

**PROVISION OF CONDITION MONITORING SERVICES USING HAND HELD TECHNOLOGY FOR A PERIOD OF 5 YEARS AT
MATLA POWER STATION**



NEC3 Term Service Contract (TSC3)

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

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

for Condition Monitoring Service at Matla Power Station.

Contents:**No of
pages****Part C1 Agreements & Contract Data****Part C2 Pricing Data****Part C3 Scope of Work**

CONTRACT No. [Insert at award stage]

**PROVISION OF CONDITION MONITORING SERVICES USING HAND HELD TECHNOLOGY FOR A PERIOD OF 5 YEARS AT
MATLA POWER STATION****PART C1: AGREEMENTS & CONTRACT DATA**

Contents:**No of
pages****C1.1 Form of Offer and Acceptance**

C1.1 Form of offer and Acceptance

C1.2 Contract Data provide by the Employer

C1.2 Contract Data provided by the Contractor

C1.2a Contract Data provided by the *Employer***C1.2b Contract Data provided by the *Contractor***[to be inserted from Returnable Documents at award
stage]**C1.3 Proforma Guarantees**

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C1.1 Form of Offer & Acceptance

Offer

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

Condition Monitoring Service at Matla 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	The offered total of the Prices exclusive of VAT is	R [●]
	Sub total	R [●]
	Value Added Tax @ 15% is	R [●]
	The offered total of the amount due inclusive of VAT is ¹	R [●]
	(in words) [●]	

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

Signature(s)

Name(s)

Capacity

**For the
tenderer:**

(Insert name and address of organisation)

Name &
signature of
witness

Date

Tenderer's CIDB registration number:

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

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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.

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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

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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	General	
	The <i>conditions of contract</i> are the core clauses and the clauses for main Option:	
		A: Priced contract with price list
	dispute resolution Option	W1: Dispute resolution procedure
	and secondary Options	
		X1: Price adjustment for inflation
		X2: Changes in the law
		X17: Low service damages
		X18: Limitation of liability
		X19: Task Order
		Z: <i>Additional conditions of contract</i>
	of the NEC3 Term Service Contract April 2013 ² (TSC3)	
10.1	The <i>Employer</i> is (name):	Eskom Holdings SOC Ltd (reg no: 2002/015527/30), a state owned company incorporated in terms of the company laws of the Republic of South Africa
	Address	Registered office at Megawatt Park, Maxwell Drive, Sandton, Johannesburg

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

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	Tel No.	[•]
	Fax No.	[•]
10.1	The <i>Service Manager</i> is (name):	Brenda Moeng
	Address	Eskom Holdings SOC Limited Matla Power Station Private Bag
	Tel	017 612 6406
	Fax	
	e-mail	MoengBr@eskom.co.za
11.2(2)	The Affected Property is	Eskom Matla Power Station
11.2(13)	The <i>service</i> is	Condition Monitoring Service for Matla Power Station.
11.2(14)	The following matters will be included in the Risk Register	N/A
11.2(15)	The Service Information is in	Part 3: Scope of Work and all documents.
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	2 weeks
2	The Contractor's main responsibilities	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	1 week from the Contract Date
3	Time	
30.1	The <i>starting date</i> is.	TBC
30.1	The <i>service period</i> is	5 years after start date
4	Testing and defects	There is no reference to Contract Data in this section of the core clauses and terms in italics used in this section are identified elsewhere in this Contract Data
5	Payment	
50.1	The <i>assessment interval</i> is	Between the 25 day of each successive month.
	The <i>currency of this contract</i> is the	South African Rand
51.2	The period within which payments are made is	4 weeks.
51.4	The <i>interest rate</i> is	the publicly quoted prime rate of interest (calculated on a 365 day year) charged by from

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time to time by the Standard Bank of South Africa Limited (as certified, in the event of any dispute, by any manager of such bank, whose appointment it shall not be necessary to prove) for amounts due in Rands and

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

6	Compensation events	There is no reference to Contract Data in this section of the core clauses and terms in italics used in this section are identified elsewhere in this Contract Data
7	Use of Equipment Plant and Materials	There is no reference to Contract Data in this section of the core clauses and terms in italics used in this section are identified elsewhere in this Contract Data
8	Risks and insurance	
80.1	These are additional <i>Employer's</i> risks	N/A
83.1	The <i>Employer</i> provides these insurances from the Insurance Table	as stated for "Format TSC3" available on http://www.eskom.co.za/Tenders/InsurancePolicies/Procedures/Pages/EIMS_Policies_From_1_April_2014_To_31_March_2015.aspx (See Annexure A for basic guidance).
83.1	The <i>Employer</i> provides these additional insurances	as stated for "Format TSC3" available on http://www.eskom.co.za/Tenders/InsurancePolicies/Procedures/Pages/EIMS_Policies_From_1_April_2014_To_31_March_2015.aspx (See Annexure A for basic guidance)
83.1	The <i>Contractor</i> provides these additional insurances:	【•】
83.1	The minimum amount of cover for insurance against loss and damage	the amount of the deductibles relevant to the event described in the "Format TSC3"

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	caused by the <i>Contractor</i> to the <i>Employer's</i> property is	insurance policy available on http://www.eskom.co.za/Tenders/InsurancePolicies/Procedures/Pages/EIMS_Policies_From_1_April_2014_To_31_March_2015.aspx
83.1	The insurance against loss of or damage to the <i>works</i> , Plant and Materials is to include cover for Plant and Materials provided by the <i>Employer</i> for an amount of	[•]
83.1	The minimum amount of cover for insurance in respect of 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 for any one event is:	Whatever the <i>Contractor</i> deems necessary in addition to that provided by the <i>Employer</i>.
83.1	The minimum limit of indemnity for insurance in respect of 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 for any one event is:	As prescribed by the Compensation for Occupational Injuries and Diseases Act No. 130 of 1993 and the <i>Contractor's</i> common law liability for people falling outside the scope of the Act with a limit of Indemnity of not less than R500 000 (Five hundred thousand Rand).
9	Termination	There is no reference to Contract Data in this section of the core clauses and terms in italics used in this section are identified elsewhere in this Contract Data.
10	Data for main Option clause	
A	Priced contract with price list	
20.5	The <i>Contractor</i> prepares forecasts of the final total of the Prices for the whole of the service at intervals no longer than	2 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 www.ice-sa.org.za). If the Parties do not agree on an Adjudicator the Adjudicator will be appointed by the Arbitration Foundation of Southern Africa (AFSA).
	Address	[•]
	Tel No.	[•]
	Fax No.	[•]
	e-mail	[•]

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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 www.ice-sa.org.za) 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	
	- if the Parties cannot agree a choice or	the Chairman for the time being or his nominee
	- if the arbitration procedure does not state who selects an arbitrator, is	of the Association of Arbitrators (Southern Africa) or its successor body.
12	Data for secondary Option clauses	
X1	Price adjustment for inflation	
X1.1	The base date for indices is The proportions used to calculate the Price Adjustment Factor are:	01 October 2022 Proportion linked to index for 20% L - Transport 65% C3 - Labour 100% The Indices and proportions are provided on the price list. The prices will be fixed and firm for the first year will escalate yearly as per the above indices
X2	Changes in the law	There is no reference to Contract Data in this Option and terms in italics are identified elsewhere in this Contract Data.
X17	Low service damages	
X17.1	The <i>service level table</i> is in	The penalty of 10% of the task order will be deducted should the contractor fail to action the task as required by the employer.
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 described in the "Format TSC3" insurance policy available on http://www.eskom.co.za/Tenders/InsurancePolicies/Procedures/Pages/EIMS_Policies

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		From_1_April_2014_To_31_March_2015.aspx
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"> the total of the Prices at the Contract Date and 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 in the <i>Employer's</i> assets and works / maintenance policies available on http://www.eskom.co.za/Tenders/InsurancePoliciesProcedures/Pages/EIMS_Policies_From_1_April_2014_To_31_March_2015.aspx
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"> Defects due to his design, plan and specification, Defects due to manufacture and fabrication outside the Affected Property, loss of or damage to property (other than the <i>Employer's</i> property, Plant and Materials), death of or injury to a person and infringement of an intellectual property right.
X18.5	The <i>end of liability date</i> is	4 weeks after the end of the <i>service period</i>.
X19	Task Order	
X19.5	The <i>Contractor</i> submits a Task Order programme to the <i>Service Manager</i> within	3 days of receiving the Task Order
Z	The <i>additional conditions of contract</i> are	Z1 to Z11 always apply.

Z1 Cession delegation and assignment

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

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- 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 Ethics

- Z4.1 Any offer, payment, consideration, or benefit of any kind made by the *Contractor*, which constitutes or could be construed either directly or indirectly as an illegal or corrupt practice, as an inducement or reward for the award or in execution of this contract constitutes grounds for terminating the *Contractor's* obligation to Provide the Service or taking any other action as appropriate against the *Contractor* (including civil or criminal action).
- Z4.2 The *Employer* may terminate the *Contractor's* obligation to Provide the Service if the *Contractor* (or any member of the *Contractor* where the *Contractor* constitutes a joint venture, consortium or other unincorporated grouping of two or more persons or organisations) is found guilty by a competent court, administrative or regulatory body of participating in illegal or corrupt practices.
- Such practices include making of offers, payments, considerations, or benefits of any kind or otherwise, whether in connection with any procurement process or contract with the *Employer* or other people or organisations and including in circumstances where the *Contractor* or any such member is removed from the an approved vendor data base of the *Employer* as a consequence of such practice.
- Z4.3 Notwithstanding the provisions of core clause 90.2, the procedures on termination in terms of this clause are P1, P2 and P4 as stated in the core clause 92 and the amount due is A1 and A3 as stated in core clause 93.

Z5 Confidentiality

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- Z5.1 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.
- Z5.2 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*.
- Z5.3 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.
- Z5.4 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*.
- Z5.5 The *Contractor* ensures that all his subcontractors abide by the undertakings in this clause.

Z6 Waiver and estoppel: Add to core clause 12.3:

- Z6.1 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.

Z7 Health, safety and the environment: Add to core clause 27.4

- Z7.1 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.
- Z7.2 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.

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- Z8.1 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.
- Z8.2 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.
- Z8.3 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.

Z9 Notifying compensation events

- Z9.1 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.

Z10 Employer's limitation of liability

- Z10.1 The *Employer's* liability to the *Contractor* for the *Contractor's* indirect or consequential loss is limited to R0.00 (zero Rand)
- Z10.2 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.

Z11 Termination: Add to core clause 91.1, at the second main bullet point, fourth sub-bullet point, after the words "against it":

- Z11.1 or had a business rescue order granted against it.

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These notes are provided as guidance to tendering contractors and the Contractor about the insurance provided by the Employer. The Contractor must obtain its own advice. Details of the insurance itself are available from the internet web link given below.

1. Services provided in a TSC3 contract could include some element of construction or refurbishment as well as a continuous maintenance or operational service activity. If an event occurs which causes loss or damage, a claim could be made either against the *Employer's* "works" type policy which may be in place for the *Employer's* portion of the Affected Property concerned or against the *Employer's* assets policy which may be in place for the *Employer's* portion of the Affected Property concerned, or both.
2. The cover provided and the deductibles under the works policy are different to those under the assets policy. Each policy has a range of applicable deductibles depending on the location of the Affected Property and the nature of the insurable event.
3. The *Contractor* is required in terms of Contract Data for clause 83 to provide cover for the deductibles in the insurance provided by the *Employer*. This can be provided from his own resources on a 'self insured' basis or obtained by him from his own insurers. In order to assess the extent of this cover, tendering contractors and their brokers should consult the internet web link given below and scroll to '**Format TSC3**' to establish both the cover and the deductibles in relation to the service provided in terms of this contract.
4. Tendering contractors should note that cover provided by the *Employer* is only per the policies available on the internet web link listed below and may not be the cover required by the tendering contractor or as intended by each of the listed insurances in the left hand column of the Insurance Table in clause 83.2. In terms of clause 83.1 "the *Contractor* provides the insurances stated in the Insurance Table except any insurance which the *Employer* is to provide". Hence the *Contractor* provides insurance which the *Employer* does not provide and in cases where the *Employer* does provide insurance the *Contractor* insures for the difference between what the Insurance Table requires and what the *Employer* provides.
5. If Marine Insurance is required the *Contractor* needs to obtain a copy of the latest edition of Eskom's Marine Policies Procedures found at internet website given below.
6. Further information and full details of all Eskom provided policies and procedures may be obtained from:

[http://www.eskom.co.za/Tenders/InsurancePoliciesProcedures/Pages/EIMS_Policies_
From_1_April_2014_To_31_March_2015.aspx](http://www.eskom.co.za/Tenders/InsurancePoliciesProcedures/Pages/EIMS_Policies_From_1_April_2014_To_31_March_2015.aspx)

**PROVISION OF CONDITION MONITORING SERVICES USING HAND HELD TECHNOLOGY FOR A PERIOD OF 5 YEARS AT
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C1.2 Contract Data

Part two - Data provided by the *Contractor*

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

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

Notes to a tendering contractor:

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

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

Clause	Statement	Data
10.1	The <i>Contractor</i> is (Name): Address Tel No. Fax No.	
11.2(8)	The <i>direct fee percentage</i> is	%
	The <i>subcontracted fee percentage</i> is	%
11.2(14)	The following matters will be included in the Risk Register	
11.2(15)	The Service Information for the <i>Contractor's</i> plan is in:	
21.1	The plan identified in the Contract Data is contained in:	
24.1	The key people are: 1 Name: Job: Responsibilities: Qualifications: Experience: 2 Name:	

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

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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 _____	
11.2(19)	The tendered total of the Prices is	R _____

C1.3 Forms of Securities

Pro formas for Bonds & Guarantees

For use with the NEC3 Term Service Contract (TSC3)

[Note to contract compiler:

Once it has been decided which securities are required for this contract delete from this file the ones not required, revise the notes below accordingly and delete this note.]

The *conditions of contract* stated in the Contract Data Part 1 include the following Secondary Options:

Option X4: Parent company guarantee

Option X13: Performance Bond

Each of these secondary Options requires a bond or guarantee "in the form set out in the Service Information". Pro forma documents for these bonds and guarantees are provided here for convenience but are to be treated as part of the Service Information.

The *Contractor* shall guarantee his ASGI-SA Obligations by providing the *Employer* with an ASGI-SA Guarantee in the form provided here.

[Note to contract compiler: If there are no ASGI-SA Obligations in this contract, delete the above statement and the ASGI_SA bond]

The organisation providing the bond / guarantee does so by copying the pro forma document onto his letterhead without any change to the text or format and completing the required details. The completed document is then given to the *Employer* within the time stated in the contract.

**PROVISION OF CONDITION MONITORING SERVICES USING HAND HELD TECHNOLOGY FOR A PERIOD OF 5 YEARS AT
MATLA POWER STATION****Pro forma Parent Company Guarantee (for use with Option X4) – N/A***(to be reproduced exactly as shown below on the letterhead of the Contractor's Parent Company)*

**Eskom Holdings SOC Ltd
Megawatt Park
Maxwell Drive
Sandton
Johannesburg**

Date:

Dear Sirs,

Parent Company Guarantee for Contract No

With reference to the above numbered contract made or to be made between

Eskom Holdings SOC Ltd(the *Employer*) and**{Insert registered name and address of the *Contractor*}**(the *Contractor*), for**{Insert details of the *works* from the Contract Data}**(the *works*).

I/We the undersigned

on behalf of the *Contractor's*
parent company

of physical address

and duly authorised thereto do hereby unconditionally guarantee to the *Employer* that the *Contractor* shall Provide the Service in accordance with the above numbered Contract.

1. If for any reason the *Contractor* fails to Provide the Service, we hereby agree to cause to Provide the Service at no additional cost to the *Employer*.
2. If we fail to comply with the terms of this Deed of Guarantee, the *Employer* may itself procure such performance (whether or not the Agreement be formally determined). The *Employer* is to notify us and we shall indemnify the *Employer* for any additional cost or expense it incurs.
3. Our liability shall be as primary obligor and not merely as surety and shall not be impaired or discharged by reason of any arrangement or change in relationship made between the *Contractor* and the *Employer* and/or between us and *Contractor*; nor any alteration in the obligations undertaken by the *Contractor* or in the terms of the Agreement; nor any indulgence, failure, delay by you as to any matter; nor any dissolution or liquidation or such other analogous event of the *Contractor*.
4. The *Employer* shall not be obliged before taking steps to enforce the terms of this Deed of Guarantee to obtain judgement against the *Contractor* in any court or other tribunal, to make or file any claim in liquidation (or analogous proceedings) or to seek any remedy or proceed first against the *Contractor*.
5. This Deed of Guarantee shall be governed by and construed in accordance with the laws of the Republic of South Africa and we hereby submit to the non-exclusive jurisdiction of the High Court of South Africa.

**PROVISION OF CONDITION MONITORING SERVICES USING HAND HELD TECHNOLOGY FOR A PERIOD OF 5 YEARS AT
MATLA POWER STATION**

Signed at _____ on this _____ day of _____ 200_

Signature(s)

Name(s) (printed)

Position in parent company

Signature of Witness(s)

Name(s) (printed)

**PROVISION OF CONDITION MONITORING SERVICES USING HAND HELD TECHNOLOGY FOR A PERIOD OF 5 YEARS AT
MATLA POWER STATION**

**Pro forma Performance Bond – Demand Guarantee (for use with Option X13)
– N/A**

(to be reproduced exactly as shown below on the letterhead of the Bank providing the Guarantee)

**Eskom Holdings SOC Ltd
Megawatt Park
Maxwell Drive
Sandton
Johannesburg**

Reference No. [●] *[Drafting Note:
Bank reference
number to be inserted]*

Date:

Dear Sirs

Performance **Bond – Demand Guarantee:** *[Drafting Note: Name of Contractor to be inserted]*

Project [] Contract Reference: *[Drafting Note: Contractor contract reference number to be inserted]*

1. In this Guarantee the following words and expressions shall have the following meanings:-
 - 1.1 “Bank” - means [●], [●] Branch, (Registration No. [●]); *[Drafting Note: Name of Bank to be inserted]*
 - 1.2 “Bank’s Address” - means [●]; *[Drafting Note: Bank’s physical address to be inserted]*
 - 1.3 “Contract” – means the written agreement relating to the Services, entered into between Eskom and the Contractor, on or about the [●] day of [●] 200[●] (Contract Reference No. [.] as amended, varied, restated, novated or substituted from time to time; *[Drafting Note: Signature Date and Contract reference number to be inserted]*
 - 1.4 “Contractor” – means [●] a company registered in accordance with the laws of [●] under Registration Number [●]. *[Drafting Note: Name and details of Contractor to be inserted]*
 - 1.5 “Eskom” - means Eskom Holdings SOC Ltd, a company registered in accordance with the laws of the Republic of South Africa under Registration Number 2002/015527/30].
 - 1.6 “Expiry Date” - means the earlier of
 - the date that the Bank receives a notice from Eskom stating that all amounts due from the Contractor as certified in terms of the contract have been received by Eskom and that the Contractor has fulfilled all his obligations under the Contract, or
 - the date that the Bank issues a replacement Bond for such lesser or higher amount as may be required by Eskom
 - 1.7 “Guaranteed Sum” - means the sum of R [●] ([●] Rand);
 - 1.8 “Services” - means [insert as applicable.].
2. At the instance of the Contractor, we the undersigned _____ and _____, in our respective capacities as _____ and _____ of the Bank, and duly authorized thereto, confirm that we hold the Guaranteed Sum at the disposal of Eskom, as security for the proper performance by the Contractor of all of its obligations in terms of and arising from the Contract and hereby undertake to pay to Eskom, on written demand from Eskom received prior to the Expiry Date, any sum or sums not exceeding in total the Guaranteed Sum.
3. A demand for payment under this guarantee shall be made in writing at the Bank’s address and shall:
 - 3.1 be signed on behalf of Eskom by a Group Executive, Divisional Executive, Senior General Manager or its delegate;

PROVISION OF CONDITION MONITORING SERVICES USING HAND HELD TECHNOLOGY FOR A PERIOD OF 5 YEARS AT MATLA POWER STATION

- 3.2 state the amount claimed ("the Demand Amount");
- 3.3 state that the Demand Amount is payable to Eskom in the circumstances contemplated in the Contract.
4. Notwithstanding the reference herein to the Contract the liability of the Bank in terms hereof is as principal and not as surety and the Bank's obligation/s to make payment:
- 4.1 is and shall be absolute provided demand is made in terms of this bond in all circumstances; and
- 4.2 is not, and shall not be construed to be, accessory or collateral on any basis whatsoever.
5. The Bank's obligations in terms of this Guarantee:
- 5.1 shall be restricted to the payment of money only and shall be limited to the maximum of the Guaranteed Sum; and
- 5.2 shall not be discharged and compliance with any demand for payment received by the Bank in terms hereof shall not be delayed, by the fact that a dispute may exist between Eskom and the Contractor.
6. Eskom shall be entitled to arrange its affairs with the Contractor in any manner which it sees fit, without advising us and without affecting our liability under this Guarantee. This includes, without limitation, any extensions, indulgences, release or compromise granted to the Contractor or any variation under or to the Contract.
7. Should Eskom cede its rights against the Contractor to a third party where such cession is permitted under the Contract, then Eskom shall be entitled to cede to such third party the rights of Eskom under this Guarantee on written notification to the Bank of such cession.
8. This Guarantee:
- 8.1 shall expire on the Expiry Date until which time it is irrevocable;
- 8.2 is, save as provided for in 7 above, personal to Eskom and is neither negotiable nor transferable;
- 8.3 shall be returned to the Bank upon the earlier of payment of the full Guaranteed Sum or expiry hereof;
- 8.4 shall be regarded as a liquid document for the purpose of obtaining a court order; and
- 8.5 shall be governed by and construed in accordance with the law of the Republic of South Africa and shall be subject to the jurisdiction of the Courts of the Republic of South Africa.
- 8.6 Any claim which arises or demand for payment received after expiry date will be invalid and unenforceable.
9. The Bank chooses domicilium citandi et executandi for all purposes in connection with this Guarantee at the Bank's Address.

Signed at _____

Date _____

For and behalf of the Bank

Bank Signatory: _____

Bank Signatory: _____

Witness: _____

Witness: _____

Bank's seal or stamp

**PROVISION OF CONDITION MONITORING SERVICES USING HAND HELD TECHNOLOGY FOR A PERIOD OF 5 YEARS AT
MATLA POWER STATION**

Pro forma ASGI-SA Guarantee

(to be reproduced exactly as shown below on the letterhead of the Bank providing the Guarantee)

**Eskom Holdings SOC Ltd
Megawatt Park
Maxwell Drive
Sandton
Johannesburg**

Reference No [●] [Drafting Note:
Bank reference
number to be inserted]

Date:

Dear Sirs

Pro-Forma ASGI-SA Guarantee: [Drafting Note: Name of Contractor to be inserted]

Project [] Contract Reference: [●] [Drafting Note: Contractor contract reference number to be inserted]

1. In this Guarantee the following words and expressions shall have the following meanings:-
 - 1.1 "Bank" - means [●], [●] Branch, (Registration No. [●]); [Drafting Note: Name of Bank to be inserted]
 - 1.2 "Bank's Address" - means [●]; [Drafting Note: Bank's physical address to be inserted]
 - 1.3 "Contract" – means the written agreement relating to the Project, entered into between the *Employer* and the *Contractor*, on or about the [●] day of [●] 200[●] (Contract Reference No. [●] as amended, varied, restated, novated or substituted from time to time; [Drafting Note: Signature Date and Contract reference number to be inserted])
 - 1.4 "*Contractor*" – means [●] a company registered in accordance with the laws of [●] under Registration Number [●]. [Drafting Note: Name and details of Contractor to be inserted]
 - 1.5 "*Contractor's ASGI-SA Obligations*" – means the *Contractor's ASGI-SA Obligations* under and as defined in the Contract.
 - 1.6 "*Employer*" - means Eskom Holdings SOC Ltd, a company registered in accordance with the laws of the Republic of South Africa under Registration Number 2002/015527/30.
 - 1.7 "Expiry Date" - means the [●] day of [●] 200[●]; [Drafting Note: anticipated date of issue of ASGI-SA Performance Certificate to be inserted.]
 - 1.8 "Guaranteed Sum" - means the sum of R [●] ([●] Rand);
 - 1.9 "Project" – means the
2. At the instance of the *Contractor*, we the undersigned _____ and _____, in our respective capacities as _____ and _____ of the Bank, and duly authorized thereto, confirm that we hold the Guaranteed Sum at the disposal of the *Employer*, as security for the proper performance by the *Contractor* of the *Contractor's ASGI-SA Obligations* and hereby undertake to pay to the *Employer*, on written demand from the *Employer* received prior to the Expiry Date, any sum or sums not exceeding in total the Guaranteed Sum.
3. A demand for payment under this guarantee shall be made in writing at the Bank's address and shall:
 - 3.1 state the amount claimed ("the Demand Amount");
 - 3.2 state that the Demand Amount is payable to the *Employer* in the circumstances contemplated in the Contract.
4. Notwithstanding the reference herein to the Contract the liability of the Bank in terms hereof is as

PROVISION OF CONDITION MONITORING SERVICES USING HAND HELD TECHNOLOGY FOR A PERIOD OF 5 YEARS AT MATLA POWER STATION

principal and not as surety and the Bank's obligation/s to make payment:

- 4.1 is and shall be absolute provided demand is made in terms of this bond in all circumstances; and
- 4.2 is not, and shall not be construed to be, accessory or collateral on any basis whatsoever.
5. The Bank's obligations in terms of this Guarantee:
- 5.1 shall be restricted to the payment of money only and shall be limited to the maximum of the Guaranteed Sum; and
- 5.2 shall not be discharged and compliance with any demand for payment received by the Bank in terms hereof shall not be delayed, by the fact that a dispute may exist between the *Employer* and the *Contractor*.
6. The *Employer* shall be entitled to arrange its affairs with the *Contractor* in any manner which it sees fit, without advising us and without affecting our liability under this Guarantee. This includes, without limitation, any extensions, indulgences, release or compromise granted to the *Contractor* or any variation under or to the Contract.
7. Should the *Employer* cede its rights against the *Contractor* to a third party where such cession is permitted under the Contract, then the *Employer* shall be entitled to cede to such third party the rights of the *Employer* under this Guarantee on written notification to the Bank of such cession.
8. This Guarantee:
- 8.1 shall expire on the Expiry Date until which time it is irrevocable;
- 8.2 is, save as provided for in 7 above, personal to the *Employer* and is neither negotiable nor transferable;
- 8.3 shall be returned to the Bank upon the earlier of payment of the full Guaranteed Sum or expiry hereof;
- 8.4 shall be regarded as a liquid document for the purpose of obtaining a court order; and
- 8.5 shall be governed by and construed in accordance with the law of the Republic of South Africa and shall be subject to the jurisdiction of the courts of the Republic of South Africa.
- 8.6 Any claim which arises or demand for payment received after expiry date will be invalid and unenforceable.
9. The Bank chooses domicilium citandi et executandi for all purposes in connection with this Guarantee at the Bank's Address.

Signed at _____

Date _____

For and behalf of the Bank

Bank Signatory: _____

Bank Signatory: _____

Witness: _____

Witness: _____

Bank's seal or stamp

**PROVISION OF CONDITION MONITORING SERVICES USING HAND HELD TECHNOLOGY FOR A PERIOD OF 5 YEARS AT
MATLA POWER STATION****PART 2: PRICING DATA****TSC3 Option A**

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

PROVISION OF CONDITION MONITORING SERVICES USING HAND HELD TECHNOLOGY FOR A PERIOD OF 5 YEARS AT MATLA POWER STATION

C2.1 Pricing assumptions: Option A

How work is priced and assessed for payment

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

Identified and defined terms	11	
	11.2	(12) The Price List is the <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"> the Price for each lump sum item in the Price List which the <i>Contractor</i> has completed and 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.
		(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.

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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*

Part 1

The rates and Prices entered for each item includes for all work and other things necessary to complete the item.

Condition Monitoring Service price list: SECTION A

1. The staff rates are:

Item nr	Designation (or category) or name of staff member	Unit	Expected Quantity	Rate	Price
1	Consultant/Site Manager				
2	First Senior Analyst				
3	Second Senior Analyst				
4	First Technician				
5	Second Technician				
6	Lab Technician				
7	Tribologist				

2. The expenses are:

Item nr	Expense item	Unit	Expected Quantity	Rate	Price
1	Yearly medical screening				
2	Safety File (Once off)				
3	Yearly PPE Clothing				
4	Standby Travelling Rates/KM paid (Limited distance) for call outs				
5	Travelling Rates/KM Paid to supplier premises for acceptance testing and Q.C				
6	Site manager Standby call-out/over time rates during normal working days and Saturday				
7	Snr Analyst Standby call-out/over time rates during normal working days and Saturday				
8	Technician Standby call-out/over time rates during normal working days and Saturday				

PROVISION OF CONDITION MONITORING SERVICES USING HAND HELD TECHNOLOGY FOR A PERIOD OF 5 YEARS AT MATLA POWER STATION

9	Lab Technician Standby call-out/over time rates during normal working days and Saturday				
10	Tribologist Standby call-out/over time rates during normal working days and Saturday				
11	Site Manager Standby call-out/over time rates for Sunday or Holiday				
12	Snr Analyst Standby call-out/over time rates for Sunday or Holiday				
13	Technician Standby call-out/over time rates for Sunday or Holiday				
14	Lab Technician Standby call-out/over time rates for Sunday or Holiday				
15	Tribologist Standby call-out/over time rates for Sunday or Holiday				

3. The task schedule

Item nr	Items of work priced on a lump sum basis	Unit	Expected Quantity	Rate	Price
1	Ultrasound Testing	Per unit			
2	Operational Deflection Shape Analysis	Per Machine			
3	Video Amplification	Per Machine			
4	Alignment	Per Machine			

Document reference	Title	No of pages
	This cover page	1
C3.1	<i>Employer's Service Information</i>	
C3.2	<i>Contractor's Service Information</i>	
	Total number of pages	

C3.1: EMPLOYER'S SERVICE INFORMATION

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5.8	Site services and facilities.....	Error! Bookmark not defined.
5.8.1	Provided by the <i>Employer</i>	Error! Bookmark not defined.
5.8.2	Provided by the <i>Contractor</i>	Error! Bookmark not defined.
5.9	Control of noise, dust, water and waste	Error! Bookmark not defined.
5.10	Hook ups to existing works	Error! Bookmark not defined.
5.11	Tests and inspections	Error! Bookmark not defined.
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1 Description of the service

1.1 Executive overview

Condition monitoring at Eskom uses criticality status to differentiate equipment. Boilers, turbines, generators, generator transformers, and draught group fans, are classed as criticality Level 1 (L1) equipment and are monitored differently. Non-critical equipment includes all other equipment, typically rotating machines, electrical panels, electrical switchgear, piping, etc., and is classed as Level 2 (L2) or Level 3 (L3) criticality. All of these equipment exhibit similar characteristics in terms suitability for predictive maintenance technologies.

The services requested is for provision of condition monitoring services for balance of plant using hand held equipment at Matla Power Station as stipulated and prescribed in this document for a period of 60 months using Emerson 2140 software and equipment's provided by the employer. The sole purpose of condition monitoring is to keep machines in useful operating state and prevent catastrophic failures by taking remedial actions to correct deficiencies.

Condition monitoring remain a useful tool for knowing equipment operational condition and life cycle management and often takes place at a specified interval as prescribed by maintenance strategy. The maintenance strategy specifies what failure mode are to be monitored, monitoring frequency and ideal technique for monitoring. The following are the significant achievements:

- Decrease uncertainty concerning machinery condition
- Ability to anticipate condition
- Not to have forced action based on asset failure
- Give correct recommendations

Objective of Effective Condition Monitoring

Elementary goals for Condition Monitoring at Eskom Coal Fired Station is to access and view equipment operational condition, and allow planned intervention to correct unusual conditions.

In summary is to;

- Optimize Operational Costs
- Improve Reliability, Availability and Operability
- Increase equipment life cycle

Condition Monitoring techniques currently being utilized at Matla Power Station

1. Vibration Analysis
2. Tribology
3. Infrared Thermography
4. Shaft Laser Alignment
5. Ultrasonic Testing
6. Visual Inspection

7. Plant monitoring (this includes trends)

1.2 *Employer's requirements for the service*

1. Collection of vibration data, analysis and reporting using employer's equipment.
2. Raise maintenance request (SAP Notification) for deviations on plant being monitored by hand held techniques (Vibration and infrared) to be attended by Maintenance.
3. Weekly and Monthly report indicating plant status robot, defects, unavailable plants and reasons.
4. Testing components that requires an outage or unit to be off, providing feedback on analysis and challenges encountered.
5. Influencing outage scopes and providing pre and post outage reports
6. Conduct Shaft Laser Alignment on Boiler, Turbine and Auxiliary plant when required to do so
7. Attend to any additional request (AD-Hoc Request) as per the customer's requirements.
8. Be able to work with CSI Emerson 2140 vibration equipment and software, including Equipment for special tests such as ODS or video amplification
9. Assist Maintenance & Engineering Departments with their QC/Acceptance test of equipment at the suppliers workshops or at the station (motors, pumps, gearboxes etc.) after repairs or when required;
10. Have a stand-by roster with a minimum of 3 People on roster for call-out and over time purpose
11. Training and transfer of skills to Eskom employees involved in condition monitoring on all aspects of Condition Monitoring.
12. PMs Compliance
13. Assist in Investigations on failed machines
14. Vibration Software Alarm-set streamlining and keeping accurate and up to date.
15. Attend Safety and plant related meetings as required.
16. Provide services of an advisory or specialist nature.
17. Communicate immediately all challenges and or any other factors causing or leading to a delay in testing a plant or getting access or plant not being tested during normal working hours or beyond business hours.
18. All reports to indicate component description with component barcode and name
19. Responsible for the development and implementation of the oil analysis program and for ensuring the correct lubricants are specified for all equipment on site. Responsible for ensuring the power station lubricant survey is up to date for monitoring and managing lubricant use.
20. Thermal scan, thickness test, oil analysis and collecting of oil samples.
21. Responsible for keeping the business informed on all condition monitoring status and updates on platforms provided (i.e. meetings, WhatsApp groups, emails etc.) on report, verbal and or presentation format.
22. Required to join business online groups (i.e. WhatsApp and any other business approved social media apps for business purposes only).
23. All components should be tested as per PMs/planning schedules
24. Reports are required to be available within 2 days of testing. Oil report is required 2 to 3 days of taking the sample.

1.2.1 Other Requirements

1. Have Safety Files ready and comply with Safety and Health requirements at Matla Power Station at all times.
2. Incorporate additional Plant on scope as required by *Employer* and system Engineers and adjust databases as required.
3. As per man grade cost, Keep an electronic and manual book of working times, call outs and overtime. Record reasons for over time, callouts and time not on site.

1.2.2 Special Tests

1. Do resonant tests on equipment and report on findings and submit notification for corrective action, when required.
2. Conduct case studies histories.
3. Perform other test activities when required such as Operational Deflection Shape Analysis, Video Amplification, ultrasound and alignment.

1.2.3 Reporting

Reporting	Monthly Condition monitoring Overview report
Reporting	Weekly Condition monitoring Overview report
Reporting	Weekly Standby Reliability Status Report
Reporting	Weekly Feed pump Condition Monitoring Status Summary Report
Reporting	Daily reporting on routine & requests for vibration and IR sampling
Reporting	Reports to be generated for every alignment job conducted not exceeding 1 day
Request	Collect vibration data & Analyse data on Request and provide feedback on findings
Request	Collect vibration data before acceptance of equipment at Eskom Workshop and Supplier's workshops.
PM's	Weekly test plan to be provided a week before for proper planning and plant availability
PM's	Include additional Vibration and Infra-Red PM's Added to scope by Planning department.
PM's	Request all plants to be tested on meeting platforms for readiness
PM's	Completion of PM History feedback and Time duration indication.
Standby duties	At least four people to be on standby list to do Standby duties
Equipment	Equipment To be kept in a clean and presentable condition after Use.
Special tests	Setup, Monitoring, and Analysis Reporting for special condition Monitoring test With equipment supplied By Matla such as portable online system, Modal Analysis, Infra-red, resonance etc.
Time Recording	Maintain a clear Record of times worked for the Employer in a diary format

Database maintenance & management	Vibration reporting & History data base (RBM view) to be used by Contractor to reflect History of all Routine and ad-hoc work done and kept up to date. Vibration data base are to be kept current and alarms, Fault Frequency sets, and Analysis Parameter set information kept current with plant together with the plant tree structure.
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1.2.4 Scope of Work

Vibration Analysis (data collection, analysis and reporting)

- The routine frequency for data collection, analysis and reporting is specified on Annexure A

Infrared Thermography (Image collection, analysis and reporting)

- The frequency for image collection, analysis and reporting is specified on Annexure B

Tribology (Oil collection, analysis and reporting)

- The frequency for oil collection, analysis and reporting is specified on Annexure C

Thickness measurements (Analysis and reporting)

- The frequency for thickness measurements, analysis and reporting is specified on Annexure D

Shaft Laser Alignment (Alignment and reporting)

- This part of the service will be on a full time basis of the contract and or “if and when required basis”
- The frequency for shaft laser alignment is on “if and when requested” by maintenance personnel.
- The shaft laser alignment covers Boiler Plant, Turbine Plant and Auxiliary Plant

1.3 Interpretation and terminology

The following abbreviations are used in this Service Information:

1.3.1 Abbreviations

Abbreviation	Meaning given to the abbreviation
PSC	Professional Service Contract
PM	Planned Maintenance “ a schedule to determine data collection interval routines”
NEC	New Engineering Contract
P&T	Performance and Testing
ODS	Operational Defection Shape
QC	Quality Control
IR	Infrared
DO	Dissolved Oxygen
CM	Condition Monitoring
MCSA	Motor Current Signature Analysis

1.3.2 Definitions

a) Condition Monitoring

Condition monitoring (CM) is the process of monitoring a parameter(s) of condition in machinery (vibration, temperature etc.), in order to identify a significant change which is indicative of a developing fault. It is a major component of predictive maintenance. The use of conditional monitoring allows maintenance to be scheduled, or other actions to be taken to prevent failure and avoid its consequences. Condition monitoring has a unique benefit in that conditions that would shorten normal lifespan can be addressed before they develop into a major failure. In the context of this report, Condition Monitoring is taken to mean the use of advanced technologies in order to determine equipment condition, and potentially predict failure. It includes, but is not limited to, technologies such as Vibration Measurement and Analysis; Infrared Thermography; Oil Sampling and Analysis; Ultrasonic and Motor Current Analysis.

b) Vibration Monitoring

Vibration can be defined as the cyclic or oscillating motion of a machine or machine component from its position of rest.

c) Thermography

Infrared thermography (IRT) or (IR), thermal imaging, and thermal video are examples of infrared imaging science. Since infrared radiation is emitted by all objects above absolute zero according to the black body radiation law, thermography makes it possible to see one's environment with or without visible illumination.

The amount of radiation emitted by an object increases with temperature; therefore, thermography allows one to see variations in temperature. When viewed through a thermal imaging camera, warm objects stand out well against cooler backgrounds.

d) Tribology

Tribology is the science and engineering of interacting surfaces in relative motion. It includes the study and application of the principles of friction, lubrication and wear. Tribology is a branch of mechanical engineering and materials science. The certification levels (or their equivalent) for Tribology are shown in Appendix C and are defined by the International Council for Machinery Lubrication (ICML). The Noria Corporation provides a range of educational publications related to the respective Oils Analysis and Machinery Lubrication levels.

e) Motor Current Signature Analysis

Motor Current Signature Analysis (MCSA) is considered the most popular fault detection method currently because it can easily detect the common machine faults such as turn to turn short circuit, cracked/broken rotor bars, bearing deterioration etc. Motor current signature analysis (MCSA) can effectively detect abnormal operating conditions in induction motor applications.

f) Temperature Monitoring

This function refers to the monitoring of machine temperatures by the use of thermo-couples placed at strategic positions on the prospective machine or plant.

g) Balancing

The balancing of rotating bodies is important to avoid excessive vibrations. In heavy industrial machines such as gas turbines and electric generators, "out of balance" vibration can cause catastrophic failure, as well as noise and discomfort.

h) Alignment

Shaft alignment is the process to align two or more shafts with each other to within a tolerated margin. It is an absolute requirement for machinery before the machinery is put into service.

i) Ultrasonic

In the context of this document, Ultrasonic refers to the measurement and analysis of sounds generated by rotating machines at frequencies beyond the range audible to people i.e. above 18 MHz.

2 Management strategy and start up.

2.1 The *Contractor's* plan for the service

In the TSC3 the *Contractor's* plan is his "design" for performing the *service* throughout the *service period*. Section 2 of the *conditions of contract* describes what the *Contractor* is to show in his plan both in the core clauses and some additional requirements in each of the main Options.

The extent of the *Contractor's* plan will depend on whether the *Contractor* is required to develop a plan in accordance with the *Employer's* broad outline of the *service* or whether the *Employer* has provided a plan for the *Contractor* to follow. Read the TSC3 Guidance Notes pages 21 and 22 for more information on the *Contractor's* plan.

Use this section to describe any particulars which must be taken into account by the *Contractor* in developing his plan as required by clause 21.2. For example information about the order and timing or method of carrying out particular items of work.

List technical reporting and scheduling requirements which are to be incorporated into the *Contractor's* plan.

2.2 Management meetings

Monthly meetings shall be attended monthly as per NEC where contract related issues shall be discussed in details with due dates agreed.

Minutes of the meeting shall be compiled by the contractor and submitted to the Contract Manager within five days of the meeting for verification and adoption. Actions shall be adhere to as per due dates specified.

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

Title and purpose	Approximate time & interval	Location	Attendance by:
Departmental Plant Status Meeting	Daily 07:30 AM – 08:00 AM	Engineering Boardroom/MS Teams	<i>Employer's Agent , Consultant</i>
Station Plant Focus Meeting	Daily 09:00 – 10:00 AM	Production Boardroom/MS Teams	<i>Consultant</i>
Risk Assessment	When and if required	Control Room or any other location communicated	<i>Consultant</i>
Engineering Safety meeting	Monthly 09:00 – 10:00 AM	Engineering Boardroom/MS Teams	<i>Employer's Agent , Consultant</i>
Safety Friday Meeting	Weekly 09:00 – 10:00 AM	Lekgotla boardroom/MS Teams	<i>Employer's Agent , Consultant</i>
CAP Close out	09:00 – 10:00 AM	5 th Floor boardroom/MS Teams	<i>Employer's Agent , Consultant</i>
Contractors meeting (Planning)	Weekly 14:00 – 15:00 AM	Engineering Boardroom/MS Teams	<i>Employer's Agent , Consultant</i>
Main SHEQ Meeting	Monthly 09:00 – 10:00 AM	Bambanani Boardroom/MS Teams	<i>Employer's Agent</i>

Meetings of a specialist nature may be convened as specified elsewhere in this Scope or if not so specified by persons and at times and locations to suit the Parties, the nature and the progress of the *services*. Records of these meetings shall be submitted to the *Employer's Agent* 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 or shall be recorded using the record function on MS Teams or any other technology available and approved by Eskom. 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. The contractor should ensure that meetings are attended as per specified venue or online system used.

2.3 Contractor's management, supervision and key people

The *Contractor* indicates on an organogram his structure and key personal that will be employed by the *Contractor*. He indicates the contact names, level, contact numbers of each and the responsibilities of each person employed on this contract.

The Contract Key person is responsible for the execution of all work (including Special Tests) as stated in the Scope and all requests as requested by the *Employer's Agent* or any of his delegates at the time. The Contract Key person is also responsible for coordinating working time's as prescribed by Matla Power Station Man Power department and recording of such time is as stated in the *Scope*

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

2.5.1 Identification and communication

- All documentation will be done bearing the Eskom logo and comply with documentation format as requested by the *Employer's Agent* or any of his delegates for the duration of the Contract.
- Communication method to all the clients of the *Employer* will be dictated by the Employer or the *Employer's Agent* or any of his delegates as he deems fit.
- The clients that need to be communicated to will also be determined by the *Employer or the Service Manager* or any of his delegates as he deems fit.

- The *Contractor* implements a document management system for control of all documents he produces under this contract.
- Upon completion of the Contract, the Contractor must submit all information contained in his document management system to Eskom Matla Power Station.
- Information contained in the Contractor's document management system may not be divulged to any third party, without authorisation from the Service Manager to do so at Eskom Matla Power Station.
- Formal Communication to the *Employer* or the *Service Manager* must be done by means of formal letter heads accepted and approved by his company stating all required information. Facsimiles and other means of communication will not be accepted other than an Original document.

2.5.2 Retention of documents

- Any software that forms part of the Services is supplied by the *Employer*. No condition monitoring or other Eskom owned software may be removed from site by the Contractor without authorisation of the Service Manager on site.
- All data in terms of this contract are supplied on electronic media including hard copies of all such documentation.
- All data and reports produced under this contract is considered the intellectual property of Eskom Matla Power Station and may not be divulged to any third party without prior authorisation from the Service Manager to do so.
- Upon completion of the Contract, the Contractor must submit all information contained in his document management system to Eskom Matla Power Station.
- Information contained in the Contractor's document management system may not be divulged to any third party, without authorisation from the Service Manager to do so at Eskom Matla Power Station

2.6 Invoicing and payment

The following details shall be shown on or attached to each Invoice to show how the amount due has been assessed:

- Including expenses
- Including rates as per category of staff hours worked.

The *Contractor* shall address the tax invoice to Invoiceseskomlocal@eskom.co.za and include on it the following information:

- Name and address of the *Contractor* and the *Service Manager*;
- The contract number and title;
- *Contractor's* VAT registration number;
- The *Employer's* VAT registration number;
- Total amount invoiced excluding VAT, the VAT and the invoiced amount including VAT;

- (add other as required)

2.7 Contract change management

This section is intended to deal with any additional requirements to the compensation event clauses in section 6 of the core clauses; such as the use of standard forms. Not the same thing as documentation control.

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

If Option C or E applies first read clause 52.2 and then state whether the *Contractor* is required to keep any other records. Include any other constraint which may be required in regard to format and filing of the records, and whether access for the *Service Manager* shall be provided in hard copy or electronically.

Could delete if Option A applies unless the *Employer* requires some form of control over the *Contractor's* record keeping for the purpose of compensation event management.

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

N/A

2.11 Design and supply of Equipment

The Employer will make available the list of equipment below for the Contractor's use during performance of the services.

- 6 x Desktop computers
- 3 x 2140 CSI Dual Channel Data Collector (With Cables & Accelerometer)

NB: The employer will not provide the following equipment;

- ROTAlign Shaft Laser Unit
- Ultrasound
- Infrared Camera

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

2.12.1 Equipment

All equipment's that are part of Eskom's asset shall be return to Eskom before the end of the contract.

2.12.2 Information and other things

Data base and all history should be provided as and when required and at the end of the service period

2.13 Management of work done by Task Order

- No task orders will be loaded.
- All special tests performed during the month must be reflected at the end of the month under special Tests on the monthly invoice.
- Special Test rates as agreed upon between the *Contract* and the *Employer* and time spent performing such a test, reporting and presentation.

3 Health and safety, the environment and quality assurance

3.1 Health and safety risk management

The Consultant shall at all times comply with the health and safety requirements prescribed by law as they may apply to the services.

- The Contractor and his sub-Consultants ensure at all times compliance with safety regulations imposed by any Act of Parliament, ordinance or any regulation or by-law of any local or statutory authority.
- The Contractor acts in accordance with the health and safety requirements stated in the Works Information.
- In carrying out its obligations to the Employer in terms of this contract; in providing the Works; in using Plant, Materials and Equipment; and while at the Site for any reason. The Contractor complies and procures and ensures the compliance by its employees, agents, Sub Contracts and mandatories with the provisions of the Occupational Health and Safety Act 85 of 1993 (as amended) and all regulations in force from time to time in terms of that Act ("the OHSA")
- The contractor shall comply to Eskom "Health, Safety and Environmental specifications for Contractor" document attached to the Works Information (as amended from time to time) and such other Eskom Safety Regulations as are applicable to the Works and are provided in writing to the Consultant (collectively "the Eskom Regulations").
- The Eskom Regulations may be amended from time to time by the Employer and all amendments will be provided in writing to the Contractor.
- The Contractor complies with the provisions of the latest written version of the Eskom Regulations with which it has been provided.

**PROVISION OF CONDITION MONITORING SERVICES USING HAND HELD TECHNOLOGY FOR A PERIOD OF 5 YEARS AT
MATLA POWER STATION**

- The health and safety plan prepared by the Consultant in accordance with the SHEQ Requirements.
- The OHSA and the Eskom Regulations are collectively referred to as the "SHEQ Requirements".
- The Consultant, at all times, considers itself to be the "Employer" for the purposes of the OHSA and shall not consider itself under the supervision or management of the Employer with regard to compliance with the SHEQ Requirements.
- The Contractor shall furthermore not consider itself to be a subordinate or under the supervision of the Employer in respect of these matters.
- The Consultant is at all times responsible for the supervision of its employees, agents, Sub Consultants and mandatories and takes full responsibility and accountability for ensuring they are competent, aware of the SHEQ Requirements and execute the Works in accordance with the SHEQ Requirements.
- The Contractor acknowledges that it is fully aware of the requirements of all the above and undertakes to employ only people who have been duly authorized in terms thereof and who have received sufficient training to ensure that they can comply therewith.
- The Contractor ensures that all statutory appointments and appointments required by any Eskom Regulations are made and that all appointees fully understand their responsibilities and is trained and competent to execute their duties.
- The Contractor supervises the execution of their duties by all such appointees.
- The Contractor shall appoint a person who will liaise with the Eskom Safety Officer responsible for the premises relevant to this contract. The person appointed shall, on request supply the Eskom Safety Officer with copies of minutes of all Health And Safety Committee meetings, whenever he is required to do so and supply the Eskom Safety Officer with copies of all appointments in respect of employees employed on this contract, in terms of the Act and Regulations and shall advise the Eskom Safety Officer of any changes thereto.
- The Employer, or any person appointed by the Employer, may, at any stage during the duration of this contract conduct health and safety audits regarding all aspects of compliance with the SHEQ Requirements, at any off-site place of work, or the site establishment of the Contractor.
- Refuse any employee, Sub Contractor or agent of the Contractor access to the premises if such person has been found to commit an unsafe act or any unsafe working practice or is found not to be qualified or authorised in terms of the SHEQ Requirements and issue the Consultant with a stop order should the Employer become aware of any unsafe working procedure or condition or any non-compliance with any provision of the SHEQ Requirements.
- The Contractor immediately reports any disabling injury as well as any threat to health or safety of which it becomes aware at the Works or on the Site to the Employer's Representative.
- The Contractor undertakes not to do, or not to allow anything to be done which will contravene any of the provisions of the Act, Regulations or Safety and Operating Procedures.
- The Contractor appoints a person, qualified in accordance with the SHEQ Requirements, as the liaison with the Eskom Safety Officer for all matters related to health and safety, this person shall be contactable 24 hours a day.

- The Contractor confirms that it has been provided with sufficient written information regarding the health and safety arrangements and procedures applicable to the Works to ensure compliance by it and all employees, agents, Sub Contractors or mandatories with the SHEQ Requirements while providing the Works in terms of this contract. As such, the Contractor confirms that this contract and the relevant Eskom Regulations referred to in this contract constitute written arrangements and procedures between the Contractor and the Employer regarding health and safety for the purposes of section 37(2) of the OHSA.
- The Contractor agrees that the Employer is relieved of any and all of its responsibilities and liabilities in terms of Section 37(1) of OHSA in respect of any acts or omissions of the Consultant, and the Consultant's employees, agents or Sub-Consultants, to the extent permitted by the OHSA.
- The Contractor hereby indemnifies the Employer and holds the Employer harmless in respect of any and all loss, costs, claims, demands, liabilities, damage, penalties or expense that may be made against the Employer and/or suffered or incurred by the Employer (as the case may be) as a result of, any failure of the Contractor.
- Contractor's employees, agents, Sub Contractors and/or mandatories to comply with their obligations in terms of this clause 18, and/or the failure of the Employer to procure the compliance by the Contractor, its employees, agents, Sub Contractors and/or mandatories with their responsibilities and/or obligations in terms of or arising from the OHSA.
- In carrying out his obligation as the mandatory to the Employer for this contract in terms of the National Environmental Management Act No.107 of 1998, the Consultant ensures that he complies with the Act when Providing the Services or using plant, materials or equipment.
- Permit to work system.
No work is to be carried out without a "permit to work". The Consultant's Responsible Person must satisfy himself that all sources of possible danger are isolated. Details of the Permit to Work system can be found in the Plant Safety Regulations for Arnot Power Station.
- Safety Induction Course.
All the employees of the Consultant must attend a safety induction course before they will be allowed to work on the Site. It is the responsibility of the Consultant to ensure that all employees have attended the safety induction.
- A list of employees requiring safety induction must be submitted at least 2 days in advance of arrival on site with the date and time of arrival so that the safety induction can be arranged.
- Local Safety Procedures.
The Consultant adheres to all local procedures. A list of some local procedures is available on request from the Employer's Agent.
- Incidents / Accidents
Incidents and accidents must be reported and investigated as detailed in. All incidents must also be reported to the Employer within 24 hours.
- First aid must be made available either by the Consultant or use can be made of the Matla medical centre at a fee. The availability of the Consultant's own first aid does not relieve the Consultant of his obligation to report and investigate the incident in accordance with Arnot Procedure.

- **Protective Equipment and Clothing**

The Consultant must ensure that all protective equipment necessary to carry out the work is supplied, maintained and used by his employees as required in terms of the OHSACT and local procedures.

- **Inspection of Equipment**

Equipment will be inspected by an authorised Eskom employee on arrival at the site.

3.2 Environmental constraints and management

Matla Power Station Environmental Policy must be adhered to.

3.2.1 Disposal of Hazardous / toxic Waste

Waste must be removed promptly to the designated deposit areas. No stockpiling will be permitted.

- Domestic waste to the white Skips.
- Production waste in the marked bins i.e. coal and ash only.
- Paper & cans to their respective recycling bins.
- Contact Civil Engineering for the disposal of building rubble.
- Scrap metal (M a Metal bins), Wood & Rubber, Redundant Valves, Pipes, Equipment etc. to be placed in the marked bins in the Scrap Yard.
- Solvents and cloths used to the Cleaning Bay.
- Hazardous / toxic waste includes all waste which contains elements or compounds listed as hazardous substances in terms of the Hazardous Substances Act No. 15 of 1973. Any Consultant who produces hazardous waste on site will be responsible for the safe removal of such waste to a registered Class I site by a waste removal and disposal body. The Consultant will be required to produce a certificate of safe disposal in accordance with. The Consultant must ensure that persons handling hazardous waste have undergone suitable training and are acquainted with cleaning methods in case of a spillage. The Consultant is also responsible for the safe removal of their hazardous waste to Matla Hazardous Waste Store. Other requirements for hazardous waste are detailed in.

In order to ensure effective hazardous waste management, a copy of the Consultants hazardous waste inventory must be supplied to the Employer's Agent at least 2 days prior to the occupation date.

3.2.2 Abbreviated list of Hazardous Materials

Acids and alkalis	Hydrocarbons	Pesticides & insecticides
Antimony and its compounds	Inorganic cyanides	Pharmaceuticals
Arsenic compounds	Inorganic compounds containing halogens	Phosphorus and its compounds
Asbestos	Inorganic compounds containing sulphur	Selenium and its compounds
Barium compounds	Laboratory chemicals	Silver compounds
Beryllium compounds	Lead compounds	Tarry & petroleum products
Biocides & phytopharmaceuticals	Medical wastes	Tellurium and its compounds
Boron compounds	Mercury compounds	Thallium and its compounds
Cadmium and its compounds	Nickel and its compounds	Vanadium compounds
Chromium compounds	Organic halogen compounds	Zinc compounds
Copper compounds	Paints and paint sludges	Waste with flash point < 60 °C
Heterocyclic organic compounds	Peroxides, chlorates	

3.3 Quality assurance requirements

The Contractor shall implement and maintain a Quality Management System that, as a minimum meets the requirements of ISO 9001 series and the Business Excellence Quality Management Standard for Condition Monitoring for Matla Power Station. The refurbishment and repair of power station electrical motors work instruction 240-89217674.

3.3.1 Quality management & System requirements

- Clause 40.1 requires that the *Consultant* operate a quality management system as stated in the Scope and ISO 14001 standards.
- Matla Power Station strives to conform to ISO 14001 standards, it is thus expected from the consultant to adhere to these ISO requirements at all levels.

3.3.2 Information in the quality plan

- Clause 40.2 requires that the *Consultant* provide a quality policy statement and quality plan which complies with requirements stated in the Scope and ISO standards.

3.3.3 Contractor's Quality Assurance and Quality Control

The *Contractor* compiles, in conjunction with the *Employer* and the *Supervisor*, a product verification plan. This document shows at which stages during the contract involvement is required, and what types of inspection, testing, hold, witnessing etc. are carried out to ensure that the requirements of the specifications are met.

4 Procurement

There is a cross reference from the core clause 11.2(6) definition of Disallowed Cost to the Service Information regarding procurement procedures. This part of the Service Information MUST include any such procedures to be able to administer Disallowed Cost.

4.1 People

4.1.1 Minimum requirements of people employed

The *Contractor* applies for access permits (Contractor's permit) at the Security gate on the start date of the contract. The *Contractor* personnel shall be required to be in possession of an access permit at all times.

The *Contractor's* visitors and all personnel shall conform at all times to the security arrangements in force at the site. Application forms for visitors must be filled in by the *Contractor's* Site Manager and approved by the *Service Manager*, one day before the visit and submitted to the *Employer's* Protection Services office. Visitors will not be allowed on site if the necessary forms are not in the possession of the security staff.

The Chief of Protection Services may, with valid cause, remove any, of the *Contractor'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 Protection Services, constitutes a security risk.

No unauthorised vehicles will be allowed on site. Only *Contractor's* Vehicles with displayed Contract Vehicle Permits disks will be allowed on site. Contract Vehicle Applications should be directed to the *Service Manager*.

The *Contractor* will be restricted to the *working areas* associated with his place of work. The *Contractor* is forbidden to enter any other areas, and must ensure that his employees abide by these regulations.

4.1.2 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.

4.1.3 Accelerated Shared Growth Initiative – South Africa (ASGI-SA)

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

Specify any constraints on how the *Contractor* is to prepare subcontract documentation, whether use of the NEC system is compulsory or not (compulsory is recommended) and how subcontract tenders are to be issued, received, assessed (using a joint report?) and awarded.

4.2.3 Limitations on subcontracting

The *Employer* may require that the *Contractor* must subcontract certain specialised work, or that the *Contractor* shall not subcontract more than a specified proportion of the whole of the contract.

4.2.4 Attendance on subcontractors

N/A

4.3 Plant and Materials

4.3.1 Specifications

Plant and Materials are defined as items intended to be included in the Affected Property. This will refer to replacement of worn or defective parts, routine replacement as part of regular preventative maintenance and supply of spare parts. Quality is usually designed in or specified in the technical specifications. However to cover circumstances where quality may not be prescribed, this sub-paragraph could also be used to state an overarching default requirement – fitness for purpose etc.

Either specify here or provide a list of the applicable specifications and attach them as Annexure or state where they can be obtained from.

4.3.2 Correction of defects

N/A

4.3.3 *Contractor's* procurement of Plant and Materials

Specify any constraints on how the *Contractor* is to order, codify, expedite, freight, import, transport to the Affected Property and any other requirements for delivery and storage before installation. The *Employer* may require warranties from suppliers to be in favour of the *Employer* and not just to the *Contractor*. The *Employer* may also need schedules of vendor data for his own use after the end of the *service period*.

4.3.4 Tests and inspections before delivery

N/A

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

N/A

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

- All security access regulation's laid down by ESKOM and in particular Matla Power Station must be complied with.

- Goods and Equipment removed or brought on to the premises must be declared at Security.
- Permanent access permits supplied by security for equipment regularly used and is either taken out or brought in for working purposes must be shown at the gate.
- Goods or equipment not used for routine work must have a (*Employer*) signed gate permit for removal, valid only for that instance.
- Breathalyser tests conducted at security must be complied with to ensure safety. Persons found not passing such a test will be denied access to the premises.
- The *Contractor* must familiarise his staff and himself with Eskom regulation pertaining to substance abuse and insure adherence to the regulation.

5.2 People restrictions, hours of work, conduct and records

- Working hours are the times that are implemented by Matla Power Station's Man power department.
- The rules and regulations pertaining to over time and Emergency call-out regulations are also available at the man power department, or can be viewed in the ESKOM Conditions of service.
- Work Starting times mean being at your place of work and ready to commence working at the stipulated starting time.
- End of work day means leaving your place of work at the stipulated time.
- These times can only be changed with permission from the *Employer* or his delegate, with arrangement being done within a reasonable time frame prior to leaving the place of work.
- The *Contractor* remains responsible for staff constraints due to whatever reason, and will make provision for lack of staff to ensure that work scope is completed and up to date.
- Concise time keeping records manually and electronically indicating manpower and level of responsibility must be kept up to date, corresponding to rate of cost to manpower being invoiced. The *Contractor Key person* is responsible for record keeping and signing of Payment certificates at each month end.

5.3 Health and safety facilities on the Affected Property

Section 3 deals with contractual H & S requirements in addition to those of the OHSA Act. This section allows the *Employer* to state what measures are to be taken on the Affected Property by describing where First Aid facilities provided by the *Employer* are located and any other emergency arrangements. Do not use if already addressed in 2.3.

5.4 Environmental controls, fauna & flora

The contractor to comply with the following requirements and legislation:

- Occupational Health and Safety Act 85 of 1993 as amended and its regulations
- Compensation for Occupational Injuries and Diseases Act 130 of 1993 as amended
- National Environmental Management Act 107 of 1998 as amended
- National Environmental Waste Act 59 of 2008 as amended
- National Water Act 36 of 1998 as amended

- Eskom procedures and safety requirements set out in safety, health and environmental specifications 004 4830
- Eskom procedure 32-95 in regards with the management of safety, health and environmental incidents
- Any other act or procedure deemed necessary or applicable

If the work includes some toxic and hazardous substances during normal and routine activities. In this case the *Contractor* uses such hazardous substances in accordance with the applicable regulations and procedures are disposed off by the contractor in accordance with the applicable law

5.5 Cooperating with and obtaining acceptance of Others

- 1) The *Contractor* may be required to share the Affected Plant equipment and/or space with *Others*.
- 2) Cooperating with statutory authorities or inspection agencies

5.6 Records of Contractor's Equipment

Service Manager must keep a list of all Contractors equipment and records calibration certificates.

5.7 Equipment provided by the Employer

Proper communication must be made then a crane shall be made available when needed.
The Contractor will use this Matla pre-assessment form if does not have their own approved form.

The Employer will make available the list of equipment below for the Contractor's use during performance of the services.

- 6 x Desktop computers
- 3 x 2140 CSI Dual Channel Data Collector (With Cables & Accelerometer)

NB: The employer will not provide the following equipment;

- ROTAlign Shaft Laser Unit
- Ultrasound
- Infrared Camera

6. List of drawings

6.1 Drawings issued by the *Employer*

This is the list of drawings issued by the *Employer* at or before the Contract Date and which apply to this contract.

Drawing number	Revision	Title

Annexure A: Vibrations

Section	Plant	No. of machines	Frequency
Boiler	DEGAS FANS	3	Monthly
	SO3 PUMPS A&B	2	Bi Weekly
	LH & RH SEC. AIRHEATER GEARBOX	12	Monthly
	SO3 BLOWER	6	Monthly
	LH & RH ID FAN	12	Monthly
	LH & RH FD FAN	12	Monthly
	LH & RH PA FAN	12	Monthly
	MILL GEARBOXES A - F	36	Monthly
	Boiler Aux Cooling Pumps A,B&C	18	Monthly

Section	Plant	No. of machines	Frequency
Turbine	CW Pumps(South and North)	12	Monthly
	Force Cooling Comp Lube Oil Pump	1	When Running
	FORCED COOLING COMPRESSOR	1	When Running
	BFPT - MAIN OIL PUMP	6	Monthly
	A & B ELECTRIC FEEDPUMP	12	When Running
	CW BOOSTER PUMPS A & B	12	Monthly
	MAIN COND EXTR PUMPS A & B (CEP's)	12	Monthly
	LP HTR DRN PUMP A & B	12	Monthly
	WATER EJECTOR PUMPS A, B, C & D	24	Monthly
	STATOR COOLANT PUMPS A & B	12	Monthly
	TURB AC CONTROL OIL PUMPS A & B	12	Monthly
	SEAL OIL PUMP & RECIRC PUMP	12	Monthly
	MAIN OIL TANK PURIFIER	6	Monthly
	BFPT - PURIFIER	6	Monthly
	BFPT - EXTRACTION PUMPS A & B	12	Monthly
	BFPT - WTR EJECTOR PUMPS A & B	12	Monthly
	EFP LUBE OIL PUMP A & B	12	Monthly
	JACKING OIL PUMP A & B	12	When Running
	AC LUBE OIL PUMP	6	When Running
	AC LUBE OIL BOOSTER PUMP	6	When Running
	DC LUBE OIL PUMP	6	When Running
	TURBINE BARRING GEAR MTR	6	When Running
	BFPT Gland Steam Fan	6	Monthly
	BFPT - DC LUBE OIL PUMP	6	When Running
	BFPT - DC SEAL OIL PUMP	6	When Running
	FRF Pumps A & B	12	Monthly
	Turbine & BFPT Pesdestal Vibration	12	Monthly
	Seal Oil Gas Vacuum Fan	6	On Request
	Turbine DC Seal Oil Pump	6	When Running
	Generator Air Vacuum Pump	6	Monthly
	Main turbine & BFPT taprogge pumps	18	Monthly

**PROVISION OF CONDITION MONITORING SERVICES USING HAND HELD TECHNOLOGY FOR A PERIOD OF 5 YEARS AT
MATLA POWER STATION**

Section	Plant	No. of machines	Frequency
Auxiliary	Centac Compressors (Utilities& Slurry plant)	8	Monthly
	12.5l/s DEMIN PUMP A & B	2	Monthly
	25l/s DEMIN PUMP A & B	2	Monthly
	50l/s DEMIN PUMP A & B	2	Monthly
	75l/s DEMIN PUMP C & D	2	Monthly
	SPRAY WATER PUMP A & B	2	Monthly
	SPRAY WATER SERVICE PUMP	1	Monthly
	POTABLE WATER PUMP A & B	2	Monthly
	AUX COOL MAKE UP PUMP A & B	2	Monthly
	STATION CENTAC COMPRESSOR A, B & C	3	Bi Weekly
	HYDRANT PUMP	1	Monthly
	HYDRANT SERVICE PUMP	1	Monthly
	DIESEL FIRE PUMP 1&2	2	Monthly
	DIESEL DEMIN PUMP 1&2	2	Monthly
	DILUTION WATER PUMPS	5	Monthly
	COAL CONVEYORS 7 A - F	6	Monthly
	COAL CONVEYORS 8 A - F	6	Monthly
	COAL CONVEYORS 9 A - F	6	Monthly
	COAL CONVEYORS 10 A - F	6	Monthly
	COAL CONVEYORS 11 A - F	6	Monthly
	HP FUEL OIL PUMPS 1 A & B	2	weekly
	HP FUEL OIL PUMPS 2 A & B	2	weekly
	HP FUEL OIL PUMPS 3 A & B	2	weekly
	HP FUEL OIL PUMPS 4 A & B	2	weekly
	HP FUEL OIL PUMPS 5 A & B	2	weekly
	HP FUEL OIL PUMPS 6 A & B	2	weekly
	LP FUEL OIL PUMPS 1 A & B	2	weekly
	LP FUEL OIL PUMPS 2 A & B	2	weekly
	LP FUEL OIL PUMPS 3 A & B	2	weekly
	LP FUEL OIL PUMPS 4 A & B	2	weekly
	LP FUEL OIL PUMPS 5 A & B	2	weekly
	LP FUEL OIL PUMPS 6 A & B	2	weekly
	U4 DRY DUST CONV BLWR 1 to 4	4	Monthly
	U5 DRY DUST CONV BLWR 1 to 4	4	Monthly
	U6 DRY DUST CONV BLWR 1 to 4	4	Monthly
	ASH PUMPS A & B	12	Monthly
	SEALWATER PUMPS A & B	6	Monthly
	ASH CRUSHER A & B	12	Monthly
	SLUICE PUMPS A & B	12	Monthly
	SUMP LOWERING PUMP	6	Monthly
	HOPPER FILLING PUMP	6	Monthly
	BLOWER HOUSE FANS	3	Monthly
	BARGE PUMPS A & B	2	Monthly
	BOOSTER PUMPS A & B	2	Monthly

**PROVISION OF CONDITION MONITORING SERVICES USING HAND HELD TECHNOLOGY FOR A PERIOD OF 5 YEARS AT
MATLA POWER STATION**

SWR PUMP 1, 2 & 3	3	Monthly
SEC DUST COLLECT FAN 1, 2 & 3	3	Monthly
PRIMARY AIR FAN 1, 2 & 3	3	Monthly
SILO FILTER FAN 1, 2 & 3	3	Monthly
SEC SLIDE AIR FAN 1, 2 & 3	3	Monthly
TRAIN SEAL WTR PUMP A, B & C	3	Monthly
TRAIN PUMP 1, 2 , 3, 4 & 5 on pumps A, B & C	15	Monthly
TRAIN SLURRY MIXTEC GEARBOX A, B & C	3	Monthly
SLURRY AERATION BLWR 1, 2 & 3	3	Monthly
INSTRUMENT AIR COMPRESSOR 1, 2 & 3	3	Monthly
NORTH SLUDGE PUMP 1, 2, 3 & 4	4	Monthly
Storm Water Pumps	2	On Opportunity
Aeration Stndby Blower	1	On Opportunity
New Ashwater Return Pump	4	Monthly
Stores Passenger and Goods Lift Drive System	1	Monthly
Kitchen (Goods Only) Lift Drive System	1	Monthly
Slurry Plant Passenger Lift Drive System	1	Monthly
Smoke Stacks Passenger Lift Drive System	2	Monthly
Boiler Auxillary Passenger Lift Drive System	6	Monthly
Boiler Goods Passenger Lift Drive System	6	Monthly
Admin Building Lift Drive System	2	Monthly
Stores Passenger and Goods Lift Ropes	1	Monthly
Kitchen (Goods Only) Lift Ropes	1	Monthly
Slurry Plant Passenger Lift Ropes	1	Monthly
Boiler Auxillary Passenger Lift Ropes	6	Monthly
Boiler Goods Passenger Lift Ropes	6	Monthly
Admin Building Lift Ropes	2	Monthly
Centac Compressors	5	Monthly
Degas Fan A,B and C	3	Monthly

**PROVISION OF CONDITION MONITORING SERVICES USING HAND HELD TECHNOLOGY FOR A PERIOD OF 5 YEARS AT
MATLA POWER STATION**

Section	Plant	No. of machines	Frequency
Electrical	ID Fan Motor	12	Monthly
	FD Fan Motor	12	Monthly
	PA Fan Motor	12	Monthly
	Mill Motor	36	Monthly
	CW Pump Motors(North & South)	12	Monthly
	Condensate Extraction Pump Motors	12	Monthly
	Auxillary booster pump motors	12	Monthly
	LP Heater Drain Pump Motors	12	Monthly
	Sluice Pump Motors	12	Monthly
	Ash Pump motor	12	Monthly
	Blower Motors	12	Monthly
	EFP motors	12	Monthly
	Incline Conveyors	6	Monthly
	Secondary Air heater motors	12	Monthly
	Slurry plant NAWR pump motors	4	Monthly
	Slurry Plant Centac Motors	5	Monthly
	Barge pump motors	2	Monthly
	SWR pump motors	3	Monthly
	AWR pump motors	7	Monthly
	LP pump house centac motors.	3	Monthly
	Service transformers	24	Monthly
	Station transformer	1	Monthly
	AWR BOOSTER PUMPS A & B motor	2	monthly
	Turbine A.C Lubrication Oil Pump Motor 90 kW	12	monthly
	BFPT Aux Control Oil Pump Motor 75 kW	6	monthly
	Gland Steam Temp Reg Valve Motor 0.09 kW	6	monthly
	No. 7 Conveyor motor	6	monthly
	No. 9 Conveyor motor	6	monthly
	No. 10 Conveyor motor	6	monthly
	No. 11 Conveyor motor	6	monthly
	Mill coal feeder motor 2.2 kW	36	monthly
	Wash Down Sump Pump Motor 22 kW	6	monthly
	Unit cooling Pump motor	18	monthly
	Boiler Feed water 12.5 l/s Pump motor	2	monthly
	Boiler Feed water 25 l/s Pump motor	2	monthly
	Boiler Feed water 50 l/s Pump motor	2	monthly
	Boiler Feed water 75 l/s Pump motor	4	monthly
	FRF pump motor	12	monthly
	Dilution water pump motors	2	Monthly
	BFPT - BARRING GEAR MOTOR	6	When Running

Annexure B: IR thermography

Sections	Plant	No. of machines	Frequency
Boiler	S/H Safety valves	24	Monthly
	Hot Reheat safety valves	24	Monthly
	Cold reheat safety valves	24	Monthly
	Auxiliary steam header safety valve	6	Monthly
	H.P.By-pass hydrolic drain valve	6	Monthly
	Blow down regulating valve	6	Monthly
	Blow down isolating valve	6	Monthly
	L/H and R/H rear wall drains	24	Monthly
	Primary S/H inlet drains	12	Monthly
	L/H and R/H final Superheat vents	12	Monthly
	Cold reheat drain to Blow down vessel	12	Monthly
	Hot reheat drain to Blow down vessel	12	Monthly
	Pressure locks	72	Monthly
	Rainmakers	12	Monthly
	Sootblowers lines	12	Monthly Pre and post outage
	Sootblowers Drain Lines	12	Monthly Pre and post outage
	Unit 1 Blr lagging and cladding 16ml to 64ml, flue gas,expansion bellows, inlet & outlet ducts to ID, FD, PAH, SAH, duct; PF piping; Precips both front, rear,lhs, rhs wall	1074	Monthly Pre and post outage
	Unit 2 Blr lagging and cladding 16ml to 64ml, flue gas,expansion bellows, inlet & outlet ducts to ID, FD, PAH, SAH, duct; PF piping; Precips both front, rear,lhs, rhs wall	1074	Monthly Pre and post outage
	Unit 3 Blr lagging and cladding 16ml to 64ml, flue gas,expansion bellows, inlet & outlet ducts to ID (x2), FD(x2), PAH(2), SAH(2), duct; PF piping; Precips both front, rear,lhs, rhs wall and roof top	1074	Monthly Pre and post outage
	Unit 4 Blr lagging and cladding 16ml to 64ml, flue gas,expansion bellows, inlet & outlet ducts to ID (x2), FD(x2), PAH(2), SAH(2), duct; PF piping; Precips both front, rear,lhs, rhs wall and roof top	1074	Monthly Pre and post outage
	Unit 5 Blr lagging and cladding 16ml to 64ml, flue gas,expansion bellows, inlet & outlet ducts to ID (x2), FD(x2), PAH(2), SAH(2), duct; PF piping; Precips both front, rear,lhs, rhs wall and roof top	1074	Monthly Pre and post outage

PROVISION OF CONDITION MONITORING SERVICES USING HAND HELD TECHNOLOGY FOR A PERIOD OF 5 YEARS AT MATLA POWER STATION

	Unit 6 Blr lagging and cladding 16ml to 64ml, flue gas,expansion bellows, inlet & outlet ducts to ID (x2), FD(x2), PAH(2), SAH(2), duct; PF piping; Precips both front, rear,lhs, rhs wall and roof top	1074	Monthly Pre and post outage
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Sections	Plant	No. of machines	Frequency
Turbine	H.P.H Feed side safety valves	24	Monthly
	H.P.H Shell side side safety valves	24	Monthly
	DA safety valve	12	Monthly
	LPH condensate safety vlv	18	Monthly
	Aux Steam header safety vlv	6	Monthly
	Gland steam cond safety valve	6	Monthly
	IP warming safety vlv	6	Monthly
	Make-up water heater safety vlv	6	Monthly
	Main steam drain to expansion vessel	6	Monthly
	Hp and Ip Chest warming drains(Heat into condenser)	24	Monthly
	Lp Bypass(Heat into condenser)	6	Monthly
	Steam traps expansion vessel below H.P.Heaters	24	Monthly
	Steam traps at Auxillary steam header	30	Monthly
	Steam traps at expansion vessel Below B.F.P.T	12	Monthly
	DST safety valve	6	Monthly
	Auxiliary steam header steam traps	30	Monthly
	DST drains	12	Monthly
	Cold reheat drains to Flashbox no:3(heat into condenser)	12	Monthly
	Hot reheat drains to Flashbox no:3 (heat into condenser)	12	Monthly
	Steam traps at Flashbox no:1	24	Monthly
	Steam traps at Flashbox no:3	54	Monthly
	BFPT - EXTRACTION PUMPS A & B	12	monthly
	BFPT - WTR EJECTOR PUMPS A & B	12	monthly
	EFP LUBE OIL PUMP A & B	12	monthly
	WATER EJECTOR PUMPS A, B, C & D	24	monthly
	STATOR COOLANT PUMPS A & B	12	monthly
	TURB AC CONTROL OIL PUMPS A & B	12	monthly
	SEAL OIL PUMP	6	monthly
	RECIRC PUMP	6	monthly
	CW BOOSTER PUMPS A & B	12	monthly
	BFPT Cold reheat ESV drain valve	6	monthly
	BFPT cold reheat pipe drain	6	monthly
	Steam trap across RC20 S002	6	monthly
	Extraction pipe drain	6	monthly
	Steam trap across RH 40 S009	6	monthly
	MOT Vent Fan A	6	monthly

PROVISION OF CONDITION MONITORING SERVICES USING HAND HELD TECHNOLOGY FOR A PERIOD OF 5 YEARS AT MATLA POWER STATION

	HP Bypass pipe lines (U1 to U6)	12	Monthly Pre and post outage
	Unit 1-6 feed water drain lines	72	Monthly Pre and post outage
	Unit 1-6 superheated final vent control valve (rain maker)	6	Monthly Pre and post outage

Sections	Plant	No. of machines	Frequency
Auxiliary	Ash crusher motor 11.5 kW	6	monthly
	Force cooling compressor	1	monthly
	SUMP LOWERING PUMP	6	monthly
	HOPPER FILLING PUMP	6	monthly
	BLOWER HOUSE FANS	3	monthly
	Coal conveyor drive drums	30	6 Monthly
	7A-F conveyor pulleys (All units)	18	Yearly,Pre and Post Outage
	8A-F conveyor pulleys (All units)	18	Yearly,Pre and Post Outage
	9A-F conveyor pulleys (All units)	24	Yearly,Pre and Post Outage
	10A-F conveyor pulleys (All units)	12	Yearly,Pre and Post Outage
	11A-F conveyor pulleys (All units)	12	Yearly,Pre and Post Outage
	Ash crusher motor 11.5 kW	6	monthly
	Force cooling compressor	1	monthly
	SUMP LOWERING PUMP	6	monthly
	HOPPER FILLING PUMP	6	monthly
	BLOWER HOUSE FANS	3	monthly
	Coal conveyor drive drums	30	6 Monthly
	7A-F conveyor pulleys (All units)	18	Yearly,Pre and Post Outage
	8A-F conveyor pulleys (All units)	18	Yearly,Pre and Post Outage
	9A-F conveyor pulleys (All units)	24	Yearly,Pre and Post Outage
	10A-F conveyor pulleys (All units)	12	Yearly,Pre and Post Outage
	11A-F conveyor pulleys (All units)	12	Yearly,Pre and Post Outage
	Stores Passenger and Goods Lift Ropes	1	Monthly
	Kitchen (Goods Only) Lift Ropes	1	Monthly
	Slurry Plant Passenger Lift Ropes	1	Monthly
	Boiler Auxillary Passenger Lift Ropes	6	Monthly
	Boiler Goods Passenger Lift Ropes	6	Monthly
	Admin Building Lift Ropes	2	Monthly

**PROVISION OF CONDITION MONITORING SERVICES USING HAND HELD TECHNOLOGY FOR A PERIOD OF 5 YEARS AT
MATLA POWER STATION**

Sections	Plant	No. of machines	Frequency
Electrical	380 V Unit Board A , B , C , & D (all units)	24	Monthly
	380 V Diesel gen board (All units)	6	Monthly
	380 V Precipitator boards A & B (All units)	12	Monthly
	380 V Overland conveyor boards 1A & B	2	Monthly
	380 V Overland conveyor boards 2A & B	2	Monthly
	380 V Overland conveyor boards 3A & B	2	Monthly
	380 V Incline conveyor boards 1A & B	2	Monthly
	380 V Incline conveyor boards 2A & B	2	Monthly
	380 V Incline conveyor boards 3A & B	2	Monthly
	380 V Coal staith boards 1 A & B	2	Monthly
	380 V Coal staith boards 2 A & B	2	Monthly
	380 V CW Unit boards A & B	2	Monthly
	380 V Ash Plant Board A & B	2	Monthly
	380 V Station Diesel Board	1	Monthly
	380 V Water plant boards 1 A & B	2	Monthly
	380 V Water plant boards 2 A & B	2	Monthly
	Main Exciter brush gear (Wednesdays)	6	Monthly
	Generator transformers.	6	Monthly
	Excitation transformer cubicles	18	Monthly
	Unit transformers	12	Monthly
	11kV/ 400V Dry type transformers (All units)	50	Monthly
	VT's in the MV room	72	Monthly
	20 kV Breakers & Ducting & Star & Load	18	Monthly
	AWR & SWR booster pump overhead lines	4	Monthly
	Sublime Overhead line	1	Monthly
	380 V SO3 Common plant board	1	Monthly
	380 V SO3 plant boards Unit 1- 6	6	Monthly
	380 V Incomer Breakers Unit 1- 6	6	Monthly
	Blower Motors	10	Monthly
	ID Fan Motor	12	Monthly
	FD Fan Motor	12	Monthly
	PA Fan Motor	12	Monthly
	Mill Motor	36	Monthly
	CW Pump Motors(North & South)	12	Monthly
	Condensate Extraction Pump Motors	12	Monthly
	Auxillary booster pump motors	12	Monthly
	LP Heater Drain Pump Motors	12	Monthly
	Sluice Pump Motors	12	Monthly
	Ash Pump motor	12	Monthly
	EFP motors	12	Monthly
	Incline Conveyors	6	Monthly
	Secondary Air heater motors	12	Monthly
	Slurry plant NAWR pump motors	4	Monthly

PROVISION OF CONDITION MONITORING SERVICES USING HAND HELD TECHNOLOGY FOR A PERIOD OF 5 YEARS AT MATLA POWER STATION

	Slurry Plant Centac Motors	5	Monthly
	Barge pump motors	2	Monthly
	SWR pump motors	3	Monthly
	AWR pump motors	7	Monthly
	LP pump house centac motors.	3	Monthly
	Dust Plant Control Room: UPS	6	Monthly

Annexure C: Oil Analysis

Sections	Plant	No. of machines	Frequency
Boiler	SAH Gearbox FD, ID, PA Fan & Motor Lub oil	48	Monthly
Turbine	Turbine Lube oil	6	Monthly
	Turbine lube oil (Rbot etc)(Main Turbine, BFPT & EFP's)	24	6 Monthly
	BFPT Lub Oil	6	Monthly
	LP Bypass FRF oil	6	Monthly
	HP Bypass FRF oil	6	Monthly
	EFP Lube oil	12	Monthly
	Force cooling compressor	1	When Running
	Main CW Pump(Every March)	48	Annually
	20 kV Breaker Compressors	4	6 Monthly
Auxiliary	Unit Diesel Gen. Engine oil	12	Monthly
	Unit 4 to 6 Dust conveying Blower Lub Oil (12 off)	24	Monthly
	Centac Compressors (Utilities& Slurry plant)	8	Monthly
	Diesel Engine Compressors(Engine & Compressor)	4	Monthly
	Diesel Samples	14	Annually
	Stores Passenger and Goods Lift Ropes	1	Monthly
	Kitchen (Goods Only) Lift Ropes	1	Monthly
	Slurry Plant Passenger Lift Ropes	1	Monthly
	Boiler Auxillary Passenger Lift Ropes	6	Monthly
	Boiler Goods Passenger Lift Ropes	6	Monthly
	Admin Building Lift Ropes	2	Monthly
Electrical	Coal Conveyor gearbox oil	30	Monthly
	Mill gear box (All units)	36	Monthly

Annexure D: Thickness Test

Section	Plant	No. of machines	Frequency
Auxiliary	Slurry lines	3 lines from Slurry Plant to Ash dam(Including Y-Pieces)	4 Monthly
	Hydrogen Cooler CW Pipes	6	6 Monthly
	Hydro Bins (bottom of cones)	4	Yearly
	DHP instrument air supply lines	1 line from Slurry compressor house to unit 1 - 6	2 Yearly
	DHP conveying air supply lines	1 line from Slurry compressor house to unit 1 - 6	2 Yearly
	DHP T-boxes	48/unit	6 Monthly
	Dust Conveying Lines (Pipe in Pipe and Supply to Unit Silo)	8/unit (at temperatures around 90 degrees celsius)	4 Monthly
	Unit Silo Aeration Ring	6	6 Monthly
	Unit Silo Collection Cone and Downpipe	3	On Opportunity
	Dust conveying lines	Duty and Standby line from 1 - 6 to Slurry silos	4 Monthly
	U1-6 ash pump discharge lines to hydrobins	1/unit	4 Monthly
	Reclaim line from unit 7 dam discharge to clarifiers and launders	Entire pipeline	Yearly
	Lime dosing pipes	All lime dosing pipes to all clarifiers	Yearly
	Kriel Matla Filtered water supply line	The entire pipeline under management of Matla	Yearly
	SWR Pipeline	Line A&B	Yearly
	Barge and Booster Pipeline	Booster line 1&2	Yearly
	Station potable supply lines	All pipes from the main potable head tank	Yearly
	Station demin supply lines	All pipes from the demin supply isolating valve	Yearly
	Fire pipes	All fire pipes	Yearly