3" insurance policy available on** *http://www.eskom.co.za/Tenders/InsurancePoliciesProcedures/Pages/EIMS_Policies_From_1_April_2014_To_31_March_2015.aspx* |
| X18.3 | The *Contractor*'s liability for Defects due to his design of an item of Equipment is limited to | **The greater of**<br>• **the total of the Prices at the Contract Date and**<br>• **the amounts excluded and unrecoverable from the *Employer*'s insurance (other than the resulting physical damage to the** |

| | | |
|---|---|---|
| | | ***Employer*'s property which is not excluded) plus the applicable deductibles in the *Employer*'s assets and works / maintenance policies available on** http://www.eskom.co.za/Tenders/InsurancePoliciesProcedures/Pages/EIMS_Policies_<br>• Fr*om_1_April_2014_To_31_March_2015.aspx* |
| X18.4 | The *Contractor*'s total liability to the *Employer*, for all matters arising under or in connection with this contract, other than the excluded matters, is limited to | **the total of the Prices other than for the additional excluded matters.**<br><br>**The *Contractor's* total liability for the additional excluded matters is not limited.**<br><br>**The additional excluded matters are amounts for which the *Contractor* is liable under this contract for**<br><br>• **Defects due to his design, plan and specification,**<br>• **Defects due to manufacture and fabrication outside the Affected Property,**<br>• **loss of or damage to property (other than the *Employer*'s property, Plant and Materials),**<br>• **death of or injury to a person and infringement of an intellectual property right.** |
| X18.5 | The *end of liability date* is | **12 months after the end of the *service period*.** |
| **X19** | **Task Order** | |
| X19.5 | The *Contractor* submits a Task Order programme to the *Service Manager* within | **Two (2) days of receiving the Task Order** |
| **Z** | **The *additional conditions of contract* are** | **Z1 to Z14 always apply.** |

**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**

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.

**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 Action** means to harm or threaten to harm, directly or indirectly, an Affected Party or the 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 *Contractor* to the *Employer*'s property | The replacement cost where not covered by the *Employer*'s insurance.<br><br>The *Employer*'s policy deductible as at Contract Date, where covered by the *Employer*'s insurance. |
| Loss of or damage to Plant and Materials | The replacement cost where not covered by the *Employer*'s insurance.<br><br>The *Employer*'s policy deductible as at Contract Date, where covered by the *Employer*'s insurance. |
| Loss of or damage to Equipment | The replacement cost where not covered by the *Employer*'s insurance.<br><br>The *Employer*'s policy deductible as at Contract Date, where covered by the *Employer*'s insurance. |
| The *Contractor*'s liability for loss of or damage to property (except the *Employer*'s property, Plant and Materials and Equipment) and liability for bodily injury to or death of a person (not an employee of the *Contractor*) arising from or in connection with the *Contractor*'s Providing the Service | <u>Loss of or damage to property</u><br>The replacement cost<br><br><u>Bodily injury to or death of a person</u><br>The amount required by the applicable law. |
| Liability for death of or bodily injury to employees of the *Contractor* 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**

| **Insurance against or name of policy** | **Minimum amount of cover or minimum lir of indemnity** |
|---|---|
| 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 44 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 44 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, normalised 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***

**[Instructions to the contract compiler: (delete this notes before issue to tenderers with an enquiry)** Whenever a cell is shaded in the left hand column it denotes this data is optional and would be required in relation to the option selected. In the event that the option is not required select and delete the whole row.]

**Notes to a tendering contractor:**

1. Please read both the both the NEC3 Term Service Contract April 2013 and the relevant parts of its Guidance Notes (TSC3-GN)[3] in order to understand the implications of this Data which the tenderer is required to complete.
2. The number of the clause which requires the data is shown in the left hand column for each statement however other clauses may also use the same data.
3. Where a form field like this [ ] appears, data is required to be inserted relevant to the option selected. Click on the form field ***once*** and type in the data. Otherwise complete by hand and in ink.

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

| Clause | Statement | Data |
|---|---|---|
| 10.1 | The *Contractor* is (Name): | |
| | Address | |
| | Tel No. | |
| | Fax No. | |
| 11.2(8) | The *direct fee percentage* is | **%** |
| | The *subcontracted fee percentage* is | **%** |

[3] Available from Engineering Contract Strategies Tel 011 803 3008 Fax 086 5391902 or www.ecs.co.za

| | | |
|---|---|---|
| 11.2(14) | The following matters will be included in the Risk Register | |
| 11.2(15) | The Service Information for the *Contractor*'s plan is in: | |
| 21.1 | The plan identified in the Contract Data is contained in: | |
| 24.1 | The key people are:<br>1 Name:<br>Job:<br>Responsibilities:<br>Qualifications:<br>Experience:<br>2 Name:<br>Job<br>Responsibilities:<br>Qualifications:<br>Experience: | |
| | | **CV's (and further key person's data including CVs) are in .** |
| **A** | **Priced contract with price list** | |
| 11.2(12) | The *price list* is in | |
| 11.2(19) | The tendered total of the Prices is | **R** |

**Part 2: Pricing Data**
**TSC3 Option A**

| Document reference | Title | No of pages |
|---|---|---|
| C2.1 | Pricing assumptions: Option A | 2 |
| C2.2 | The *price list* | **[●]** |

# 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:

**Identified and defined terms** 11 11.2 (12) The Price List is the *price list* unless later changed in accordance with this contract.

(17) The Price for Services Provided to Date is the total of

- the Price for each lump sum item in the Price List which the *Contractor* has completed and
- where a quantity is stated for an item in the Price List, an amount calculated by multiplying the quantity which the *Contractor* has completed by the rate.

(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.

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*

## Maintenance Price list

**Schedule A Maintenance : Core crew**

| Item nr | Description | No. | Unit | Expected Quantity | Rate | Price |
|---|---|---|---|---|---|---|
| 1. | Project Manager | 1 | Hr | 2000 | | |
| 2. | Site Supervisor | 1 | Hr | 10088 | | |
| 3. | Safety Officer | 1 | Hr | 2000 | | |
| 4. | Rubber linner | 2 | Hr | 10088 | | |
| 5. | Rubber linner Assistants | 2 | Hr | 10088 | | |
| 6. | Sand bluster | 2 | Hr | 2272 | | |
| 7. | Sand bluster Assistants | 2 | Hr | 2272 | | |
| | | | | | | |

**The total of the Prices**

**Note:**
**1. The hours are estimates only and only the 1st 8 hours will be paid as normal, during the week (Monday to Friday)**

**Schedule B Maintenance: Other Costs**

| Item nr | Description | No. | Unit | Expected Quantity | Rate | Price |
|---|---|---|---|---|---|---|
| 8 | Preliminaries & General Fixed (Once-off) | 1 | ea | 1 | | |
| 9 | Site Establishment: 1x tool containers and 1x Offices 2.35mx6m | 1 | ea | 1 | | |
| 10 | Site De-Establishment tool containers and Offices 2.35mx6m | 1 | ea | 1 | | |
| 11 | Safety (safety file & medicals) | 1 | Yearly | 5 | | |
| 12 | PPE | 1 | Yearly | 5 | | |
| 13 | Transport (Home-Work-Home) | 1 | ea | 730 | | |
| 14 | Transport collect & deliver off site rubber lining (less than 1 tone) | 1 | ea | 150 | | |
| 15 | Transport collect & deliver off site rubber lining (less than 4 tone and more than 1 tone) | 1 | ea | 15 | | |
| 16 | Hire of spark test | 1 | Hr | 1848 | | |
| 17 | PosiTector to test hardness, prifile & | 1 | Hr | 10088 | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | environmental condiotions | | | | | |
| 18 | Hire of sandblasting equipment | 1 | Hr | 5544 | | |
| 19 | Use of autoclave- cooker steam pot (per bake) | 1 | ea | 160 | | |
| 20 | Off site sandblusting | 1 | m2 | 600 | | |
| 21 | Off site pipe painting | 1 | m2 | 600 | | |
| 22 | Butyl rubber | 1 | m2 | 4200 | | |
| 23 | Cutsteel: Cutlaas product | 1 | m2 | 1000 | | |
| 24 | Rubber lining Primmer | 1 | m2 | 4200 | | |
| | | | | | | |

**The total of the Prices**

**Note:**
**1. Preliminaries & General Fixed include: Rubber lining hand tools, polishing grinder, electrical extensions, LED flame proof lights and rubber lining consumables, extraction fan set**
**2. Vehicle rate to include fuel and other associated costs, it's a return trip total of 40km, from home to work and to home.**
**3. Suppliers are to include a separate sheet of the breakdown of items included in the above e.g consumables, SHEQ provision.**
**4. PPE, Top & trouser must be acid chemical proof 65/35 Polyviscose**
**5. Sandblasting equipment: Compressor 180Psi, pot, extraction fan and consumables for sandblasting.**

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

| Item nr | Description | No. | Unit | Normal overtime rate | Estimated hours | Price |
|---|---|---|---|---|---|---|
| 25 | Project Manager | 1 | Hr | | 350 | |
| 26 | Site Supervisor | 1 | Hr | | 2800 | |
| 27 | Safety Officer | 1 | Hr | | 350 | |
| 28 | Rubber linner | 2 | Hr | | 2800 | |
| 29 | Rubber linner Assistants | 2 | Hr | | 2800 | |
| 30 | Sand bluster | 2 | Hr | | 900 | |
| 31 | Sand bluster Assistants | 2 | Hr | | 900 | |

**The total of the Prices**

**Note:**
**1. Overtime rate will be after 8 hours of normal time and on Saturday.**

**Schedule D Maintenance: Overtime rates (2.0) Sundas & Public holidays**

| Item nr | Description | No. | Unit | Normal overtime rate | Estimated hours | Price |
|---|---|---|---|---|---|---|
| 32 | Project Manager | 1 | Hr | | 250 | |
| 33 | Site Supervisor | 1 | Hr | | 1038 | |
| 34 | Safety Officer | 1 | Hr | | 250 | |
| 35 | Rubber linner | 2 | Hr | | 1048 | |
| 36 | Rubber linner Assistants | 2 | Hr | | 1048 | |
| 37 | Sand bluster | 2 | Hr | | 400 | |
| 38 | Sand bluster Assistants | 2 | Hr | | 400 | |
| | | | | | | |
| | **TOTAL OF PRICES** | | | | | |

# Outage Price list

**Schedule E Outage : Core crew**

| Item nr | Description | No. | Unit | Expected Quantity | Rate | Price |
|---|---|---|---|---|---|---|
| 1. | Project Manager | 1 | Hr | 500 | | |
| 2. | Site Supervisor | 1 | Hr | 2522 | | |
| 3. | Safety Officer | 1 | Hr | 500 | | |
| 4. | Rubber linner | 2 | Hr | 2522 | | |
| 5. | Rubber linner Assistants | 2 | Hr | 2522 | | |
| 6. | Sand bluster | 2 | Hr | 568 | | |
| 7. | Sand bluster Assistants | 2 | Hr | 568 | | |
| | | | | | | |

**The total of the Prices**

**Note:**
**1. The hours are estimates only and only the 1st 8 hours will be paid as normal, during the week (Monday to Friday)**

**Schedule F Outage: Other Costs**

| Item nr | Description | No. | Unit | Expected Quantity | Rate | Price |
|---|---|---|---|---|---|---|
| 8 | Preliminaries & General Fixed (once off) | 1 | ea | 1 | | |
| 9 | Safety (safety file & medicals) per outage | 1 | ea | 3 | | |
| 10 | PPE per outage | 1 | ea | 3 | | |
| 11 | Transport (Home-Work-Home) | 1 | day | 200 | | |
| 12 | Transport collect & deliver off site rubber lining (less than 1 tone) | 1 | ea | 50 | | |
| 13 | Transport collect & deliver off site rubber lining (less than 4 tone and more than 1 tone) | 1 | ea | 3 | | |
| 14 | Hire of spark test | 1 | Hr | 2522 | | |
| 15 | PosiTector to test hardness, prifile & environmental condiotions | 1 | Hr | 462 | | |
| 16 | Hire of sandblasting equipment | 1 | Hr | 1386 | | |
| 17 | Use of autoclave- cooker steam pot (per bake) | 1 | Ea | 40 | | |
| 18 | Off site sandblusting | 1 | m2 | 200 | | |
| 19 | Off site pipe painting | 1 | m2 | 200 | | |
| 20 | Butyl rubber | 1 | m2 | 1050 | | |
| 21 | Cutsteel: Cutlaas product | 1 | m2 | 120 | | |
| 22 | Rubber lining Primmer | 1 | m2 | 1050 | | |
| | | | | | | |

**The total of the Prices**

**1. Preliminaries & General Fixed include: Rubber lining hand tools, polishing grinder, electrical extensions, LED flame proof lights and rubber lining consumables, extraction fan set**
**2. Vehicle rate to include fuel and other associated costs, it's a return trip total of 40km, from home to work and to home.**
**3. Suppliers are to include a separate sheet of the breakdown of items included in the above e.g consumables, SHEQ provision.**
**4. PPE, Top & trouser must be acid chemical proof 65/35 Polyviscose**
**5. Sandblasting equipment: Compressor 180Psi, pot, extraction fan and consumables for sandblasting.**

**Schedule G Maintenance: Overtime rates (1.5)**

| Item nr | Description | No. | Unit | Normal overtime rate | Estimated hours | Price |
|---|---|---|---|---|---|---|
| 23 | Project Manager | 1 | Hr | | 100 | |
| 24 | Site Supervisor | 1 | Hr | | 500 | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 25 | Safety Officer | 1 | Hr | | 100 | |
| 26 | Rubber linner | 2 | Hr | | 500 | |
| 27 | Rubber linner Assistants | 2 | Hr | | 500 | |
| 28 | Sand bluster | 2 | Hr | | 200 | |
| 29 | Sand bluster Assistants | 2 | Hr | | 200 | |

**TOTAL PRICES**

**Schedule G Outage: Overtime rates (2.0) Sundas & Public holidays**

| Item nr | Description | No. | Unit | Normal overtime rate | Estimated hours | Price |
|---|---|---|---|---|---|---|
| 30 | Project Manager | 1 | Hr | | 100 | |
| 31 | Site Supervisor | 1 | Hr | | 450 | |
| 32 | Safety Officer | 1 | Hr | | 100 | |
| 33 | Rubber linner | 2 | Hr | | 450 | |
| 34 | Rubber linner Assistants | 2 | Hr | | 450 | |
| 35 | Sand bluster | 2 | Hr | | 100 | |
| 36 | Sand bluster Assistants | 2 | Hr | | 100 | |
| | **TOTAL PRICES** | | | | | |

**TOTAL TENDERED PRICE EXCLUDING VAT**

# Part 3: Scope of Work

| Document reference | Title | No of pages |
|---|---|---|
| | This cover page | 1 |
| C3.1 | *Employer*'s Service Information | |
| C3.2 | *Contractor*'s Service Information | |
| | Total number of pages | |

# C3.1: Employer's service Information

## 1. Description of the *service*

### 1.1 Executive overview

The service is the provision of the rubber lining inside the tank & pipes service to the water treatment plant and its auxiliaries. Rubber lining includes, inspecting, testing, rubber removal, sand blasting, rubber lining patch repairs and rubber lining full repairs of equipment for Maintenance and Outages.

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

- The *Contractor* provides a crew that will be site per task order issued for repairs per programm provided. Monday to Friday will be normal working hours, 8 hours per day.
- The *Contractor* can be requested work on Sartday or Sunday or/and public holidays.
- The *Contractor* provides qualified labour to carry out the service.
- All vessels will be done at Eskom promises.
- For pipes will the done at *Contactor's* site.
- 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 task.
- The *Contractor* performs quality control on own work as per pre-approved quaility control plans.
- The *Contractor* performs work within the specified period and to the acceptable quality standard.
- All testing equipment must a have a valid calibrated certificates.

#### 1.3 Core crew and standby arrangement

##### 1.3.1 Core crew

The *service provider* provides a skilled rubber lining crew that will be site based during execution. Project Manager & safety officer will be as when required on site.

Base crew

1x Project Manager
1x Site Supervisor
1x Safety Officer
2x Rubber linner
2x Rubber linner Assistants
2x Sand bluster
2x Sand bluster Assistants

Overtime shall be approved by the Service *Manager* in writing prior to commencement of such overtime. Overtime hours shall be governed by the Basic Conditions of Employment Act.

### 1.4 The works consist of the repairs and maintenance of the following:

Rubber lining of pipes & vessels at Duvha Power Station. Rubber lining includes, inspecting, testing, rubber removal, sand blasting, rubber lining patch repairs and rubber lining full repairs of equipment.

The following sub- systems shall be rubber lined be the contractor:

1.4.1 Demin Cation vessels & pipes

- There are 3 Cation vessels in the demineralisation plant.

Table : Cation vessel design specification

| Parameter | Value | Unit |
|---|---|---|
| Height | 4.8 | m |
| Diameter | 3 | m |
| Shell surface area | 45.24 | $m^2$ |
| Top dome surface area | 10.6 | $m^2$ |
| Bottom dome surface area | 10.6 | $m^2$ |
| Total surface area | 66.44 | $m^2$ |
| Vessel Volume | 40 | $m^3$ |
| Design P/T | 500@50 | kPa/$^0$C |
| Operating P/T | 250@50 | kPa/$^0$C |
| Material of Contruction | Rubber lined mild steel | - |

- The Contractor & Eskom must conduct a detailed visual inspection and pin-hole detection testing (no more than 3 kilovolts per mm) on the existing rubber to check the condition of the rubber lining and identify the defects. Identify and mark-up the defects or the areas requiring the repairs.
- The Contractor must strip & re-rubber line the damed area the vessel using 6mm Grade A butyl rubber. Sandblast the whole vessel with silica free sand blasting grit.
- The Contractor must ensure that there is a system installed which will remove the dust created during sandblasting and must be exhausted outside the building in a designated area.
- The contractor should take note that this is a demineralisation plant and hence the cleanliness during blasting operations is of outmost importance to prevent contamination during production. Refer specifications on surface preparation and rubber lining.
- Table can be used to determine the rubber lining requirements for the vessel. The supports must also be rubber lined with 6 mm Grade A butyl rubber. The supports must be straightened before rubber lining is done.
- The floor of the vessel must also be rubber lined. The Contractor must take note that the floor is constructed out of cement. After the rubber lining is removed, the floor must be inspected to see if it is level. If it is not level, an additional screed must be put in by Eskom
- The floor must then be lightly sandblasted to create the required blast profile. The floor must be cleaned by using a vacuum prior to rubber lining. The products used for the rubber lining must also be manufactured for use on concrete floors.
- The manholes must also be rubber lined.
- Eskom will be responsible to remove, nozzles, laterals and pipes inside the vessels for access & install back after rubber lining is completed.
- Contractor to rubber line test sample panels shall be (100mm X 200mm X 2mm) will be required per vessel.
- Inlet & oulet pipes pipes that need rubber lining will be removed by Eskom, Contactor will collect from Duvha Power station to their site to re-rubber line and deliver back to the station

1.4.2 Demin Degasser vessels & pipes.

- There are 3 Degasser vessels in the demineralisation plant.

Table : Degasser vessel design specification

| Parameter | Value | Unit |
|---|---|---|
| Height | 4.8 | m |
| Diameter | 2.5 | m |
| Shell surface area | 45.6 | $m^2$ |
| Top dome surface area | 7.25 | $m^2$ |
| Total surface area | 52.85 | $m^2$ |
| Vessel Volume | 40 | $m^3$ |
| Design P/T | Atm.@40 | kPa/$^0$C |
| Operating P/T | Atm.@25 | kPa/$^0$C |
| Material of Contruction | Rubber lined mild steel | - |

- The Contractor & Eskom must conduct a detailed visual inspection and pin-hole detection testing (no more than 3 kilovolts per mm) on the existing rubber to check the condition of the rubber lining and identify the defects. Identify and mark-up the defects or the areas requiring the repairs.
- The Contractor must strip & re-rubber line the damed area the vessel using 6mm Grade A butyl rubber. Sandblast the whole vessel with silica free sand blasting grit.
- The Contractor must ensure that there is a system installed which will remove the dust created during sandblasting and must be exhausted outside the building in a designated area.
- The contractor should take note that this is a demineralisation plant and hence the cleanliness during blasting operations is of outmost importance to prevent contamination during production. Refer specifications on surface preparation and rubber lining.
- Table can be used to determine the rubber lining requirements for the vessel. The supports must also be rubber lined with 6 mm Grade A butyl rubber. The supports must be straightened before rubber lining is done.
- The floor of the vessel must also be rubber lined.
- The manholes must also be rubber lined.
- Eskom will be responsible to remove, nozzles, laterals and pipes inside the vessels for access & install back after rubber lining is completed.
- Test sample panels shall be (100mm X 200mm X 2mm) will be required per vessel.
- Inlet & oulet pipes pipes that need rubber lining will be removed by Eskom, Contactor will collect from Duvha Power station to their site to re-rubber line and deliver back to the station

1.4.3 Demin Weak Base vessels & pipes.

- There are 3 Weak Base vessels in the demineralisation plant.

Table : Weak Base vessel design specification

| Parameter | Value | Unit |
|---|---|---|
| Height | 2 | m |
| Diameter | 2.8 | m |
| Shell surface area | 19 | $m^2$ |
| Top dome surface area | 6.16 | $m^2$ |
| Bottom dome surface area | 6.16 | $m^2$ |
| Total surface area | 31.32 | $m^2$ |
| Vessel Volume | 40 | $m^3$ |
| Design P/T | 650@60 | kPa/$^0$C |
| Operating P/T | 400@50 | kPa/$^0$C |
| Material of Contruction | Rubber lined mild steel | - |

- The Contractor & Eskom must conduct a detailed visual inspection and pin-hole detection testing (no more than 3 kilovolts per mm) on the existing rubber to check the condition of the rubber lining and identify the defects. Identify and mark-up the defects or the areas requiring the repairs.
- The Contractor must strip & re-rubber line the damed area the vessel using 6mm Grade A butyl rubber. Sandblast the whole vessel with silica free sand blasting grit.
- The Contractor must ensure that there is a system installed which will remove the dust created during sandblasting and must be exhausted outside the building in a designated area.
- The contractor should take note that this is a demineralisation plant and hence the cleanliness during blasting operations is of outmost importance to prevent contamination during production. Refer specifications on surface preparation and rubber lining.
- Table can be used to determine the rubber lining requirements for the vessel. The supports must also be rubber lined with 6 mm Grade A butyl rubber. The supports must be straightened before rubber lining is done.
- The floor of the vessel must also be rubber lined. The Contractor must take note that the floor is constructed out of cement. After the rubber lining is removed, the floor must be inspected to see if it is level. If it is not level, an additional screed must be put in by Eskom
- The floor must then be lightly sandblasted to create the required blast profile. The floor must be cleaned by using a vacuum prior to rubber lining. The products used for the rubber lining must also be manufactured for use on concrete floors.
- The manholes must also be rubber lined.
- Eskom will be responsible to remove, nozzles, laterals and pipes inside the vessels for access & install back after rubber lining is completed.
- Test sample panels shall be (100mm X 200mm X 2mm) will be required per vessel.
- Inlet & oulet pipes pipes that need rubber lining will be removed by Eskom, Contactor will collect from Duvha Power station to their site to re-rubber line and deliver back to the station

1.4.4 Demin Strong Base vessels & pipes.

- There are 3 Strong Base vessels in the demineralisation plant.

Table : Strong Base vessel design specification

| Parameter | Value | Unit |
|---|---|---|
| Height | 3 | m |
| Diameter | 2.8 | m |
| Shell surface area | 22 | $m^2$ |
| Top dome surface area | 6.84 | $m^2$ |
| Bottom dome surface area | 6.84 | $m^2$ |
| Total surface area | 35.68 | $m^2$ |
| Vessel Volume | | $m^3$ |
| Design P/T | 650@60 | kPa/$^0$C |
| Operating P/T | 270@50 | kPa/$^0$C |
| Material of Contruction | Rubber lined mild steel | - |

- The Contractor & Eskom must conduct a detailed visual inspection and pin-hole detection testing (no more than 3 kilovolts per mm) on the existing rubber to check the condition of the rubber lining and identify the defects. Identify and mark-up the defects or the areas requiring the repairs.
- The Contractor must strip & re-rubber line the damed area the vessel using 6mm Grade A butyl rubber. Sandblast the whole vessel with silica free sand blasting grit.
- The Contractor must ensure that there is a system installed which will remove the dust created during sandblasting and must be exhausted outside the building in a designated area.
- The contractor should take note that this is a demineralisation plant and hence the cleanliness during blasting operations is of outmost importance to prevent contamination during production. Refer specifications on surface preparation and rubber lining.
- Table can be used to determine the rubber lining requirements for the vessel. The supports must also be rubber lined with 6 mm Grade A butyl rubber. The supports must be straightened before rubber lining is done.

- The floor of the vessel must also be rubber lined. The Contractor must take note that the floor is constructed out of cement. After the rubber lining is removed, the floor must be inspected to see if it is level. If it is not level, an additional screed must be put in by Eskom
- The floor must then be lightly sandblasted to create the required blast profile. The floor must be cleaned by using a vacuum prior to rubber lining. The products used for the rubber lining must also be manufactured for use on concrete floors.
- The manholes must also be rubber lined.
- Eskom will be responsible to remove, nozzles, laterals and pipes inside the vessels for access & install back after rubber lining is completed.
- Test sample panels shall be (100mm X 200mm X 2mm) will be required per vessel.
- Inlet & oulet pipes pipes that need rubber lining will be removed by Eskom, Contactor will collect from Duvha Power station to their site to re-rubber line and deliver back to the station

1.4.5 Demin Mixed Bed vessels & pipes.

- There are 3 Mixed Bed vessels in the demineralisation plant.

Table : Mixed Bed vessel design specification

| Parameter | Value | Unit |
|---|---|---|
| Height | 2.25 | m |
| Diameter | 2.4 | m |
| Shell surface area | 17 | $m^2$ |
| Top dome surface area | 6.81 | $m^2$ |
| Bottom dome surface area | 6.81 | $m^2$ |
| Total surface area | 30.62 | $m^2$ |
| Vessel Volume | 13 | $m^3$ |
| Design P/T | 650@60 | kPa/$^0$C |
| Operating P/T | 140@40 | kPa/$^0$C |
| Material of Contruction | Rubber lined mild steel | - |

- The Contractor & Eskom must conduct a detailed visual inspection and pin-hole detection testing (no more than 3 kilovolts per mm) on the existing rubber to check the condition of the rubber lining and identify the defects. Identify and mark-up the defects or the areas requiring the repairs.
- The Contractor must strip & re-rubber line the damed area the vessel using 6mm Grade A butyl rubber. Sandblast the whole vessel with silica free sand blasting grit.
- The Contractor must ensure that there is a system installed which will remove the dust created during sandblasting and must be exhausted outside the building in a designated area.
- The contractor should take note that this is a demineralisation plant and hence the cleanliness during blasting operations is of outmost importance to prevent contamination during production. Refer specifications on surface preparation and rubber lining.
- Table can be used to determine the rubber lining requirements for the vessel. The supports must also be rubber lined with 6 mm Grade A butyl rubber. The supports must be straightened before rubber lining is done.
- The floor of the vessel must also be rubber lined.
- The manholes must also be rubber lined.
- Eskom will be responsible to remove, nozzles, laterals and pipes inside the vessels for access & install back after rubber lining is completed.
- Test sample panels shall be (100mm X 200mm X 2mm) will be required per vessel.
- Inlet & oulet pipes pipes that need rubber lining will be removed by Eskom, Contactor will collect from Duvha Power station to their site to re-rubber line and deliver back to the station

1.4.7 CPP Cation vessels & pipes

- There are 3 Cation vessels in the Condensate Polishing Regeneration plant.

Table : Cation vessel design specification

| Parameter | Value | Unit |
|---|---|---|
| Height | 3.25 | m |
| Diameter | 2 | m |
| Shell surface area | 22 | $m^2$ |
| Top dome surface area | 3.5 | $m^2$ |
| Bottom dome surface area | 3.5 | $m^2$ |
| Total surface area | 29 | $m^2$ |
| Vessel Volume | | $m^3$ |
| Design P/T | 1200@80 | kPa/$^0$C |
| Operating P/T | 400@40 | kPa/$^0$C |
| Material of Contruction | Rubber lined mild steel | - |

- The Contractor & Eskom must conduct a detailed visual inspection and pin-hole detection testing (no more than 3 kilovolts per mm) on the existing rubber to check the condition of the rubber lining and identify the defects. Identify and mark-up the defects or the areas requiring the repairs.
- The Contractor must strip & re-rubber line the damed area the vessel using 6mm Grade A butyl rubber. Sandblast the whole vessel with silica free sand blasting grit.
- The Contractor must ensure that there is a system installed which will remove the dust created during sandblasting and must be exhausted outside the building in a designated area.
- The contractor should take note that this is a demineralisation plant and hence the cleanliness during blasting operations is of outmost importance to prevent contamination during production. Refer specifications on surface preparation and rubber lining.
- Table can be used to determine the rubber lining requirements for the vessel. The supports must also be rubber lined with 6 mm Grade A butyl rubber. The supports must be straightened before rubber lining is done.
- The floor of the vessel must also be rubber lined.
- The manholes must also be rubber lined.
- Eskom will be responsible to remove, nozzles, laterals and pipes inside the vessels for access & install back after rubber lining is completed.
- Test sample panels shall be (100mm X 200mm X 2mm) will be required per vessel.
- Inlet & oulet pipes pipes that need rubber lining will be removed by Eskom, Contactor will collect from Duvha Power station to their site to re-rubber line and deliver back to the station

1.4.8 CPP Anion vessels & pipes

- There are 3 Anion vessels in the Condensate Polishing Regeneration plant.

Table : Anion vessel design specification

| Parameter | Value | Unit |
|---|---|---|
| Height | 3.25 | m |
| Diameter | 1.5 | m |
| Shell surface area | 17 | $m^2$ |
| Top dome surface area | 2 | $m^2$ |
| Bottom dome surface area | 2 | $m^2$ |
| Total surface area | 21 | $m^2$ |
| Vessel Volume | | $m^3$ |
| Design P/T | 1200@80 | kPa/$^0$C |
| Operating P/T | 400@40 | kPa/$^0$C |
| Material of Contruction | Rubber lined mild steel | - |

- The Contractor & Eskom must conduct a detailed visual inspection and pin-hole detection testing (no more than 3 kilovolts per mm) on the existing rubber to check the condition of the rubber lining and identify the defects. Identify and mark-up the defects or the areas requiring the repairs.
- The Contractor must strip & re-rubber line the damed area the vessel using 6mm Grade A butyl rubber. Sandblast the whole vessel with silica free sand blasting grit.
- The Contractor must ensure that there is a system installed which will remove the dust created during sandblasting and must be exhausted outside the building in a designated area.
- The contractor should take note that this is a demineralisation plant and hence the cleanliness during blasting operations is of outmost importance to prevent contamination during production. Refer specifications on surface preparation and rubber lining.
- Table can be used to determine the rubber lining requirements for the vessel. The supports must also be rubber lined with 6 mm Grade A butyl rubber. The supports must be straightened before rubber lining is done.
- The floor of the vessel must also be rubber lined.
- The manholes must also be rubber lined.
- Eskom will be responsible to remove, nozzles, laterals and pipes inside the vessels for access & install back after rubber lining is completed.
- Test sample panels shall be (100mm X 200mm X 2mm) will be required per vessel.
- Inlet & oulet pipes pipes that need rubber lining will be removed by Eskom, Contactor will collect from Duvha Power station to their site to re-rubber line and deliver back to the station

1.4.9 CPP Resin Storage vessels & pipes

- There are 3 Resin Storage vessels in the Condensate Polishing Regeneration plant.

Table : Resin Storage vessel design specification

| Parameter | Value | Unit |
|---|---|---|
| Height | 2.75 | m |
| Diameter | 2 | m |
| Shell surface area | 18 | $m^2$ |
| Top dome surface area | 3 | $m^2$ |
| Bottom dome surface area | 3 | $m^2$ |
| Total surface area | 24 | $m^2$ |
| Vessel Volume | | $m^3$ |
| Design P/T | 1200@80 | kPa/$^0$C |
| Operating P/T | 400@40 | kPa/$^0$C |
| Material of Contruction | Rubber lined mild steel | - |

- The Contractor & Eskom must conduct a detailed visual inspection and pin-hole detection testing (no more than 3 kilovolts per mm) on the existing rubber to check the condition of the rubber lining and identify the defects. Identify and mark-up the defects or the areas requiring the repairs.
- The Contractor must strip & re-rubber line the damed area the vessel using 6mm Grade A butyl rubber. Sandblast the whole vessel with silica free sand blasting grit.
- The Contractor must ensure that there is a system installed which will remove the dust created during sandblasting and must be exhausted outside the building in a designated area.
- The contractor should take note that this is a demineralisation plant and hence the cleanliness during blasting operations is of outmost importance to prevent contamination during production. Refer specifications on surface preparation and rubber lining.
- Table can be used to determine the rubber lining requirements for the vessel. The supports must also be rubber lined with 6 mm Grade A butyl rubber. The supports must be straightened before rubber lining is done.
- The floor of the vessel must also be rubber lined.
- The manholes must also be rubber lined.
- Eskom will be responsible to remove, nozzles, laterals and pipes inside the vessels for access & install back after rubber lining is completed.
- Test sample panels shall be (100mm X 200mm X 2mm) will be required per vessel.

- Inlet & oulet pipes pipes that need rubber lining will be removed by Eskom, Contactor will collect from Duvha Power station to their site to re-rubber line and deliver back to the station

1.4.10 CPP Interface Resin layer Storage vessels & pipes

- There are 2 Interface Resin layer Storage vessels in the Condensate Polishing Regeneration plant.

Table : Interface Resin layer Storage vessel design specification

| Parameter | Value | Unit |
|---|---|---|
| Height | 1.2 | m |
| Diameter | 0.8 | m |
| Shell surface area | 3 | $m^2$ |
| Top dome surface area | 0.2 | $m^2$ |
| Bottom dome surface area | 0.5 | $m^2$ |
| Total surface area | 3.7 | $m^2$ |
| Vessel Volume | | $m^3$ |
| Design P/T | 1200@80 | kPa/$^0$C |
| Operating P/T | 400@40 | kPa/$^0$C |
| Material of Contruction | Rubber lined mild steel | - |

- The Contractor & Eskom must conduct a detailed visual inspection and pin-hole detection testing (no more than 3 kilovolts per mm) on the existing rubber to check the condition of the rubber lining and identify the defects. Identify and mark-up the defects or the areas requiring the repairs.
- The Contractor must strip & re-rubber line the damed area the vessel using 6mm Grade A butyl rubber. Sandblast the whole vessel with silica free sand blasting grit.
- The Contractor must ensure that there is a system installed which will remove the dust created during sandblasting and must be exhausted outside the building in a designated area.
- The contractor should take note that this is a demineralisation plant and hence the cleanliness during blasting operations is of outmost importance to prevent contamination during production. Refer specifications on surface preparation and rubber lining.
- Table can be used to determine the rubber lining requirements for the vessel. The supports must also be rubber lined with 6 mm Grade A butyl rubber. The supports must be straightened before rubber lining is done.
- The floor of the vessel must also be rubber lined.
- The manholes must also be rubber lined.
- Eskom will be responsible to remove, nozzles, laterals and pipes inside the vessels for access & install back after rubber lining is completed.
- Test sample panels shall be (100mm X 200mm X 2mm) will be required per vessel.
- Inlet & oulet pipes pipes that need rubber lining will be removed by Eskom, Contactor will collect from Duvha Power station to their site to re-rubber line and deliver back to the station

1.4.11 Demin Hot Water Tank & pipes

- There is 1 Hot Water Tank in the demineralisation plant.

Table : Hot Water Tank design specification

| Parameter | Value | Unit |
|---|---|---|
| Height | | m |
| Diameter | | m |
| Shell surface area | | $m^2$ |
| Top dome surface area | | $m^2$ |
| Bottom dome surface area | | $m^2$ |
| Total surface area | | $m^2$ |
| Vessel Volume | | $m^3$ |
| Design P/T | 1200@80 | kPa/$^0$C |
| Operating P/T | 400@40 | kPa/$^0$C |
| Material of Contruction | Rubber lined mild steel | - |

- The Contractor & Eskom must conduct a detailed visual inspection and pin-hole detection testing (no more than 3 kilovolts per mm) on the existing rubber to check the condition of the rubber lining and identify the defects. Identify and mark-up the defects or the areas requiring the repairs.
- The Contractor must strip & re-rubber line the damed area the vessel using 6mm Grade A butyl rubber. Sandblast the whole vessel with silica free sand blasting grit.
- The Contractor must ensure that there is a system installed which will remove the dust created during sandblasting and must be exhausted outside the building in a designated area.
- The contractor should take note that this is a demineralisation plant and hence the cleanliness during blasting operations is of outmost importance to prevent contamination during production. Refer specifications on surface preparation and rubber lining.
- Table can be used to determine the rubber lining requirements for the vessel. The supports must also be rubber lined with 6 mm Grade A butyl rubber. The supports must be straightened before rubber lining is done.
- The floor of the vessel must also be rubber lined.
- The manholes must also be rubber lined.
- Eskom will be responsible to remove heater element
- Test sample panels shall be (100mm X 200mm X 2mm) will be required per vessel.
- Inlet & oulet pipes pipes that need rubber lining will be removed by Eskom, Contactor will collect from Duvha Power station to their site to re-rubber line and deliver back to the station

1.4.12 CPP Hot Water Tank & pipes

- There is 1 Hot Water Tank in the Condensate Polishing Regeneration plant.

Table : Hot Water Tank design specification

| Parameter | Value | Unit |
|---|---|---|
| Height | | m |
| Diameter | | m |
| Shell surface area | | $m^2$ |
| Top dome surface area | | $m^2$ |
| Bottom dome surface area | | $m^2$ |
| Total surface area | | $m^2$ |
| Vessel Volume | | $m^3$ |
| Design P/T | 1200@80 | kPa/$^0$C |
| Operating P/T | 400@40 | kPa/$^0$C |
| Material of Contruction | Rubber lined mild steel | - |

- The Contractor & Eskom must conduct a detailed visual inspection and pin-hole detection testing (no more than 3 kilovolts per mm) on the existing rubber to check the condition of the rubber lining and identify the defects. Identify and mark-up the defects or the areas requiring the repairs.
- The Contractor must strip & re-rubber line the damed area the vessel using 6mm Grade A butyl rubber. Sandblast the whole vessel with silica free sand blasting grit.
- The Contractor must ensure that there is a system installed which will remove the dust created during sandblasting and must be exhausted outside the building in a designated area.
- The contractor should take note that this is a demineralisation plant and hence the cleanliness during blasting operations is of outmost importance to prevent contamination during production. Refer specifications on surface preparation and rubber lining.
- Table can be used to determine the rubber lining requirements for the vessel. The supports must also be rubber lined with 6 mm Grade A butyl rubber. The supports must be straightened before rubber lining is done.
- The floor of the vessel must also be rubber lined.
- The manholes must also be rubber lined.
- Eskom will be responsible to remove heater element
- Test sample panels shall be (100mm X 200mm X 2mm) will be required per vessel.
- Inlet & oulet pipes pipes that need rubber lining will be removed by Eskom, Contactor will collect from Duvha Power station to their site to re-rubber line and deliver back to the station

1.4.13 Unit 1-6 CPP vessels & pipes

- There are 3 vessels in the Condensate Polishing Regeneration plant per unit, total of 18 vessels.

Table : CPP vessel design specification

| Parameter | Value | Unit |
|---|---|---|
| Height | | m |
| Diameter | | m |
| Shell surface area | | $m^2$ |
| Top dome surface area | | $m^2$ |
| Bottom dome surface area | | $m^2$ |
| Total surface area | | $m^2$ |
| Vessel Volume | | $m^3$ |
| Design P/T | 1200@80 | kPa/$^0$C |
| Operating P/T | 400@40 | kPa/$^0$C |
| Material of Contruction | Rubber lined mild steel | - |

- The Contractor & Eskom must conduct a detailed visual inspection and pin-hole detection testing (no more than 3 kilovolts per mm) on the existing rubber to check the condition of the rubber lining and identify the defects. Identify and mark-up the defects or the areas requiring the repairs.
- The Contractor must strip & re-rubber line the damed area the vessel using 6mm Grade A butyl rubber. Sandblast the whole vessel with silica free sand blasting grit.
- The Contractor must ensure that there is a system installed which will remove the dust created during sandblasting and must be exhausted outside the building in a designated area.
- The contractor should take note that this is a demineralisation plant and hence the cleanliness during blasting operations is of outmost importance to prevent contamination during production. Refer specifications on surface preparation and rubber lining.
- Table can be used to determine the rubber lining requirements for the vessel. The supports must also be rubber lined with 6 mm Grade A butyl rubber. The supports must be straightened before rubber lining is done.
- The floor of the vessel must also be rubber lined.
- The manholes must also be rubber lined.
- Eskom will be responsible to remove, nozzles, laterals and pipes inside the vessels for access & install back after rubber lining is completed.
- Test sample panels shall be (100mm X 200mm X 2mm) will be required per vessel.
- Inlet & oulet pipes pipes that need rubber lining will be removed by Eskom, Contactor will collect from Duvha Power station to their site to re-rubber line and deliver back to the station

1.4.14 Ammonia hydroxide storage vessels & pipes

- There are 2 vessels in the bulk chemical storage area.

Table : CPP vessel design specification

| Parameter | Value | Unit |
|---|---|---|
| Height | | m |
| Diameter | | m |
| Shell surface area | | $m^2$ |
| Top dome surface area | | $m^2$ |
| Bottom dome surface area | | $m^2$ |
| Total surface area | | $m^2$ |
| Vessel Volume | | $m^3$ |
| Design P/T | 1200@80 | kPa/$^0$C |
| Operating P/T | 400@40 | kPa/$^0$C |
| Material of Contruction | Rubber lined mild steel | - |

- The Contractor & Eskom must conduct a detailed visual inspection and pin-hole detection testing (no more than 3 kilovolts per mm) on the existing rubber to check the condition of the rubber lining and identify the defects. Identify and mark-up the defects or the areas requiring the repairs.
- The Contractor must strip & re-rubber line the damed area the vessel using 6mm Grade A butyl rubber. Sandblast the whole vessel with silica free sand blasting grit.
- The Contractor must ensure that there is a system installed which will remove the dust created during sandblasting and must be exhausted outside the building in a designated area.
- The contractor should take note that this is a demineralisation plant and hence the cleanliness during blasting operations is of outmost importance to prevent contamination during production. Refer specifications on surface preparation and rubber lining.
- Table can be used to determine the rubber lining requirements for the vessel. The supports must also be rubber lined with 6 mm Grade A butyl rubber. The supports must be straightened before rubber lining is done.
- The floor of the vessel must also be rubber lined.
- The manholes must also be rubber lined.
- Eskom will be responsible to remove pipes inside the vessels for access & install back after rubber lining is completed.
- Test sample panels shall be (100mm X 200mm X 2mm) will be required per vessel.
- Inlet & oulet pipes pipes that need rubber lining will be removed by Eskom, Contactor will collect from Duvha Power station to their site to re-rubber line and deliver back to the station

1.4.15 Low concetration Ammonia hydroxide vessels & pipes

- There are 2 vessels in the bulk chemical storage area.

Table : CPP vessel design specification

| Parameter | Value | Unit |
|---|---|---|
| Height | | m |
| Diameter | | m |
| Shell surface area | | $m^2$ |
| Top dome surface area | | $m^2$ |
| Bottom dome surface area | | $m^2$ |
| Total surface area | | $m^2$ |
| Vessel Volume | | $m^3$ |
| Design P/T | 1200@80 | kPa/$^0$C |
| Operating P/T | 400@40 | kPa/$^0$C |
| Material of Contruction | Rubber lined mild steel | - |

- The Contractor & Eskom must conduct a detailed visual inspection and pin-hole detection testing (no more than 3 kilovolts per mm) on the existing rubber to check the condition of the rubber lining and identify the defects. Identify and mark-up the defects or the areas requiring the repairs.
- The Contractor must strip & re-rubber line the damed area the vessel using 6mm Grade A butyl rubber. Sandblast the whole vessel with silica free sand blasting grit.
- The Contractor must ensure that there is a system installed which will remove the dust created during sandblasting and must be exhausted outside the building in a designated area.
- The contractor should take note that this is a demineralisation plant and hence the cleanliness during blasting operations is of outmost importance to prevent contamination during production. Refer specifications on surface preparation and rubber lining.
- Table can be used to determine the rubber lining requirements for the vessel. The supports must also be rubber lined with 6 mm Grade A butyl rubber. The supports must be straightened before rubber lining is done.
- The floor of the vessel must also be rubber lined.
- The manholes must also be rubber lined.
- Eskom will be responsible to remove pipes inside the vessels for access & install back after rubber lining is completed.
- Test sample panels shall be (100mm X 200mm X 2mm) will be required per vessel.
- Inlet & oulet pipes pipes that need rubber lining will be removed by Eskom, Contactor will collect from Duvha Power station to their site to re-rubber line and deliver back to the station

1.4.16 Low concetration Ammonia hydroxide vessels & pipes

- There are 2 vessels in the bulk chemical storage area.

Table : CPP vessel design specification

| Parameter | Value | Unit |
|---|---|---|
| Height | | m |
| Diameter | | m |
| Shell surface area | | $m^2$ |
| Top dome surface area | | $m^2$ |
| Bottom dome surface area | | $m^2$ |
| Total surface area | | $m^2$ |
| Vessel Volume | | $m^3$ |
| Design P/T | 1200@80 | kPa/$^0$C |
| Operating P/T | 400@40 | kPa/$^0$C |
| Material of Contruction | Rubber lined mild steel | - |

- The Contractor & Eskom must conduct a detailed visual inspection and pin-hole detection testing (no more than 3 kilovolts per mm) on the existing rubber to check the condition of the rubber lining and identify the defects. Identify and mark-up the defects or the areas requiring the repairs.
- The Contractor must strip & re-rubber line the damed area the vessel using 6mm Grade A butyl rubber. Sandblast the whole vessel with silica free sand blasting grit.
- The Contractor must ensure that there is a system installed which will remove the dust created during sandblasting and must be exhausted outside the building in a designated area.
- The contractor should take note that this is a demineralisation plant and hence the cleanliness during blasting operations is of outmost importance to prevent contamination during production. Refer specifications on surface preparation and rubber lining.
- Table can be used to determine the rubber lining requirements for the vessel. The supports must also be rubber lined with 6 mm Grade A butyl rubber. The supports must be straightened before rubber lining is done.
- The floor of the vessel must also be rubber lined.
- The manholes must also be rubber lined.
- Eskom will be responsible to remove pipes inside the vessels for access & install back after rubber lining is completed.
- Test sample panels shall be (100mm X 200mm X 2mm) will be required per vessel.
- Inlet & oulet pipes pipes that need rubber lining will be removed by Eskom, Contactor will collect from Duvha Power station to their site to re-rubber line and deliver back to the station

## 1.5 Interpretation and terminology

The following abbreviations are used in this Services Information:

| **Abbreviation** | **Meaning given to the abbreviation** |
|---|---|
| WTP | Water Treatment Plant |
| PSR | Plant Safety Regulations |
| PTW | Permit To Work |
| QC | Quality control |
| QCP | Quality control Plan |
| CM | Corrective Maintenance |
| PM | Planned maintenance |
| SHEQ | Safety, Health, Environment and Quality |
| HV | High Voltage |
| CCW | Circulating Cooling Watet |

| Abbreviation | Meaning given to the abbreviation |
|---|---|
| CPP | Condensate polishing Plant |
| V/V | Valve |
| LAR | Limited Access Register |
| SPO | Senior Plant Oparator |
| | |

### 1.6 Specifications

| Title | Date or revision | Tick if publicly available |
|---|---|---|
| **General Specifications:** | | |
| Occupational Health and Safety Act 85 of 1993 and its regulations | | ✓ |
| Basic Conditions of Employment Act | | ✓ |
| | | |
| 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 |
| **Technical specifications:** | | |
| • Supply Contract Quality Requirements Specification (QM58) | | Available from the service manager |
| • Quality procedure MGM0001 | | Available from the service manager |
| • Work in Confined Spaces (SAP0006) | | Available from the service manager |
| • Criteria for environmental monitoring of work (SAI 0082) | | Available from the service manager |
| Procedure for environmental handling of waste including redundant and obsolete equipment (ENVP 0016) | | Available from the service manager |
| | | |

## 2 Management strategy and start up

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

### 2.2 Management meetings

| Title and purpose | Approximate time & interval | Location | Attendance by: |
|---|---|---|---|
| Task Progress meeting | As per request | Duvha Power Station | *Employer*, *Contractor* and planner. |
| Contract Monthly meeting | Monthly at 09:30-10:30 | Duvha Power Station | *Employer*, *Contractor* |

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

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

### 2.4 Minimum requirements of people employed

The following key people must meet the minimum requirements tabled under each designation

**Site/Project Manager**

- Minimum five years experience in construction or maintenance environment
- Mananging training/qualification
- Safety training
- Computer literate
- 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
- Raising of quality inspection/control documentation and non-conformance reports, effecting, tracking and closing including filing of such.
- Provide advice in respect to plant problems and possible solutions.
- Assist with recommissioning of plant and perform tests and inspections as required.
- Preparing and completion of quality control plans
- Ensuring compliance to the Eskom Quality requirements standard (QM 58)

**Supervisor**

- Supervisory training/qualification
- Safety training.
- Minimum three years in rubber lining.
- Control daily activities
- Prioritise and allocate work
- Monitor progress and report progress
- Perform first line quality control

**Rubber liner**

- Minimum of 3 years experience in rubber lining.

**Sand bluster**

- Minimum of 3 years experience in Sand blusting.

### 2.5 Documentation control

- 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 last 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.

- All contractual communications will be in the form of properly compiled letters or forms attached to e mails and not as a message in the e mail itself.

- Inspections reports to be compiled and submitted within two weeks.

- Data package 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.

### 2.6 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 Eskom Holdings Limited's VAT (4740101508) and Company Registration Number (2002/015527/06). The tax invoice shall be saved in PDF and sent to invoiceseskomlocal@mp2rc110.eskom.co.za and include on each invoice the following information:

Name and address of the *Contractor* and the *Service Manager;*
The contract number and title;
*Contractor*'s VAT registration number;
The *Employer*'s VAT registration number 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)

### 2.8 Records of Defined Cost to be kept by the *Contractor*

The *Contractor* keeps accurate and complete books of accounts, records and other evidence relating to the Actual Cost. Records and accounts must reflect all work done on the contract. These are open to audit. All documentation is kept by the *Contractor* for a period of three years following Completion of this contract. This information must be kept up to date at all times.

The *Contractor* may be requested to submit to the delegated *Service Manager* proof of costs incurred, which may include the following*:*

- the number and grading of employees within the Working Areas
- the number and grading of employees outside the Working Areas
- copies of their daily time cards
- cost allocation
- payroll registers
- Schedule of Equipment and time sheets, and
- Any other information the delegated *Project Manager* reasonably requires.

### 2.10 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.

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

#### 2.12.1 Equipment

None.

#### 2.12.2 Information and other things

All records, data books, inspection reports etc relating to the *Works.*

### 2.13 Management of work done by Task Order

The *Service Manager* 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* issues Task Order*s* 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* 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.

Emergency *work*

The *Service Manager* may issue a verbal instruction to the *Contractor* to undertake emergency work. This verbal instruction is confirmed in writing within 5 days from when the instruction is issued.

## 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 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: Duvha Power Station Contractors safety manual (latest revision obtainable from the Service Manager
- The documents are completed by the *Contractor's* and submitted to the *Employer* before taking possession of the works.
- These documents are valid for the duration of the works.
- The *Contractor* and all his personnel attend a Health and Safety Induction Course prior to starting with the *works*.
- 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.
- 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.

### 3.2 Environmental constraints and management

- 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 – Waste Management Procedure
  b. ENVP0031 – Environmental Specifications for Contractors.
- 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 W*orks*, the *Contractor* is responsible to keep the work area clean of any rubble, and to place all refuse into the bins provided

### 3.3 Quality assurance requirements

- All work is carried out under the supervision of an experienced supervisor.
- The *Contractor* complies with the *Employer*'s Quality Requirements as specified in Eskom Generation Standard QM58.
- 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.
- 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:

- OHSA: 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*

a) The *Employer* will provide power supply, water and land for the storage of equipment and material.
b) The *Employer will* supply all the necessary material required to execute the *Works*. Once these are handed over to the *Contractor,* the *Contractor* is responsible for ensuring safeguarding of these.
c) Should the *Contractor* need to use of any of the *Employer's* Equipment, including compressed air, electricity, water supply and mobilr crane, it must be specified by the Contracto*r.* The *Employer* does not guarantee continuity of supply of any of these items.

### 4.3 Contractor's Equipment

The Contractor must supply all tools and equipment that are needed for the entire contract period.

## 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 *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 and the lunch break is 12:00 – 12:30.
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. During callout, hours will start counting from entering Duvha site when living side.

It is very important that the *Contractor* 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.

### 5.3 Equipment provided by the *Employer*

- The *Employer* allows the *Contractor* to use Overhead Cranes and Hoists, provided the *Contractor's* employee is an authorised Lifting Machine operator.
- The *Employer* provides scaffolding, the request shall be made through the Service manager or his/ her representative.
- Should the Contractor require using any of the Employer's Equipment, including compressed air, electricity, water supply and crane, it must be specified by the Contractor during the kick off meeting. The Employer does not guarantee continuity of supply of any of these items.

- The Employer shall be entitled to withdraw use of the said Equipment, should proper maintenance and cleanliness not be ensured. In that event, the *Contractor* shall be obliged to provide the necessary Equipment at his own cost.
- The *Contractor* 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.
- The *Contractor* site manager 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. Arrangements for training courses can be made via Duvha Power Station Maintenance Training but the *Contractor* will absorb costs.
- A copy of this accredited and valid training certificate must be given to the *Employer's Supervisor*, who will then arrange access for usage.

### 5.4 Site services and facilities

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 Contractors' electrical distribution boards are installed at the works on a time negotiated with the project manager, prior to the possession date.
   - 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 Eskom will provides ablution facilities for its personnel.

d) Catering Facilities
   - The Contractor are not allowed to use the Employer's dining facilities, unless a specific agreement has been made between the Contractor and Eskom Catering and Accommodation Services (ECAS).
   - The Contractor may buy take away meals from the fast foods outlet on Site.

e) 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*

### 5.6 Employer's Site entry and security control, permits, and Site regulations

#### 5.6.1 Restrictions to access on Site, roads, walkways and barricades

a) Pedestrian crossings are marked on the power station roads and should be used.
b) Walkways are clearly marked on the Power Station and should be used when walking to keep safe on any object that might fall.
c) Barricades are provided where there are open trenches and around the sumps and manholes.
d) The contractor shall occupy only such ground as is necessary to carry out the works.

e) All fences and other structure that have been damaged or interfered with by the contractor shall be restored to be in a condition at least equivalent to their original condition.

### 5.6.2 Plant Safety Regulations

a) 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.
b) Activities that are allowed to be carried out under the LAR must not require a permit and must satisfy the following criteria:

   i) They must not involve danger to the person carrying out the activity
   ii) No plant isolations must be required
   iii) The activity must be performed by a skilled person and there must be no risk of a production loss
   iv) The duration of the activity must be less than 24 hours
   v) The Authorised Supervisor accompanies the Contractor during the first instances of working under a LAR on a specific plant area.

c) 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.
d) It is also important that as soon as the activity is completed the person, who was doing the activity, notify (verbally) the person in charge of the plant that conditions are back to normal and that the LAR has been signed off. Signing the LAR book silently without notifying the person in charge of the plant is not sufficient.
e) For more information please refer to Plant Safety Regulation C11.
f) The Contractor is required to have as a minimum 80% of its site personell authorised as Responsible Persons/Authorised supervisor/s as per the Eskom's Plant Safety Regulations.

### 5.6.3 Provided by the *Contractor*

The contractor should provide facilities they deem necessary in executing the work. This must be discussed with the Project Manager prior to commencement of work.

### 5.6.4 Tests and inspections

- The *Contactor* shall conduct 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 system engineer and project manager before it may be covered up.

### 5.7 List of drawings

None