



## NEC3 Term Service Contract (TSC3)

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

**and**

**for Provision of Routine and Adhoc Condition  
monitoring service at Kendal Power Station**

| <b>Contents:</b>                              | <b>No of<br/>pages</b> |
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**CONTRACT No.**

## PART C1: AGREEMENTS & CONTRACT DATA

| Contents:                                                    | No of pages |
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| [to be inserted from Returnable Documents at award stage]    |             |
| <b>C1.2a Contract Data provided by the <i>Employer</i></b>   | <b>[•]</b>  |
| <b>C1.2b Contract Data provided by the <i>Contractor</i></b> | <b>[•]</b>  |
| [to be inserted from Returnable Documents at award stage]    |             |
| <b>C1.3 Proforma Guarantees</b>                              | <b>[•]</b>  |

### 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:

#### **Provision of Routine and Adhoc Condition monitoring service at Kendal Power Station**

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

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

|                |                                                                      |       |
|----------------|----------------------------------------------------------------------|-------|
| Options A or C | The offered total of the Prices exclusive of VAT is                  | R [•] |
|                | Sub total                                                            | R [•] |
|                | Value Added Tax @ 15% is                                             | R [•] |
|                | The offered total of the amount due inclusive of VAT is <sup>1</sup> | R [•] |
|                | (in words) [•]                                                       |       |

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

Signature(s)

Name(s)

Capacity

**For the  
tenderer:**

(Insert name and address of organisation)

Name &  
signature of  
witness

Date

Tenderer's CIDB registration number:

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

## Acceptance

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

The terms of the contract, are contained in:

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

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

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

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

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

Signature(s)

Name(s)

Capacity

**for the  
Employer**

(Insert name and address of organisation)

Name &  
signature of  
witness

Date

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

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

Note:

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

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

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

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

|                             | For the tenderer:                         | For the Employer                          |
|-----------------------------|-------------------------------------------|-------------------------------------------|
| Signature                   | _____                                     | _____                                     |
| Name                        | _____                                     | _____                                     |
| Capacity                    | _____                                     | _____                                     |
| On behalf of                | (Insert name and address of organisation) | (Insert name and address of organisation) |
| Name & signature of witness | _____                                     | _____                                     |
| Date                        | _____                                     | _____                                     |

## C1.2 TSC3 Contract Data

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

**[Instructions to the contract compiler: (delete these two notes in the final draft of a contract)]**

1. Please read the relevant clauses in the conditions of contract before you enter data. The number of the clause which requires the data is shown in the left hand column for each statement however other clauses may also use the same data.
2. Some TSC3 options are always selected by Eskom Holdings SOC Ltd. The remaining TSC3 options are identified by shading in the left hand column. In the event that the option is not required select and delete the whole row. Where the following symbol is used "[●]" - data is required to be inserted relevant to the specific option selected.]

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

| Clause | Statement                                                                               | Data                                                                          |
|--------|-----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| 1      | <b>General</b>                                                                          |                                                                               |
|        | The <i>conditions of contract</i> are the core clauses and the clauses for main Option: |                                                                               |
|        |                                                                                         | <b>A: Priced contract with price list</b>                                     |
|        | dispute resolution Option                                                               | <b>W1: Dispute resolution procedure</b>                                       |
|        | and secondary Options                                                                   |                                                                               |
|        |                                                                                         | <b>X1: Price adjustment for inflation</b>                                     |
|        |                                                                                         | <b>X2: Changes in the law</b>                                                 |
|        |                                                                                         | <b>X3: Multiple currencies</b>                                                |
|        |                                                                                         | <b>X7: Delay Damages</b>                                                      |
|        |                                                                                         | <b>X12: Partnering</b>                                                        |
|        |                                                                                         | <b>X13: Performance bond</b>                                                  |
|        |                                                                                         | <b>X17: Low service damages</b>                                               |
|        |                                                                                         | <b>X18: Limitation of liability</b>                                           |
|        |                                                                                         | <b>X19: Task Order</b>                                                        |
|        |                                                                                         | <b>Z: Additional conditions of contract</b>                                   |
|        | of the NEC3 Term Service Contract April 2013 <sup>2</sup> (TSC3)                        |                                                                               |
| 10.1   | The <i>Employer</i> is (name):                                                          | <b>Eskom Holdings SOC Ltd (reg no: 2002/015527/30), a state owned company</b> |

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

|          |                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------|-------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |                                                             | 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 <i>Service Manager</i> is (name):                       | Nicholas Mdluli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|          | Address                                                     | Kendal Power Station<br>P/Bag X7272<br>Witbank<br>1035                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|          | Tel                                                         | 013 647 6273                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|          | Fax                                                         | 086 539 5187                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|          | e-mail                                                      | MdluliNS@eskom.co.za                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 11.2(2)  | The Affected Property is                                    | Kendal Power Station                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 11.2(13) | The <i>service</i> is                                       | Provision of Routine and Adhoc Condition monitoring service at Kendal Power Station                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 11.2(14) | The following matters will be included in the Risk Register | <ol style="list-style-type: none"> <li>1. Damage to the property</li> <li>2. Natural disasters</li> <li>3. Changes to existing safety procedures</li> <li>4. Community unrest around Kendal Power Station blocking access to site</li> <li>5. Delays caused by others on site</li> <li>6. Construction hazards</li> <li>7. Covid-19 Pandemic or any other Pandemic declared</li> <li>8. Hazardous gases</li> <li>9. Electrocution</li> <li>10. Fire and smoke</li> <li>11. Extreme weather conditions</li> <li>12. Contamination from hazardous chemical substances</li> <li>13. Work Stoppages</li> <li>14. Road blockages due to Mining Operations</li> </ol> |
| 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 <i>law of the contract</i> is the law of                | the Republic of South Africa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 13.1     | The <i>language of this contract</i> is                     | English                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 13.3     | The <i>period for reply</i> is                              | One week                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 2        | <b>The Contractor's main responsibilities</b>               | Data required by this section of the core clauses is also provided by the <i>Contractor</i> in Part 2 and terms in italics used in this section are identified elsewhere in this Contract Data                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

|      |                                                                  |                                                                                                                                                                                                                                                                                                                                 |
|------|------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 21.1 | The <i>Contractor</i> submits a first plan for acceptance within | Three days of the Task Order Date or as agreed between the two Parties                                                                                                                                                                                                                                                          |
| 3    | <b>Time</b>                                                      |                                                                                                                                                                                                                                                                                                                                 |
| 30.1 | The <i>starting date</i> is.                                     | [•]                                                                                                                                                                                                                                                                                                                             |
| 30.1 | The <i>service period</i> is                                     | 60 Months                                                                                                                                                                                                                                                                                                                       |
| 4    | <b>Testing and defects</b>                                       | There is no reference to Contract Data in this section of the core clauses and terms in italics used in this section are identified elsewhere in this Contract Data                                                                                                                                                             |
| 5    | <b>Payment</b>                                                   |                                                                                                                                                                                                                                                                                                                                 |
| 50.1 | The <i>assessment interval</i> is                                | between the 24 <sup>th</sup> and 28 <sup>th</sup> day of each successive month.                                                                                                                                                                                                                                                 |
| 51.1 | The <i>currency of this contract</i> is the                      | South African Rand                                                                                                                                                                                                                                                                                                              |
| 51.2 | The period within which payments are made is                     | 30 days from the receipt of an undisputed invoice.                                                                                                                                                                                                                                                                              |
| 51.4 | The <i>interest rate</i> is                                      | the publicly quoted prime rate of interest (calculated on a 365 day a 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 .                 |
| 6    | <b>Compensation events</b>                                       | There is no reference to Contract Data in this section of the core clauses and terms in italics used in this section are identified elsewhere in this Contract Data                                                                                                                                                             |
| 7    | <b>Use of Equipment Plant and Materials</b>                      | There is no reference to Contract Data in this section of the core clauses and terms in italics used in this section are identified elsewhere in this Contract Data                                                                                                                                                             |
| 8    | <b>Risks and insurance</b>                                       |                                                                                                                                                                                                                                                                                                                                 |
| 80.1 | These are additional <i>Employer's</i> risks                     | <ol style="list-style-type: none"> <li>1. Natural Disaster</li> <li>2. Unavailability or no access to the Power Station</li> <li>3. Severe weather conditions</li> <li>4. Site and working conditions</li> <li>5. Delays caused by community unrests and strikes</li> <li>6. Poor security</li> <li>7. Work Stoppage</li> </ol> |
| 9    | <b>Termination</b>                                               | <ol style="list-style-type: none"> <li>1. R1– R21</li> </ol>                                                                                                                                                                                                                                                                    |



|         |                                                                                                                                           |  |                                                                                                                                                                                                                                                                                                                                                                                                              |                     |
|---------|-------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| 10      | Data for main Option clause                                                                                                               |  |                                                                                                                                                                                                                                                                                                                                                                                                              |                     |
| A       | Priced contract with price list                                                                                                           |  |                                                                                                                                                                                                                                                                                                                                                                                                              |                     |
| 20.5    | The <i>Contractor</i> prepares forecasts of the final total of the Prices for the whole of the <i>service</i> at intervals no longer than |  | Four weeks.                                                                                                                                                                                                                                                                                                                                                                                                  |                     |
| 11      | Data for Option W1                                                                                                                        |  |                                                                                                                                                                                                                                                                                                                                                                                                              |                     |
| W1.1    | The <i>Adjudicator</i>                                                                                                                    |  | the person selected from the ICE-SA Division (or its successor body) of the South African Institution of Civil Engineering Panel of Adjudicators by the Party intending to refer a dispute to him. (see <a href="http://www.ice-sa.org.za">www.ice-sa.org.za</a> ). If the Parties do not agree on an Adjudicator the Adjudicator will be appointed by the Arbitration Foundation of Southern Africa (AFSA). |                     |
|         | Address                                                                                                                                   |  | [•]                                                                                                                                                                                                                                                                                                                                                                                                          |                     |
|         | Tel No.                                                                                                                                   |  | [•]                                                                                                                                                                                                                                                                                                                                                                                                          |                     |
|         | Fax No.                                                                                                                                   |  | [•]                                                                                                                                                                                                                                                                                                                                                                                                          |                     |
|         | e-mail                                                                                                                                    |  | [•]                                                                                                                                                                                                                                                                                                                                                                                                          |                     |
| W1.2(3) | The <i>Adjudicator nominating body</i> 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 <a href="http://www.ice-sa.org.za">www.ice-sa.org.za</a> ) or its successor body.                                                                                                                                                                         |                     |
| W1.4(2) | The <i>tribunal</i> is:                                                                                                                   |  | arbitration                                                                                                                                                                                                                                                                                                                                                                                                  |                     |
| W1.4(5) | The <i>arbitration procedure</i> 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                                                                                  |  | the Chairman for the time being or his nominee of the Association of Arbitrators (Southern Africa) or its successor body.                                                                                                                                                                                                                                                                                    |                     |
|         | - if the Parties cannot agree a choice or                                                                                                 |  |                                                                                                                                                                                                                                                                                                                                                                                                              |                     |
|         | - if the arbitration procedure does not state who selects an arbitrator, is                                                               |  |                                                                                                                                                                                                                                                                                                                                                                                                              |                     |
| 12      | Data for secondary Option clauses                                                                                                         |  |                                                                                                                                                                                                                                                                                                                                                                                                              |                     |
| X1      | Price adjustment for inflation                                                                                                            |  |                                                                                                                                                                                                                                                                                                                                                                                                              |                     |
| X1.1    | The <i>base date</i> for indices is                                                                                                       |  | [•].                                                                                                                                                                                                                                                                                                                                                                                                         |                     |
|         | The proportions used to calculate the Price Adjustment Factor are:                                                                        |  | proportion                                                                                                                                                                                                                                                                                                                                                                                                   | linked to index for |
|         |                                                                                                                                           |  | 0.                                                                                                                                                                                                                                                                                                                                                                                                           | [•]                 |
|         |                                                                                                                                           |  | 0.                                                                                                                                                                                                                                                                                                                                                                                                           | [•]                 |
|         |                                                                                                                                           |  | 0.                                                                                                                                                                                                                                                                                                                                                                                                           | [•]                 |

|       |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|       |                                                                                                                                                                                    | <div> <div>0.</div> <div>[•]</div> <div>[•]</div> </div> <div> <div>0.</div> <div>[•]</div> <div>[•]</div> </div> <div> <div>[•]</div> <div>non-adjustable</div> </div> <div>1.00</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| X2    | Changes in the law                                                                                                                                                                 | There is no reference to Contract Data in this Option and terms in italics are identified elsewhere in this Contract Data.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| X3:   | Multiple currencies                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| X12:  | Partnering                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| X13:  | Performance bond                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| X17   | Low service damages                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| X17.1 | The <i>service level table</i> is in                                                                                                                                               | Appendix A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| X18   | Limitation of liability                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| X18.1 | The <i>Contractor's</i> liability to the <i>Employer</i> for indirect or consequential loss is limited to                                                                          | R0.0 (zero Rand)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| X18.2 | For any one event, the <i>Contractor's</i> liability to the <i>Employer</i> for loss of or damage to the <i>Employer's</i> property is limited to                                  | the amount of the deductibles relevant to the event                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| X18.3 | The <i>Contractor's</i> liability for Defects due to his design of an item of Equipment is limited to                                                                              | <p>The greater of</p> <ul style="list-style-type: none"> <li>the total of the Prices at the Contract Date and</li> <li>the amounts excluded and unrecoverable from the <i>Employer's</i> insurance (other than the resulting physical damage to the <i>Employer's</i> property which is not excluded) plus the applicable deductibles</li> </ul>                                                                                                                                                                                                                                                                                                    |
| X18.4 | The <i>Contractor's</i> total liability to the <i>Employer</i> , for all matters arising under or in connection with this contract, other than the excluded matters, is limited to | <p>the total of the Prices other than for the additional excluded matters.</p> <p>The <i>Contractor's</i> total liability for the additional excluded matters is not limited.</p> <p>The additional excluded matters are amounts for which the <i>Contractor</i> is liable under this contract for</p> <ul style="list-style-type: none"> <li>Defects due to his design, plan and specification,</li> <li>Defects due to manufacture and fabrication outside the Affected Property,</li> <li>loss of or damage to property (other than the <i>Employer's</i> property, Plant and Materials),</li> <li>death of or injury to a person and</li> </ul> |

|            |                                                                                           |                                                                                                     |
|------------|-------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
|            |                                                                                           | <ul style="list-style-type: none"> <li>• infringement of an intellectual property right.</li> </ul> |
| X18.5      | The <i>end of liability date</i> is                                                       | <b>[•] months after the end of the <i>service period</i>.</b>                                       |
| <b>X19</b> | <b>Task Order</b>                                                                         |                                                                                                     |
| X19.5      | The <i>Contractor</i> submits a Task Order programme to the <i>Service Manager</i> within | <b>Three days of receiving the Task Order or as agreed between the two Parties</b>                  |
| <b>Z</b>   | <b>The <i>additional conditions of contract</i> are</b>                                   | <b>Z1 to Z14 always apply.</b>                                                                      |

## **Z1 Cession delegation and assignment**

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

## **Z2 Joint ventures**

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

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

- Z3.1 Where a change in the *Contractor's* legal status, ownership or any other change to his business composition or business dealings results in a change to the *Contractor's* B-BBEE status, the *Contractor* notifies the *Employer* within seven days of the change.
- Z3.2 The *Contractor* is required to submit an updated verification certificate and necessary supporting documentation confirming the change in his B-BBEE status to the *Service Manager* within thirty days of the notification or as otherwise instructed by the *Service Manager*.
- Z3.3 Where, as a result, the *Contractor's* B-BBEE status has decreased since the Contract Date the *Employer* may either re-negotiate this contract or alternatively, terminate the *Contractor's* obligation to Provide the Service.
- Z3.4 Failure by the *Contractor* to notify the *Employer* of a change in its B-BBEE status may constitute a reason for termination. If the *Employer* terminates in terms of this clause, the procedures on termination are P1, P2 and P4 as stated in clause 92, and the amount due is A1 and A3 as stated in clause 93.

## **Z4 Confidentiality**

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

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

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

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

- Z6.1 The *Contractor* undertakes to take all reasonable precautions to maintain the health and safety of persons in and about the execution of the *service*. Without limitation the *Contractor*:
- accepts that the *Employer* may appoint him as the "Principal Contractor" (as defined and provided for under the Construction Regulations 2014 (promulgated under the Occupational Health & Safety Act 85 of 1993) ("the Construction Regulations") for the Affected Property;
  - warrants that the total of the Prices as at the Contract Date includes a sufficient amount for proper compliance with the Construction Regulations, all applicable health & safety laws and regulations and the health and safety rules, guidelines and procedures provided for in this contract and generally for the proper maintenance of health & safety in and about the execution of the *service*; and
  - undertakes, in and about the execution of the *service*, to comply with the Construction Regulations and with all applicable health & safety laws and regulations and rules, guidelines and procedures otherwise provided for under this contract and ensures that his Subcontractors, employees and others under the *Contractor's* direction and control, likewise observe and comply with the foregoing.
- Z6.2 The *Contractor*, in and about the execution of the *service*, complies with all applicable environmental laws and regulations and rules, guidelines and procedures otherwise provided for under this contract and ensures that his Subcontractors, employees and others under the *Contractor's* direction and control, likewise observe and comply with the foregoing.

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

- Z7.1 Within one week of receiving a payment certificate from the *Service Manager* in terms of core clause 51.1, the *Contractor* provides the *Employer* with a tax invoice in accordance with the *Employer's* procedures stated in the Service Information, showing the amount due for payment equal to that stated in the payment certificate.
- Z7.2 If the *Contractor* does not provide a tax invoice in the form and by the time required by this contract, the time by when the *Employer* is to make a payment is extended by a period equal in time to the delayed submission of the correct tax invoice. Interest due by the *Employer* in terms of core clause 51.2 is then calculated from the delayed date by when payment is to be made.
- Z7.3 The *Contractor* (if registered in South Africa in terms of the companies Act) is required to comply with the requirements of the Value Added Tax Act, no 89 of 1991 (as amended) and to include the *Employer's* VAT number 4740101508 on each invoice he submits for payment.

**Z8 Notifying compensation events**

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

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

---

**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:

|                         |                                                                                                                                                                                                                                                                    |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Affected Party</b>   | means, as the context requires, any party, irrespective of whether it is the <i>Contractor</i> 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, |
| <b>Coercive Action</b>  | 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,                                             |
| <b>Collusive Action</b> | 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,                                                                                                     |
| <b>Committing Party</b> | means, as the context requires, the <i>Contractor</i> , 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 <i>Contractor</i> to the <i>Employer's</i> property | The replacement cost where not covered by the <i>Employer's</i> insurance.<br><br>The <i>Employer's</i> policy deductible as at Contract Date, where covered by the <i>Employer's</i> insurance. |
| Loss of or damage to Plant and Materials                                            | The replacement cost where not covered by the <i>Employer's</i> insurance.                                                                                                                       |

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

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

**Insurance  
by the  
Employer**

86

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

**INSURANCE TABLE B**

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

## C1.2 Contract Data

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

**[Instructions to the contract compiler: (delete this notes before issue to tenderers with an enquiry)**

Whenever a cell is shaded in the left hand column it denotes this data is optional and would be required in relation to the option selected. In the event that the option is not required select and delete the whole row.]

#### Notes to a tendering contractor:

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

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

| Clause   | Statement                                                                                                         | Data                  |
|----------|-------------------------------------------------------------------------------------------------------------------|-----------------------|
| 10.1     | The <i>Contractor</i> is (Name):<br><br>Address<br><br>Tel No.<br><br>Fax No.                                     |                       |
| 11.2(8)  | The <i>direct fee percentage</i> is<br><br>The <i>subcontracted fee percentage</i> is                             | %<br><br>%            |
| 11.2(14) | The following matters will be included in the Risk Register                                                       | <b>Not Applicable</b> |
| 11.2(15) | The Service Information for the <i>Contractor's</i> plan is in:                                                   | <b>C3.2</b>           |
| 21.1     | The plan identified in the Contract Data is contained in:                                                         | <b>C3.2</b>           |
| 24.1     | The key people are:<br><br>1 Name:<br><br>Job:<br><br>Responsibilities:<br><br>Qualifications:<br><br>Experience: |                       |

<sup>3</sup> Available from Engineering Contract Strategies Tel 011 803 3008 Fax 086 5391902 or [www.ecs.co.za](http://www.ecs.co.za)



2

Name:  
  
Job  
  
Responsibilities:  
  
Qualifications:  
  
Experience:

CV's (and further key person's data including CVs) are in \_\_\_\_\_.

|          |                                     |      |
|----------|-------------------------------------|------|
| A        | Priced contract with price list     |      |
| 11.2(12) | The <i>price list</i> is in         | C2.2 |
| 11.2(19) | The tendered total of the Prices is | R    |

**PART 2: PRICING DATA**  
**TSC3 Option A**

| Document reference | Title                         | No of pages |
|--------------------|-------------------------------|-------------|
| C2.1               | Pricing assumptions: Option A | 2           |
| C2.2               | The <i>price list</i>         | [•]         |

## C2.1 Pricing assumptions: Option A

### How work is priced and assessed for payment

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

|                                     |      |                                                                                                                                                                                                                                                                                                                            |
|-------------------------------------|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Identified and defined terms</b> | 11   |                                                                                                                                                                                                                                                                                                                            |
|                                     | 11.2 | (12) The Price List is the <i>price list</i> unless later changed in accordance with this contract.                                                                                                                                                                                                                        |
|                                     |      | (17) The Price for Services Provided to Date is the total of                                                                                                                                                                                                                                                               |
|                                     |      | <ul style="list-style-type: none"><li>the Price for each lump sum item in the Price List which the <i>Contractor</i> has completed and</li><li>where a quantity is stated for an item in the Price List, an amount calculated by multiplying the quantity which the <i>Contractor</i> has completed by the rate.</li></ul> |
|                                     |      | (19) The Prices are the amounts stated in the Price column of the Price List. Where a quantity is stated for an item in the Price List, the Price is calculated by multiplying the quantity by the rate.                                                                                                                   |

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*

### 1. Condition Monitoring Services

| Item nr | Description                                       | Unit      | Expected Quantity | Rate | Price |
|---------|---------------------------------------------------|-----------|-------------------|------|-------|
| 1       | Condition Monitoring execution resources          |           |                   |      |       |
| 1.1     | Supervisor (8 hours by 20 days per month)         | Month     | 60                |      |       |
| 1.2     | Analyst (8 hours by 20 days per month)            | Month     | 60                |      |       |
| 1.3     | 3 x Data collector (8 hours by 20 days per month) | Month     | 60                |      |       |
| 2       | Vibration                                         | Month     | 60                |      |       |
| 3       | Tribology Part 1                                  | 3 Monthly | 20 (Quarterly)    |      |       |
| 4       | Tribology Part 2                                  | Month     | 60                |      |       |
| 5       | Thermography                                      | Month     | 60                |      |       |
| 6       | Strobe Light Inspection                           | Month     | 60                |      |       |
| 7       | Steel cord belts X-ray                            | Yearly    | 5                 |      |       |
| 8       | Site Establishment (Once-Off)                     | Item      | 1                 |      |       |
| 9       | Site De-Establishment (Once-Off)                  | Item      | 1                 |      |       |
| 10      | Health & Safety (PPE)                             | Yearly    | 5                 |      |       |

The total of the Prices

### 2. Labour Rates for call outs and compensation events (Only).

| Item no. | Description                                    | Unit     | Outside normal working hours Rate @ 1.5 | Saturday Rate x 1.5 | Sunday and Public holiday Rate x 1.5 |
|----------|------------------------------------------------|----------|-----------------------------------------|---------------------|--------------------------------------|
| 1.       | Vibrations (call outs after hours)             | Per hour |                                         |                     |                                      |
| 2.       | Thermography (call out after hours)            | Per hour |                                         |                     |                                      |
| 3.       | Strobe light inspection (call out after hours) | Per hour |                                         |                     |                                      |
| 4.       | Tribology (call out after hours)               | Per hour |                                         |                     |                                      |
| 5.       | Travelling after hours                         | Per hour |                                         |                     |                                      |

## PART 3: SCOPE OF WORK

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|---------------------------|-----------------------------------------|--------------------|
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| C3.2                      | <i>Contractor's Service Information</i> |                    |
|                           | Total number of pages                   |                    |

## C3.1: EMPLOYER'S SERVICE INFORMATION

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## 1 Description of the *service*

### 1.1 Executive overview

The contract is for Provision of routine and Adhoc conditioning Monitoring and analysis service at Kendal Power Station. The duration for the contract is 60 months. Provision of routine and Adhoc condition monitoring and analysis service at Kendal Power Station as specified below:

- A. Vibration Measurements and Analysis;
- B. Tribology
- C. Infrared Thermography
- D. X-rays steel cord inspection
- E. Ultrasound
- F. Partial discharge
- G. Stroboscopic inspection
- H. Fixed services
- I. On Demand call outs
- J. Reporting
- K. Findings

This service shall cover all the Kendal Power Station plants as per the scope of work.

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

#### **A. Vibration Measurements and Analysis:**

The *Contractor* shall measure, monitor and analyse all machines for vibrations as detailed in annexure A and as per instruction by the *Employer* as and when required.

The *Contractor* shall also perform vibration test on rebuilt/refurbished electric motors as required prior delivery to Kendal site. These tests shall be done in conjunction with the Performance and testing, technical support and systems engineer at Kendal Power Station (Employer).

The *Contractor* shall measure and or collect data in accordance with the following standards:

- (a) ISO 13373-1;
- (b) ISO 17359;
- (c) ISO 10816-1&3;
- (d) ISO 18434; and/or
- (e) Eskom 36-1095 Rev 0, for vibration: (VIBRATION-BASED CONDITION MONITORING OF ROTATING PLANT MACHINERY)

The *Contractor* shall ensure that personnel responsible for collecting data shall be as consistent as possible when collecting data to ensure repeatability. Data to be collected at marked points all the time by all data collectors.

The *Contractor* shall ensure that the machine shall be in its normal operating condition such as running speed and load where possible when vibration data is collected.

The *Contractor's* analysis, diagnosis, prognosis or recommendations shall comply to the following standards:

- (a) ISO 13373-1;
- (b) ISO 17359;
- (c) ISO 10816-1&3;
- (d) ISO 18434; and/or
- (e) Eskom 36-1095 Rev 0, for vibration: (VIBRATION-BASED CONDITION MONITORING OF ROTATING PLANT MACHINERY)

The *Contractor's* vibration analyst shall perform detailed analysis on the data in alarm, determine the root cause of the problem and its severity, and recommend the solution to the *Employer*.

#### **B. Tribology (Oil Analysis)**

The *Contractor* shall conduct oil analysis in compliance with standard Eskom 36-53 Rev 0, for oil and lubricating fluids (IN-SERVICE MONITORING OF LUBRICATING OILS AND HYDRAULIC FLUIDS).

The *Contractor* shall monitor and conduct oil analysis in all machines detailed on annexure A and as per the instruction by the *Employer* as and when required.

#### **C. Infrared Thermography scan**

The *Contractor* shall perform infrared thermography scans on all the plants as detailed on Appendix B and as per the instruction by the *Employer*.

#### **D. X-rays (Steel cord belts inspection)**

The *Contractor* shall perform X-rays on all steel cord conveyor belts at Kendal power station every year.

The *Contractor* shall produce a detailed report for each conveyor belt done, and the report shall include graphical dimensions and results.

#### **E. Ultrasound**

The *Contractor* shall perform Ultrasound as and when is required by the employer and generate reports within 5 working days.

#### **F. Partial discharge**

The *Contractor* shall perform Partial discharge as and when is required by the *Employer* and generate the report within 5 working days.

### **G. Stroboscopic inspection**

The *Contractor* shall use stroboscopic technology for inspection of rotating machinery and produce a report as per scope of work.

### **H. Fixed Services:**

1. Continuous assessment and improvement of Condition Monitoring programs, measurement techniques, analysis of data, reports etc.
2. Capturing and trending of information on problematic plant, *Employer* shall get an access to database where all results are stored.
3. Providing Maintenance and Engineering solutions and recommendations.
4. Establishing serious plant problems immediately to Engineering, Maintenance and Operating.
5. Providing a monthly vibration reports on all plant areas as detailed on scope of work
6. Providing a monthly/3 monthly Tribology and Thermography reports as detailed on the scope of work
7. Providing Condition monitoring reports within five working days from data collection.
8. Performing strobe light inspections on the mill girth gears monthly basis and other plant areas requiring this service.
9. Performing follow up test on the maintained plant as part of commissioning of these plants listed on scope of work
10. Reviewing and discussing monthly reports and recommendation with clients.
11. Providing a monthly management report with combined condition monitoring matrix that shows all condition monitoring done per plant as detailed in the scope of work

### **I. On-Demand Services or Call-Outs:**

The *Contractor* shall provide the detailed services on annexure A and Annexure B on request by the *Employer* at any given time for any of the following purposes:

1. To return equipment to service after plant breakdown or plant opportunity maintenance.
2. Support investigations.

The On-Demand Services or Call-Outs shall be provided by the *Contractor* on instruction by the *Employer* at no extra cost provided the services will be performed within the normal working hours.

The On-Demand Services or Call-Outs shall be provided by the *Contractor* on instruction by the *Employer* at agreed rates of the called out personnel provided the services will be performed outside the normal working hours.

### **J. Reporting**

The *Contractor* shall provide reports that comply with the following standards:

1. Eskom 36 -1095 Rev 0, for vibration: (VIBRATION-BASED CONDITION MONITORING OF ROTATING PLANT MACHINERY).
2. Eskom GGL 36 - 53 Rev 0, for oil and lubricating fluids (IN-SERVICE MONITORING OF LUBRICATING OILS AND HYDRAULIC FLUIDS)
3. ISO 13379 - Condition monitoring and diagnostics of machines. General guidelines on data interpretation and diagnostics techniques
4. ISO 18434 - Condition monitoring and diagnostics of machines. Thermography
5. ISO 18436 - Condition monitoring and diagnostics of Machines. Requirements for training and certification of personnel
6. ISO 13381 Condition monitoring and diagnostics of machines. Prognostics
7. ISO 17359 - Condition monitoring and diagnostics of machines. General guidelines

8. ISO 22096 - Condition monitoring and diagnostics of machines. Acoustic emission
9. ISO 13357 - Petroleum products. Determination of the filterability of lubricating oils
10. 240-129001353 - Vibration-Based Condition Monitoring of Rotating Auxiliary Plant Machinery (Hand Held Monitoring) Guideline
11. 240-129001393 - Infrared Thermography Standard
12. 240-83539806 - Manual Ultrasonic Wall Thickness Testing on Eskom Power Plants Standard

The *Contractor* shall conduct an in depth analysis to all failures of plant that is included in the works information, and a detailed report shall be compiled and submitted to the *Employer*.

#### **K. Findings**

The *Contractor* shall load defects on the flip system after discussion with the System Engineer and prioritise accordingly on all findings and the notification number shall be included on the report for tracking purposes.

Note: All software's data and data content remain with the *Employer* at the end of the contract.

### **1.3 Interpretation and terminology**

The following abbreviations are used in this Service Information:

| <b>Abbreviation</b> | <b>Meaning given to the abbreviation</b>       |
|---------------------|------------------------------------------------|
| B-BBEE              | Broad Based Black Economic Empowerment         |
| CEP                 | Condensate Extraction Pump                     |
| CM                  | Condition Monitoring                           |
| CPP                 | Condensate Polishing Plant                     |
| CPP                 | Condensate Polishing Plant                     |
| EFP                 | Electric Feed Pump                             |
| FD                  | Forced Draft                                   |
| FRF                 | Fire Resistant Fluid                           |
| ID                  | Induced Draft                                  |
| ISO                 | International Organisation for Standardization |
| KPI                 | Key Performance Indicator                      |

|           |                                             |
|-----------|---------------------------------------------|
| KPIs      | Key Performance Indicators                  |
| LAN       | Local Area Network                          |
| LH        | Left-hand                                   |
| PA        | Primary Air                                 |
| PM        | Planned Maintenance Task                    |
| RH        | Right-hand                                  |
| SANAS     | South African National Accreditation System |
| SOW<br>HP | Scope of Work<br>High Pressure              |
| SSC       | Submersible Scraper Conveyor                |

## 2 Management strategy and start up.

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

- The *Contractor* shall provide the methods of carrying out of all services as described in section 1.1.
- The work schedule shall be issued by the *Employer* to the *Contractor*.

The *Contractor* shall ensure that as a minimum the following is incorporated into the plan.

1. Vibration reports shall be submitted to the employer by the *Contractor* as per annexure A frequency.
2. Tribology reports shall be submitted to the employer by the *Contractor* as per annexure A frequency.
3. Thermography reports shall be submitted to the *Employer* every month.
4. Strobe light inspection on mill girth gears report shall be submitted to the *Employer* ever month.
5. X rays for the steel cord conveyor belts within 12 months

## 2.2 Management meetings

The *Contractor* and *Employer* shall use the techniques of partnering to manage the contract by holding meetings designed to pro-actively and jointly manage the administration of the contract with the objective of minimising the adverse effects of risks and surprises for both Parties.

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 register and compensation events                        | Monthly                                                             | Kendal Power Station                                                | <i>Employer, Contractor</i>                                         |
| Overall contract progress and feedback                       | Two Monthly                                                         | Kendal Power Station                                                | <i>Employer, Contractor</i>                                         |
| Adhoc Meetings                                               | As and when required                                                | Kendal Power Station                                                | <i>Employer, Contractor</i>                                         |
| Safety meeting                                               | Monthly                                                             | Kendal Power Station                                                | P&T, <i>Contractor</i> employees                                    |
| Early Warning, Risk Reduction, Risk register                 | As agreed between parties involved during execution of the contract | As agreed between parties involved during execution of the contract | As agreed between parties involved during execution of the contract |
| Compensation Event                                           | As agreed between parties involved during execution of the contract | As agreed between parties involved during execution of the contract | As agreed between parties involved during execution of the contract |
| Dispute Resolution                                           | As agreed between parties involved during execution of the contract | As agreed between parties involved during execution of the contract | As agreed between parties involved during execution of the contract |
| Non-Compliance to specification, deviation from the contract | As agreed between parties involved during execution of the contract | As agreed between parties involved during execution of the contract | As agreed between parties involved during execution of the contract |
| SD&L, SHEQ Compliance                                        | As agreed between parties involved during execution of the contract | As agreed between parties involved during execution of the contract | As agreed between parties involved during execution of the contract |

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

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

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

The *Contractor* shall provide an organogram showing his people and their lines of authority / communication.

The *Contractor* shall show the list of key people and roles and responsibility. The *Contractor* shall ensure the following minimum skills and competence are always onsite.

1. Minimum of 5 personnel to on site during the normal working hours
2. Site Manager- shall have a ISO Cat/level 3, IR level 2 and Oil L1
3. Analyst- shall have a ISO Cat/ level 2 & IR level 2
4. Junior Analyst- shall have ISO Cat/level 1 and IR level 1
5. Assistant Analyst shall possess Cat level 1 to take vibration measurements & a certificate to collect oil samples on rotating Machinery
6. Tribologist shall possess a Mechanical/chemical diploma and oil analysis level 2 and be certified to analyse oil.

### **2.4 Provision of bonds and guarantees**

The form in which a bond or guarantee required by the *conditions of contract* (if any) is to be provided by the *Contractor* is given in Part 1 Agreements and Contract Data, document C1.3, Sureties.

The *Employer* may withhold payment of amounts due to the *Contractor* until the bond or guarantee required in terms of this contract has been received and accepted by the person notified to the *Contractor* by the *Service Manager* to receive and accept such bond or guarantee. Such withholding of payment due to the *Contractor* does not affect the *Employer's* right to termination stated in this contract.

### **2.5 Documentation control**

The documentation will be identified with an alpha numeric which indicates source, recipient, communication number etc.

All contractual communications shall be in the form of properly compiled letters or forms attached to e-mails and not as a message in the email itself. State any particular routing requirements but note from TSC3 who issues what to whom.

The *Contractor* shall ensure that the document comply with QM 58 requirements. The *Contractor* shall comply to all Eskom Quality procedures.

## 2.6 Invoicing and payment

In terms of core clause 50 the Contractor assesses the amount due and applies to the *Employer* for payment. The *Contractor* applies for payment with a tax invoice addressed to the *Employer* as follows:

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The *Contractor* includes the following information on each tax invoice as a minimum:

- Name and address of the *Contractor*
- The contract number and title;
- The Purchase Order Number
- *Contractor's* VAT registration number;
- The *Employer's* VAT registration number 4740101508;
- The Price for each lump sum item in the Price List or Task Order which the *Contractor* has completed;
- Where a quantity is stated for an item in the Price List or Task Order, an amount calculated by multiplying the quantity which the *Contractor* has completed by the rate,
- Other amounts to be paid to the *Contractor*;
- Less amounts to be paid by or retained from the *Contractor*;
- The change in the amount due since the previous payment being the invoiced amount - excluding VAT, the VAT and including VAT;

(add other as required)

The *Contractor* attaches the detail assessment of all work done for each item in the Price List to each tax invoice showing

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

- Procedures for invoice submission and payment: All Invoices to be submitted electronically payment instructions: [invoiceseskomlocal@eskom.co.za](mailto:invoiceseskomlocal@eskom.co.za).

## 2.7 Contract change management

Any additional requirement to the compensation event clause shall be dealt with in accordance with *Employers'* procurements procedures and as per section 6 of the core clauses.

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

In order to substantiate the Defined Cost of compensation events, the Employer may require the Contractor to keep records of amounts paid by him for people employed by the Contractor, Plant and Materials, work subcontracted by the Contractor and Equipment. [See clause 11.2(5) and 63.2]. Contractor must keep safe all records of amounts paid by the Employer and be made available to the Employer when needed.



## 2.9 Insurance provided by the *Employer*

First read TSC3 Core Clause 86.1 and then add anything necessary for the management of insurance related issues such as a cross reference to where procedures for making claims can be found. Also provide contact details for persons capable of being able to answer any insurance related queries the *Contractor* may have, as well as to whom the information required by Marine Insurance (if any) may be addressed.

## 2.10 Training workshops and technology transfer

The contractor shall be required to have at least one training workshop per year where the sharing of the technology used to the nominated people by the employer.

## 2.11 Design and supply of Equipment

In an event that the Contractor have to design an equipment that will enable providing of the service, the contractor shall ensure that some details of the design of Equipment are shared with the Service Manager, not necessarily for his acceptance but as an assurance that the Equipment will be able to allow the Contractor to Provide the Service efficiently and without delay

The liability for such design supply and use of the Equipment shall remain with the Contractor

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

### 2.12.1 Equipment

All tools and equipment provided by the contractor shall remain in a serviceable condition and the responsibility and maintenance of such remains with the Contractor

### 2.12.2 Information and other things

The Contractor shall provide at the end of the service period stated in the Service Information:

1. Equipment master database collected by the contractor or created by the contractor shall remain the property of Eskom and should submit to Eskom upon expiry of the contract.

The equipment master database shall consist of the following categories of data as a minimum:

1. Identity and specifications
2. Function and operating conditions
3. Measurement parameters
4. Measurement points
5. Alarm thresholds
6. Measurements history.

## 2.13 Management of work done by Task Order

Many considerations can apply to Task Orders, such as availability of resources, arrangements for emergency work, Task Order reporting (work carried out and service results), assessment of additional Prices for service not included in the Price List etc.

1. The employer shall authorised work by issuing a task order to the contractor specifying the work service that needs to be carried out
2. During the execution of the work/service by the contractor ,the employer may from time to time perform random witnessing to ensure that the agreed quality requirement are meet
3. The employer shall perform assessment of the work /services done to verify that the work /services done were completed as per task order.
4. The contractor shall supply the task order report which as minimum reflects work carried out and services results, resources involved and price for the service as per price list.

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

### 3.1 Health and safety risk management

#### 3.1.1 The contractor shall comply with SHE tender returnable requirements (document No 240-77433139)

- a) Annexure B
- b) Health and Safety Plan
- c) Health and Safety Costing (Training and PPE)
- d) Baseline Risk assessment
- e) Valid letter of good standing
- f) SHE Policy Signed by CEO and dated
- g) Proof of SHE Competency

#### 3.1.2 Plant Safety Regulations:

- a) Eskom Holdings Limited, on request from the Contracting Party, isolates required plant from all sources of danger as described in the Plant Safety Regulations
- b) Eskom Holdings Limited, on request from the Contracting Party, makes available a copy of the latest revision of the Plant Safety Regulations to the Contracting Party.
- c) The Contracting Party conforms to all rules and regulations applicable to Plant Safety and completes the Workman's Register prior to working on the plant.

### **3.1.3 Fire Precautions:**

- a) Any tampering with Eskom Holdings Limited's fire equipment is strictly forbidden.
- b) All exit doors, fire escape routes, walkways, stairways and stair landings and access to electrical distribution boards are kept free of obstruction and are used for work or storage at any time. Firefighting equipment remains accessible at all times.
- c) In case of fire, report the location and extent of the fire to the Kendal Power Station Electrical Operating Desk at 7911.
- d) Take the necessary action to safe guard the area to prevent injury and spreading of the fire.

### **3.1.4 Incident Management:**

- All incidents must be reported to the client before the end of the shift as stipulated in Eskom procedure 32-95 (also refer to Kendal incident management flow chart).
- All incidents shall be investigated in terms of OHS Act general administrative regulations 8 and 9, using Eskom procedure 32-95 as a reference, and where injuries as contemplated in sections 24 and 25 have been sustained, be reported to the department of labour.
- Contractors shall use the standard general administrative regulation Annexure 1 "recording of an Incident" form for all incident investigation reports. The objective of incident investigation, should not only be a legal requirement, but should establish why and how the incident occurred and find out the real root cause of the incident and to decide on precautionary measures that are required to address the root cause to prevent any further recurrences of the same or similar incidents.
- Every contractor should be in possession of an accident register and must acquaint himself with the contents of section 24 of the occupational health and safety act.

### **3.1.5 Speed limit:**

All vehicles are driven with due consideration for personnel and property. A maximum speed limit of 40 km per hour is adhered to on the Kendal Power Station premises at all times.

### **3.1.6 Health and Safety Arrangements:**

- a) The Contracting Party that all his personnel attend a Health and Safety Induction Course prior to starting with the work. A one- (1) hour course is provided by Eskom Holdings Limited and is valid for the duration of one- (1) year.
- b) The Contracting Party complies with the guidelines set out in the Contractor Health and Safety 32-136 and SHE Requirement for Commercial Requirement, The contract custodian shall ensure that the main supplier or principal supplier is notified that he/she is accountable for the management of his/her subcontractors and suppliers and also to ensure that the subcontractors/suppliers comply with the applicable legal and Eskom requirements (applicable during the contract execution of works and services in terms of the contract).
- c) Kendal Power Station Safety Risk Management reserves the right and authority to visit and inspect the Contracting Party's workplace or site establishment to ensure that tools, machinery and equipment comply with the minimum safety requirements.
- d) The contract person representing Eskom Holdings Limited may instruct the Contracting Party to stop work, without penalty to Eskom Holdings Limited, where the Contracting Party's personnel fail to conform to safety standards or contravene health and safety regulations. The contract person representing Eskom Holdings Limited may cause the Contracting Party to discipline his employees and to submit a disciplinary action report to Eskom Holdings Limited. The Contracting Party implements additional health and safety precautions where necessary.
- e) The following Health & Safety requirements are also complied with:
  - i) The Contracting Party's proof of registration with the Compensation Commissioner and assessment of payment is verified.
  - ii) The Contracting Party demonstrates that all of his/her employees have been made aware and understand the risks and hazards associated with the type of work or activity to be carried out.

- iii) The Contracting Party supplies a Certificate of Competency to the contract person representing Eskom Holdings Limited of his/her employees to work under the following conditions, prior to commencement of any such work on site:
  - Confined Spaces
  - Heights
  - Heat stresses
  - Cold stresses
- iv) The Contracting Party demonstrates to Eskom Holdings Limited that he/she is capable of providing adequate free issue (preferably SABS approved) Personal Protective Equipment (P.P.E.) for use by his employees.
- v) All the Contracting Party's employees receive formal Safety Induction Training from SRM before commencement of work on site.
- vi) Sub-contractors - the Contracting Party states if the use of sub-contractor/s are envisaged and who the sub-contractor/s are. Proof is provided to Eskom Holdings Limited that the sub-contractor/s has the necessary competence and resources to carry out the work safely and to ensure that the obligation of care to the environment is exercised.
- vii) The Contracting Party complies with medical examination processes.

### **Health and Safety file**

The following are the requirements for the Health and Safety File contemplated in CR 7 (1) (b)

- Contractor's information and organogram
- Management and supervisor's health and safety training
- Training needs analysis (Matrix)
- Incident Management
- Letter of good standing
- Statutory appointments
- Baseline Risk Assessments
- Health and safety induction
- Certificates of medical fitness
- Tools and equipment inspections
- Hazardous chemical substances
- Certificates of competency

- PPE
- Environmental Management
- SHE Plan
- Health and Safety Specifications
- Emergency Plan

### **3.1.7 Vehicle and driver safety**

All drivers, passengers and pedestrians must obey all 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.

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

- a) No Eskom Holdings Limited employee or Contracting Party employee is allowed to transport passengers on the back of open light delivery vehicles (LDV's).
- b) It is a legal requirement to provide safe transportation of Eskom Holdings Limited and Contracting Party employees – therefore the following is enforced:
  - i) The contract person representing Eskom Holdings Limited and the Contracting Party ensures that no Eskom Holdings Limited employee or Contracting Party employees or any other person, when on an Eskom Holdings Limited site and/or performing work for Eskom Holdings Limited, is allowed to be transported in the back of open vehicles.
  - ii) There may be cases where this may not be reasonable or practicable, namely where vehicles are used during line inspections on sites or on private roads, or similar cases, and in these cases such vehicles are driven at less than 30km per hour or at a speed suitable to the prevalent conditions. In such cases, the carrying of passengers in the back of such open vehicles could be explicitly allowed, after:
    - a risk assessment has been carried out, indicating a very low risk;
    - mitigating factors have been identified to control any risk identified;
    - proper seating and handrails have been provided on the back of such open vehicle;
    - these measures have been discussed at the relevant Health and Safety Committee Meeting and approved by the relevant employer.
    - is defined and contained in a formal written division's or BU's policy, including the appropriate mitigating factors;
    - such a policy has been communicated to all employees and contractors.

Such risk assessment findings/outcomes must be available at all times for audit purposes.

- iii) Tools and equipment must be properly secured.
- iv) Only authorised drivers may transport passengers.
- v) Proof must be submitted on request in terms of valid roadworthiness of the vehicle/s.
- vi) The above must apply to on site and off site transportation of passengers.
- vii) No person may be transported in the back of vehicles closed by means of canopies, unless provided with factory-fitted or manufactured-approved, proper seating and safety belts, i.e. crew cabs.

- c) The driver must ensure that no employees are transported in the back of open vehicles unless it is allowed in terms of a divisional or BU-specific policy as referred to in paragraph b) ii). This also applies to the Contracting Party and its employees when performing work for Eskom.
- d) The driver must ensure that all canopies are properly fitted and secured and that all loose tools and objects in vehicles are properly secured.
- e) The driver must make sure that their passengers are seated and wear seatbelts at all times.

### **3.1.8 Life savings rules:**

Five Life Saving Rules have been developed that will apply to all Eskom Holdings Limited employees, agents, consultants and contractors.

- **Rule 1:** Open, Isolate, Test, Earth, Bond, and/or Insulate before touch - that is any plant operating above 1 000 V.
- **Rule 2:** Hook up at heights - no person may work at height where there is a risk of falling.
- **Rule 3:** Buckle up – no person may drive any vehicle on Eskom business and/or on Eskom premises unless the driver and all passengers are wearing seat belts.

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

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

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

### **3.1.9 Thermal and Flash Suits – Personal Protective Equipment**

The following Health & Safety requirements are also complied with:

#### **a) Policy:**

Generation Policy GGP 36-941 Rev 0 – "SAFETY MEASURES AND APPROVED PROTECTIVE CLOTHING AND PERSONAL PROTECTIVE EQUIPMENT AGAINST THERMAL HAZARDS OF AN ELECTRIC ARC FOR METAL CLAD SWITCHGEAR (UP TO 11Kv) NOT INTERNAL ARC PROOF" was issued in February 2008, and all Generation BU's are to comply with it.

#### **b) Standard:**

Standard GGS 36-941 Rev 0 - "SAFETY MEASURES AND APPROVED PROTECTIVE CLOTHING AND PERSONAL PROTECTIVE EQUIPMENT AGAINST THERMAL HAZARDS OF AN ELECTRIC ARC FOR METAL CLAD SWITCHGEAR (UP TO 11Kv) NOT INTERNAL ARC PROOF" was issued in February 2008, and sets out the requirements to ensure safety with this plant.

**c) Procedure:**

A proper Procedure is required at each Station to ensure that all involved and affected staff are fully aware of the dangers attached to MV and LV Switchgear, and the approved methods of managing the risks involved.

For externally mounted Switchgear, GGS 36-942 prescribes the following standard Flash Protection Boundaries:

| FLASH PROTECTION BOUNDRY |                   |
|--------------------------|-------------------|
| VOLTAGE (VOLTS)          | DISTANCE (METERS) |
| 50 TO 750                | 0.9               |
| 750 TO 1,000             | 1.2               |
| 1,000 TO 11,000          | 4.8               |

**3.1.10 Plant Safety Regulations - Appointment of a Responsible Person, Appointed Person and/or an Authorised Supervisor (Rev 0 - May 2008)**

The OHS Act states that anyone entering Eskom Holdings Limited's premises must adhere to its set of regulations, i.e. Plant Safety Regulations, as Eskom Holdings Limited is responsible for the Contractor's safety while they are on Eskom Holdings Limited's sites.

It is required that all Contractors must appoint a Responsible Person or an Authorised Supervisor to supervise work done by the Contracting Party. An Appointed Person can be appointed by the Contracting Party to do isolations if required.

**3.1.11 Process to appoint a Responsible Person, Appointed Person and/or Authorised Supervisor**

The Contracting Party will identify a person who will represent him as a Responsible Person, Appointed Person and/or an Authorised Supervisor.

The Contracting Party may send more than one person for training.

The appointed person/s will be trained by Eskom Holdings Limited. There are two Formal sets of training, i.e. Theoretical Training and Practical Training

**3.1.12 Training**

**i) Practical training**

The Contracting Party will send a representative for training to become a Responsible Person, an Appointed Person and/or an Authorised Supervisor to be instructed in the Practical aspects of the plant, Isolations, Plant Identification, Plant systems etc.

**ii) Theoretical training**

During his practical training period, the representative of the Contracting Party must attend a theoretical course of 5 days for a Responsible Person and 2.5 days for an Authorised Supervisor. From the time that the person has written the Exam for the theoretical test to the time that he must appear before the Authorisation Committee is three months.

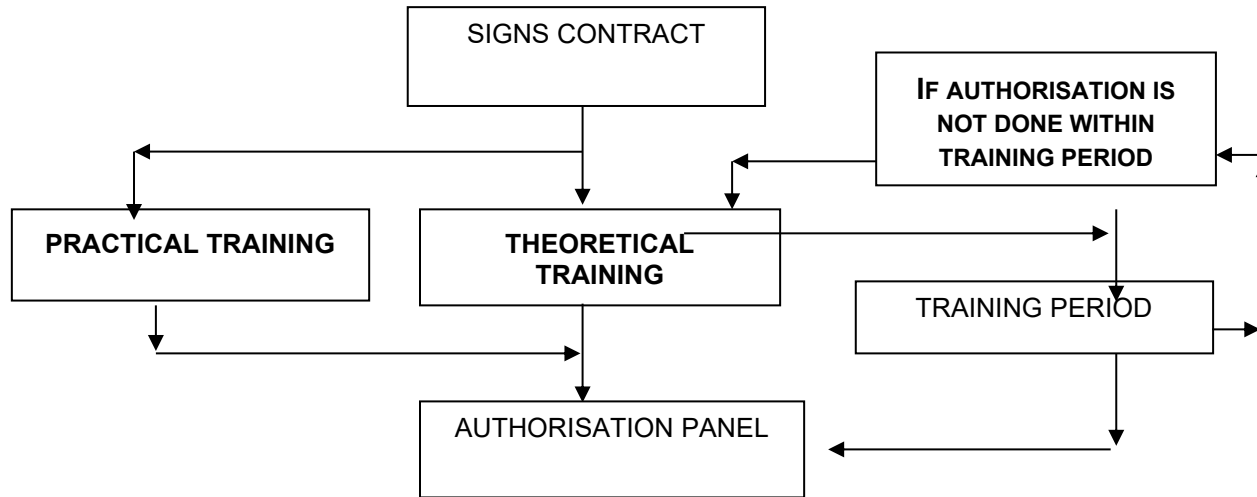
If he does not appear before the Authorisation Committee during the three months, he must redo the theoretical exam.

The duration and cost for Practical and Theoretical training, as a package, will be determined by Mr. JJ Malaza (Legislation Instructor – Kendal Power Station).

He can be contacted at +27 13 647 6867, to arrange for training.

The costs will be handled as a compensation event.

### 3.1.13 Training process



### 3.1.14 Costs related to training

The Contracting Party will be responsible for all costs related to the training. The costs must be shown separately in the price list.

### 3.1.15 Accreditation and validity period and area

A certificate will be issued to the Responsible Person, an Appointed Person and/or an Authorised Supervisor which will be valid for 2 years and it will only be applicable to Kendal Power Station.

If a person who is authorised moves from one Contracting Party to another, his/her authorization automatically lapses.

### 3.1.16 Contact Person - Kendal Power Station

Mr Gert Delport and Hannes Vollens Tee (Legislative Instructors - Kendal Power Station) are the custodian at Kendal Power Station for the above training and accreditation and he can be contacted at Tel +27 13 647 9472.

**No work will be done at Kendal Power Station by the Contracting Party if he did not appoint an accredited Responsible Person for Kendal Power Station.**



**3.1.17 Authorisation of contractors in term of ORHVS (Operating Regulations for High Voltage Systems) and PSR (Plant Safety Regulations):**

Eskom Holdings Limited employs many contractors to work not only on new installations but to a greater extent on existing plant and networks and the contractors are therefore required to comply with Eskom Holdings Limited's relevant regulations.

To enable contractor's staff to be authorized as responsible persons or other authorizations in terms of the ORHVS, PSR, and Directive ESKADAAU4 there has been much speculation as to what the requirements are in terms of the OHS act.

In order to clarify these issues, many discussions with our Legal department and consulting advocates had taken place and the following are minimum requirements to ensure that reasonable steps are taken.

1. It is absolutely necessary at the outset to stipulate in the tender documents what the requirements are in terms of the ORHVS and PSR. These requirements must include (inter alia):
  - Competencies required of the contractor or their employees.
  - What knowledge of the ORHVS and PSR parts thereof, is required by the relevant persons.
  - The scope of the contractor's responsibilities in terms of any authorizations.
  - What the contractor will be required to satisfy with respect to the requirements of the OHS Act.
2. Contracts shall include:
  - In terms of Section 37(2) of the OHS Act an agreement to ensure compliance by the mandatory with the provisions of the Act. It is not possible to quote a single standard that will cater for all contracts; each contract shall be handled on a case by case basis.
  - The above-mentioned requirements that were requested in the call for Tender.
  - The contractor's person designated in terms of Section 16 of the Act. The contractor shall also declare in writing their employees competent in terms of the relevant requirements.
3. Once a contract is awarded, the Eskom Holdings Limited person designated in terms of the General Machinery Regulation 2 shall ensure the following before work in terms of the ORHVS and PSR is done.
  - The contractor or their employees shall be evaluated against the scope of authorization.
  - The Eskom Holdings Limited regulations applicable to the scope of the work to be done shall be handed to the contractor. Depending on the nature of the contract it may be beneficial for the contractors' person/s requiring authorization to attend the relevant formal regulation course.
  - With regard to the actual authorization the contractor shall declare in writing their Section 16 appointee competent and define the extent of his responsibility. The Eskom Holdings Limited GMR2 appointee shall approve the acceptability of the contractor's Responsible Person (Section 16 appointee) or shall authorize any other duties in terms of the ORHVS and PSR as per ESKADAAU4.
  - All authorizations shall be for specific contracts and limited to a specific time frame.
  - Notwithstanding the Section 37(2) agreement that was concluded between Eskom Holdings Limited and the contractor, Eskom Holdings Limited is not absolved from a "Duty of Care" requirement over the "mandatory". This implies that for example, when contractors are working on, or in close proximity to Eskom Holdings Limited's live apparatus they shall be supervised to the extent of what would be considered reasonable.

### **3.1.18 Barricading / Screens and Scaffolding:**

The Contracting Party provides and installs barricades and warning devices to ensure that equipment and persons are not exposed to danger or to prevent access to dangerous areas.

Eskom Holdings Limited supplies scaffolding. Arrangements of such is made at least one- (1) week in advance by the Contracting Party.

(Tampering of any approved scaffold is not allowed for any adjustments – The contract person representing Eskom Holdings Limited is notified for any adjustments.

### **3.1.19 Asbestos:**

- a) All stripping of asbestos material shall be undertaken strictly in accordance with the Eskom Holdings Limited Procedure OVP76 HSPHRN 00 00 5 and other relevant standards and updates, with special reference to the asbestos regulations according to the Occupational Health and Safety Act number 85 of 1993.
- b) The contract person representing Eskom Holdings Limited advises the Contracting Party whether areas that are to be stripped of lagging have been identified as containing asbestos. If the Contracting Party is not sure whether lagging contains asbestos, he is to notify Safety Risk Management who will identify whether the lagging contains asbestos.
- c) The Contracting Party shall be obliged to ascertain from the contract person representing Eskom Holdings Limited in advance whether areas required to be stripped are non-asbestos. Any contractor, other than the contractor appointed to remove asbestos shall strip lagging material containing asbestos fibers.
- d) The contractor appointed to remove asbestos, may not begin removal without first obtaining the necessary permission from the Inspector of Labour and Risk Management.

## **3.2 Environmental constraints and management**

The contractor shall comply with

- 1. Kendal Environmental communication procedure (\*1015692),
- 2. Environmental Management System (ISO 14001, 2004),
- 3. National Environmental Management Act ( Act 107 of 1998),
- 4. Kendal Emergency Preparedness Plan (\*1015702),
- 5. Kendal Non-conformance, Corrective and Preventive Actions Procedure (\*1017357),
- 6. Kendal Environmental Aspect and Impact Identification, Rating and Management Procedure (\*1015586)
- 7. Eskom SHEQ policy (32-727)

### **3.3 Quality assurance requirements**

The Contractor shall comply with QM 58 requirements which stipulate minimum requirements.

The Contractor shall comply with the minimum requirements for the Contractor's Quality Plan and Work Procedures or provide the Employer's Quality Plan if that is to be used.

The Employer shall witness and hold points are identified generally and describe any particular requirements for QA

The Employer shall do QCP on Jobs like Laser Alignment performed by the Contractor.

The Employer shall visit the site and do job observation in terms of Safety and quality.

The Contractor shall repeat any work that is substandard until the required service is met.

The use of any equipment or strategies that do not meet the specified requirements shall be subjected to approval of the Employer.

#### **Tool Calibration**

The Contractor shall ensure that all instruments have valid calibration certificates at time of use and the calibration certificates must be available on request. The Contractor ensure that all measuring equipment and instrumentation used to Provide the Works are provided with a SANAS (South African National Accreditation System) Calibration Laboratory test certificate.

## **4 Procurement**

### **4.1 People**

#### **4.1.1 Minimum requirements of people employed**

#### **4.1.2 Minimum requirements of people employed**

The contractor shall submit proof of qualifications and CV (experience records) for all condition monitoring personnel that will be on site and also that will be providing the services.

### **Staff and Skills required on site**

The contractor shall ensure the following minimum skills and competence shall always be onsite.

1. Minimum of 5 personnel to on site during the normal working hours
2. Site Manager- shall have a ISO Cat/level 3, IR level 2 and Oil L1
3. Analyst- shall have a ISO Cat/ level 2 & IR level 2
4. Junior Analyst- shall have ISO Cat/level 1 and IR level 1
5. Assistant Analyst- shall have Cat level 1 to take vibration measurements & a certificate to collect oil samples on rotating Machinery
6. Tribologist shall have a Mechanical/chemical diploma and oil analysis level 2 and be certified to analyse oil.

### **Minimums Skills Required for Vibration**

The contractor shall ensure that the vibration analysis team shall be led by personnel with at least ISO Cat/level 3. The team leader shall take responsibility to develop the monitoring program, route and measurement procedures for each machine, verifying the quality of the data.

1. A Level 2 Vibration Analyst may conduct diagnosis, prognosis and recommend corrective actions.
2. A Level 1 Vibration analyst may only collect data.

### **Mandatory:**

The contractor shall ensure that technician or analyst may not conduct work above his/her education and experience qualification. E.g. a Level/category 1 Vibration analyst may take vibration measurements, but not conduct diagnosis and prognosis for delivery to Eskom.

### **Thermography Skills**

The contractor shall ensure that thermography shall be performed by personnel with level 1 certificate for data collection and analysis performed by a person with level 2 certificate.

### **X rays**

The contractor shall ensure that X-rays shall be performed by a qualified team. A proof of competency/reference for the task must be produce by the contractor assigned to perform this task.

#### **4.1.3 BBBEE and preferencing scheme**

Specify constraints which *Contractor* must comply with after contract award in regard to any Broad Based Black Economic Empowerment (B-BBEE) or preferencing scheme measures.

#### **4.1.4 Accelerated Shared Growth Initiative – South Africa (ASGI-SA)**

If the ASGI-SA requirements are to be included in this contract specify constraints which *Contractor* must comply with after contract award in regard to any ASGI-SA requirements. The ASGI-SA Compliance Schedule completed in the returnable tender schedules is reproduced here. If ASGI-SA does not apply, delete this paragraph.

The *Contractor* complies with and fulfils the *Contractor's* obligations in respect of the Accelerated and Shared Growth Initiative - South Africa in accordance with and as provided for in the *Contractor's* ASGI-SA Compliance Schedule stated below

*[Insert the agreed ASGI-SA Compliance Schedule here]*

The *Contractor* shall keep accurate records and provide the *Service Manager* with reports on the *Contractor's* actual delivery against the above stated ASGI-SA criteria. [Elaborate on access to and format of records and frequency of submission etc.]

The *Contractor's* failure to comply with his ASGI-SA obligations constitutes substantial failure on the part of the *Contractor* to comply with his obligations under this contract.

## **4.2 Subcontracting**

### **4.2.1 Preferred subcontractors**

TSC3 does not make use of nominated subcontracting, but the Employer may list which subcontractors or suppliers the Contractor is required to enter into subcontracts with. This is usually only required where specialist services need to be obtained from a particular supplier or group of suppliers in order to comply with operational standards.

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

If the contractor subcontracts work, the contractor is responsible for providing the works as if the contractor has not subcontracted. This contract applies as subcontractor's employees and equipment were the contractors.

### **4.2.3 Limitations on subcontracting**

The subcontractor in case the contractor subcontract shall meet all the requirements stipulated on this service information. The employer shall perform all necessary checks, assessment and verification and that subcontractor all the requirements.

#### **4.2.4 Attendance on subcontractors**

If subcontractor will execute work, the main contractor remains fully responsible for the work and accountable

### **4.3 Plant and Materials**

#### **4.3.1 Specifications**

The Employer shall make the specification of the existing equipment where service will be provided accessible to the contractor.  
The Contractor shall develop a database and submit to the employer for review and acceptance prior to the service work being performed.

#### **4.3.2 Correction of defects**

The Contractor shall notify the employer when the plant where work/service is defective the flip system shall be used to raise defects and services manager must be notified immediately

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

The contractor shall submit all plant, material purchased, and asset register to the employer for record keeping.

#### **4.3.4 Tests and inspections before delivery**

Core Clause 41.1 makes reference to the Service Information stating which Plant and Materials are to be inspected and tested before delivery. Specify any requirements particularly if such tests and inspections are to be carried out by agents of the *Employer* overseas.

#### **4.3.5 Plant & Materials provided “free issue” by the Employer**

List any Plant and Materials which are to be provided by the *Employer*.

State arrangements for collection by *Contractor* or delivery by others on behalf of the *Employer*, off loading, inspection, storage, care custody and control, return of unused Plant and Materials, etc. Always include a statement to the effect that ‘all other Plant and Materials are to be provided by the *Contractor*’.

#### **4.3.6 Cataloguing requirements by the Contractor**

State whether cataloguing is applicable, if it is, reference the requirements for cataloguing that need to be satisfied by the *Contractor* (consult Procurement Instruction Number 1 of 2018 – Incorporating Cataloguing into the Procurement Environment, Unique Identifier 240-1289988974).

## 5 Working on the Affected Property

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

- (1) The *Contractor* applies for a photo permit (if on site for longer than two (2) months) at Protective Services at the Kendal Power Station main security gate, prior to the start of any work on site.
- (2) In order to assist Protective Services with the issuing of permits and the identification of personnel on site, the *Contractor* supplies a list of all personnel that he intends using on site, at least 24-hours prior to entry of the Kendal Power Station Security Area. This list is hand delivered to Protective Services, or can be faxed to (013) 647-9100. The list, identified with the Contracting Party's name, contains the following information:
  - Employee name and surname
  - Employee ID Number
  - Signature of the contract person representing Eskom Holdings SOC Limited
  - Copy of the first page of the ID book of every employee of the Contracting Party
- (3) The list of details is completed on the special form attached to the Contractor's Safety Manual, available on request from the contract person representing Eskom Holdings SOC Limited.
- (4) The Contracting Party's personnel are required to be in possession of their Contractor's Permits at all times.
- (5) All Contractor Permits are submitted to Protective Services when the relevant personnel leave the site after completion of the work.
- (6) Lost permits are paid for by the Contracting Party to Protective Services at a cost per permit to be confirmed at security.
- (7) The Contracting Party's visitors and all personnel conform at all times, to the security arrangements in force at the time. Application forms for visitors are filled in by the Contracting Party's Site Manager and approved by the contract person representing Eskom Holdings SOC Limited, one (1) day before the visit and submitted to the Protective Services office. Visitors are not allowed on site if the necessary forms are not in the possession of security staff.
- (8) The Chief of Protective Services may with valid cause remove any of the Contracting Party's personnel from the 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.
- (9) No unauthorised vehicles are allowed on site. Only the Contracting Party's vehicles with displayed Contract Vehicle Permit disks are allowed on site. Contract Vehicle Permit applications are directed to the contract person representing Eskom Holdings SOC Limited.
- (10) The *Contractor* is restricted to the areas associated with his place of work. The Contracting Party is forbidden to enter any other areas, and ensures that his employees, subcontractors and/or sub-consultants abide to these regulations.
- (11) Parking inside the Kendal Power Station building is strictly forbidden, except for loading and off-loading purposes.
- (12) No recruiting of labour, casual or otherwise, may be done on the Kendal Power Station premises, including the area outside the Kendal Power Station main security gate.

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

Employer's normal working hours will apply and Contractor's key people delivering service will sign a daily attendance register as per the Employer's condition of service.

### Contractor's regular working hours

- a) The Contractor's Regular Working Hours, in terms of the contract, are Mondays to Thursdays 07:15 to 16:30, Fridays 07:15 to 12:15 excluding Public Holidays.
- b) During normal working hours, one Lift Mechanics and two Assistant Lift Mechanics shall be on site.

### Callouts - Overtime

- a) The Contractor shall provide a callout service to respond to any stoppage or malfunction of the equipment at any time, providing a 24 hour standby service, with a response time of within one (1) hour.
- b) Callout service shall consist of returning the lift to service.
- c) In the case of any major breakdown, a repair plan of action must be submitted to the Employer.
- d) Repair work to commence on the exact time agreed between the Employer and the Contractor on this plan of action. No additional cost to the Employer for this service will be acceptable.

## 5.3 Health and safety facilities on the Affected Property

Contractor is required to undergo departmental safety induction programme for every department where service will be rendered.

## 5.4 Environmental controls, fauna & flora

Contractor shall comply with all environmental procedures and processes as required

## 5.5 Cooperating with and obtaining acceptance of Others

This sub-paragraph could be used to deal with two issues.

- 1) The cross reference from core clause 25.1 about cooperation generally as well as details about Others with whom the *Contractor* may be required to share the Affected Property. See clause 11.2(9) for the definition of Others.
- 2) Requirements for liaison with and acceptance from statutory authorities or inspection agencies.



## **5.6 Records of *Contractor's* Equipment**

All the instruments or equipment provided by the contractor shall be documented by the Kendal security personnel and the copy shall be kept by the contractor on their allocated site, upon leaving the site the contractor shall produce the original list of instrument's or equipment to security as proof of ownership.

## **5.7 Equipment provided by the *Employer***

Employer does not provide any equipment for this specific scope of work.

## **5.8 Site services and facilities**

### **5.8.1 Provided by the *Employer***

The employer shall provide the following services

1. Office space
2. Water
3. Electricity
4. Drawings as and when required
5. Links for Local Area Network.( Telephone expenses shall be on contractors account.)

### **5.8.2 Provided by the *Contractor***

The Contractor shall provide all office equipment and office consumables, which will be used for data input, required. The computers must also be maintained and upgrade by the Contractor. The Contractor shall be responsible for the payment of all applicable software license fees.

The Contractor shall be responsible for the supply and maintenance of all portable condition monitoring equipment's and tools required performing the service. Tools include but not limited to vibration analysers, infra-red cameras, condition monitoring database and software, all computer hardware to run the software including consumables.

The Contractor shall be responsible for all tribology expenses.

The Contractor shall be responsible for its own accommodation and transportation of workers to and from the site.

All condition monitoring instruments or equipment including office furniture provided by the Contractor shall remain the property of the Contractor and upon contract expiry they shall be removed by the Contractor

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

Contractor shall comply with the Kendal noise, dust water and waste requirements.

5.10 Hook ups to existing works

Hook up at heights is compulsory when working at any elevated or heights above the ground

5.11 Tests and inspections

5.11.1 Description of tests and inspections

Describe the tests and inspections to be carried out by the *Contractor* and the *Service Manager* and others [40.1].

5.11.2 Materials facilities and samples for tests and inspections

State what materials facilities and samples for tests and inspections the *Contractor* and the *Employer* are to provide, per core clause 40.2.

6 List of drawings

6.1 Drawings issued by the *Employer*

Please note; Drawings will be made available when required but remains with Eskom personnel. No drawings will be given to a contractor.

| Drawing number | Revision | Title |
|----------------|----------|-------|
|                |          |       |
|                |          |       |
|                |          |       |
|                |          |       |
|                |          |       |
|                |          |       |
|                |          |       |
|                |          |       |
|                |          |       |

Appendix A

|     |                                     |                    |     |     |     |      |          |                     |                     |
|-----|-------------------------------------|--------------------|-----|-----|-----|------|----------|---------------------|---------------------|
|     | KENDAL POWER STATION                |                    |     |     |     |      |          |                     |                     |
|     | CONDITION MONITORING SCOPE OF WORK  |                    |     |     |     |      |          |                     |                     |
| NO  | PLANT DESCRIPTION                   | Number of machines |     |     |     |      | MACHINES | Vibration Frequency | Tribology frequency |
|     |                                     | mtr                | gbx | fan | pmp | cmpr | STATION  |                     |                     |
|     |                                     |                    |     |     |     |      |          |                     |                     |
|     | BOILER PLANT                        |                    |     |     |     |      |          |                     |                     |
|     |                                     |                    |     |     |     |      |          |                     |                     |
| 1   | DRAUGHT GROUP                       |                    |     |     |     |      |          |                     |                     |
| 1.1 | FD FAN                              |                    |     |     |     |      |          |                     |                     |
|     | Motor                               | 12                 |     |     |     |      | 12       | Monthly             | 3 Monthly           |
|     | Fan                                 |                    |     | 12  |     |      | 12       | Monthly             | 3 Monthly           |
|     |                                     |                    |     |     |     |      |          |                     |                     |
| 1.2 | ID FAN                              |                    |     |     |     |      |          |                     |                     |
|     | Motor                               | 12                 |     |     |     |      | 12       | Monthly             | 3 Monthly           |
|     | Fan                                 |                    |     | 12  |     |      | 12       | Monthly             | 3 Monthly           |
|     |                                     |                    |     |     |     |      |          |                     |                     |
| 1.3 | PA FAN                              |                    |     |     |     |      |          |                     |                     |
|     | Motor                               | 12                 |     |     |     |      | 12       | Monthly             | 3 Monthly           |
|     | Fan                                 |                    |     | 12  |     |      | 12       | Monthly             | 3 Monthly           |
|     |                                     |                    |     |     |     |      |          |                     |                     |
| 2   | MILLING PLANT                       |                    |     |     |     |      |          |                     |                     |
| 2.1 | Mill motor                          | 30                 |     |     |     |      | 30       | Monthly             | 3 Monthly           |
| 2.2 | Mill Gearbox                        |                    | 30  |     |     |      | 30       | Monthly             | 3 Monthly           |
| 2.3 | Mill Trunnion Bearings              |                    |     |     |     |      | 30       |                     | 3 Monthly           |
| 2.4 | Girth Gear & Pinion Gear            |                    |     |     |     |      | 30       | Monthly             |                     |
| 2.5 | Mill Gearbox Lub Oil Motor and Pump | 30                 |     |     |     |      | 30       | Monthly             |                     |
| 2.6 | Mill Trunion HP + LP Oil Pump Motor | 30                 |     |     |     |      | 30       | Monthly             |                     |
| 2.7 | Mill Motor Lub Oil Motor and Pump   | 30                 |     |     |     |      | 30       | Monthly             |                     |

|      |                                            |    |    |    |    |  |     |         |                          |
|------|--------------------------------------------|----|----|----|----|--|-----|---------|--------------------------|
| 2.8  | Mill Feeder Gearbox                        |    | 30 |    |    |  | 60  | Monthly | 3 Monthly                |
| 2.9  | Mill Feeder Motor                          | 30 |    |    |    |  | 60  | Monthly |                          |
| 1.10 | Mill Seal Air Fans (motor + fan bearings)  | 60 |    | 60 |    |  | 120 | Monthly |                          |
|      |                                            |    |    |    |    |  |     |         |                          |
| 3    | SECONDARY AIR HEATER                       |    |    |    |    |  |     |         |                          |
| 3.1  | SAH Motor                                  | 12 |    |    |    |  | 12  | Monthly |                          |
| 3.2  | SAH Gearbox                                |    | 12 |    |    |  | 12  | Monthly | 3 Monthly                |
| 3.3  | SAH Guide Bearing                          |    |    |    |    |  | 12  |         | Monthly                  |
| 3.4  | SAH Support Bearing                        |    |    |    |    |  | 12  |         | Monthly                  |
|      |                                            |    |    |    |    |  |     |         |                          |
| 4    | BOILER WATER CIRC PUMP                     |    |    |    |    |  |     |         |                          |
| 4.1  | Boiler Water Circ Pump                     | 18 |    |    | 18 |  | 36  | Monthly |                          |
|      |                                            |    |    |    |    |  |     |         |                          |
| 5    | SCANNER AIR FAN                            |    |    |    |    |  |     |         |                          |
| 5.1  | Scanner air fans (Purge air)               | 12 |    |    |    |  | 12  | Monthly |                          |
|      |                                            |    |    |    |    |  |     |         |                          |
| 6    | SO3 PLANT                                  |    |    |    |    |  |     |         |                          |
| 6.1  | SO3 Air Blower                             |    |    | 6  |    |  | 6   | Monthly | 3 Monthly                |
| 6.2  | S03 Air Blower Motor                       | 6  |    |    |    |  | 6   | Monthly |                          |
| 6.3  | SO2 Cooler Fan Motor                       | 6  |    |    |    |  | 6   | Monthly |                          |
|      |                                            |    |    |    |    |  |     |         |                          |
| 6.4  | SSC Hydraulic Pack X6                      | 6  |    |    |    |  | 6   |         | Monthly                  |
| 6.5  | Sulphur Common Plant p/p motor x4          | 4  |    |    |    |  | 4   | Monthly |                          |
| 6.6  | HP bypass valve X12                        | 12 |    |    |    |  | 12  | Monthly | Monthly                  |
|      |                                            |    |    |    |    |  |     |         |                          |
|      | TURBINE PLANT                              |    |    |    |    |  |     |         |                          |
|      | Turbine Main oil tank X 6                  |    |    |    |    |  | 6   |         | Monthly and Yearly R-bot |
| 1    | ELECTRIC FEED PUMPS                        |    |    |    |    |  |     |         |                          |
| 1.1  | Motor                                      | 18 |    |    |    |  | 18  | Monthly |                          |
| 1.2  | Main Pump                                  | 18 |    |    |    |  | 18  | Monthly |                          |
| 1.3  | Gearbox                                    |    | 18 |    |    |  | 18  | Monthly |                          |
| 1.4  | Booster Pump                               |    |    |    | 18 |  | 18  | Monthly |                          |
| 1.5  | Pump and motor tribology, (1 tank per EFP) |    |    |    |    |  | 18  |         | Monthly                  |
|      |                                            |    |    |    |    |  |     |         |                          |

|      |                               |    |  |  |    |   |    |         |                                                     |
|------|-------------------------------|----|--|--|----|---|----|---------|-----------------------------------------------------|
| 2    | UNITIZED COMPRESSOR           |    |  |  |    |   |    |         |                                                     |
| 2.1  | Motor                         | 6  |  |  |    |   | 6  | Monthly |                                                     |
| 2.2  | Compressor                    |    |  |  |    | 6 | 6  | Monthly | 3 Monthly                                           |
|      |                               |    |  |  |    |   |    |         |                                                     |
| 3    | CONDENSATE, CONDENSER PLANT   |    |  |  |    |   |    |         |                                                     |
| 3.1  | CEP Motor                     | 12 |  |  |    |   | 12 | Monthly | Monthly                                             |
| 3.2  | CEP Pump                      |    |  |  | 12 |   | 12 | Monthly | Monthly                                             |
| 3.3  | CPP Booster Pump Motor        | 12 |  |  |    |   | 12 | Monthly |                                                     |
| 3.4  | CPP Booster Pump              |    |  |  | 12 |   | 12 | Monthly |                                                     |
| 3.5  | LP Heater 2 Drain Pump Motor  | 12 |  |  |    |   | 12 | Monthly |                                                     |
| 3.6  | LP Heater 2 Drain Pump        |    |  |  | 12 |   | 12 | Monthly |                                                     |
| 3.7  | Elmo Vacuum Pump Motor        | 18 |  |  |    |   | 18 | Monthly |                                                     |
| 3.8  | Elmo Vacuum Pump              |    |  |  | 18 |   | 18 | Monthly |                                                     |
| 3.9  | Make up pumps                 |    |  |  | 12 |   | 12 | Monthly |                                                     |
| 3.10 | Make up pump motors           | 12 |  |  |    |   | 12 | Monthly |                                                     |
|      |                               |    |  |  |    |   |    |         |                                                     |
| 4    | GAS TURBINE                   |    |  |  |    |   |    |         |                                                     |
| 4.1  | AC lube oil pump motor        | 2  |  |  |    |   | 2  | Monthly |                                                     |
| 4.2  | AC lube oil pumps             |    |  |  | 2  |   | 2  | Monthly |                                                     |
| 4.3  | Fuel (Diesel) sampling        |    |  |  |    |   | 2  |         | 6 Monthly(diesel tanks sampling), Trucks on Request |
|      |                               |    |  |  |    |   |    |         |                                                     |
| 5    | FORCE COOLING COMPRESSOR      |    |  |  |    |   |    |         |                                                     |
| 5.1  | Motor                         | 1  |  |  |    |   | 1  | Monthly |                                                     |
| 5.2  | Compressor                    |    |  |  |    | 1 | 1  | Monthly |                                                     |
|      |                               |    |  |  |    |   |    |         |                                                     |
|      |                               |    |  |  |    |   |    |         |                                                     |
|      | OUTSIDE PLANT                 |    |  |  |    |   |    |         |                                                     |
|      |                               |    |  |  |    |   |    |         |                                                     |
| 1    | MAIN COOLING WATER PUMPS      |    |  |  |    |   |    |         |                                                     |
| 1.1a | MCW Pump Motor, units 1, 2, 3 | 9  |  |  |    |   | 9  | Monthly | 3 Monthly                                           |
| 1.2a | MCW Pump, units 1, 2, 3       |    |  |  | 9  |   | 9  | Monthly | 3 Monthly                                           |
| 1.1b | MCW Pump Motor, units 4, 5, 6 | 6  |  |  |    |   | 6  | Monthly | 3 Monthly                                           |

|      |                             |    |   |  |    |    |    |           |           |
|------|-----------------------------|----|---|--|----|----|----|-----------|-----------|
| 1.2b | MCW Pump, units 4, 5, 6     |    |   |  | 6  |    | 6  | Monthly   | 3 Monthly |
|      |                             |    |   |  |    |    |    |           |           |
| 2    | AUXILIARY COOLING           |    |   |  |    |    |    |           |           |
| 2.1  | Open Circuit Pump Motor     | 8  |   |  |    |    | 8  | Monthly   |           |
| 2.2  | Open Circuit Pump           |    |   |  | 8  |    | 8  | Monthly   |           |
| 2.3  | Close Circuit Pump Motor    | 8  |   |  |    |    | 8  | Monthly   |           |
| 2.4  | Close Circuit Pump          |    |   |  | 8  |    | 8  | Monthly   |           |
| 2.5  | Aux Cooling Fan Motor       | 6  |   |  |    |    | 6  | Monthly   |           |
|      |                             |    |   |  |    |    |    |           |           |
| 3    | FUEL OIL PLANT              |    |   |  |    |    |    |           |           |
| 3.1  | LP Fuel Oil Pump Motor      | 6  |   |  |    |    | 6  | Monthly   |           |
| 3.2  | LP Fuel Oil Pump            |    |   |  | 6  |    | 6  | Monthly   |           |
| 3.3  | HP Fuel Oil Pump Motor      | 6  |   |  |    |    | 6  | Monthly   |           |
| 3.4  | HP Fuel Oil Pump            |    |   |  | 6  |    | 6  | Monthly   |           |
|      |                             |    |   |  |    |    |    |           |           |
| 4    | ASH CONDITIONING PUMPS      |    |   |  |    |    |    |           |           |
| 4.1  | Ash Conditioning Pump Motor | 12 |   |  |    |    | 12 | Monthly   |           |
| 4.2  | Ash Conditioning Pump       |    |   |  | 12 |    | 12 | Monthly   |           |
|      | AREATION BLOWERS            |    |   |  |    |    |    |           |           |
| 4.3  | Motor                       | 12 |   |  |    |    | 12 | Monthly   |           |
| 4.5  | Gear Box                    |    |   |  |    | 12 | 12 | Monthly   | 3 Monthly |
|      |                             |    |   |  |    |    |    |           |           |
| 4.6  | Clean And Dirty Motors      | 6  |   |  |    |    | 6  | Monthly   |           |
| 4.7  | Clean And Dirty Pumps       |    |   |  | 6  |    | 6  | Monthly   |           |
| 4.8  | Dust Suppression Motors     | 4  |   |  |    |    | 4  | Monthly   |           |
| 4.9  | Dust Suppression Pumps      |    |   |  | 4  |    | 4  | Monthly   |           |
| 4.10 | Cross over plant            | 4  | 4 |  |    |    | 4  | 2 Monthly |           |
| 4.11 | Sewage plant                | 2  | 2 |  |    |    | 2  | 2 Monthly |           |
|      |                             |    |   |  |    |    |    |           |           |
|      |                             |    |   |  |    |    |    |           |           |
| 5    | COAL OVERLAND CONVEYORS     |    |   |  |    |    |    |           |           |
| 5.1  | CS 1A Motor                 | 1  |   |  |    |    | 1  | Monthly   |           |
| 5.2  | CS 1A Gearbox               |    | 1 |  |    |    | 1  | Monthly   | 3 Monthly |
| 5.3  | CS 1B Motor                 | 1  |   |  |    |    | 1  | Monthly   |           |
| 5.4  | CS 1B Gearbox               |    | 1 |  |    |    | 1  | Monthly   | 3 Monthly |
| 5.5  | S 1A drive 1 Motor          | 1  |   |  |    |    | 1  | Monthly   |           |
| 5.6  | S 1A drive 1 Gearbox        |    | 1 |  |    |    | 1  | Monthly   | 3 Monthly |

|      |                      |   |   |  |  |  |   |         |           |
|------|----------------------|---|---|--|--|--|---|---------|-----------|
| 5.7  | S 1A drive 2 Motor   | 1 |   |  |  |  | 1 | Monthly |           |
| 5.8  | S 1A drive 2 Gearbox |   | 1 |  |  |  | 1 | Monthly | 3 Monthly |
| 5.9  | S 1B drive 1 Motor   | 1 |   |  |  |  | 1 | Monthly |           |
| 5.10 | S 1B drive 1 Gearbox |   | 1 |  |  |  | 1 | Monthly | 3 Monthly |
| 5.11 | S 1B drive 2 Motor   | 1 |   |  |  |  | 1 | Monthly |           |
| 5.12 | S 1B drive 2 Gearbox |   | 1 |  |  |  | 1 | Monthly | 3 Monthly |
| 5.13 | S 2A Motor           | 1 |   |  |  |  | 1 | Monthly |           |
| 5.14 | S 2A Gearbox         |   | 1 |  |  |  | 1 | Monthly | 3 Monthly |
| 5.15 | S 2B Motor           | 1 |   |  |  |  | 1 | Monthly |           |
| 5.16 | S 2B Gearbox         |   | 1 |  |  |  | 1 | Monthly | 3 Monthly |
| 5.17 | S 4A Motor           | 1 |   |  |  |  | 1 | Monthly |           |
| 5.18 | S 4A Gearbox         |   | 1 |  |  |  | 1 | Monthly | 3 Monthly |
| 5.19 | S 4B Motor           | 1 |   |  |  |  | 1 | Monthly |           |
| 5.20 | S 4B Gearbox         |   | 1 |  |  |  | 1 | Monthly | 3 Monthly |
| 5.21 | S 5A drive 1 Motor   | 1 |   |  |  |  | 1 | Monthly |           |
| 5.22 | S 5A drive 1 Gearbox |   | 1 |  |  |  | 1 | Monthly | 3 Monthly |
| 5.23 | S 5A drive 2 Motor   | 1 |   |  |  |  | 1 | Monthly |           |
| 5.24 | S 5A drive 2 Gearbox |   | 1 |  |  |  | 1 | Monthly | 3 Monthly |
| 5.25 | S 5B drive 1 Motor   | 1 |   |  |  |  | 1 | Monthly |           |
| 5.26 | S 5B drive 1 Gearbox |   | 1 |  |  |  | 1 | Monthly | 3 Monthly |
| 5.27 | S 5B drive 2 Motor   | 1 |   |  |  |  | 1 | Monthly |           |
| 5.28 | S 5B drive 2 Gearbox |   | 1 |  |  |  | 1 | Monthly | 3 Monthly |
| 5.29 | S 6A drive 1 Motor   | 1 |   |  |  |  | 1 | Monthly |           |
| 5.30 | S 6A drive 1 Gearbox |   | 1 |  |  |  | 1 | Monthly | 3 Monthly |
| 5.31 | S 6A drive 2 Motor   | 1 |   |  |  |  | 1 | Monthly |           |
| 5.32 | S 6A drive 2 Gearbox |   | 1 |  |  |  | 1 | Monthly | 3 Monthly |
| 5.33 | S 6B drive 1 Motor   | 1 |   |  |  |  | 1 | Monthly |           |
| 5.34 | S 6B drive 1 Gearbox |   | 1 |  |  |  | 1 | Monthly | 3 Monthly |
| 5.35 | S 6B drive 2 Motor   | 1 |   |  |  |  | 1 | Monthly |           |
| 5.36 | S 6B drive 2 Gearbox |   | 1 |  |  |  | 1 | Monthly | 3 Monthly |
| 5.37 | CS 2A Motor          | 1 |   |  |  |  | 1 | Monthly |           |
| 5.38 | CS 2A Gearbox        |   | 1 |  |  |  | 1 | Monthly | 3 Monthly |
| 5.39 | CS 2B Motor          | 1 |   |  |  |  | 1 | Monthly |           |
| 5.40 | CS 2B Gearbox        |   | 1 |  |  |  | 1 | Monthly | 3 Monthly |
| 5.41 | S 8A Motor           | 1 |   |  |  |  | 1 | Monthly |           |
| 5.42 | S 8A Gearbox         |   | 1 |  |  |  | 1 | Monthly | 3 Monthly |

|      |                           |   |   |  |  |  |   |         |              |
|------|---------------------------|---|---|--|--|--|---|---------|--------------|
| 5.43 | S 8B Motor                | 1 |   |  |  |  | 1 | Monthly |              |
| 5.44 | S 8B Gearbox              |   | 1 |  |  |  | 1 | Monthly | 3 Monthly    |
| 5.45 | T1A Motor                 | 1 |   |  |  |  | 1 | Monthly |              |
| 5.46 | T1A Gearbox               |   | 1 |  |  |  | 1 | Monthly | 3 Monthly    |
| 5.47 | T1B Motor                 | 1 |   |  |  |  | 1 | Monthly |              |
| 5.48 | T1B Gearbox               |   | 1 |  |  |  | 1 | Monthly | 3 Monthly    |
| 5.49 | T2A Motor                 | 1 |   |  |  |  | 1 | Monthly |              |
| 5.50 | T2A Gearbox               |   | 1 |  |  |  | 1 | Monthly | 3 Monthly    |
| 5.51 | T2B Motor                 | 1 |   |  |  |  | 1 | Monthly |              |
| 5.52 | T2B Gearbox               |   | 1 |  |  |  | 1 | Monthly | 3 Monthly    |
| 5.53 | T3A Motor                 | 1 |   |  |  |  | 1 | Monthly |              |
| 5.54 | T3A Gearbox               |   | 1 |  |  |  | 1 | Monthly | 3 Monthly    |
| 5.55 | T3B Motor                 | 1 |   |  |  |  | 1 | Monthly |              |
| 5.56 | T3B Gearbox               |   | 1 |  |  |  | 1 | Monthly | 3 Monthly    |
| 5.57 | T4 Motor                  | 6 |   |  |  |  | 6 | Monthly |              |
| 5.58 | T4 Hydraulic pack         |   | 6 |  |  |  | 6 | Monthly | 3 Monthly    |
| 5.59 | T5A Motor                 | 1 |   |  |  |  | 1 | Monthly |              |
| 5.60 | T5A Gearbox               |   | 1 |  |  |  | 1 | Monthly | 3 Monthly    |
| 5.61 | T5B Motor                 | 1 |   |  |  |  | 1 | Monthly |              |
| 5.62 | T5B Gearbox               |   | 1 |  |  |  | 1 | Monthly | 3 Monthly    |
| 5.63 | T5C Motor                 | 1 |   |  |  |  | 1 | Monthly |              |
| 5.64 | T5C Gearbox               |   | 1 |  |  |  | 1 | Monthly | 3 Monthly    |
| 5.65 | T5D Motor                 | 1 |   |  |  |  | 1 | Monthly |              |
| 5.66 | T5D Gearbox               |   | 1 |  |  |  | 1 | Monthly | 3 Monthly    |
| 5.67 | T5E Motor                 | 1 |   |  |  |  | 1 | Monthly |              |
| 5.68 | T5E Gearbox               |   | 1 |  |  |  | 1 | Monthly | 3 Monthly    |
| 5.69 | T5F Motor                 | 1 |   |  |  |  | 1 | Monthly |              |
| 5.70 | T5F Gearbox               |   | 1 |  |  |  | 1 | Monthly | 3 Monthly    |
| 5.71 | ECB 30 Motor and Gear Box | 6 |   |  |  |  | 6 | Monthly | 3 Monthly GB |
| 5.72 | ECB 31 Motor and Gear Box |   | 6 |  |  |  | 6 | Monthly | 3 Monthly GB |
| 5.73 | ECB 32 Motor and Gear Box | 6 |   |  |  |  | 6 | Monthly | 3 Monthly GB |
| 5.74 | ECB 40 Motor and Gear Box |   | 6 |  |  |  | 6 | Monthly | 3 Monthly GB |
| 5.75 | ECB 41 Motor and Gear Box | 6 |   |  |  |  | 6 | Monthly | 3 Monthly GB |
| 5.76 | ECB 42 Motor and Gear Box |   | 6 |  |  |  | 6 | Monthly | 3 Monthly GB |
| 5.77 | ECB 43 Motor and Gear Box | 6 |   |  |  |  | 6 | Monthly | 3 Monthly GB |
|      |                           |   |   |  |  |  |   |         |              |



|      |                                                                 |   |   |  |  |  |   |           |           |
|------|-----------------------------------------------------------------|---|---|--|--|--|---|-----------|-----------|
| 6    | ASH PLANT CONVEYORS                                             |   |   |  |  |  |   |           |           |
|      | Ash Transverse Conveyors ETK                                    |   |   |  |  |  |   | Monthly   |           |
| 6.1  | ETK 11 Motor                                                    | 2 |   |  |  |  | 2 | Monthly   |           |
| 6.2  | ETK 11 Gearbox                                                  |   | 2 |  |  |  | 2 | Monthly   | 3 Monthly |
| 6.3  | ETK 12 Motor                                                    | 2 |   |  |  |  | 2 | Monthly   |           |
| 6.4  | ETK 12 Gearbox                                                  |   | 2 |  |  |  | 2 | Monthly   | 3 Monthly |
| 6.5  | ETK 21 Motor                                                    | 2 |   |  |  |  | 2 | Monthly   |           |
| 6.6  | ETK 21 Gearbox                                                  |   | 2 |  |  |  | 2 | Monthly   | 3 Monthly |
| 6.7  | ETK 22 Motor                                                    | 2 |   |  |  |  | 2 | Monthly   |           |
| 6.8  | ETK 22 Gearbox                                                  |   | 2 |  |  |  | 2 | Monthly   | 3 Monthly |
| 6.17 | ETK 13 Motor                                                    | 1 |   |  |  |  | 1 | Monthly   |           |
| 6.18 | ETK 13 Gearbox                                                  |   | 1 |  |  |  | 1 | Monthly   | 3 Monthly |
| 6.19 | ETK 23 Motor                                                    | 1 |   |  |  |  | 1 | Monthly   |           |
| 6.20 | ETK 23 Gearbox                                                  |   | 1 |  |  |  | 1 | Monthly   | 3 Monthly |
|      |                                                                 |   |   |  |  |  |   | Monthly   |           |
|      | Ash Shiftable Conveyors - ETK 14 / 24                           |   |   |  |  |  |   |           |           |
| 6.21 | ETK 14 Motor                                                    | 2 |   |  |  |  | 1 | Monthly   |           |
| 6.22 | ETK 14 Gearbox                                                  |   | 2 |  |  |  | 1 | Monthly   | 3 Monthly |
| 6.23 | ETK 24 Motor                                                    | 2 |   |  |  |  | 1 | Monthly   |           |
| 6.24 | ETK 24 Gearbox                                                  |   | 2 |  |  |  | 1 | Monthly   | 3 Monthly |
| 6.25 | ETK 14 Motor Link                                               | 1 |   |  |  |  | 1 | Monthly   |           |
| 6.26 | ETK 14 Gearbox Link                                             |   | 1 |  |  |  | 1 | Monthly   | 3 Monthly |
| 6.27 | ETK 14 Motor Boom                                               | 1 |   |  |  |  | 1 | Monthly   |           |
| 6.28 | ETK 14 Gearbox Boom                                             |   | 1 |  |  |  | 1 | Monthly   | 3 Monthly |
| 6.29 | ETK 24 Motor Link                                               | 1 |   |  |  |  | 1 | Monthly   |           |
| 6.30 | ETK 24 Gearbox Link                                             |   | 1 |  |  |  | 1 | Monthly   | 3 Monthly |
| 6.31 | ETK 24 Motor Boom                                               | 1 |   |  |  |  | 1 | Monthly   |           |
| 6.32 | ETK 24 Gearbox Boom                                             |   | 1 |  |  |  | 1 | Monthly   | 3 Monthly |
| 6.33 | Ash Plant Moving heads hydraulic system                         |   |   |  |  |  | 4 |           | 3 Monthly |
| 6.34 | Ash stacker and spreader crawler gearboxes                      |   | 4 |  |  |  | 4 | 3 Monthly | 3 Monthly |
| 6.35 | Ash stacker and spreader crawler motor                          | 4 |   |  |  |  | 4 | 3 Monthly |           |
| 6.36 | Ash stacker and spreader slew gearboxes (helical and planetary) |   | 8 |  |  |  | 8 | 3 Monthly | 3 Monthly |
| 6.37 | Ash stacker and spreader slew drive motor                       | 4 |   |  |  |  | 4 | 3 Monthly |           |
| 6.38 | Ash stacker and spreader slew bearing grease analysis           |   |   |  |  |  | 2 |           | 3 Monthly |

|      |                                                                   |   |   |  |   |  |   |         |           |
|------|-------------------------------------------------------------------|---|---|--|---|--|---|---------|-----------|
|      | Conditioned ash Conveyors ETK                                     |   |   |  |   |  |   |         |           |
| 6.39 | 01ETK 11 Motor                                                    | 1 |   |  |   |  | 1 | Monthly |           |
| 6.40 | 01ETK 11 Gearbox                                                  |   | 1 |  |   |  | 1 | Monthly | 3 Monthly |
| 6.41 | 01ETK 21 Motor                                                    | 1 |   |  |   |  | 1 | Monthly |           |
| 6.42 | 01ETK 21 Gearbox                                                  |   | 1 |  |   |  | 1 | Monthly | 3 Monthly |
| 6.43 | 02ETK 11 Motor                                                    | 1 |   |  |   |  | 1 | Monthly |           |
| 6.44 | 02ETK 11 Gearbox                                                  |   | 1 |  |   |  | 1 | Monthly | 3 Monthly |
| 6.45 | 02ETK 21 Motor                                                    | 1 |   |  |   |  | 1 | Monthly |           |
| 6.46 | 02ETK 21 Gearbox                                                  |   | 1 |  |   |  | 1 | Monthly | 3 Monthly |
| 6.47 | 03ETK 11 Motor                                                    | 1 |   |  |   |  | 1 | Monthly |           |
| 6.48 | 03ETK 11 Gearbox                                                  |   | 1 |  |   |  | 1 | Monthly | 3 Monthly |
| 6.49 | 03ETK 21 Motor                                                    | 1 |   |  |   |  | 1 | Monthly |           |
| 6.50 | 03ETK 21 Gearbox                                                  |   | 1 |  |   |  | 1 | Monthly | 3 Monthly |
| 6.51 | Ash Plant Moving heads hydraulic system conditioned ash conveyors |   |   |  | 6 |  | 6 |         | 3 Monthly |
|      | Ash conditioners                                                  |   |   |  |   |  |   |         |           |
| 6.52 | 11-01ETK10 AM101 1B Ash conditioner - Fly ash Bunker 1 Motor      | 1 |   |  |   |  | 1 | Monthly |           |
| 6.53 | 11-01ETK10 AM102 1A Ash conditioner - Fly ash Bunker 1 Motor      | 1 |   |  |   |  | 1 | Monthly |           |
| 6.54 | 11-01ETK20 AM101 2A Ash conditioner - Fly ash Bunker 1 Moto       | 1 |   |  |   |  | 1 | Monthly |           |
| 6.55 | 11-01ETK30 AM101 3B Ash conditioner - Fly ash Bunker 1 Motor      | 1 |   |  |   |  | 1 | Monthly |           |
| 6.56 | 11-02ETK10 AM101 1B Ash conditioner - Fly ash Bunker 2 Motor      | 1 |   |  |   |  | 1 | Monthly |           |
| 6.57 | 11-02ETK10 AM102 1A Ash conditioner - Fly ash Bunker 2 Motor      | 1 |   |  |   |  | 1 | Monthly |           |
| 6.58 | 11-02ETK20 AM101 2A Ash conditioner - Fly ash Bunker 2 Motor      | 1 |   |  |   |  | 1 | Monthly |           |
| 6.59 | 11-02ETK30 AM101 3B Ash conditioner - Fly ash Bunker 2 Motor      | 1 |   |  |   |  | 1 | Monthly |           |
| 6.60 | 11-03ETK10 AM101 1B Ash conditioner - Fly ash Bunker 3 Motor      | 1 |   |  |   |  | 1 | Monthly |           |
| 6.61 | 11-03ETK10 AM102 1A Ash conditioner - Fly ash Bunker 3 Motor      | 1 |   |  |   |  | 1 | Monthly |           |
| 6.62 | 11-03ETK20 AM101 2A Ash conditioner - Fly ash Bunker 3 Moto       | 1 |   |  |   |  | 1 | Monthly |           |
| 6.63 | 11-03ETK30 AM101 3B Ash conditioner - Fly ash Bunker 3 Motor      | 1 |   |  |   |  | 1 | Monthly |           |

|      |                                                                |    |    |  |   |  |    |         |           |
|------|----------------------------------------------------------------|----|----|--|---|--|----|---------|-----------|
| 6.64 | 11-03ETK30 AM101 3B Ash conditioner - Fly ash Bunker 3 Motor   | 1  |    |  |   |  | 1  | Monthly |           |
| 6.65 | 11-01ETK10 AM101 1B Ash conditioner - Fly ash Bunker 1 Gearbox |    | 1  |  |   |  | 1  | Monthly | 3 Monthly |
| 6.66 | 11-01ETK10 AM102 1A Ash conditioner - Fly ash Bunker 1 Gearbox |    | 1  |  |   |  | 1  | Monthly | 3 Monthly |
| 6.67 | 11-01ETK20 AM101 2A Ash conditioner - Fly ash Bunker 1 Gearbox |    | 1  |  |   |  | 1  | Monthly | 3 Monthly |
| 6.68 | 11-01ETK30 AM101 3B Ash conditioner - Fly ash Bunker 1 Gearbox |    | 1  |  |   |  | 1  | Monthly | 3 Monthly |
| 6.69 | 11-02ETK10 AM101 1B Ash conditioner - Fly ash Bunker 2 Gearbox |    | 1  |  |   |  | 1  | Monthly | 3 Monthly |
| 6.70 | 11-02ETK10 AM102 1A Ash conditioner - Fly ash Bunker 2 Gearbox |    | 1  |  |   |  | 1  | Monthly | 3 Monthly |
| 6.71 | 11-02ETK20 AM101 2A Ash conditioner - Fly ash Bunker 2 Gearbox |    | 1  |  |   |  | 1  | Monthly | 3 Monthly |
| 6.72 | 11-02ETK30 AM101 3B Ash conditioner - Fly ash Bunker 2 Gearbox |    | 1  |  |   |  | 1  | Monthly | 3 Monthly |
| 6.73 | 11-03ETK10 AM101 1B Ash conditioner - Fly ash Bunker 3 Gearbox |    | 1  |  |   |  | 1  | Monthly | 3 Monthly |
| 6.74 | 11-03ETK10 AM102 1A Ash conditioner - Fly ash Bunker 3 Gearbox |    | 1  |  |   |  | 1  | Monthly | 3 Monthly |
| 6.75 | 11-03ETK20 AM101 2A Ash conditioner - Fly ash Bunker 3 Gearbox |    | 1  |  |   |  | 1  | Monthly | 3 Monthly |
| 6.76 | 11-03ETK30 AM101 3B Ash conditioner - Fly ash Bunker 3 Gearbox |    | 1  |  |   |  | 1  | Monthly | 3 Monthly |
| 6.77 | 11-03ETK30 AM101 3B Ash conditioner - Fly ash Bunker 3 Gearbox |    | 1  |  |   |  | 1  | Monthly | 3 Monthly |
|      |                                                                |    |    |  |   |  |    |         |           |
| 7    | COAL STACKER / RECLAIMER 1 & 2                                 |    |    |  |   |  |    |         |           |
| 7.1  | Boom Conveyor drive motor                                      | 2  |    |  |   |  | 2  | Monthly |           |
| 7.2  | Boom Conveyor drive gearbox                                    |    | 2  |  |   |  | 2  | Monthly | 3 Monthly |
| 7.3  | Intermediate Conveyor motor                                    | 2  |    |  |   |  | 2  | Monthly |           |
| 7.4  | Intermediate Conveyor gearbox                                  |    | 2  |  |   |  | 2  | Monthly | 3 Monthly |
| 7.5  | Hydraulic pack                                                 |    |    |  | 2 |  | 2  | Monthly | 3 Monthly |
|      |                                                                |    |    |  |   |  |    | Monthly |           |
| 8    | BUCKET ASH ELEVATORS                                           |    |    |  |   |  |    | Monthly |           |
| 8.1  | Motor                                                          | 12 |    |  |   |  | 12 | Monthly |           |
| 8.2  | Gearbox                                                        |    | 12 |  |   |  | 12 | Monthly | 3 Monthly |

|      |                                        |    |    |  |   |   |    |         |           |
|------|----------------------------------------|----|----|--|---|---|----|---------|-----------|
|      |                                        |    |    |  |   |   |    |         |           |
| 9    | ESP ASH CONVEYORS                      |    |    |  |   |   |    |         |           |
| 9.1  | First collecting conveyors motors      | 12 |    |  |   |   | 12 | Monthly |           |
| 9.2  | First collecting conveyors gearbox     |    | 12 |  |   |   | 12 | Monthly | 3 Monthly |
| 9.3  | Second collecting conveyor motors      | 12 |    |  |   |   | 12 | Monthly |           |
| 9.4  | Second collecting conveyor gearbox     |    | 12 |  |   |   | 12 | Monthly | 3 Monthly |
| 9.5  | Ash hopper collecting conveyor motors  | 48 |    |  |   |   | 48 | Monthly |           |
| 9.6  | Ash hopper collecting conveyor gearbox |    | 48 |  |   |   | 48 | Monthly | 3 Monthly |
| 9.7  | Top bunker conveyors motors            | 6  |    |  |   |   | 6  | Monthly |           |
| 9.8  | Top bunker conveyors gearbox           |    | 6  |  |   |   | 6  | Monthly | 3 Monthly |
|      |                                        |    |    |  |   |   |    |         |           |
| 10   | COARSE ASH CONVEYORS                   |    |    |  |   |   |    |         |           |
| 10.1 | Sicon belt motor                       | 6  |    |  |   |   | 6  | Monthly |           |
| 10.2 | Sicon belt gearbox                     |    | 6  |  |   |   | 6  | Monthly | 3 Monthly |
| 10.3 | Apron Conveyor motor                   | 6  |    |  |   |   | 6  | Monthly |           |
| 10.4 | Apron Conveyor gear box                |    | 6  |  |   |   | 6  | Monthly | 3 Monthly |
| 10.5 | Coarse Ash Conveyor Motor              | 6  |    |  |   |   | 6  | Monthly |           |
| 10.6 | Coarse Ash Conveyor gearbox            |    | 6  |  |   |   | 6  | Monthly | 3 Monthly |
|      |                                        |    |    |  |   |   |    |         |           |
|      |                                        |    |    |  |   |   |    |         | 3 Monthly |
| 11   | LP SERVICES - STATION COMPRESSORS      |    |    |  |   |   |    |         |           |
|      | Centac compressor motor                | 3  |    |  |   |   | 3  | Monthly |           |
|      | Centac compressor                      |    |    |  |   | 3 | 3  | Monthly | 3 Monthly |
|      | Electric fire pumps                    | 2  |    |  | 2 |   | 2  | Monthly |           |
|      | Diesel fire pumps                      | 2  |    |  | 2 |   | 2  | Monthly |           |
|      | TH1 Fire pump electric                 | 1  |    |  | 1 |   |    | Monthly |           |
|      | TH1 Fire pump diesel                   | 1  |    |  | 1 |   |    | Monthly |           |
|      | TH1 Fire pump jockey                   | 1  |    |  | 1 |   |    | Monthly |           |
|      |                                        |    |    |  |   |   |    |         |           |
| 12   | Water Treatment Plant                  |    |    |  |   |   |    |         |           |
| 12.1 | Vacuum pump                            |    |    |  | 3 |   | 3  | Monthly |           |
| 12.2 | Vacuum pump motor                      | 3  |    |  |   |   | 3  | Monthly |           |
| 12.3 | Demin plant supply pump                |    |    |  | 4 |   | 4  | Monthly |           |
| 12.4 | Demin plant supply pump motor          | 4  |    |  |   |   | 4  | Monthly |           |
| 12.5 | Anion supply pump                      |    |    |  | 4 |   | 4  | Monthly |           |
| 12.6 | Anion supply pump motor                | 4  |    |  |   |   | 4  | Monthly |           |

|       |                                       |      |     |     |     |      |   |         |  |
|-------|---------------------------------------|------|-----|-----|-----|------|---|---------|--|
| 12.7  | Potable water pump                    |      |     |     | 4   |      | 4 | Monthly |  |
| 12.8  | Potable water pump motor              | 4    |     |     |     |      | 4 | Monthly |  |
| 12.9  | Motive water pump                     |      |     |     | 2   |      | 2 | Monthly |  |
| 12.10 | Motive water pump motor               | 2    |     |     |     |      | 2 | Monthly |  |
| 12.11 | Demin water pump                      |      |     |     | 2   |      | 2 | Monthly |  |
| 12.12 | Demin water pump motor                | 2    |     |     |     |      | 2 | Monthly |  |
| 12.13 | Rinse recycle pump                    |      |     |     | 1   |      | 1 | Monthly |  |
| 12.14 | Rinse recycle pump motor              | 1    |     |     |     |      | 1 | Monthly |  |
| 12.15 | Brine pump                            |      |     |     | 1   |      | 1 | Monthly |  |
| 12.16 | Brine pump motor                      | 1    |     |     |     |      | 1 | Monthly |  |
| 12.17 | Caustic soda off - loading pump       |      |     |     | 1   |      | 1 | Monthly |  |
| 12.20 | Caustic soda off - loading pump motor | 1    |     |     | 1   |      | 2 | Monthly |  |
| 12.21 | Mixed bed blower motor                | 2    |     |     | 2   |      | 4 | Monthly |  |
| 12.22 | Filter air blower motor               | 2    |     |     | 2   |      | 4 | Monthly |  |
|       |                                       |      |     |     |     |      |   |         |  |
|       |                                       |      |     |     |     |      |   |         |  |
|       |                                       |      |     |     |     |      |   |         |  |
|       |                                       | mtr  | gbx | fan | pmp | cmpr |   |         |  |
|       |                                       | 775  | 311 | 102 | 209 | 22   |   |         |  |
|       | TOTAL                                 | 1537 |     |     |     |      |   |         |  |

Thermography, stroboscopic and Belt scan (steel cord inspection) condition monitoring

1. The table below is the thermography and stroboscopic scope of work to be done

| THERMOGRAPHY |                                                                                    |                |                                             |                                                                                                                                     |
|--------------|------------------------------------------------------------------------------------|----------------|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
|              | DESCRIPTION                                                                        | INFRARED IMAGE | TEMPERATURES                                | COMMENTS                                                                                                                            |
| 1            | Generator Transformers                                                             |                |                                             |                                                                                                                                     |
| 1.1          | Bushings                                                                           | Yes            | Bushing connection temperatures             | 1. Transformer can be tested at any load between 386 MW and 686 MW.<br>2. A summary table with all the temperatures to be Supplied. |
| 1.2          | Main "Tank"                                                                        | Yes            | Casing temperature                          |                                                                                                                                     |
| 1.3          | Cooler banks                                                                       | Yes            | 6 inlet and 6 outlet temperatures.          |                                                                                                                                     |
| 1.4          | Tap changer                                                                        | Yes            | Casing temperature. Monthly                 |                                                                                                                                     |
| 2            | Unit Transformers A & B                                                            |                |                                             |                                                                                                                                     |
| 2.1          | Coolers                                                                            | Yes            | Average temperature on top part. Monthly    | 1. A summary table of all the temperatures to be Supplied.                                                                          |
| 3            | Service Transformers A & B                                                         |                |                                             |                                                                                                                                     |
| 3.1          | "Tank"                                                                             | Yes            | Average temp of tank.                       | 1. A summary table of all the temperatures to be Supplied.                                                                          |
| 3.2          | Coolers                                                                            | Yes            | Average temp on top of coolers.             |                                                                                                                                     |
| 4            | EFP Transformers A, B & C                                                          |                |                                             |                                                                                                                                     |
| 4.1          | "Tank"                                                                             | Yes            | Average temp of tank.                       | 1. Scan all 3 transformers, include standby one.<br>2. A summary table of all the temperatures to be Supplied.                      |
| 4.2          | HV & LV connections                                                                | Yes            | Temps of all HV & LV connections.           |                                                                                                                                     |
| 4.3          | Coolers                                                                            | Yes            | Average temperature on top part. Monthly    |                                                                                                                                     |
| 5            | Outage work<br>On request, electrical boards,<br><br>Transformer energisation etc. | Yes<br><br>Yes | As per request.                             | As requested                                                                                                                        |
| 6            | Mill pinion gear                                                                   | Yes            | Temperatures of hot and cold spots. Monthly | 1. A summary table of all the temperatures to be                                                                                    |

|    |                                                                                        |     |                                                                               |                                                            |
|----|----------------------------------------------------------------------------------------|-----|-------------------------------------------------------------------------------|------------------------------------------------------------|
|    |                                                                                        |     |                                                                               | Supplied.                                                  |
| 7  | Coal Stock Yard                                                                        | Yes | Temperature profile of coal stock<br>Pile surface area.                       |                                                            |
| 8  | ESP TX (x 168)                                                                         | Yes | Average temp of SIR/TR. (3 Monthly)                                           | 1. A summary table of all the temperatures to be Supplied. |
| 9  | Sulphur Common Plant (x2)                                                              | Yes | Average temp of tank.(Monthly)                                                | 1. A summary table of all the temperatures to be Supplied. |
| 10 | ALL HV Motors                                                                          | Yes | Temperature of the Terminal box.<br>Monthly                                   | 1. A summary table of all the temperatures to be Supplied. |
| 11 | H2 Plant                                                                               | Yes | Temperatures of Electrolyser connections. Monthly                             | 1. A summary table of all the temperatures to be Supplied. |
| 12 | PULLEY BEARINGS(ASH/COAL) Plant                                                        | Yes | Temperatures of hot and cold spots. Coal (monthly) and outside ash (2 weekly) | 1. A summary table of all the temperatures to be Supplied. |
| 13 | Gearbox, motor and fluid coupling bearings                                             | Yes | Temperatures of hot and cold spots. Monthly                                   | 1. A summary table of all the temperatures to be Supplied. |
| 14 | 22KV Breaker scans (RED,WHITE,BLUE Phases Gen side and Gen TRFR side including IPB)X 6 | Yes | Temperatures of hot and cold spots. Monthly                                   | 1. A summary table of all the temperatures to be Supplied. |
| 15 | Electrical Boards (HV/LV) and cable chamber spread                                     | Yes | Temperatures of hot and cold spots. 6 Monthly                                 | 1. A summary table of all the temperatures to be Supplied. |
| 16 | Boiler casings x6                                                                      | Yes | Temperatures of hot and cold spots. Monthly                                   | 1. A summary table of all the temperatures to be Supplied. |
| 17 | 22KV and 11KV lines (Coal/ ash Plant                                                   | Yes | Temperatures of hot and cold spots. Monthly                                   | 1. A summary table of all the temperatures to be Supplied. |

| STROBE LIGHT INSPECTION. |                  |                                                                                                                                                                                                                          |
|--------------------------|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1                        | Mill pinion gear | Do a strobe light inspection on whole girth and pinion gear to identify cracked teeth, contact profile etc. Digital photographs to be taken of normal and abnormal conditions. This activity will take place every month |

|                             |                      |                                                                                                                                                      |
|-----------------------------|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| Steel cord belts inspection |                      |                                                                                                                                                      |
|                             |                      |                                                                                                                                                      |
| 1                           | Coal plant Conveyors | Perform steel cord inspection through approved technology that will be able identify damaged cords and give the belt condition overview at that time |
| 2                           | Ash Plant Conveyors  | Perform steel cord inspection through approved technology that will be able identify damaged cords and give the belt condition overview at that time |

Appendix C

Key performance indicators

The Contractor shall provide all services stipulate in the contract and comply with the following key performance indicators.

All reports for the services shall be submitted within 5 working days after data has been collected.

Contractor shall respond to all call outs requests.

Contractor shall report to site within an hour after call-out has been made.

Contractor shall ensure zero unpredicted failures.

Contractors shall ensure 100% PM compliance.

Contractor shall ensure that no early warnings issued against by the Service manager for poor performance.

Contractor shall ensure Zero safety incidents