# NEC3 Term Service Contract (TSC3)

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

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

**for** Refurbishment and supply of Tutuka P/S WTP Vertical Sand filter and Anion Supply Pumps on an “as and when” required basis for a period of 5 years.

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

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# PART C1: AGREEMENTS & CONTRACT DATA

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# 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:

**Refurbishment of and supply Tutuka P/S WTP Vertical Sand filter and Anion Supply Pumps on an "as and when" required basis 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 | 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

| No. | Subject | Details |
|---|---|---|
| 1 | **N/A** | **N/A** |
| 2 | **N/A** | **N/A** |

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.*

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

| 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** |
| | | **X20: Key performance indicators** |
| | | **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. | **[●]** |
| | Fax No. | **[●]** |
| 10.1 | The *Service Manager* is (name): | **[●]** |
| | Address | **[●]** |
| | Tel | **[●]** |
| | Fax | **[●]** |

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

| | | |
|---|---|---|
| | e-mail | **[●]** |
| 11.2(2) | The Affected Property is | Tutuka Power Station – Main stores |
| 11.2(13) | The *service* is | Refurbishment and supply of Tutuka P/S WTP Vertical Sand filter and Anion Supply Pumps on an "as and when" required basis for a period of 5 years. |
| 11.2(14) | The following matters will be included in the Risk Register | As stipulated in the Site information section of this contract (**Appendix C** on the last page of this document) |
| 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 | **24 Hours** |
| 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 | Not Applicable |
| 3 | **Time** | |
| 30.1 | The *starting date* is. | **[●]** |
| 30.1 | The *service period* is | **60 Months** |
| 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 | **On Completion of each Task / order** |
| 51.1 | The *currency of this contract* is the | **South African Rand** |
| 51.2 | The period within which payments are made is | **60 Days** |
| 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** | |
| 80.1 | These are additional *Employer*'s risks | **Refer to Risk Register on an appendix C Insurance as stipulated on Z12 clause.** |
| **9** | **Termination** | **Termination will be dealt with as per NEC3 TSC termination clauses** |
| **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 | **Not Applicable** |
| **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).** |
| | Address | **[●]** |
| | Tel No. | **[●]** |
| | Fax No. | **[●]** |
| | e-mail | **[●]** |
| 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 | **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 month prior to the enquiry closing date.** |
| | The proportions used to calculate the Price Adjustment Factor are: | **proportion** / **linked to index for** / **Index prepared by**<br>**0.** / **[●]** / **[●]**<br>**0.** / **[●]** / **[●]**<br>**0.** / **[●]** / **[●]**<br>**0.** / **[●]** / **[●]**<br>**0.** / **[●]** / **[●]**<br>**15%** / **non-adjustable**<br>**100%** |
| **X2** | **Changes in the law** | **Of the Republic of South Africa.** |
| **X17** | **Low service damages** | |
| X17.1 | The *service level table* is in | Appendix A on the Second last page of this document |
| **X18** | **Limitation of liability** | |
| X18.1 | The *Contractor*'s liability to the *Employer* for indirect or consequential loss is limited to | **R0.0 (zero Rand)** |
| 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** |
| 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** |

| | | |
|---|---|---|
| | | • **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** |
| 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**<br>• **infringement of an intellectual property right.** |
| X18.5 | The *end of liability date* is | **6 months after installation of each refurbished Pump** |
| **X19** | **Task Order** | |
| X19.5 | The *Contractor* submits a Task Order programme to the *Service Manager* within | **7 days of receiving the Task Order/ Order** |
| **X20** | **Key Performance Indicators (not used when Option X12 applies)** | |
| X20.1 | The *incentive schedule* for Key Performance Indicators is in | As indicated on the last **Annexure B** of scope of work of this document. No incentives will be paid out for Key performance indicators |
| X20.2 | A report of performance against each Key Performance Indicator is provided at intervals of | The performance of the *Contractor* will be assessed 6 monthly to ensure transparency and good performance is sustained |
| **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 | Loss of or damage to property<br>The replacement cost<br><br>Bodily injury to or death of a person<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 47 of 1999, save to the extent that any liabilities are incurred due to the unlawful intent of the *Contractor* or any other person or the presence of the *Contractor* or that person or any property of the *Contractor* or such person at or in the KNPS or on the KNPS site, without the permission of the *Employer* or of a person acting on behalf of the *Employer*.

Z13.3 Subject to clause Z13.4 below, the *Employer* waives all rights of recourse, arising from the aforesaid, save to the extent that any claims arise or liability is incurred due or attributable to the unlawful intent of the *Contractor* or any other person, or the presence of the *Contractor* or that person or any property of the *Contractor* or such person at or in the KNPS or on the KNPS site, without the permission of the *Employer* or of a person acting on behalf of the *Employer*.

Z13.4 The *Employer* does not waive its rights provided for in section 30 (7) of Act 47 of 1999, or any replacement section dealing with the same subject matter.

Z13.5 The protection afforded by the provisions hereof shall be in effect until the KNPS is decommissioned.

## Z14 Asbestos

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

| | |
|---|---|
| **AAIA** | means approved asbestos inspection authority. |
| **ACM** | means asbestos containing materials. |
| **AL** | means action level, i.e. a level of 50% of the OEL, i.e. 0.1 regulated asbestos fibres per ml of air measured over a 4 hour period. The value at which proactive actions is required in order to control asbestos exposure to prevent exceeding the OEL. |
| **Ambient Air** | means breathable air in area of work with specific reference to breathing zone, which is defined to be a virtual area within a radius of approximately 30cm from the nose inlet. |
| **Compliance Monitoring** | means compliance sampling used to assess whether or not the personal exposure of workers to regulated asbestos fibres is in compliance with the Standard's requirements for safe processing, handling, storing, disposal and phase-out of asbestos and asbestos containing material, equipment and articles. |
| **OEL** | means occupational exposure limit. |
| **Parallel Measurements** | means measurements performed in parallel, yet separately, to existing measurements to verify validity of results. |
| **Safe Levels** | means airborne asbestos exposure levels conforming to the Standard's requirements for safe processing, handling, storing, disposal and phase-out of asbestos and asbestos containing material, equipment and articles. |
| **Standard** | means the *Employer*'s Asbestos Standard 32-303: Requirements for Safe Processing, Handling, Storing, Disposal and Phase-out of Asbestos and Asbestos Containing Material, Equipment and Articles. |
| **SANAS** | means the South African National Accreditation System. |
| **TWA** | means the average exposure, within a given workplace, to airborne asbestos fibres, 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.

**Additional Z clauses**

- **The *Employer* reserves the right to terminate the contract should the *Contractor* fail to deliver/perform the service/s as per the scope of work**.
- **The *Employer* reserves the right to terminate the contract, once 3 non-conformances are raised against the *Contractor.***

# C1.2 Contract Data

## Part two - Data provided by the *Contractor.*

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

| Clause | Statement | Data |
|---|---|---|
| 10.1 | The *Contractor* is (Name):<br>Address<br>Tel No.<br>Fax No. | |
| 11.2(8) | The *direct fee percentage* is<br>The *subcontracted fee percentage* is | **%**<br>**%** |
| 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 |
|---|---|
| C2.1 | Pricing assumptions: Option A |
| 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*

## Refurbishment as and when required.

Sand filter Supply Pump: Stock Number (566763)
(Pump Model: CPW-V 8x4x17S) – 55kW Motor (F120 Coupling)

| Item nr | Description | Unit | Rate |
|---|---|---|---|
| 1 | Pump Collection from site and Transportation to Contractor's Workshop | EA | |
| 2 | Pump Striping/Disassembly, Cleaning, Dimensional Checks, NDT Inspections and compilation of Contractor's Pump Assessment and Repair Scope of Work Report | EA | |
| 3 | **Sourcing/Supply of Pump Spare Parts and Consumables** | | |
| 3.1 | Pump Casing (SS 316L) **x1** | EA | |
| 3.2 | Impeller (SS 316L) **x1** | EA | |
| 3.3 | Volute Wear Plate (SS 316L) **x1** | EA | |
| 3.4 | Volute Back Cover (SS 316L) **x1** | EA | |
| 3.5 | Pump Base Plate (Mild Steel (30mm thickness) **x1** | EA | |
| 3.6 | Pump Discharge Pipe (SS 316L) **x1** | EA | |
| 3.7 | Pump Column (Mild Steel) **x3** | EA | |
| 3.8 | Intermediate Shaft (EN57) **x2** | EA | |
| 3.9 | Bottom Shaft (EN57) **x1** | EA | |
| 3.10 | Thrust Shaft (EN57) **x1** | EA | |
| 3.11 | Motor Support Stool (Mild Steel) **x1** | EA | |
| 3.12 | Intermediate Bearing Housing (for Line Shafts) (SS 316L) **x3** | EA | |
| 3.13 | Intermediate Shaft Sleeve (SS 316L) **x7** | EA | |
| 3.14 | Intermediate Bearing Bush (High-Lube Vesconite) **x 3** | EA | |
| 3.15 | Shaft Coupling (EN57) **x3** | EA | |
| 3.16 | Hook Sleeve (SS 316L) **x1** | EA | |
| 3.17 | Casing Clamp Lugs (SS 316L) **x16** | EA | |

| | | | |
|---|---|---|---|
| 3.18 | Oil Seals (for Intermediate Bearings) (VITON) **x3** | EA | |
| 3.19 | Casing Gaskets (Acid Resistant) **x3** | EA | |
| 3.20 | Wear Plate Gasket (Acid Resistant) **x1** | EA | |
| 3.21 | Column and Discharge Pipe Gaskets (Acid resistant) **Complete Set for Pump** | EA | |
| 3.22 | Gland Seal Box (EN8) **x1** | EA | |
| 3.23 | Gland Seal Cap (EN8) **x1** | EA | |
| 3.24 | Thrust Bearing Housing Support (EN8) **x1** | EA | |
| 3.25 | Water Deflector Plate (Below Bearing Housing) (Mild Steel) x1 | EA | |
| 3.26 | Grease Deflector Plate (Above Bearing Housing) (Mild Steel) **x1** | EA | |
| 3.27 | Thrust Angular Contact Ball Bearing (SKF 3318-19) **x1** | EA | |
| 3.28 | Oil Seal (Gland Box) (VITON) **x2** | EA | |
| 3.29 | Oil Seal (Below Bearing Housing) (VITON) **x1** | EA | |
| 3.30 | Oil Seal (Above Bearing Housing) (VITON) **x1** | EA | |
| 3.31 | Bearing Housing (EN8) **x1** | EA | |
| 3.32 | Bearing Cap (EN8) **x1** | EA | |
| 3.33 | Adjusting Plate (Mild Steel) **x1** | EA | |
| 3.34 | Intermediate Bearings Cooling Water tubing/Piping and Swagelok fittings (SS 316L) **Complete Set** | EA | |
| 3.35 | Bolts, Nuts, Studs, Lock Nuts, Washers, Screws, Caps (SS 316L) **Complete Set for Pump** | EA | |
| 3.36 | Pump Guards (Mild Steel) **x2** | EA | |
| 3.37 | Thrust Shaft Key (EN57) **x1** | EA | |
| 3.38 | Spare Components Testing/Certification **As per SOW** | EA | |
| 4 | Pump Coating/Corrosion Protection of Required Components as per SOW (Coating Products **as per SoW**) | EA | |
| 5 | Complete Pump Re- Assembly **x1** | EA | |
| 6 | Pump Performance Testing (ISO 9906) **X1** | EA | |
| 7 | Documentation and QC Data Package | EA | |

| | | | |
|---|---|---|---|
| | Compilation and Submission **X1** | | |

**Anion Supply Pump: Stock Number (566768)**
**(CPW-V 8x5x17L) – 110kW Motor (F140 Coupling)**

| Item nr | Description | Unit | Rate |
|---|---|---|---|
| 1 | Pump Collection from site and Transportation to Contractor's Workshop | EA | |
| 2 | Pump Striping/Disassembly, Cleaning, Dimensional Checks, NDT Inspections and compilation of Contractor's Pump Assessment and Repair Scope of Work Report | EA | |
| 3 | **Sourcing/Supply of Pump Spare Parts and Consumables** | EA | |
| 3.1 | Pump Casing (SS 316L) **x1** | EA | |
| 3.2 | Impeller (SS 316L) **x1** | EA | |
| 3.3 | Volute Wear Plate (SS 316L) **x1** | EA | |
| 3.4 | Volute Back Cover (SS 316L) **x1** | EA | |
| 3.5 | Pump Base Plate (Mild Steel (30mm thickness) **x1** | EA | |
| 3.6 | Pump Discharge Pipe (SS 316L) **x1** | EA | |
| 3.7 | Pump Column (Mild Steel) **x2** | EA | |
| 3.8 | Intermediate Shaft (EN57) **x1** | EA | |
| 3.9 | Bottom Shaft (EN57) **x1** | EA | |
| 3.10 | Thrust Shaft (EN57) **x1** | EA | |
| 3.11 | Motor Support Stool (Mild Steel) **x1** | EA | |
| 3.12 | Intermediate Bearing Housing (for Line Shafts) (SS 316L) **x2** | EA | |
| 3.13 | Intermediate Shaft Sleeve (SS 316L) **x5** | EA | |
| 3.14 | Intermediate Bearing Bush (High-Lube Vesconite) **x 2** | EA | |
| 3.15 | Shaft Coupling (EN57) **x2** | EA | |
| 3.16 | Hook Sleeve (SS 316L) **x1** | EA | |
| 3.17 | Casing Clamp Lugs (SS 316L) **x16** | EA | |
| 3.18 | Oil Seals (for Intermediate Bearings) (VITON) **x2** | EA | |

| | | | |
|---|---|---|---|
| 3.19 | Casing Gaskets (Acid Resistant) **x3** | EA | |
| 3.20 | Wear Plate Gasket (Acid Resistant) **x1** | EA | |
| 3.21 | Column and Discharge Pipe Gaskets (Acid resistant) **Complete Set for Pump** | EA | |
| 3.22 | Gland Seal Box (EN8) **x1** | EA | |
| 3.23 | Gland Seal Cap (EN8) **x1** | EA | |
| 3.24 | Thrust Bearing Housing Support (EN8) **x1** | EA | |
| 3.25 | Water Deflector Plate (Below Bearing Housing) (Mild Steel) x1 | EA | |
| 3.26 | Grease Deflector Plate (Above Bearing Housing) (Mild Steel) **x1** | EA | |
| 3.27 | Thrust Angular Contact Ball Bearing (SKF 3318-19) **x1** | EA | |
| 3.28 | Oil Seal (Gland Box) (VITON) **x2** | EA | |
| 3.29 | Oil Seal (Below Bearing Housing) (VITON) **x1** | EA | |
| 3.30 | Oil Seal (Above Bearing Housing) (VITON) **x1** | EA | |
| 3.31 | Bearing Housing (EN8) **x1** | EA | |
| 3.32 | Bearing Cap (EN8) **x1** | EA | |
| 3.33 | Adjusting Plate (Mild Steel) **x1** | EA | |
| 3.34 | Intermediate Bearings Cooling Water tubing/Piping and Swagelok fittings (SS 316L) **Complete Set** | EA | |
| 3.35 | Bolts, Nuts, Studs, Lock Nuts, Washers, Screws, Caps (SS 316L) **Complete Set for Pump** | EA | |
| 3.36 | Pump Guards (Mild Steel) **x2** | EA | |
| 3.37 | Thrust Shaft Key (EN57) **x1** | EA | |
| 3.38 | Spare Components Testing/Certification **As per SOW** | EA | |
| 4 | Pump Coating/Corrosion Protection of Required<br>Components as per SOW (Coating Products **as per SoW**) | EA | |
| 5 | Complete Pump Re- Assembly **x1** | EA | |
| 6 | Pump Performance Testing (ISO 9906) **X1** | EA | |
| 7 | Documentation and QC Data Package Compilation and Submission **X1** | EA | |

## Supply as and when required.

| Item nr | Stock Number | Description | Unit | Rate |
|---|---|---|---|---|
| 1 | 566763 | Supply of Completely New Sand Filter Pump Unit (including all testing and documentation) – In the event original pump requires scrapping. (As per SOW) | EA | |
| 2 | 566768 | Supply of Completely New Anion Supply Pump Unit (including all testing and documentation) – In the event original pump requires scrapping. (As per SOW) | EA | |

# PART 3: SCOPE OF WORK

| Document reference | Title |
|---|---|
| | This cover page |
| C3.1 | *Employer*'s Service Information |
| C3.2 | *Contractor*'s Service Information |

# : EMPLOYER'S SERVICE INFORMATION

## Contents

# 1 Description of the *service*

## 1.1 Executive overview

The scope of work is to detail the requirements for the full refurbishment of the Anion and Sand filter Supply Pumps on an “as and when” required basis over a five (5) year contractual period.

Tutuka Power Station’s Water Treatment Plant (WTP) is equipped with three (3) demineralized. water (ion exchange) production trains. Each train is fitted with a Vertical Spindle (CPW-V 8x5x17L) Centrifugal Anion Supply Pump (full 316L stainless steel construction – Demineralized Water Application), capable of delivering at a duty point flowrate of 222m3/hr. at a discharge pressure of 6.35bar (A). An illustration of the vertical spindle pump is depicted. Below:

Fig.1: Tutuka P/S – Vertical Anion Supply Pump (3.0m length)

In addition, the Potable Water Production Plant is also equipped with eight (8) Vertical (CPWV 8x4x17S) Centrifugal Sand filter Supply Pumps [316L stainless steel (wet end) / carbon steel construction (top end)] capable of delivering at a duty point flowrate of 225m3/hr at a discharge. pressure of 4.8bar (A). An illustration of the vertical spindle pump is depicted below:

Fig.2: Tutuka P/S – Vertical Sand filter Supply Pump (4.8m length)

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

This scope details the full refurbishment on an "as and when" required basis (i.e. pump collection from site and transport to Pump Repairer Workshop, full pump strip down to component level and detailed component condition assessment, sourcing and supply of pump OEM manufactured and approved spare parts, pump re-assembly, pump performance testing and delivery of pump to Tutuka Power Station Main Stores) of the Anion and Sand filter Supply Vertical Pumps at Tutuka Power Station's Water Treatment Plant. This pump refurbishment works is required to be carried out within a maximum period of four (4) working weeks per pump refurbishment (from the time of collection of the defective pump from site). In the event, when it is not economically feasible to carry-out a full refurbishment of the pump (due to its condition/state when fully assessed) a full replacement of the pump, with a completely new pump unit will be required to be costed, sourced and supplied by the *Contractor* to the *Employer*, within a maximum period twelve (12) to fourteen (14) weeks.

### 1.2.1 Roles and Responsibilities

a) The Eskom Engineer and Maintenance Technician together with the Eskom Quality Inspector will conduct all quality checks during the pump refurbishment works, which are carried out by the *Contractor*.
b) *Contractor* shall be fully responsible for the implementation of the defined scope of work.
c) The *Contractor* shall be responsible for ensuring that all Sub-Contracting Parties are fully conversant with the requirements of this scope of work and referenced standards in this document.
d) The *Contractor* shall be responsible for quality assurance and control. Any approval, check, certificate, consent, examination, inspection, instruction, notice, proposal, request, test, or similar act by Eskom (including absence of disapproval) shall not relieve the *Contractor* from any responsibility under the Contract, including responsibility for errors, omissions, discrepancies and non-compliances.
e) The *Contractor* shall take note of and respond to any comments made by Eskom on the *Contractor's* documents. However, Eskom is not bound to check the *Contractor's* documents for any errors, omissions, ambiguities or discrepancies or compliance with the requirements of the Contract. Eskom's receipt of, or review of, or comment on, the *Contractor's* documents will not relieve the *Contractor* from responsibility for the *Contractor's* errors or omissions or departure from the requirements of the Governance Standards.
f) Any such approval or consent, or any review shall not relieve the *Contractor* from any obligation or responsibility.
g) Any specific queries or requirements not covered by this document shall be referred to the *Employer's* Engineer.
h) The *Service Manager* should ensure the *Contractor* performs the Works as per the Scope of Work requirements.

### 1.2.2 Process for Monitoring

Monitoring will be conducted through internal and external audits, inspection and non-conformance. reporting. Non-conformance reporting must be conducted by utilising the following procedure: 240-44175038: Control of Non-conformance product or service procedure.
The monitoring of the pump's refurbishment will be subject to: A pre-job meeting to discuss and analyse the procedures and processes to be used during the length of the Contract and shall be held prior to commencement of any work. The purpose of the pre-job meeting would be to ascertain specifics in relation to this SOW. Attendance shall include the Service Manager, Eskom Engineer, Eskom Maintenance Supervisor and Contractor (Contact Manager).

### 1.2.3 Related/Supporting Documents

Refer to below drawings for full build details of the Anion and Sand filter Supply Pumps:
a) SAM-22108: CPW-V 8x4x17S, SPINDLE PUMP / 55KW 4P, D250S/M / PINFLEX 204 / 4829mm LONG.
b) SAM-22086: CPW-V 8x4x17S PUMP SECTIONAL ARRANGEMENT

c) SAM-23267: CPW-V 8x5x17 / 110kW 4POLE D280S/M - FENNERFLEX COUPLING.
d) SAM-25448: CPW-V 8x5x17 PUMP SECTIONAL ARRANGEMENT.
e) Sand filter Supply Pump Datasheet.
f) Anion Supply Pump Datasheet.

## 1.2.4 Preliminary and General

a. The *Contractor* studies the Employer's SoW to prepare and submit a detailed Work Methodology and Quality Control Plan (QCP) to the *Service Manager*, for each section of works, in order to obtain acceptance before each activity is started. The *Contractor* liaises with the entire ***Employer's*** team such as engineer, quality controller/s, pump specialist/s etc. and requests clarification from the Contract Manager immediately, if any discrepancy or ambiguity is discovered in the SoW, which was not clarified during the tender period. The *Employer* will review and provide decisions on all such discrepancies and ambiguous areas of scope within seven (7) days of the contract award and thereafter, the *Contractor* provides the Works as per the Works Information.
b. The *Contractor* submits the following pre-requisite documentation, during the tendering period, for technical evaluation by the *Employer:*
    1. *Contractor* to provide a Work Methodology for the Vertical Anion and Sand filter Supply Pumps, detailing the complete step-by-step Disassembly and Re-assembly Procedures for the pumps (NB: all component clearances during assembly process to be clearly defined within the ***Contractor's*** Procedures).
    2. *Contractor* to provide current experience level for Refurbishment of Vertical CPW Centrifugal Pumps (i.e., Sand filter and Anion Pumps). And a list of verifiable references where complete refurbishments have been carried out on these vertical pumps shall be provided.
    3. *Contractor* to provided certification of ISO 9001:2015 (Quality Management System) and a quality control plan (QCP/ITP – with referenced documentation) shall be provided detailing all activities and intervention points for the refurbishment of the Sand filter and Anion Supply Pumps.
    4. *Contractor* to provide certification of his/her Pump Performance Testing Facility, to demonstrate compliance/equipment calibration as per ISO 9906 Grade 2b for Centrifugal Pumps requirements: For pump flowrate, head, power, NPSH, efficiencies, hydraulic/hydrostatic and vibration testing.
    5. Provide a detailed typical pump refurbishment schedule/programme for the Sand filter and Anion Supply Pump. 6. Provide the minimum performance warranty/guarantee period for the pump refurbishment works.

## 1.2.5 *Contractor's* Scope of Work

The below sections outline and details the requirements for the refurbishment/repair work of Anion and Sand filter Pumps:

### 1.2.5.1 Pump Collection from Tutuka Power Station (Main Stores)

The *Employer* will inform the *Contractor* to collect the defective pump requiring repair/refurbishment from the Power Station, by issuing an instruction. The *Contractor* shall provide a sufficiently sized truck (and driver) with a hydraulic high-up to load the pump from Tutuka P/S Main Stores, or from the Water Treatment Plant (within 48 hours of ***Employer's*** notification) and transport the defective pump to the ***Contractor's*** Workshop. Prior to loading of the pump onto the transportation vehicle, the *Contractor* shall take photographic pictures of the external condition/state of the pump prior to transportation (these pictures will form part of the *Contractors* detailed Pump Assessment Report).

### 1.2.5.2 Pump Visual Inspection (prior to pump disassembly)

The *Contractor* shall:
a) Catalogue all loose parts upon arrival of the pump at *Contractors* Workshop.

b) List any transport/shipping damage or other visible damage before pump disassembly.
c) Visually inspect all components upon receipt for any abnormalities/defects, or unusual wear during transportation.

### 1.2.5.3 Strip, Disassembly and Components Identification

The *Contractor* shall conduct the full disassembly of the pump down to each component level in accordance with the pump's original equipment manufacturer dis-assembly procedures.

### 1.2.5.4 Pump Components Cleaning, Dimensional Checks, NDT and Inspections

a) Steam clean, bead blast, and/or grit blast stationary components as required to remove rust or scale and to prepare critical surfaces for non-destructive examination (NDE) and dimensional inspection.
b) Bead/Grit blast the rotating components as required to prepare critical surfaces for NDT and dimensional inspection.
c) Clean the shaft using a stainless wire brush, or blast with aluminum oxide, walnut shells, or similar nonaggressive blasting media to prepare the shaft surface for NDT and dimensional inspection.
d) All non-rotating/stationary mild/carbon steel components shall be abrasive blast cleaned and shall be carried out in accordance with Clause 5.3 of SANS 10064 (ISO 8504) and the degree of cleanliness achieved shall be Sa 2.5 in accordance with ISO 8501/1.
e) The profile, peak to valley, when measured by SANS 5772 (ISO 8503-4), shall be as specified in the relevant manufacturer's Product Data Sheet for the coating system being utilised (typically, 50-to-100-micron blast profile). All quality control records shall be documented by the *Contractor* and provided to the *Employer* during inspections.
f) After cleaning, all components of the pump to be thoroughly inspected and condition documented.
g) Component Non-Destructive Examinations and Testing: Certified and qualified personnel shall perform Magnetic Particle Inspection and/or Liquid Penetrant, Ultrasonic Testing Examinations on welds and wall thickness examinations, where required on specific pump components (i.e., shafts, pump columns, pump discharge pipework, pump baseplate), to reveal any possible cracks or flaws. All results from NDT assessments to be documented and provided within a detailed report. All defects and deficiencies highlighted during the NDT and examinations shall be marked for repair or replacement by the *Contractor.*
h) Component Dimensional Inspections/Checks: Dimensional inspections and checks (e.g., shaft run outs checks) shall be conducted by the *Contractor* on all pump components/parts as per pump OEM specifications/tolerances and recommendations. All components that are found to contain defects or found to be outside the recommended specifications/tolerance/clearance ranges of the OEM, shall be marked for repair or replacement by the *Contractor.*
i) The *Contractor* shall also perform Hydrostatic (Hydro) Testing of the pump casing to ensure it can safely hold the amount of pressure it is rated for and maintain structural integrity during the testing [in accordance with requirements of ISO 9906 (2012)].
j) The *Contractor* shall identify each stationary component, its alignment registers, and the components that attach and align with it. The registers must be on the same centreline, identify the components by item or part number on the cross-sectional drawing from pump manufacturer.
k) As per the submitted and approved *Contractors* Inspection and Quality Control Plan, the *Employer's* Representatives (Engineer/Maintenance Personnel/QC Personnel) shall be informed to carryout inspections at the *Contractors* Workshop, to view and assess the pump components condition. During these inspections the *Contractor* shall provide all relevant testing documentation to the *Employer*, for review (Quality Control Hold-Point).
l) Once consensus has been reached between the *Employer's* and *Contractor's* personnel on the required pump repair scope, the *Contractor* shall then proceed with the finalisation of his/her Assessment, Costing and Repair Scope of Work Report.

### 1.2.5.5 *Contractor's* Pump Assessment and Repair Scope of Work Report

Once the required inspection works (as detailed above) has been completed by the *Contractor*, the *Contractor* is required to compile and submit (to *the Employer*) a comprehensive report of all findings (cause of failure, where applicable), components condition and recommendations required for the complete repair/refurbishment of the full pump unit, to bring it back to its original design limits/standard as per the pumps OEM requirements. The assessment report shall include a full list of all required spare parts that has been marked for repair/replacement, including a detailed pricelist (with material bill of quantities and labour rates) to carry out the repair/refurbishment of the pump unit. The *Contractor* will be afforded a period of seven (7) calendar days (from the time of pump collection) to provide the *Employer* with the Pump Assessment Report, Repair SoW together with the repair price breakdown for review. The *Contractor* also is also required to submit detailed programme/plan including breakdown of all tasks to be executed, date of completion for the pump refurbishment works and the amount of time needed to complete each activity for *Employer* to approve before commencement of the works. In the event, when it is not economically feasible (repair costs exceeds 70% of a new pump cost) to carry-out a full repair/refurbishment of the pump (due to its condition/state when stripped and assessed), the *Contractor's* Pump Assessment report should highlight as such, and a full replacement cost for a complete new identical pump unit will required to be supplied by the *Contractor* to the *Employer.* Should the complete pump unit replacement route be selected and accepted by the *Employer*, it is the expectation that the new pump unit will be available and delivered to site within a maximum period twelve (12) to fourteen (14) weeks of order placement.

### 1.2.5.6 Sourcing/Supply of Pump Spare Parts and Consumables

a) Upon review and acceptance (by the *Employer*) of the *Contractors* Pump Assessment, Repair/Refurb SoW Report and Repair Costing Breakdown. The *Employer* shall issue a Task Order to the *Contractor* to proceed with the SoW. The *Contractor* shall then proceed with the sourcing and supply of required spare parts/components and consumables as stated on his bill of quantities.
b) All required pump spare (casted/machined) components and parts (i.e. pump volute/casing, wear plates, impellers, pump back covers, casing lugs, pump columns, thrust bearing assemblies, intermediate bearing housings, all pump shafts, pump shaft couplings, pump shaft sleeves, gland seal box, pump base plate, motor stool) shall only be sourced directly from the OEM of the pump. This will ensure standardization.
of all pump components and ensure the performance integrity of the pump is maintained.
c) All other spare parts (seals, bearings, bushes, gaskets, nuts and bolts, etc.) shall be sourced and supplied by the *Contractor* as per the recommendations provided by the pump OEM. All rolling and wear elements (ball bearing, seals, line shaft bushes, gaskets, etc.) which are removed during the stripping process shall be replaced and not be re-used.
e) The *Contractor* will be required to supply and install replacement pump guards (located on motor tool/frame). New pump guards (conforming to OSHA 29 CFR 1910.217) shall be fitted with a hinge mechanism to allow for easy access during online pump thrust bearing vibration data collection by the on-site condition monitoring personnel.
f) The *Contractor* shall ensure that all rotating components (impellers and shafts) are trimmed and dynamically balanced in accordance with ISO 21940-11: Mechanical vibration — Rotor balancing – Quality Grade G2.5. Impeller balancing/testing shall be witnessed by the *Employer* and certificates provided shall be reviewed and form part of the Pump Quality Control Data Package.
g) Pump shafts run out and deflection testing shall be conducted all existing and new shafts, to determine the degree the straightness of the three- or four-piece shaft contained with the Sand filter and Anion Supply Pumps. Shaft run out and deflection testing shall be witnessed by the *Employer* and certificates provided shall be reviewed and form part of the Pump Quality Control Data Package. Any defects and deficiencies highlighted during the testing shall be rectified by the *Contractor*, prior to the pump assembly process.
h) The *Contractor* shall ensure all required quality control testing documentation (material certificates, impeller trim and balancing certificates, shaft run outs and deflection certificates) for the new spare components are in place and provided to the *Employer* for review, during inspections/workshop visits.
i) As per the submitted and approved *Contractors* Inspection and Quality Control Plan, the *Employer's* Representatives (Engineer/Maintenance Personnel/QC Personnel) shall be informed to carryout inspections at the *Contractors* Workshop, to view and inspect all new pump spares/components that has been sourced by the *Contractor*. During these inspections the *Contractor* shall provide all relevant testing documentation to the *Employer*, for review (Quality Control Hold-Point).

## 1.2.5.7 Coating/Corrosion Protection of Required Components

a) All mild/carbon steel components (i.e., pump columns, pump base plate, motor stool, etc.) shall be abrasive blast internally and externally to a degree of cleanliness achieved of Sa 2.5 in accordance with ISO 8501/1.
b) Soluble salt concentration must be below 50mg/m², when tested with a Weber Reilly detection kit.
c) Freedom from dust and debris shall be less than 'dust quantity rating' 2 when tested in accordance with ISO 8502-3.
d) The primer coat shall be applied as soon as possible after the surface preparation operation during the same shift as the blast cleaning operation, but under no circumstances may the primer be applied over rust bloom or over surfaces that have changed colour due to humidity or other contamination.
e) Apply two component self-priming, low VOC amine modified epoxy coating system Phenoline 187 UHS. DFT per coat at 250 microns. Apply 2 coats to a DFT of 500 microns (nominal).
f) Upon final curing (max 72hrs) of first and second coating layer, the *Contractor* shall conduct DFT Testing to assess the dry film thickness of the applied layers. If any anomalies are found, it shall be immediately rectified by the *Contractor*.
g) Epoxy topcoat colour coding: Brilliant Green (H10) – SANS 10140-3. h) With specific reference to non-stainless steel pump casing/volutes - A two-part 100% solids co-polymer coating NORDBAK (NORDCOAT 2) which is a corrosion and wear resistant coating, shall be applied to the internal and external surfaces of the pump casing, in accordance with coating manufactures product application requirements.
i) All quality control records shall be documented by the *Contractor* and provided to the *Employer* during inspections (surveillance QC checks will also be conducted by the *Employer*).

## 1.2.5.8 Pump Re-Assembly

a) The *Contractor* shall conduct the full re-assembly of the pump (with its new spare components) in accordance with the pump's original equipment manufacturer approved assembly procedures.
b) The *Contractor* shall note and document all component re-assembly records (installation clearances, etc.) during the re-assembly of the pump. An assembly report shall be provided to *the Employer* depicting (with photographic evidence) compliance with pump OEM acceptable clearances and tolerance that were achieved during the pump re-assembly process.
c) As per the submitted and approved *Contractors* Inspection and Quality Control Plan, the *Employer's* Representatives (Engineer/Maintenance Personnel/QC Personnel) shall be informed to carryout post pump assembly inspection at *the Contractors* Workshop, to view and inspect the complete assembled pump unit. During these inspections the *Contractor* shall provide pump assembly records to the *Employer*, for review (Quality Control Hold-Point).
d) The pump nameplate/tag is also required to be replaced by the *Contractor* (with 304L stainless steel material, engraved nameplate), clearly detailing the pump model, serial number, discharge flowrate and head, maximum design pressure, impeller diameter, materials of construction (casing/impeller/shafts), pump speed, liquid SG, pump hydraulic test pressure, and shall include the pump manufacturers full details.

## 1.2.5.9 Pump Performance Testing

a) Upon full re-assembly of the pump, a full pump performance test [which shall include bearing running temperatures (IR – Infrared Scans) and vibrational analysis] is required to be carried out in the presence and to the satisfaction of the *Employer's* Personnel (Quality Control Hold-Point). Vibration Analysis shall be carried out on the pump during the performance test in accordance with the requirement detailed within ISO 10816-6 (1995): Mechanical vibration - Evaluation of machine vibration by measurements on non-rotating parts.
c) The Pump Performance Testing shall be conducted in accordance with ISO 9906 (2012) Rotodynamic Pumps - Hydraulic Performance Acceptance Tests – Grade 2B.
d) The *Contractor* shall ensure that the pump main trust bearing is sufficiently greased before commencement of the performance test. And its operating temperatures shall be monitored during the performance testing and shall be less than the recommended pump OEM operating limits.

e) *The Contractor* shall be responsible for the providing the required electric motor and pump-to-motor shaft coupling (which is sized in accordance with the pump design) for the purposes of the pump performance testing.
f) If in the event the performance test results do not meet the minimum requirements as detailed in ISO 9906 – Grade 2B, it will be required of the *Contractor* to correct all related deficiencies within the pump (at his/her cost). The pump shall then be re-tested to ensure compliance with the performance test standard.
g) Once a satisfactory performance test is carried out on the pump, with no related defects observed by the *Contractor* or the *Employer*, the refurbished pump shall be readied by the *Contractor* for release and delivery (utilizing the *Contractor's* transportation) to Tutuka Power Station (Main Stores or Water Treatment Plant).
h) The *Supplier* shall contact Tutuka Main Stores, 48 hours before any delivery and collections are made at the Main Stores. It should be noted that the Main Stores is opened from 08:00am to 15:30pm (Mondays to Thursdays) and is opened from 08:00am to 11:00am (Fridays). It is preferred not to do any deliveries and collections on Fridays and Public Holidays and Weekend (unless under urgent/emergency situations). Urgent delivers can be made after hours, when arranged with the Main Stores Personnel.

## 1.2.5.10 Performance Guarantees

Post pump installation on the Power Station Water Treatment Plant, a full vibrational analysis and IR bearing scans will be conducted on the pump (and motor assembly) to assess its first service/production run conditions. If in the event, high vibrations (or high thrust bearing temperatures, or any other anomaly) is noted during its first service run, the *Employer* will immediately notify the *Contractor* and highlight the defect/discrepancy. All vibrational analysis reports and process conditions will be made available to the *Contractor.*

It will be the responsibility of the *Contractor* to conduct an on-site visit and inspection of the pump within 48hrs of the *Employer's* notification. If the defect or deviation found on the pump cannot be rectified in situ on the plant by *the Contractor*, it will be the responsibility of the *Contractor* collect the pump from site (the pump will be removed from the plant by the *Employer's* Personnel), identify and correct the noted defect and deliver the pump back to Tutuka Power Station (all transportation and re-works/repair/testing costs will be carried and the responsibility *Contractor* to address).

Monthly condition monitoring reports will also be made available to the *Contractor* (if and when required). In cases where the running vibration amplitudes in subsequent operation of the pumps are higher than 2.3 mm/s RMS, the *Contractor* will be required to visit site and perform fault finding with the *Employer's* personnel and advice the *Employer* of the potential pump defect and repair method/s.

The *Contractor* is also required to indicate the full extent of the guarantees he/she is prepared to offer with respect to integrity of his/her repair/refurbishment works carried out on all pumps.

## 1.2.5.11 Quality Requirements

The *Contractor* shall comply with the ISO 9001:2008 Quality Management System and *Employer's* Quality Requirements as specified in Eskom QM58 document:

a) Quality documents for inspections and tests plans shall be required to be submitted to the *Service Manager* for approval before the pump refurbishment works begin.
b) The *Contractor* shall compile a detailed Quality Control Plan (QCP) and shall be submitted for acceptance to the *Employer* Engineer, before the repair works can be executed.
c) The QCP shall indicate relevant intervention points (e.g., hold, witness, surveillance points, etc.) and shall be agreed upon with the *Employer*.
d) The QCPs must meet the technical requirements and include relevant inspections and tests to be done. The reference documentation and acceptance criteria should be included on the QCP.
e) The *Contractor* shall prepare suitable quality control plans (QCP's) and Inspection and Test Plans (ITPs) for all work carried out.
f) The *Employer,* the *Employer* QC Representative, and the *Contractor* shall review these QCPs/ITPs jointly based on the actual scope of work and inspections that are required, which will be agreed upon with the *Contractor.*

g) The *Contractor* is required to notify the *Employer* at least 72 hours in advance of witness and hold QC inspection intervention points.
h) Surveillance Inspection by the *Employer* can be done at any time during execution of the Works. The *Employer* will have full authority to inspect the Works at any time regardless of if the *Employer's* Works on site or at the *Contractor's* premises/workshops or *Sub- Contractors* premises. This comprises of monitoring or making observations to verify whether material/items or services conform to the specified requirements. Surveillance activities may include audit inspections, witness of testing, review of quality documentation & records, personnel qualifications etc.
i) Any scope deviation during the execution shall be approved in writing from the *Employer*.
j) The *Employer* shall be given a notice period of three (3) days prior to any inspection or testing that is required to be witnessed by the *Employer* at the *Contractors* Premises.
k) The *Contractor* will be subject to periodic audits by the *Employer* in order to ensure compliance with the system. Any deviations will be corrected to the *Employer* satisfaction.
l) On completion of the works, the *Contractor* shall provide the Eskom Engineer with a Data Book/Package containing all the relevant Quality Control documents and records pertaining to the pump repair/refurbishment works.
m) The *Contractor* shall submit one (1) hard copy, one (1) soft copy in PDF format using a USB and one (1) native (WORD) updatable copy of the QCP to the *Employer*, upon delivery on the repaired/refurbished pump to site.
n) This Data Book/Package shall contain, as a minimum, the following:

1) The Quality Control Plan (fully signed-off)
2) The *Contractors* Pump Assessment and Repair Scope of Work Report (with Cost
3) Breakdown)
4) NDT/NDE Reports (MPI, Dye Pen, Ultrasonic, Wall Thickness Testing Reports)
5) Sandblast and Coating Records
6) Spares Material Certificates
7) Copies of all Batch Release Certificates from the manufacturer, acquired during the
8) course of the pump refurbishment.
9) Product data sheets and certificates
10) Rotor Balance Reports
11) Shaft Run Out Reports
12) All relevant Repairer's Workshop QC records
13) Copies of all approved pump disassembly and assembly procedures and method
14) statements
15) Pump Assembly Records
16) Non-Conformance Reports
17) Pump Hydraulic and Performance Test Reports
18) Copy of all Technical Notifications/Clarification (signed by *Employer* Engineer)

## 1.2.5.12 Works Programme/Schedule

The *Contractor* shall submit a detailed program of the works, one (1) week after collection of each pump for refurbishment. The programme must clearly demonstrate the *Contractor* plans to complete the repair works in good time, effective from the task order placement. The program submission must be in soft copy PDF (Gantt Chart). The pump refurbishment program shall specify the different activities applicable for the execution of the required SOW from pump collection to the refurbished pump delivery to site, as well as the period allocated for each activity.

## 1.2.5.13 Transportation Requirements

a) Packaging and Crating (In accordance with the pump OEM's material control, preservation, storage and handling procedure): The *Contractor* shall be responsible for the safe packaging and transportation of all repaired and refurbished pump to and from Tutuka Power Station (Main Stores).

b) Prior to loading on delivering transport, the *Contractor* shall: Secure the pump unit to the truck to prevent movement.
c) Cover the pump unit if an open truck is used.
d) On delivery, all documentation (QC Data Package) shall be handed in and accepted by the *Employer.*
e) Transportation by road for the *Contractors* costs.
f) The *Service Manager* shall be informed when delivery will be conducted at least two (2) days in advance.
g) No deliveries to be conducted after 11:00am on Fridays, Weekends or Public Holidays, except under urgent/emergency situations.
h) Pallets to convey the pump unit shall be sound enough to carry and transport the load of the pump.
i) All *Contractor's* transportation vehicles shall be in a roadworthy/compliant condition.
j) Forklift / Overhead Crane (with driver) will be supplied by the *Employer* for offloading/loading of pump onto/from transportation vehicle.

Example of acceptable Packing and Crating during pump transportation/delivery

## General Requests

- All PPE to be provided by *Contractor*.
- Attendance of meetings "as and when" required by the *Employer.*
- Risk assessments must be completed before each task.
- The *Employer's* Lifesaving rules to adhere to.
- Will comply within the *Employer's* QC Standard's.
- Site conditions will be according to the *Employer* 's and Safety regulations standards.
- All telephone accounts on *Contractor* account
- Quality control plan and Contract Quality plan Approval Process standard as per QM-58The
- *Employer's* transport procedures to be adhered to.
- The *Contractor* must provide proof of experience and qualifications of all personnel. .
- The *Service Manager* will verify that the work performed as per Assessment is in fact a true reflection of work performed. Support documentation will be required from the *Contractor.*
- All services must be done according to the *Employer*'s standards and procedures.
- *Contractor* to collect pumps at the *Employer's* site.

- All testing equipment supplied and used by *Contractor* to be calibrated and kept in good working condition as per the *Employer*'s requirements and Certificates must be handed to the *Service Manager*
- Non – performance *Contractor* will be monitored – NCR / PIR and the NEC (Instructions, Early warning and Notifications) rules will be issued accordingly and applied.
- Deliveries might be required after hours as requested by *Service Manager.*

## 1.3 Interpretation and terminology

### 1.3.1 Definitions

| Definition | Explanation |
|---|---|
| Competent person | (OHS Act) means any person having the knowledge, training, experience, and qualifications, specific to the work or task being performed, provided that, where appropriate, qualifications and training are registered in terms of the South African Qualifications Authority Act, 1995 (Act No. 58 of 1995) |
| *Contractor* | In relation to this document, where the word "Contractor" is used, it will mean all or some of the following: principal Contractors, appointed Contractors, suppliers, vendors, service providers and consultants |
| *Employer* | (OHS Act) means, subject to the provisions of subsection (2), any person who employs or provides work for any person and remunerates that person or expressly or tacitly undertakes to remunerate him/her, but excludes a TES (ex-labour broker) as defined in section 1(1) of the Labour Relations Act 1956 (Act No. 28 of 1956) |
| Environment | (32-94) means:<br>the land, water, and atmosphere of the earth; micro-organisms and plant and animal life; and any part or combination of (a) and (b) and the interrelationships among and between them, and the physical, chemical, aesthetic, and cultural properties and conditions of the foregoing that influence human health and well-being |
| Eskom requirements | Eskom requirements flowing from directives, policies, standards, procedures, specifications, work instructions, guidelines, or manuals |
| Hazard | (OHS Act) means a source of, or exposure to, danger |
| Health and safety plan | (OHS Act) means a document plan that addresses hazards identified and includes safe work procedures to mitigate, reduce, or control hazards identified |
| Health and safety requirements | Means comprehensive health and safety requirements for a contract, project, Site, and scope of work. This specification is intended to ensure the health and safety of persons, both workers and the public, and the duty of care to the environment. The health and safety requirements must be specific to each contract, project, Site, and scope of work |
| Lifesaving Rules | (240-62196227) a rule that, if not adhered to, has the potential to cause serious harm to people |
| Method statement | (OHS Act) means a written document detailing the key activities to be performed to reduce, as reasonably as practicable, the hazards identified in any risk assessment |
| Near miss | A near miss is an OHS event that did not result in human injury or damage but had the potential, under different circumstances, to cause human injury or property damage. This includes the reporting of hazards or unsafe conditions. |
| Pre-job brief or meetings | (34-227) means a meeting that is held prior to the commencement of the day's work and that is attended by all the relevant employees associated with the work task |
| Risk assessment | (OHS Act) means a programme to determine any risk associated with any hazard at a Construction Site to identify the steps needed to be taken to remove, reduce, or control such hazard. |
| Site | (34-228) means an Eskom department, unit, complex, building, specific project, work site, or the site where agents, clients, principal Contractors, |

| Definition | Explanation |
|---|---|
| | Contractors, suppliers, vendors, and service providers provide a service to Eskom, directly or indirectly |
| Task | (34-227) a segment of work that requires a set of specific and distinct actions for its completion |

### 1.3.2 The following abbreviations are used in this Service Information:

| Abbreviation | Meaning given to the abbreviation |
|---|---|
| B-BBEE | Broad Based Black Economic Empowerment |
| C&I | Control and Instrumentation |
| CIDB | Construction Industry Development Board |
| COC | Certificate of Compliance |
| CoC | Certificate of Compliance |
| CPA | Cost Price Adjustment |
| EMD | Electrical Maintenance Department |
| EN | European Standards |
| GA | General Arrangement |
| H V | High Voltage (1000V and above) |
| ISO | International Organization for Standardization |
| L V | Low Voltage (< 1000 V) |
| LAR | Local Access Register |
| MSDS | Material Safety Data Sheet |
| MV | Medium Voltage |
| NCR | None Conformance Report |
| NDT | Non-Destructive Testing |
| OEM | Original Equipment Manufacturer |
| OHS | Occupational Health and Safety |
| OHSACT | Occupational Health and Safety Act |
| ORHVS | Operating Regulations for High Voltage Systems |
| P/S | Power Station |
| PIR | Performance Improvement Report |
| PPE | Personal Protective Equipment |
| PPPFA | Preferential Procurement Policy Framework Act |
| PSR | Plant Safety Regulations |

| | |
|---|---|
| QCP | Quality Control Plan |
| QMS | Quality Management Systems |
| RP | Responsible Person |
| SABS | South African Bureau of Standards |
| SACPCMP | South African Council for the Project and Construction Management Professions |
| SAMTRAC | Safety Management Training Course |
| SANS | South African National Standards |
| SAP | System Application Product |
| SHEQ | Safety Health Environmental and Quality |
| SOW | Scope of work |
| SS | Stainless Steel |
| WTP | Water Treatment Plant |
| YTD | Year to date |

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# 2 Management strategy and start up.

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

*a)* To be discussed before each task can be carried out between the *Contractor* and *Employer*
*b)* Programme to be supplied within 7 working days after receiving the task order and Order.
*c)* The *Contractor* can start work after the Purchase Order has been issued, unless given Instruction by the *Service Manager*

## 2.2 Management meetings

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

| Title and purpose | Approximate time & interval | Location | Attendance by: |
|---|---|---|---|
| Risk registers and compensation events | TBC | TBA | TBC |
| Overall contract progress and feedback | TBC | TBA | *Employer* and *Contractor* |

Meetings of a specialist nature may be convened as specified elsewhere in this Service Information or if not so specified by persons and at times and locations to suit the Parties, the nature and the progress of the *service*. Records of these meetings shall be submitted to the *Service Manager* by the person convening the meeting within five days of the meeting.

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

Attendance of meetings as required by *Service Manager* Such as

a) Any meeting requested by the *Employer* or *Contractor.*

b) All Assessment meetings.
c) Early warning/Risk mitigation meetings.

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

All staff to be qualified, trained and competent to execute scope.

## 2.4 Provision of bonds and guarantees.

Not Applicable

## 2.5 Documentation control

a) Each instruction, certificate, submission, proposal, record, acceptance, notification, reply and other communication which this contract requires is communicated in a form which can be. read, copied and recorded.
b) Writing is in the Language of this contract.
c) All reports to be discussed, compiled and handed in to the *Service Manager* and Engineer.
d) All communications must be printed and filed in the *Service Managers* file.
e) The *Employer's* Order number must be used on all documentation, such as invoices and tests certificates.
f) All submerged idlers (Stub -shaft) to be collected are to be accompanied with a SAP Purchase Order documents.
g) Repair data book containing assessment reports, scope of work, all test results, and quality assurance certificates, shall be provided to the *Employer* on delivery.
h) The *Employer's* Task Order Number must be utilised on all documentation, such as invoices. and tests certificates, QC documentation, etc.
i) On completion of the Works, the *Contractor* shall provide the *Employer's* Engineer with a Data Book/Package containing all the relevant Quality Control documents and records pertaining to the pump repair/refurbishment works. This QC Package shall be submitted to the *Employer* on the day of delivery of the repaired/refurbished pump to Tutuka Power Station.

**Documentation and QC Data Package Submission**

a) It will be the responsibility of the *Contractor* to develop, document and submit a detailed and comprehensive Quality Control Data Package (for each refurbished/repaired pump), containing the master QCP (fully signed-off) together with will all referenced reports, testing documentation, certifications, material certificates, etc.
b) The QC Data Package for the pump shall be submitted to the *Employer* on the day of the delivery of the pump to the Power Station.

## 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

_____
and include on each invoice the following information:

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

d) The *Employer*'s VAT registration number 4740101508.
e) Description of service provided for each item invoiced based on the Price List.
f) Total amount invoiced excluding VAT, the VAT and the invoiced amount including VAT. Purchase order number
g) CPA calculation sheet
h) CPA calculation sheet and the Invoice for CPA (with the GL Account Number and the Cost Center on the Invoice) to be send to the financial department as per the *Employer.* Invoicing procedure / instruction
i) Invoices and a Copy of the Assessment with a Service Entry number to be send to the financial department as per the *Employer's* Invoicing procedure / instruction

## 2.7 Contract change management.

- Where the *Contractor* does Name Changes, Mergers, Acquisitions, and Cessions the *Employer's* procedure must be followed. (The *Employer's* Procurement and Supply Management Procedure)
- In a case where one *Contractor* takes over from another *Contractor,* the Site *Service Manager* must be notified in writing immediately.
- The *Contractor* does not cede, delegate or assign any of its rights or obligations to any person without the written consent of the *Employer.*
- Changing the service information
- Access
- Provision by the *Employer's*
- Stopping work
- Work of the *Employer* or others
- Reply to communication.
- Changing a decision
- Withholding acceptance
- Delayed tests or inspections
- Change of affected property
- Materials, facilities etc. for tests
- *Employer's* risks
- Assumption about compensation events
- *Employer's* breach of contract

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

Not Applicable

## 2.9 Insurance provided by the *Employer.*

Refer to contract clause Z12.

## 2.10 Training workshops and technology transfer

The *Contractor* must ensure that all personnel attend the *Employers* health and safety. Induction before entry on site.

## 2.11 Design and supply of Equipment

a) *Contractor* to provide all tools and equipment necessary to perform the required service and tools / equipment to be in good and safe condition to work with.
*b) All test Equipment must be calibrated regularly, and certificates must be available during quality inspections.*

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

### 2.12.1 Equipment

Not Applicable

### 2.12.2 Information and other things

a) All Reports / Documents to be compiled, filed, discussed and handed over to the *Employe*r on the delivery of each Stub shaft.
b) *Contractor* is Responsible to ensure that his Letter of Good standing is valid at all times as stipulated in the construction regulations point 7 (C) (iv) and she specifications 2.5.2 (iv) and 3.10 *Contractor* will not be allowed on site if his letter of good standing is not valid.
*c)* As per clause 70.2 to provides other things as stated in the Service Information
*d) The Contractors Health and safety file is to be submitted for approval to the Employer's Safety Officer before contract commencement and must be kept up to date at all times.*

## 2.13 Management of work done by Task Order

a) A Order is the instruction to commence work
b) No work shall commence until a Purchase Order number, or a formal instruction has been Finalised and accepted and signed by both the *Employer* and *Contractor.*

# 3 Health and safety, the environment and quality assurance

## 3.1 Health and safety risk management

The *Contractor* shall comply with the health and safety requirements contained in Annexure SHE Specification 14RISK SRM – 084 to this Service Information.

a) All The *Employers* health and safety procedures and regulations to be adhered to by the *Contractor.*
b) A SHEQ file to be handed in at the SHEQ department for approval prior to wok commencement and kept up to date for the duration of the contract.

**SHEQ Policy**

**Eskom SHEQ Policy**

The *Employe*r has made a commitment to conduct business with respect and care for people, the environment and assets and that no operating condition or urgency of service justifies exposing anyone to negative risks arising from the *Employer's* business.

Compliance with the *Employer's* SHEQ Policy and applicable regulations is the responsibility of every employee and *Contractor.*

***Contractor* SHEQ Policy**

All *Contractors* shall have an OHS policy signed by the CEO of the *Contractor* and prominently displayed where employees normally report for duty.
Signed copy of the OHS policy shall form part of the SHEQ file.

**Health and Safety Arrangements**

The *Contractor* ensures that all his personnel attend a Health and Safety Induction Course prior to contract starting date, and annual re- induction. The Induction Course is presented by the *Employer's* Safety Risk Department at Tutuka Power Station. Arrangements are made with Safety Risk Management, by the *Contractor.*

The *Employer's* Safety Risk Manager visits and inspects the *Contractor's* workplace or site yard and the working areas to ensure that tools; machinery and Equipment comply with the minimum safety requirements.

The *Service Manager* may instruct the *Contractor* to stop work, where the *Contractor's* personnel fail to conform to safety standards or contravene health and safety regulations. Such stop-work order is not a compensation event. The *Service Manager* may instruct the *Contractor* to discipline his employees and to submit a disciplinary action report to the *Service Manager*. The *Contractor* implements additional health and safety precautions where necessary.

**Health and safety**

The *Contractor* complies with the Occupational Health and Safety Act 85 of 1993, as well as per the *Employer's* procedure as stipulated below:

a) SHEQ Policy 32-727
b) The *Employer's* Procurement and Supply Chain Management Procedure 32-1034
c) SHE Requirements for the *Employer's* Commercial Process 32-726
d) *Contractor* Health and Safety Requirements 32-136
e) Integrated SHE Organization; Roles and Responsibilities and Statutory Appointments 32- 296
f) Live-saving Rules 240-62196227
g) Working at Heights 32-418
h) The *Employer's* Vehicle Safety Specifications 32-345
i) Tutuka *Contracto*r SHEQ Specifications 14RISK SRM - 084

**Site Regulations and Procedures**

Site Regulations

The latest revision Tutuka Power Station Site Regulations form part of this contract.
Copies of these procedures are available on request.
(Any additional site regulations implemented will be applicable)
Safety risk management

"Standard for health and safety at Tutaka Power Station - requirements to be met by *Contractors*".

**Vehicle and driver safety**

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

**Speed Limit**

All vehicles must be driven with due consideration for personnel and property. All speed limits will be adhered to on the premises at all times.

**Transportation of passengers: open LDV's:**

With effect from 31 May 2006 no *Employer* employee or *Contractor* would be allowed to transport passengers on the back of open light delivery vehicles (LDV's). It is a legal requirement to provide safe transportation of the *Employe*r and *Contractor* employees – therefore the following will be enforced:

**The *Employer's* Life Saving Rules:**

Five Life Saving Rules have been developed that will apply to all the *Employer's* employees, agents, Consultants and Contractors.

a) Rule 1: Open, Isolate, Test, Earth, Bond, And / Or insulate before touch - that is any plant operating above 1000 V.
b) Rule 2: Hook up at heights - no person may work at height where there is a risk of falling.
c) Rule 3: Buckle up – no person may drive any vehicle for the *Employer's* business and/or on the *Employer's* premises: unless the driver and all passengers are wearing seat belts.

*d)* The *Employer* takes a "ZERO TOLERANCE" attitude to drivers and passengers who do not wear safety belts when driving in a vehicle for the *Employer's* Business and / or on the *Employer's* premises. The violation of this very important safety rule as well as any safety rule while performing work for or on behalf of the *Employ*er may result in the *Employer* terminating your obligation to perform work in terms of your contract with the *Employer.*

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

f) Rule 4: Be sober (no person is allowed to work under the influence of drugs and Alcohol.
g) Rule 5: Use a permit to work – where an authorization limitation exists, no person shall work without the required permit to work.

**Reporting of accidents**

The *Employer* follows an accident prevention policy that includes the investigation of all accidents involving personnel and property. This is done with the intention of introducing control measures to prevent a recurrence of the same incidents. The *Contractor* is expected to fully co-operate to achieve this objective. The *Service Manager* must be informed immediately of any incidents. A written report to be submitted to the *Employer within 24 Hours* of incidents and any damage to property or equipment.

**NOTE!** This report does not relieve the *Contractor* of his legal obligations to report certain incidents to the Department of Labour, or to keep records in terms of the Occupational Health and Safety Act, and Compensation for Occupational Injuries and Diseases Act.

## 3.2 Environmental constraints and management

The *Contractor* shall comply with the environmental criteria and constraints stated in the following: -

All waste from the project must be disposed in a sound environmental manner in accordance with Tutuka Power Station Waste Management Procedure 14 Risk ENV-013. Oil spillages must be contained and cleaned as per Oil Spill Management procedure 15 ENPRENV-001. The project must conform to the *Employer's* Environmental Legal and other Requirements procedure 14 Risk ENV-012 and the project must conform to Tutuka Power Station ISO14001 Standard with reference to Tutuka Power Station's Environmental Management System Manual 14 Risk ENV-010. All environmental incidents must be dealt with as per the Station's Incident Management, Corrective and Preventative Procedure 14 Risk PC-001 and all environmental incidents must be reported to the Environmental Department on site with Telephone Number 017-749 5536 / 9231.

## 3.3 Quality assurance requirements

The *Contractor* shall be required to demonstrate by means of a Quality Plan that this organisation is so structured that all the requirements of the specification will be properly monitored and controlled. The Quality Plan and Control procedures are to be carried out in accordance with QM 58. The Quality Control document is to be submitted for approval to Tutuka within three (3) days after order placement by the *Contractor*.

No work may commence unless the Quality Control document has been approved in writing and a copy submitted to *the Service Manager*. *The Contractor*, in conjunction with Tutuka Engineering must sign off all Quality Control documents after completing all work on site. *The Contractor* to submit a copy of the final signed off document to *the Service Manager* within 1 week after Completion of each activity or task.

a) QCP and contract quality plan standards as per QM 58 to be adhered to
b) The *Contractor* must provide Quality Control Plan documents for approval by Eskom *Service Manager* performing any activity.

# 4 Procurement

## 4.1 People

### 4.1.1 Minimum requirements of people employed.

All relevant *Contractor personnel* to be competent and trained to perform all duties as per scope of work. CV's to be submitted of all key personnel.

### 4.1.2 BBBEE and preferencing scheme

As per clause Z3 within contract data

### 4.1.3 Procurement Requirements:

**PPPFA STRATEGY**

Indicate the percentage (%) that is allocated to:

| | |
|---|---|
| Price | **90%** |
| BBBEE Status | **10%** |
| Designated commodity **(Yes/No)** | **No** |

## 4.2 Subcontracting

### 4.2.1 Preferred subcontractors

Not Applicable

### 4.2.2 Subcontract documentation, and assessment of subcontract tenders

Not Applicable

### 4.2.3Limitations on subcontracting

Not Applicable

### 4.2.4 Attendance on subcontractors

Not Applicable

## 4.3 Plant and Materials

### 4.3.1 Specifications

Eskom to approve QCP prior to work execution and sign off the required interventions as per QCP. *Supplier* to approve all steps within QCP for the execution of the work.

### 4.3.2 Correction of defects

a) Rework occurs when an Equipment has to be worked on again within a given time frame. of to 180 days after installation and it will be on the *Contractor* own cost.
*b)* In case of rework caused due to the *Contractor's* negligence, all costs will be on the *Contractor's* account.
c) Delivered components will have a warranty up to the time of its usage or 6 months.

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

The *Contractor* will supply consumables and spares as per scope of work to be done.

### 4.3.4 Tests and inspections before delivery

All refurbished and new components are to be Quality Checked and tested as per the quality control document which has been approved by the *Contractor* and *Employer*

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

All spares removed and returned to Tutuka premises must be declared at the main entrance where the authorised gate release for the spares must be shown to the Protective Services personnel.

### 4.3.6 Cataloguing requirements by the *Contractor*

Not Applicable

# 5 Working on the Affected Property

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

a) Lifesaving rules and all the *Employer 's* procedures to be adhered at all times.
b) Access is limited and controlled by Plant Safety Regulations requirements.
c) No employee will be allowed to access the plant or to work without access permit issued.
d) All personnel to have an Identification card at all times.
e) Unauthorized access to site is prohibited.
f) All activities to comply with the OSHACT and Regulations.
g) All equipment leaving the *Employer's* premises must be authorized by means of a permit to allow it to be taken of site.

h) *Contractor* on site must supply a SAPS clearance certificate to the *Employer* before contract start and every 12 months thereafter for all *Contractor's* employees to ensure continued access to site. This will also be handed in to security for *Contractor* to obtain access permits.

i) Acceptance of this tender is subject to the condition that both the contracting company's management and its employees will provide Eskom with a clear criminal record not older than thirty (30) days from a reputable screening company. If the principal *Contractor* appoints a subcontractor, the same provisions and measures will apply to the subcontractor. Acceptance of the tender is also subject to the condition that the *Contractor* will implement all such security measures for the safe performance of the work as required in the scope of the contract.

j) *Contractors* are to submit proof of verification record(s) (Security clearance) from SAPS or accredited supplier linked to SAPS AFIS system not older than thirty (30) days, as part of Risk Management process in order to curb any threats against the Installation. It is compulsory for these documents to be submitted to Security for verification before access to site is granted. Only individuals with clear criminal records will be considered.

k) *Contractors* are required to submit the SAPS Clearance Certificate obtained by the employee along with a copy of his/her Identity Document or Passport to the site Security Manager. The Security Manager is required to verify the authenticity of the CRC Certificate with SAPS and to cross reference the employee seeking access against known HR databases and site databases to determine if the employee in question has in the past participated in disruptive labor actions and if the individual was dismissed from Eskom and the reason for such dismissal. Every employee applying for access must be evaluated as an individual and subsequent finding recorded. A risk analysis of the employee profile indicating whether the employee is a risk to the installation must be completed. Any risk rating allocated above a level III will be deemed unsuitable.

l) The process shall be repeated every 12 months for low-risk employees (Risk Rating 5, 4) and every 6 months for medium to high-risk employees.

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

Working hours is the *Employer's* working hours.
Monday to Thursday 07:00-16:15
Friday 07:00-12:00

## 5.3 Health and safety facilities on the Affected Property

a) Medical Station and relevant staff on Site.
b) Each workshop has a first aid box available.
c) Yearly induction for all personnel.
d) In an emergency the contract supervisor and *Service Manager* must be notified immediately.

**First aid centre**

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 are 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* is entitled, however, to recover the costs from the *Contractor* for the use of the above *Employer's* facilities.

## 5.4 Environmental controls, fauna & flora

**Environmental management**

a) Proper care of the natural environment is important to prevent nuisance and environmental degradation.
b) All *Contractors* shall comply with the *Employer 's* environmental management procedures and Environmental legislation.
c) Environmental incidents shall be reported to the *Employer's* Environmental Department as per incident management requirements.

**Waste Management**

a) Waste segregation is important to facilitate recycling of waste. Ensure waste is disposed of in the correct colour bin.
b) The *Employer's* periodically collects waste from the bins for disposal in the correct manner.
c) No waste should be burned or buried on site.
d) Where the *Employer* and the *Contractor* have agreed that the *Contractor* is responsible for the disposal of its waste, the *Contractor* shall safely dispose of such waste and keep disposal certificates on file.

**Types and colours of bins used on site:**

a) Yellow bin for domestic waste
b) Orange bin for hazardous waste
c) Maroon bin for scrap
d) Green box for cartridges
e) Blue box for recyclable paper

**Radiation protection**

The *Contractor* conforms to the *Employer's* procedure OMOP 2049 and OMOP 2051 when performing any industrial radiography.

**Hazardous Substances**

It is required in terms of the General Administrative Regulation (Regulation 7) of the Act that any manufacturer, importer, seller or supplier of hazardous chemical substances shall supply the receiver, free of charge with sufficient information for the user, to enable the user to introduce the necessary measures as regards the protection of the health and safety of persons. It is therefore the responsibility of the supplier (dealing directly with the *Employer)* to supply the information. If information is not available for whatever reason, the supplier must indicate and give reasons to the *Employer.*

**Environmental management**

The *Contractor* is required to ensure that all goods, services or works supplied in terms of the contract conform to all applicable environmental legislation. Where work is done on the Site, the goods, services or works supplied will also conform to *the Employer's* environmental specifications.

**Handling of waste produced by the *Contractor.***

All waste introduced to and/or produced on the *Employer's* premises, by the *Contractor*, for this contract, must be handled in accordance with the minimum requirements for the Handling and Disposal of Hazardous Waste in terms of Government Legislation as proclaimed by the Department of Water Affairs and Forestry Act 1994 Ref.:BN0621-16296-5.

The *Contractor* is responsible to appoint a waste coordinator to ensure that all waste produced is handled according to the applicable legislation.

The *Contractor* is required to ensure that all goods, services or work supplied in terms of the contract conform to all applicable environmental legislation. Where work is done on the *Employer's* site, the goods, services or work supplied also conforms to the *Employer's* environmental specifications.

**Waste from the cleaning and maintenance of equipment**

The *Contractor* is responsible to contain all waste due to cleaning and maintenance of equipment and disposes of as described below.

**Stockpiling of waste**

Waste is removed promptly to the designated deposit areas. No stockpiling is permitted.

**Hazardous waste**

Waste declared as hazardous substances in terms of the Hazardous Substances Act no 15 of 1973 is the responsibility of the *Contractor* to ensure safe removal from the property to a registered Class 1 site

**Pest Control**

a) Only approved herbicides with a low environmental risk shall be used for pest control.
b) Only registered pest controllers may apply herbicides on a commercial basis.
c) Application of herbicides shall be in accordance with the Fertilisers, Farm Feeds, and Agricultural Remedies and Stock Remedies Act 36 of 194.

**Water Conservation**

a) Incidents related to water pollution must be reported to the *Employer 's* environmental department within 24 hours.
b) Report/fix leaking taps and pipes to save water.
c) Use water sparingly.
d) Chemical substances shall not be disposed of in wastewater or storm water drains.

**Air Pollution**

a) Dust suppression measures must be in place to reduce airborne dust.
b) Noxious and offensive odours arising from work activities shall be adequately controlled.
c) Ground Pollution
d) Measures to prevent or control ground contamination shall be put in place e.g., drip trays, bund walls.

e) Spill containment, clean-up and ground rehabilitation shall be done as per Tutuka procedures

## 5.5 Cooperating with and obtaining acceptance of Others.

**Others Occupying the Site**

*Contractor* to show curtesy to others during delivery and collecting of items.
The *Contractor* shares the Working Area with Others when preforming on site repairs.

**Interface with Others**

It is likely that other *contractors* will be working in the same area. Others might however from time to time require limited access to the same area in order to execute maintenance activities and the *Contractor* is to be accommodating in such instances.

**Feedback report**

A written progress report will be submitted in softcopy to the *Service Manager stating* the follow*ing:*

a) The progress on the scope of work
b) When QC hold points will take place
c) When Refurbished Pumps will be delivered.

**Completion**

This section specifies what the *Contractor* has to do for Completion.

**Requirements for Completion.**

Completion is when the *Contractor* has done all the work, which the Works Information states he is to do by the Completion Date and has corrected notified Defects, which would have prevented the *Employer* from using the works.

## 5.6 Records of *Contractor*'s Equipment

Not Applicable

## 5.7 Equipment provided by the *Employer.*

Lifting equipment for the loading and of loading of the Pumps.

## 5.8 Site services and facilities

### 5.8.1Provided by the *Employer*

Ablution Facilities will be provided by *Employer.*

### 5.8.2 Provided by the *Contractor*

a) *Contractor* to provide and ensure safe transportation services for all components and it *shall* comply with 32-93 and 32-345 procedures.
b) All PPE to be provided by *Contractor* and for any weather / working conditions.
c) Data pack to be provided on delivery.

**Protective Clothing**

The *Contractor* shall provide, keep on site and maintain protective clothing conforming to the *Employer's* safety standards. PPE for all weather and plant conditions must be provided when required by the *Contractor.*

**Access permits**

All applicable *Contractor* personnel shall be issued with access and vehicle permits (*Contractor*

Permit) which will contain the following information:

a) Name
b) ID Number
c) Company
d) Validity date

All *Contractor* permits must be submitted to Protective Services when the workers leave the Site after Completion of the works.

The *Contractor* applies to the *Employer s* Protective Services for the issuing of permits.
The *Contractor* submits his application at least 24 hours prior to entering the Security area. This application form must be delivered to Protective Services or can be faxed to (017) 749 9168.
The form contains the following information:

a) Employee Name.
b) Employee ID Number.
c) The *Employer's* Safety Co-ordinators signature.
d) The *Employer's Service Manager's* signature.
e) Copy of the first page of the ID book of every employee of the Contractor, photocopied to reduce the size to 65%.

The *Contractor's* visitors and personnel shall conform to the security arrangements in force at the Site at all times.

The Chief of Protective Services 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 of Protective Services, constitutes a security risk.

No unauthorized vehicles will be allowed on Site. Contract vehicle application should be directed to the *Service Manager.*

The *Contractor* will be limited to the working areas associated with the works. The *Contractor* is forbidden to enter any other areas and must ensure that his employees abide by these regulations.

Parking inside the Power Station is allowed. The parking application must be addressed to the protective services. All *Contractor*s will supply protective services with their vehicle's registration numbers.

No recruiting of casual labour may be done on the *Employer's* premises, including the area outside the power station security gate.

The *Contractor* obtains the access procedures, from *the Service Manager*, which may change depending on the prevailing security situation.

## 5.9 Control of noise, dust, water and waste

a) All necessary and relevant PPE must be used at all times when entering site.
b) Risk assessments must be completed before commencing with any task to be current at all times (Live Document)
c) All relevant procedures to be used at all times.

## 5.10 Hook ups to existing works

a) The *Employer* reserves the right to have any of the *Contractor's* personnel removed off site without cancelling the contract if, in the *Employer's* opinion, it is warranted.
b) The *Employer* reserves the right to request disciplinary / corrective action if, and when, required.

c) The main *Contractor* is accountable for the management of their sub-contractors and suppliers and to ensure that the applicable legal and the *Employer's* requirements (applicable during contract execution) are complied with by the sub-contractors and suppliers (all tiers). If there are non-conformances / non-compliance to applicable legal and the *Employer's* requirements identified, then the Main Service Provider / Provider / Principal *Contractor* will be penalised.
d) The *Contractor* shall operate under the direction and instructions of the *Employer's* Manager, or such person/people as may be appointed by him if not in conflict with the Occupational Health and Safety Act and the Generation Plant and Safety Regulations.
e) *The Contractor shall maintain a high standard of workmanship expected by the Employer and shall comply with any quality assurance and quality procedures implemented by the Employer.*
f) The *Employer reserves* the right to have any of the *Contractor's* personnel removed off site without any compensation to the *Contractor* in the event of the *Contractor's* personnel being in contravention with the OHS Act or any of the *Employer s* rules, regulations and procedures.
g) The *Employer* reserves the right to terminate the contract, once 3 non-conformances / PIR are raised against the *Contractor.*
h) All unknown / known services will be brought to the attention of the *Contractor* by *Service Manager*. Should the *Contractor* encounter any other services in the work area, he will immediately bring them to the attention of the *Service Manager* who will issue instructions as to what actions are to be taken.
i) The *Employer* carries no responsibility for unforeseen delays unless such a delay is negotiated within 24 hours of the occurrence and written agreement is submitted by the *Employer.*
j) Care must be taken to prevent damage to any surroundings such as the plant, roads, environment and equipment in and around existing buildings.
k) The *Contractor* and his employees will be required to conduct themselves at all times in proper and orderly manner while on the *Employer's* premises.
l) The *Contractor* and his employees may only smoke in the allowed / designated areas.
m) The *Employer* will take immediate steps to institute criminal investigations in the event of any suspected criminal acts e.g., theft etc.

## 5.11Tests and inspections

### 5.11.1 Description of tests and inspections

All refurbished and new components are to be Quality Checked and tested as per the quality control document which has been approved by the *Contractor* and *Employer.*

The *Supplier* provides all test equipment required for plant and materials testing.

Inspection and testing prior to delivery are conducted in accordance with requirements of the *Client* Procurement Quality Standard QM58 par 3.5.5 and 3.5.6 with the control of the associated generated documents aligned to that standard and approved Project Quality Plan.

### 5.11.2 Materials facilities and samples for tests and inspections

All refurbished and new components which are delivered to site shall be accommodated by the relevant certificates as stared in the approved quality control documents. (i.e. material, balance and pressure test certificates)

# 6 List of drawings

## 6.1 Drawings issued by the *Employer.*

Available from system Engineer upon request.

# 7 Appendix A – X17 – Low Service Damages

| X17 LOW SERVICE DAMAGES | | | | |
|---|---|---|---|---|
| **ITEM** | **DESRICPTION OF TASK** | **QUALITY OF PERFORMANCE** | **REASON FOR DAMAGES** | **DAMAGES TO BE IMPLEMENTED** |
| Penalty | Late delivery | Delivery exceeding committed lead time | Committed delivery date not met | • Exceeding 2 calendar days – 2% of the assessment value<br>• 3 to 7 calendar days - 5% of the assessment value<br>• 8 to 14 calendar days - 10% of the assessment value<br>• 15 to 30 calendar days - 25% of the assessment value<br>• Exceeding 30 calendar days – 50% of the assessment value |
| Penalty | Defective component | Component not up to quality standard | Unacceptable component quality | Cost of Repairs and any damages incurred |
| Penalty | Conformance Report (NCR) with 3 days | No response of Non-Conformance Report (NCR) with 3 days | No response | 2.5% of Assessment Value per day |
| Penalty | Site collection Delays | Site collection Delays as per agreed programme submitted to Service manager | Committed collection date not met | 2.5% of Assessment Value per day |
| Penalty | Documental submittal delays as per agreed programme submitted to Service manager | Documental submittal exceeding committed time agreed upon | committed time agreed upon not met | 2.5% of Assessment Value per day |

## Appendix B Key Performance Indicators

| | |
|---|---|
| Rework | None |
| Period of operation without any leaks or defects | Not less than 6 months |
| QCP adherence | 100% |
| Program | 100% compliance on key mile stone dates |
| X17 | None |

## Appendix C Risk Register

| Description of the risk | | Action to avoid or reduce the risk |
|---|---|---|
| **Risk event** | **Cause & possible outcome** | **Action to be taken and who in terms of the contract is responsible for taking it** |
| Quality of workmanship | Failure of equipment | Eskom to approve QCP prior to work execution and sign off the required interventions as per QCP. Supplier to approve all steps within QCP for the execution of the work. |
| Natural Disasters | Delay completion | Supplier asses the risks that are likely and plan accordingly. |
| Correct material use | Premature failure of component | Material certificates for each new component used on the equipment to be submitted to Eskom with the data pack. |
| Change in key personnel | High staff turnover | *Contractor* to immediately inform the *Employer* of any changes of its key personnel and shall provide the *Employer* with the employee's qualifications |