

PROVISION OF SERVICES ON ROUTINE, NON-ROUTINE ON AS AND WHEN REQUIRED BASIS ON OF CENTECC400, COOPERJOY TA-18 AND COOPERJOY TA-3000 CENTRIFUGAL COMPRESSORS AT DUVHA POWER STATION FOR A PERIOD OF 3 YEARS



NEC3 Term Service Contract (TSC3)

Between	ESKOM DUVHA POWER STATION (Reg No. 2002/015527/06)	
And the		
for	PROVISION OF SERVICES ON ROUTINE, NON-ROUTINE ON AS AND WHEN REQUIRED BASIS ON OF CENTECC400, COOPERJOY TA-18 AND COOPERJOY TA-3000 CENTRIFUGAL COMPRESSORS AT DUVHA POWER STATION FOR A PERIOD OF 3 YEARS	
Contents:	Compiled in accordance with CIDB Standard for Uniformity in Construction Procurement (January 2009 amendments)	No of pages
Part C1	Agreements & Contract Data	
Part C2	Pricing Data	
Part C3	Scope of Work	
Part C4	Site information	
CONTRACT No.	[Insert at award stage]	

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PART C1: AGREEMENTS & CONTRACT DATA

Contents:		No of pages
C1.1	Form of Offer and Acceptance	
C1.2a	Contract Data provided by the <i>Employer</i>	
C1.2b	Contract Data provided by the <i>Contractor</i>	
C1.3	Pro forma Guarantees	
C2.1a	Pricing assumptions	
C2.2b	Price list	

Documentation prepared by: Gugulethu Khumalo

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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:

Provision of Maintenance of CentecC400 Centrifugal Air compressors at Duvha Power Station

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

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

Options A or C	The offered total of the Prices exclusive of VAT is	R
Option E	The first forecast of the total Defined Cost plus the Fee exclusive of VAT is	R
	Sub total	R
	Value Added Tax @ 14% 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:			
Name & signature of witness	(insert name and address of organisation)	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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Acceptance

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

The terms of the contract, are contained in:

Part C1	Agreements and Contract Data, (which includes this Form of Offer and Acceptance)
Part C2	Pricing Data
Part C3	Scope of Work: Service Information
Part C4	Site 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 original copy of this document, including the Schedule of Deviations (if any) together with all the terms of the contract as listed above.

Signature(s)			
Name(s)			
Capacity			
for the Employer			
Name & signature of witness	(Insert name and address of organisation)	Date	

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

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

Note:

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

No.	Subject	Details
1	CPA	
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. 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. 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
		X1: Price adjustment on the 2nd year will be as per SLA between Generation and
		X2: Changes in law
		X17: Delay Damages
		X18: Limitation of liability
		X19: Task Order
		X20: Key performance indicators
		Z: Additional conditions of contract
	of the NEC3 Term Service Contract (June 2005) ²	
10.1	The <i>Employer</i> is (name):	Eskom Holdings SOC Limited (Reg No: 2002/015527/06), a juristic person incorporated in terms of the company laws of the Republic of South Africa
	Address:	Registered office at Megawatt Park, Maxwell Drive, Sandton, Johannesburg
	Tel No.:	[●]

² Available from Engineering Contract Strategies Tel 011 803 3008 Fax 011 803 3009

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	Fax No.	[•]
10.1	The <i>Service Project Manager</i> is (name):	Shirly Dhladhla
	Address	Duvha Power station P. O. Box 2199 Witbank 1035
	Tel	013 295 9465
	Fax	
	e-mail	DhladhS@eskom.co.za
11.2(2)	The Affected Property is	Duvha Power station
11.2(13)	The <i>service</i> is	Provision of services on routine, non-routine on an as and when required basis on Centec C400, CooperJoy TA-18 and TA-3000 centrifugal compressors at Duvha Power Station
11.2(14)	The following matters will be included in the Risk Register	Risks will be tabled in the risk register as they arise by both the Employer and Contractor
11.2(15)	The Service Information is in	Part 3: Scope of Work and all documents and drawings to which it makes reference.
12.2	The <i>law of the contract</i> is the law of	the Republic of South Africa
13.1	The <i>language of this contract</i> is	English
13.3	The <i>period for reply</i> is	1 week
2	The Contractor's main responsibilities	
21.1	The Contractor will ensure safety of personnel at work at all times,	
21.2	The contractor will repair or replace on an inspection which are discovered to be potentially dangerous to the safety of the public, irrespective of whether such parts are excluded from the contract or not	
21.3	Authorised persons Only person authorized with valid qualifications will work on the contracts specifications and also in the case of subcontractor, the employer may ask for cv's and qualifications, certificates etc. which will be kept on safety file	
21.4	The contractor guarantees to utilize approved parts, components and lubricants. Eskom QC representative to inspect and certify. Contractor is not	

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	allowed to subcontract more than 25% of the contract.	
3	Time	
30.1	The <i>starting date</i> is.	01/05/2022
30.1	The <i>service period</i> is	3 years
4	Testing and defects	2 days
5	Payment	
50.1	The <i>assessment interval</i> is	After completion of every Task order
50.5	The low service damage are	Plant Rework <i>For any plant rework the contractor will be held accountable:</i> - For any negligence on the plant the contractor will held accountable. And if this continues further a non- conformance report will issued to the contractor. <u>An early warning will be sent</u> - If there is emergency work , and for work which was given to contractor but delays to begin without any written communication(plan of action) by contractor to Eskom project manager and R2500 penalties per day will be charged to contractor by Eskom if work is not complete within 48 hours after warning was sent - Written communication (plan of action) should consist of the reason for the delayed repairs, delay time and the period of which the work is expected to completed , must be sent to the project manager via-email or fax within 12 hours of the notification for work - Eskom project manager will receive the communication and can either decline or accept plan Plant breakdown call-outs The contractor shall provide a callout service to respond to any emerging work at any time after contractor's working hours, providing 24 hours standby service, with a response time of one hour Call-out shall only consist of emergency work validated by Eskom personnel. - The call-out response time will be 1 hour, failure to this will result to penalties of R800 per hour till contractor's personnel

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		arrives on site, delayed damages are to a maximum of 30% of the overall monthly task order In the case of work longer than 4 hours, a repair plan must be submitted to Employer within 12 hours.	
51.1	The <i>currency of this contract</i> is the	South African Rand	
51.2	The period within which payments are made is	30 days	
51.4	The <i>interest rate</i> is	(i) zero percent above the publicly quoted prime rate of interest (calculated on a 365 day year) charged by from time to time by the Standard Bank of South Africa (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 <i>mutatis mutandis</i> 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		
	These are additional compensation events:	1.	Work outside of scope/ Unplanned Emergency work Any compensation work to be done onsite must be agreed with the project manager before work commencement
7	Use of Equipment Plant and Materials	No data is required for this section of the conditions of contract.	
8	Risks and insurance		
80.1	These are additional <i>Employer's</i> risks	1. [•]	
		2. [•]	

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		3. [•]
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/live/content.php?Item_ID=9248 (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/live/content.php?Item_ID=9248 (See Annexure A for basic guidance)
83.1	The minimum amount of cover for insurance against loss and damage caused by the <i>Contractor</i> to the <i>Employer’s</i> property is	the amount of the deductibles relevant to the event described in the “Format TSC3” insurance policy available on http://www.eskom.co.za/live/content.php?Item_ID=9248
83.1	The minimum amount of cover for loss of or damage to Plant and Materials provided by the <i>Employer</i> is:	the amount of the deductibles relevant to the event described in the “Format TSC3” insurance policy available on http://www.eskom.co.za/live/content.php?Item_ID=9248
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 Rands)..
9	Termination KPA Budget	KPI The majority of the risk that leads to compensations is identified with mitigating actions on the risk assessment. Assessments are done as per the contract task order. Compensation events are notified immediately to enable accurate financial commitments. In the Event of the <i>Contractor</i> contravening any of the financial requirements, Defect notifications are issued; after the second Defect notification has not been adhered to Termination will be considered. A defect notification shall be issued to the

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	Time Quality Safety Environmental	contractor Failure to comply with the program dates may lead to non-conformance report being issued. As per the contract delayed damages are 0,5% per day to maximum of 5% of the task Should the matter not be resolved after the issuing of two non-conformance reports the Employer may terminate the contract <i>Contractor</i> complies with all Eskom's quality requirements and policies. On completion of the works, the QIP will be signed by the relevant Eskom Quality Controller. It shows all hold points and witness points for all critical activities. QIP's must be signed before assessments are made. For non-compliance, Early Warnings will be issued with follow-up meetings and in case of continuance, non-conformance report will be issued. If the Contractor fails to comply after two non-conformance reports have been issued, the <i>Employer</i> may terminate the contract. The <i>Contractor</i> attends induction and submits a safety file. The <i>Employer</i> Permit regulations will be strictly adhered to and monitored. In case of Safety violations, the work shall be stopped and non-conformance report will be issued. 0% tolerance on safety issues, ignorance will lead to termination of contract. The <i>Contractor</i> conforms to all the <i>Employers</i> environmental policies as stated in the contract data. Any deviations will be dealt with as follow; Early Warnings will be issued, a non-conformance report will be issued, after the first non-conformance report has been issued and if the non-conformance has not been corrected the <i>Employer</i> will have the choice to terminate the contract. The <i>Contractor</i> will pay a penalty of 0,5% of the task order value per area due to the deviation
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	3 weeks.
11	Data for Option W1	

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W1.1	The <i>Adjudicator</i> is (Name)	The person selected from the Eskom Panel of Adjudicators listed in Annexure B to this Contract Data by the Party intending to refer a dispute to him.		
W1.2(3)	The <i>Adjudicator nominating body</i> is:	The Chairman of the Joint Civils Division of the South African Institution of Civil Engineering. (See www.jointcivils.co.za)		
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 - if the arbitration procedure does not state who selects an arbitrator, is	the Chairman for the time being or his nominee of the Association of Arbitrators (Southern Africa) or its successor body.		
12	Data for secondary Option clauses			
X1	Price adjustment for inflation			
X1.1	The <i>base date</i> for indices is	[•].		
	The proportions used to calculate the Price Adjustment Factor are:	proportion	linked to index for	Index prepared by
		0.	[•]	[•]
		0.	[•]	[•]
		0.	[•]	[•]
		0.	[•]	[•]
		0.	[•]	[•]
		[•]	non-adjustable	
		1.00		
X2	Changes in Law -applicable			
X17	Low service damages - Response time to call outs – Time to respond to call outs must be less than an hour. - Equipment reliability and performance – All the equipment			

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	should be reliable and technician to ensure machines are working properly after installation and before leaving site. • Use of sub-standard equipment – Contractor to always use quality products for their equipment. • Non-compliance to safety requirements which may cause delays.	
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	The contract value
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/live/content.php?Item_ID=9248
X18.3	The <i>Contractor's</i> liability for Defects due to his design of an item of Equipment is limited to	The greater of • 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/live/content.php?Item_ID=9248
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	the total of the Prices other than for the additional excluded matters. The <i>Contractor's</i> total liability for the additional excluded matters is not limited. The additional excluded matters are amounts for which the <i>Contractor</i> is liable under this contract for • 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.

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X18.5	The <i>end of liability date</i> is	12 months 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	2 days of receiving the Task Order
X20	Key Performance Indicators • Response time to call outs • Performance of the equipment • Safety compliance • Use of skilled personnel to execute the work	
Z	The <i>additional conditions of contract</i> are	Z1 to Z11 always apply.
Z1	Cession delegation and assignment	
Z1.1	The <i>Contractor</i> does not cede, delegate or assign any of its rights or obligations to any person without the written consent of the <i>Employer</i> .	
Z1.2	Notwithstanding the above, the <i>Employer</i> may on written notice to the <i>Contractor</i> 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 and the Electricity Distribution Industry.	
Z2	Joint ventures	
Z2.1	If the <i>Contractor</i> 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 <i>Employer</i> for the performance of this contract.	
Z2.2	Unless already notified to the <i>Employer</i> , the persons or organisations notify the <i>Service Manager</i> within two weeks of the Contract Date of the key person who has the authority to bind the <i>Contractor</i> on their behalf.	
Z2.3	The <i>Contractor</i> does not substantially alter the composition of the joint venture, consortium or other unincorporated grouping of two or more persons without the consent of the <i>Employer</i> having been given to the <i>Contractor</i> in writing.	
Z3	Change of Broad Based Black Economic Empowerment (B-BBEE) status	
Z3.1	Where a change in the <i>Contractor's</i> legal status, ownership or any other change to his business composition or business dealings results in a change to the <i>Contractor's</i> B-BBEE status, the <i>Contractor</i> notifies the <i>Employer</i> within seven days of the change.	
Z3.2	The <i>Contractor</i> is required to submit an updated verification certificate and necessary supporting documentation confirming the change in his B-BBEE status to the <i>Service Manager</i> within thirty days of the notification or as otherwise instructed by the <i>Service Manager</i> .	
Z3.3	Where, as a result, the <i>Contractor's</i> B-BBEE status has decreased since the Contract Date the <i>Employer</i> may either re-negotiate this contract or alternatively, terminate the <i>Contractor's</i> obligation to Provide the Works.	

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Z3.4	Failure by the <i>Contractor</i> to notify the <i>Employer</i> of a change in its B-BBEE status may constitute a reason for termination. If the <i>Employer</i> 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 <i>Contractor</i> , 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 <i>Contractor's</i> obligation to Provide the Service or taking any other action as appropriate against the <i>Contractor</i> (including civil or criminal action).
Z4.2	The <i>Employer</i> may terminate the <i>Contractor's</i> obligation to Provide the Service if the <i>Contractor</i> (or any member of the <i>Contractor</i> where the <i>Contractor</i> 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 <i>Employer</i> or other people or organisations and including in circumstances where the <i>Contractor</i> or any such member is removed from the an approved vendor data base of the <i>Employer</i> 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
Z5.1	The <i>Contractor</i> 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 <i>Contractor</i> , enters the public domain or to information which was already in the possession of the <i>Contractor</i> at the time of disclosure (evidenced by written records in existence at that time). Should the <i>Contractor</i> disclose information to Others in terms of clause 25.1, the <i>Contractor</i> ensures that the provisions of this clause are complied with by the recipient.
Z5.2	If the <i>Contractor</i> is uncertain about whether any such information is confidential, it is to be regarded as such until notified otherwise by the <i>Service Manager</i> .
Z5.3	In the event that the <i>Contractor</i> is, at any time, required by law to disclose any such information which is required to be kept confidential, the <i>Contractor</i> , to the extent permitted by law prior to disclosure, notifies the <i>Employer</i> 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 <i>Contractor</i> 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 <i>service period</i> , requires the prior written consent of the <i>Service Manager</i> . All rights in and to all such images vests exclusively in the <i>Employer</i> .
Z5.5	The <i>Contractor</i> ensures that all his subcontractors abide by the undertakings in this clause.

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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 <i>Service Manager</i> or the <i>Adjudicator</i> 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 <i>Contractor</i> undertakes to take all reasonable precautions to maintain the health and safety of persons in and about the execution of the <i>service</i>. Without limitation the <i>Contractor</i>: • accepts that the <i>Employer</i> may appoint him as the "Principal Contractor" (as defined and provided for under the Construction Regulations 2003 (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 <i>service</i>; and • undertakes, in and about the execution of the <i>service</i>, 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 <i>Contractor's</i> direction and control, likewise observe and comply with the foregoing.
Z7.2	The <i>Contractor</i> , in and about the execution of the <i>service</i> , 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 <i>Contractor's</i> direction and control, likewise observe and comply with the foregoing.
Z8	Provision of a Tax Invoice and interest. Add to core clause 51
Z8.1	Within one week of receiving a payment certificate from the <i>Service Manager</i> in terms of core clause 51.1, the <i>Contractor</i> provides the <i>Employer</i> with a tax invoice in accordance with the <i>Employer's</i> procedures stated in the Service Information, showing the amount due for payment equal to that stated in the payment certificate.
Z8.2	If the <i>Contractor</i> does not provide a tax invoice in the form and by the time required by this contract, the time by when the <i>Employer</i> 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 <i>Employer</i> in terms of core clause 51.2 is then calculated from the delayed date by when payment is to be made.
Z8.3	The <i>Contractor</i> (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 <i>Employer's</i> VAT number 4740101508 on each invoice he submits for payment.
Z9	Notifying compensation events
Z9.1	Delete from the last sentence in core clause 61.3, "unless the <i>Service Manager</i> should have notified the event to the <i>Contractor</i> but did not".
Z10	<i>Employer's</i> limitation of liability

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Z10.1	The <i>Employer's</i> liability to the <i>Contractor</i> for the <i>Contractor's</i> indirect or consequential loss is limited to R0.00 (zero Rand)
Z10.2	The <i>Contractor's</i> entitlement under the indemnity in 82.1 is provided for in 60.1(12) and the <i>Employer's</i> liability under the indemnity is limited to compensation as provided for under the compensation events stated in 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 judicial management order granted against it.
Z12	Contract Price Adjustment
The <i>base date</i> for indices is:	

Annexure A: Insurance provided by the Employer

These notes are provided as guidance to tendering contractors and the Contractor about the insurance provided by the Employer. 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/live/content.php?Item_ID=9248

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Annexure B: The Employer's Panel of Adjudicators

The following persons listed in alphabetical order of their surname have indicated their willingness to be included in the Eskom Panel of Adjudicators. Their CV's may be obtained by using the contact details provided.

Name	Location	Contact details (phone & e mail)
Nigel ANDREWS	Gauteng	+27 11 836-6760 nigela@quoin.net
Andrew BAIRD	Gauteng	+27 11 803 3008 andrewbaird@ecsconsult.co.za
Christopher BINNINGTON	Gauteng	+27 11 888-6141 cdb@bca.co.za
Peter HIGGINS	UK	+44 1293 873 868 peterhiggins@pdconsult.co.uk
Bruce LEECH	Gauteng	+27 11 290 4000 leech@counsel.co.za
Nigel NILEN	Gauteng	+27 11 465 3601; nilences@global.co.za
Peter THURLOW	Gauteng	+27 11 787 6226 info@thurlowassoc.com

Information about the Panel and appointment of the selected *Adjudicator* is available from Eskom Supply Chain Operations management, by contacting Leighton Itholeng (Tel.: +27 (0)11 800 4031) (Fax :+27 (0)86 668 0419) E-mail: Leighton.Itholeng@eskom.co.za

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

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

The conditions of contract

How work is priced and assessed for payment

Clause 11 in NEC3 Term Service Contract, June 2005 (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
		- 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

It will be assumed that the tendering contractor has read Pages 14, 15 and 73 of the TSC3 Guidance Notes before preparing the *price list*. Items in the *price list* may have been inserted by the *Employer* and the tendering contractor should insert any additional items which he considers necessary. Whichever party provides the items in the *price list* the total of the Prices is assumed to be fully inclusive of everything necessary to Provide the Service as described at the time of entering into this contract.

1 As the *Contractor* has an obligation to correct Defects (core clause 42.1) and there is no compensation event for this unless the Defect was due to an *Employer's* risk, the lump sum Prices and rates must also include for the correction of Defects.

2 If the *Contractor* has decided not to identify a particular item in the *price list* at the time of tender the cost to the *Contractor* of doing the work must be included in, or spread across, the other Prices and rates

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in the *price list* in order to fulfil the obligation to complete the *service* for the tendered total of the Prices.

3 There is no adjustment to lump sum prices in the *price list* if the amount, or quantity, of work within that lump sum item of service later turns out to be different to that which the *Contractor* estimated at time of tender. The only basis for a change to the Prices is as a result of a compensation event. See Clause 60.1.

4 Hence the Prices and rates tendered by the *Contractor* in the *price list* 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.

5 The Contractor does not have to allow in his Prices and rates for matters that may arise as a result of a compensation event. It should be noted that the list of compensation events includes those arising as a result of an *Employer's* risk event listed in core clause 80.1.

Format of the *price list*

(From page 73 of 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.

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C2: Pricing Data

C2.2 Price List

Price List B: Selling Hour Rates including transport as and when required

SKILL		UNIT	QUANTITY	NORMAL HOURLY RATE	AFTER HOURS (FACTOR OF NORMAL TIME)	SATURDAY TIME (FACTOR OF NORMAL TIME)	SUNDAY/PUBLIC HOLIDAYS TIME (FACTOR OF NORMAL TIME)
B1	Artisan	Hr	8760				
B2	Assistant	Hr	8760				

Price List C: Transport Rates for call outs as and when required

TRANSPORT		UNIT	Price	Required duration for 36 months period
C1		km		1095 days
C2		km		1095 days
C3		km		1095 days

Price List E: Protective clothing and safety Equipment per/month

		Unit	Quantity required per month	QUANTITY PROPOSED FOR 3 YEARS	Price for each month	For proposed Quantity
E1	PPE AND SHE PROVISION	P/month	1	3		
	TOTAL					

		Quantity required	Unit Price
E2	Safety Helmets	1	
E3	Safety Specs	1	
E4	Ear Plugs	1	
E5	Leather gloves	1	
E6	Overalls	1	

C3: Scope of Work**C3.1 SCOPE OF WORK****C3.1 Works Information****1.1 SCOPE OF WORK / SPECIFICATION****Work to be performed by *the Contractor* for the works**

THE CONTRACTOR MUST BE ABLE TO PERFORM THE FOLLOWING ACTIVITIES COVERED IN SCOPE OF WORK, FAILING WHICH A 10% WILL BE DEDUCTED ON MONTHLY GROSS LABOUR CHARGED EFFECTIVE AFTER FOUR MONTHS WHEN THE CONTRACT IS IN PLACE/SIGNED

1.1.1 Description of the works for Centec C400

The *works* describe the “**Maintenance**” requirements on 4 X C50MX2 air compressors. All compressor auxiliary equipment will be included as part of maintenance contract. The applicable compressors are: “All” C50MX2 air compressors. All auxiliaries related to the compressors are applicable to the contract, the auxiliaries inclusive; pipework, valves, gauges, control panels, solenoids, drains and all related measuring devices.

The *Contractor* draws up a maintenance schedule for all compressor maintenance interfaces for the 3 year period with forward planning of 6 months intervals, ensuring the relevant services and any major or minor overhauls or part replacements are planned. This will also be the basis of ensuring the required spares and consumables are available and the maintaining of the stock levels for the Duvha compressors.

A constant pressure of 6.5 bar should be maintained at all times. All leaks in the system that form part of LPS should be identified and fixed timeously. This system was originally designed such that 3 compressors should run while 1 is on standby and the contractor should ensure that the station can go back to the original design base.

1.1.2 C400 Scope of work

The works is the Maintenance (repair/service) unscheduled and scheduled deficiencies when they occur on the four C50MX2 compressors at LPS and related plant as stated in the works information for the duration of the contract period.

Corrective Maintenance: Unscheduled or scheduled repairs to correct deficiencies.

Preventative maintenance: Scheduled servicing, repairs, inspections, adjustments and replacement of parts that result in fewer breakdowns and fewer premature replacements and achieve the expected life of compressors and related plant.

Recurring maintenance: Preventative maintenance activities that recur on a periodic and scheduled cycle with a frequency of 1 year but less than 10 years.

Emergency maintenance: Maintenance activities that are unscheduled repair, to include call outs, to correct an emergency to prevent injury, loss of property, or return asset to service. These repairs are initiated within a very short time period from which the need is identified and usually within hours.

The *Contractor* supplies trained manpower for the execution of the works on a daily basis and qualified trained technicians/artisans for the servicing and major/minor work scopes. The permanent site staff provided will be to monitor and do the day to day front line maintenance, fault finding and maintenance of the compressed air system.

The *Contractor* shall ensure that no plant defects are evident. Maximum compressor availability and reliability above 92.25% must be maintained. This will be achieved by daily plant walks and availability and

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reliability indicators done per compressor and auxiliaries per day. The following strategy is applicable and must be adhered to.

Availability:

The objective of the *Employer* is to provide reliable and effective LPS compressed air supply for the power station to use, with due consideration of the cost effectiveness and long term maintainability of such system. System pressure of 650 kPa gauge must be maintained at all times measured in the common supply system at LPS after the compressed air receivers. Maintenance must not impact the lower system pressure limit of 620 kPa.

The *Contractor*, during his daily duties, walks the plant and identifies air leaks or any deviations which affect the loss of compressed air in the system.

The *Contractor* will adhere to the permit to work system and will be appointed as Responsible Person. Safety will be adhered to at all times. Appointment of the onsite artisan, *Contractor* personnel should be authorized within 6 months of the contract start date. Eskom will provide the training and cost thereof.

The compressor system, all compressor components and auxiliaries will be maintained on a plant maintenance schedule for servicing, overhauling and replacement at end of life or exceeded hours in service. The *Contractor* determines the state of plant and reports to the *Service Manager* the requirements and schedules that will be required at intervals of six months ahead for planning of spares and labour as required.

When a compressor is taken out for maintenance a detailed risk assessment will be done before compressor is taken out for maintenance activity. Standard Duvha risk assessment form will be used for this requirement. All maintenance and services performed, in terms of this agreement, shall take place during normal working hours, Monday to Thursday between the hours of 07h00 and 16h15 and Friday between the hours of 07h00 and 12h00 or as dictated by the plant conditions which may require overtime or weekend work to be carried out. The *Contractor* ensures availability of staff for breakdown or emergency work after hours, weekends and public holidays and to do the fault finding to determine what intervention from the Technicians is required or direction required to do the necessary repairs to place the compressor back in service.

For any emergency condition the *Contractor* will react to the request within 2 hours, any condition on the compressors that could cause load losses on the units due to low compressed air pressure will be addressed on a HIGH PRIORITY basis and the *Contractor* ensures the load loss threat is cleared before going off site. Spares for the works is to be managed by the *Contractor* for the servicing, maintenance, overhauls and breakdowns requirements and a total list of spares for all compressors as per the pricing list which is in Section C2. Pricing Data Option A.

Compressor spares will be utilised at intervals as listed in the maintenance and servicing schedule supplied by the *Contractor* for each compressor during the Contract period.

All defects, routine servicing, PM's & CM's will be captured by the Planning Department and all work will be carried out based on a SAP works management system. The *Service Manager* will arrange the planner which will be responsible for the scheduling of work based on a 14 day window.

The *Contractor* gives a daily report on condition, operation and deviations that are or need to be addressed and where additional hours are to be worked notifies the *Service Manager* for approval. The *Contractor* as part of this service also investigates and submits proposals for improving or suggesting better practices which could improve operation on the compressor plant.

Where callouts or breakdowns are to be attended to after-hours the *Contractor* notifies the *Service Manager* of the incident and attends to the incident accordingly.

1.1.3 Scope of work boundaries

The Maintenance Boundaries limits are as follows:

The compressor inlet suction filter through to the discharge outlet isolating valve and all equipment that interfaces with the compressors, such as drains, coolers, condensate drain solenoids, drain piping, valves, air discharge pipework, valves, filters, the compressor itself, the pipework surrounding the compressor

The following components are excluded from the Boundaries limits but reporting of deviations are required.

- The electrical supply to and motors.
- Electrical control panels situated in Eskom boards.
- Electrical Supply to local panels.

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The *Contractor* will monitor and do day to day routine inspections and maintenance of the compressors with daily communication with the *Service Manager*, main control room and outside plant shift supervisors.

1.1.4 Maintenance routines

1.1.4.1 C50MX2 compressor daily Inspections

Daily Inspection Checklist
Operating Data Log
1. Operating Parameters recorded and within specifications
2. Set points to be Checked
Gear case
3. External surfaces wiped clean
4. No unusual noise or vibrations
5. No oil leaks
6. No air leaks
7. No frayed or worn electrical cables
Intercoolers and After cooler
8. External surfaces wiped clean
9. Condensate drains functioning properly
10. No cooling water leaks
11. No air leaks
Lubrication System
12. External surfaces wiped clean
13. Proper oil level in oil reservoir
14. Proper oil colour
15. No oil leaks
16. No frayed or worn electrical cables
Compressor Drive Motor (Inspect visually only high voltages, temperatures)
17. External surfaces wiped clean
18. Properly ventilated
19. No erratic or noisy operation
20. No frayed or worn electrical cables
21. Inspected in accordance with manufacturers recommendations

1.1.4.2 C50MX2 compressor monthly inspections.

Monthly Inspections
1. Review daily logs and verify operational parameters
2. Download fault history
3. Download operation log
4. Adjust controls if required

1.1.4.3 C50MX2 compressor 2000 hour Service and inspections.

- Strip and clean drain traps
- Check manual drain valves
- Check calibration of vibration chain and verify reading
- Check oil level

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- Check panel display lights
- Report on units' condition to customer
- Clean units

1.1.4.4 C50MX2 compressor 4000 hour service

- Inspect and lubricate IV and BV valve actuator
- Strip and clean drain traps
- Check manual drain valves
- Check calibration of vibration chain and verify reading
- Record the delta T on oil and air coolers
- Check function of the oil heaters
- Replace oil filters
- Check oil level
- Replace primary air filters
- Check surface sealing area on air filter housings
- Check function of air filter differential switch
- Check function of surge sensor and verify setting
- Check seal air pressure switch setting
- Check panel display lights
- Verify trip functions – ensure motor shutdown
- Carry out oil analysis
- Carry out vibration analysis
- Strip and replace grease on main coupling
- Report on units' condition to customer
- Clean units

1.1.4.5 C50MX2 compressor 6000 hour service

- Strip and clean drain traps
- Check manual drain valves
- Check calibration of vibration chain and verify reading
- Check oil level
- Check panel display lights
- Report on units' condition to customer
- Clean units

1.1.4.6 C50MX2 compressor 8000 hour service

- Recalibrate and check the inlet and by-pass valves
- Check IP signal to each valve
- Replace positioner diaphragms on IGV and BV valves
- Inspect and lubricate IV and BV valve actuator
- Inspect pre-lube oil pump coupling
- Inspect main oil pump coupling
- Strip and clean drain traps
- Check manual drain valves
- Strip and clean oil cooler
- Check calibration of vibration chain and verify reading
- Check and calibrate all pressure transmitters (air and oil)
- Check and calibrate all temperature transmitters (air and oil)

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- Check and report on motor RTD's
- Record the delta T on oil and air coolers
- Check function of the oil heaters
- Replace oil filters
- Check oil level
- Replace secondary air filter elements
- Replace primary air filters
- Check surface sealing area on air filter housings
- Check function of air filter differential switch
- Replace demistor element
- Check/Replace and report condition of non-return valve
- Inspect and clean oil sump filter
- Check function of surge sensor and verify setting
- Check seal air pressure switch setting
- Check panel display lights
- Replace hot discharge BV valve seats
- Verify trip functions – ensure motor shutdown
- Carry out oil analysis
- Carry out vibration analysis
- Strip and replace grease on main coupling
- Report on units' condition to customer
- Clean units

1.1.6 Description of works for CooperJoy TA-18 and TA-3000

The *Works* for this *Contract* is for the maintenance of 6 Fabric Filter Plant (FFP) air compressors and 1 Forced Air Cooling Compressors, namely Cooper Joy compressors.

All compressor auxiliary equipment will be included as part of maintenance contract. The applicable compressors are: "All" Turbo Cooper Compressors (TA 1800 & TA 3000). All auxiliaries related to the compressors are applicable to the contract, the auxiliaries inclusive; pipework, valves, gauges, control panels, solenoids, drains and all related measuring devices.

The scope is an all-inclusive maintenance agreement where the *Contractor* will maintain the compressor from a daily inspection, monthly, 3 monthly, 6 monthly, and 12 monthly routine services, repairs, day to day frontline maintenance, minor and major repairs and overhauls. He will be required to have trained artisans / technicians on site to cover the daily front line and routine maintenance, call outs, fault finding and the specialised technicians for the servicing, maintenance and overhauling of the 3 types of compressors and related equipment.

A permanent trained artisan / technician is required on site to monitor, do day to day frontline maintenance, fault finding and maintain the compressors to ensure compressor availability and reliability. The *Contractor* will be required to ensure he is available for breakdowns after hours and weekends and includes public holidays to address any defect or problem on the compressors as they arise. Specialised work to be done as per schedule or breakdown by the trained and qualified technicians as the work arises or where the specialised technical expertise is required.

The *Contractor* is required to compile a service and maintenance schedule and ensure the required spares are available for each service interval, breakdowns and maintenance requirements of the compressors and as listed in the Pricing Schedule.

1.1.7 TA-18 and TA-3000 Scope of work

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The works is the Maintenance (repair/service) unscheduled and scheduled deficiencies when they occur on the FFP air compressors and related plant as stated in the works information for the duration of the contract period.

Corrective Maintenance: Unscheduled or scheduled repairs to correct deficiencies.

Preventative maintenance: Scheduled servicing, repairs, inspections, adjustments and replacement of parts that result in fewer breakdowns and fewer premature replacements and achieve the expected life of compressors and related plant.

Recurring maintenance: Preventative maintenance activities that recur on a periodic and scheduled cycle with a frequency of 1 year but less than 10 years.

Emergency maintenance: Maintenance activities that are unscheduled repair, to include call outs, to correct an emergency to prevent injury, loss of property, or return asset to service. These repairs are initiated within a very short time period from which the need is identified and usually within hours.

The *Contractor* supplies trained manpower for the execution of the works on a daily basis and qualified trained technicians/artisans for the servicing and major/minor work scopes. The permanent site staff provided will be to monitor and do the day to day front line maintenance, fault finding and maintenance of the compressed air system.

The *Contractor* shall ensure that no plant defects are evident. Maximum compressor availability and reliability above 92.25% must be maintained. This will be achieved by daily plant walks and availability and reliability indicators done per compressor and auxiliaries per day. The following strategy is applicable and must be adhered to.

Availability:

The objective of the *Employer* is to provide reliable and effective FFP compressed air supply for the power station to use, with due consideration of the cost effectiveness and long term maintainability of such system.

System pressure of 3.5 bar gauge must be maintained at all times measured in the common range system reflected in the DCS system in the main control room. Maintenance must not impact the lower system pressure limit of 3.0 Bar.

The *Contractor*, during his daily duties, walks the plant and identifies air leaks or any deviations which affect the loss of compressed air in the system.

The *Contractor* will adhere to the permit to work system and will be appointed as Responsible Person. Safety will be adhered to at all times. Appointment of the onsite artisan, *Contractor* personnel should be authorized within 6 months of the contract start date. Eskom will provide the training and cost thereof.

The compressor system, all compressor components and auxiliaries will be maintained on a plant maintenance schedule for servicing, overhauling and replacement at end of life or exceeded hours in service. The *Contractor* determines the state of plant and reports to the *Service Manager* the requirements and schedules that will be required at intervals of six months ahead for planning of spares and labour as required.

When a compressor is taken out for maintenance a detailed risk assessment will be done before compressor is taken out for maintenance activity. Standard Duvha risks assessment form will be used for this requirement.

All maintenance and services performed, in terms of this agreement, shall take place during normal working hours, Monday to Thursday between the hours of 07h00 and 16h15 and Friday between

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the hours of 07h00 and 12h00 or as dictated by the plant conditions which may require overtime or weekend work to be carried out. The *Contractor* ensures availability of staff for breakdown or emergency work after hours, weekends and public holidays and to do the fault finding to determine what intervention from the Technicians is required or direction required to do the necessary repairs to place the compressor back in service.

For any emergency condition the *Contractor* will react to the request within 2 hours, any condition on the compressors that could cause load losses on the units due to low compressed air pressure will be addressed on a HIGH PRIORITY basis and the *Contractor* ensures the load loss threat is cleared before going off site.

Spares for the works is to be managed by the *Contractor* for the servicing, maintenance, overhauls and breakdowns requirements and a total list of spares for all compressors as per the pricing list which is in Section C2. Pricing Data Option A.

Compressor spares will be utilised at intervals as listed in the maintenance and servicing schedule supplied by the *Contractor* for each compressor during the Contract period.

All defects, routine servicing, PM's & CM's will be captured by the Planning Department and all work will be carried out based on a SAP works management system. The *Service Manager* will arrange the planner which will be responsible for the scheduling of work based on a 14 day window.

The *Contractor* gives a daily report on condition, operation and deviations that are or need to be addressed and where additional hours are to be worked notifies the *Service Manager* for approval. The *Contractor* as part of this service also investigates and submits proposals for improving or suggesting better practices which could improve operation on the compressor plant.

Where callouts or breakdowns are to be attended to after-hours the *Contractor* notifies the *Service Manager* of the incident and attends to the incident accordingly.

Scope of work Boundaries

The Maintenance Boundaries limits are as follows:

The compressor inlet suction filter through to the discharge outlet isolating valve and all equipment that interfaces with the compressors, such as drains, coolers, condensate drain solenoids, drain piping, valves, water pipework, air discharge pipework, valves, filters, filter ducting

The following components are excluded from the Boundaries limits but reporting of deviations are required.

- The electrical supply to and motors.
- Bag filter compressor electrical supply form boards excluding local panel.
- Electrical control panels situated in Eskom boards.
- Electrical Supply to local panels.

The *Contractor* will monitor and do day to day routine inspections and maintenance of the compressors with daily communication with the *Service Manager*, main control room and outside plant shift supervisors.

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Maintenance routines

Turbo Compressor Daily Inspections.

Daily Inspection Checklist
Operating Data Log
22. Operating Parameters recorded and within specifications
23. Set points to be Checked
Gear case
24. External surfaces wiped clean
25. No unusual noise or vibrations
26. No oil leaks
27. No air leaks
28. No frayed or worn electrical cables
Intercoolers and After cooler
29. External surfaces wiped clean
30. Condensate drains functioning properly
31. No cooling water leaks
32. No air leaks
Lubrication System
33. External surfaces wiped clean
34. Proper oil level in oil reservoir
35. Proper oil colour
36. No mist from ejector system
37. No oil cooler water leaks
38. No oil leaks
39. No frayed or worn electrical cables
Compressor Drive Motor (Inspect visually only high voltages, temperatures)
40. External surfaces wiped clean
41. Properly ventilated
42. No erratic or noisy operation
43. No frayed or worn electrical cables
44. Inspected in accordance with manufacturers recommendations
Cooling System
45. Operating Parameters recorded and within specifications
46. No unusual noise or vibrations
47. No cooling water leaks
48. No frayed or worn electrical cables
49. Inspected in accordance with manufacturers recommendations

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Turbo Compressor Monthly inspections.

Monthly Inspections
5. Review daily logs and verify operational parameters
6. Download fault history
7. Download operation log
8. Adjust controls if required

Turbo Compressor 3 Monthly / Minor Service and inspections.

3 Monthly Service
1. Review daily logs and verify operational parameters
2. Download fault history
3. Download operation log
4. Adjust controls if required
Force Vent System
5. Replace primary inlet filtration on forcevent systems
6. Replace secondary inlet filtration on forcevent system
Compressors
7. Replace primary inlet filtration on compressors
8. Replace secondary inlet filtration on compressors
9. Grease main drive motor and inspect for any abnormalities
10. Grease oil pump motor and inspect for any abnormalities
11. Verify operation of control valves and auto block valve
12. Supply employer customer with a detailed status report

Turbo Compressor 6 Monthly Service and inspections.

6 Monthly Service
1. Review daily logs and verify operational parameters
2. Download fault history
3. Download operation log
4. Adjust controls if required
Force Vent System
5. Replace primary inlet filtration on force vent systems
6. Replace secondary inlet filtration on force vent system
Compressors
7. Replace primary inlet filtration on compressors
8. Replace secondary inlet filtration on compressors
9. Replace Inline Filter Elements
10. Replace oil filters
11. Grease main drive motor and inspect for any abnormalities
12. Grease oil pump motor and inspect for any abnormalities
13. Verify operation of control valves and auto block valve
14. Remove clean and inspect intercoolers
15. Clean intercooler cavity and paint with rust inhibiting coating
16. Replace vent filter and set vacuum on gearbox
17. Take oil sample and send for analysis.
18. Clean and inspect main drive motor coupling
19. Re-grease main drive motor coupling and assemble with

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new seals and gaskets
Cooling System
20. Remove and clean inlet louvers
21. Remove and clean drift eliminators
22. Clean out unit sump
23. Clean sump strainer
24. Clean fan blades
25. Clean unit externally

Turbo Compressor Yearly Service and inspections.

12 Monthly service
1. Review daily logs and verify operational parameters
2. Download fault history
3. Download operation log
4. Adjust controls if required
Compressors
5. Replace primary inlet filtration on compressors
6. Replace secondary inlet filtration on compressors
7. Replace Inline Filter Elements
8. Replace Oil Filter
9. Grease main drive motor and inspect for any abnormalities
10. Grease oil pump motor and inspect for any abnormalities
11. Verify operation of control valves and auto block valve
12. Remove clean and inspect intercoolers
13. Clean intercooler cavity and paint with rust inhibiting coating
14. Replace vent filter and set vacuum on gearbox
15. Take oil sample and send for analysis.
16. Clean and inspect main drive motor coupling
17. Re-grease main drive motor coupling and assemble with new seals and gaskets
18. Remove clean and inspect compressor inlet volutes
19. Inspect and clean impellers
20. Reset impeller clearances to factory specification
21. Perform surge test and re-establish surge line on compressor.
Cooling System
22. Remove and clean inlet louvers
23. Remove and clean drift eliminators
24. Clean out unit sump
25. Clean sump strainer
26. Clean fan blades
27. Clean unit externally
28. Clean unit externally

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1.1.8 Performance Criteria

An average system pressure must be maintained at all times of 650 kPa. This measurement is indicated in the plant on the pressure gauges at the discharge of control air receivers.

KPI	Explanation of performance Criteria	Penalties
Individual Compressor Availability	Compressor availability to be more than 95% available, less than 95% will be a penalty	R10 000 per Compressor below 95% if this carries on for more than a week
Individual Compressor Performance	Compressor performance pressure of 650 kPa is required but a minimum of 620 kPa discharge pressure will be accepted for the C400 and 300 – 350 kPa for the CooperJoy compressors, there will be a penalty for a compressor performing at less than 620 kPa and 60 Amps provided there are no leaks that Eskom Duvha needs to fix for the Centec C400 and a penalty for a compressor performing less than 300Kpa will be a penalty and flow rate should be according to the design provided there are no leaks that Eskom Duvha needs to fix for the CooperJoy compressors.	R10 000 per Compressor less than 620 kPa for the Centec C400 and 300 kPa for the CooperJoy if this carries on for more than a week
Compliance to Schedule Maintenance	Scheduled maintenance should be 100% (including daily check sheet, 2000 hourly , 4000 hourly, 6000 hourly and 8000 hourly Services)	R10 000 per Compressor not serviced during schedule
PSR Authorisation	1 Employee to be Authorised within 6 months of the start of the contract.	R10 000 per person per month not Authorised after 6 month contract start date.

Elimination of all oil and water and air leaks on the control air system is a must do.

Ensure compressor performance is at maximum performance according to design specification. The *Contractor* is responsible for establishing the maintenance activities in ensuring that the system average pressure does not reach bottom limit of 620 kPa. Should the risk prevail the responsibility is with the contractor to supplement the shortfall by supplying mobile compressors to accommodate the emergency situation.

The following plant availability and reliability strategy will be followed to ensure maximum compressor reliability. 90% availability will be ensured. 7% Plant maintenance will be ensured and 3% plant breakdown is ensured.

The *Contractor* must ensure that all auxiliary equipment performs as specified per design documentation.

1.2 Receivables Service

- The Contractor issues monthly reports to the Project Manager as agreed between both parties. This report shall include all work done to date, work in progress (including the status) and future work if an order is already in place during the preparation of the report and any other work that the *Contractor* is busy with. The report also includes a copy of all the invoices issued during that month.
- Investigate, identify and report potential plant failures.
- Recommend actions, modifications, system and process changes.
- Participate in investigations as required.
- There is efficient overall organisation of personnel and services.

a) On notification of a defect/repair to be conducted the *Contractor* will submit the following documentation to the *Contracts Service Manager* for approval:

- A detailed quotation for the works.
- A detailed Task Order for the work to be done.
- A program indicating the duration of the work.
- A process quality plan.
- A completion Certificate after the work is done.

In the event of a breakdown after hours and week-end the work needs to follow the Duvha Emergency approval process.

- The standby manager will approve the work to be done.
- The normal commercial process will be followed the next working day to submit the required documentation.

b) On completion of the work the *Contractor* will submit:

- Handover Documentation with signed off PQP.
- Test records of the work performed.
- Completion Certificate.
- Assessment.
- Required invoicing for payment.

c) A list of all employees and their qualifications is submitted to the *Contract Service Manager* at the starting date.

d) The *Contractor* ensure the availability of all special equipment to perform the required work as per specifications

1.3 Quality Assurance

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- The Contractor ensures that effective quality plans are in place prior to undertaking any task at Duvha Power Station.
- The Contractor is to liaise with the Project Supervisor or his delegate with respect to the maintenance scheduled

Drawings and specification

- The method and conduct of work is in accordance with the specifications and conforms to the scope of work supplied by the Supervisor or his delegate.
- The Project Manager has the propriety rights to all the documentation applicable to Duvha Power Station

1.4 Maintenance Philosophy

The *Contractor* provides all services, specialized tools and equipment, specialized personnel, and all associated maintenance services to accomplish and execute the requirements of the Service Information. The *Contractor* provides specialist technical consulting services, which support the optimum continuous operation of the *Employer's* assets on an "as and when" required basis.

In these terms the *Contractor* shall maintain and issue all legal required certification to ensure compliance.

Maintenance will be carried out in the following categories:

1.4.1 Corrective Maintenance

The Maintenance carried out after a failure has occurred and is intended to restore an item to a state in which it can perform its required function.

1.4.2 Preventative Maintenance

Maintenance carried out at pre-determined intervals, or corresponding to prescribed criteria, and intended to reduce the probability of failure or performance degradation of an item

1.4.3 Planned Maintenance

Maintenance performed during a planned or scheduled outage of the specific plant or generating unit

1.4.4 Routine Maintenance

Time based maintenance work that is performed with the plant either on or off load.

1.4.5 Opportunity Repairs

These are short outages between Overhauls to enable essential repairs and inspections to be executed.

1.5 Legislation, Regulations, Standards and Specifications

The *Contractor* conforms to all prevailing legal requirements of the republic of South Africa, Eskom SOC Limited and Duvha Power Station Site legal Requirements, with special reference but not limited to the following:

- Occupational Health and safety Act 85 of 1993 as amended and its regulations.

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- SANS 10400 National Building regulations
- Plant Safety Regulations (PSR) 36-681 – Generation Plant Safety Regulations.
- GGPP0592: Generation Policy: Power Station Plant Classification.
- OPG 0159-02: Eskom manual: Classification Guideline.
- 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, Document 004 4830
- Eskom procedures 32-95 with regards to the management of safety, health and environmental incidents
- Any other act or procedure deemed necessary or applicable if the work includes some toxic and/or hazardous substances during normal and routine maintenance activities stipulated in this document. In this case the *Contractor* handles such hazardous substances in accordance with the applicable regulations and procedures, and is disposed of by the *Contractor* in accordance with the applicable law.

Specifications

Table 1. Standards and specifications

Item	Title	Revision	Tick if publicity available
1	Eskom ESKASAAU7: Quality Requirements for the Procurement of Assets, Goods and Services.	Latest	
2	Eskom GGS 0349: Quality Assurance	Rev 2	
24	Eskom GGR0992 Plant Safety Regulations	Latest	

2. Contact Persons

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- i. The Project Manager, his delegates (other departments using the Contract), and, if outside the Employer's working hours, the Turbine Maintenance Manager or his delegate are identified as those authorised to call out the Contractor as required to perform the works.
- ii. The Project manager ensures that the Contractor, his site manager or his delegate is on site during maintenance work been carried out. The Contractor's site manager or his delegate has full signing authority and is authorised to make binding decisions. The Contractor, his site manager or his delegate is reachable per telephone, after hours for any emergencies.
- iii. The Contractor notifies the Project Manager of his contact telephone numbers by the starting date.
- iv. The Contractor notifies the Project Manager of a change of Contractor's telephone number one week before such changes takes effect.

4. SITE INFORMATION AND FACILITIES

PROVIDED BY THE EMPLOYER

4.1 LOCATION AND DESCRIPTION

Duvha Power Station is situated in the Mpumalanga Province in Witbank on the Old Bethal Road . This has been the major power producing area of South Africa since the sixties. The planning and design of Duvha Power Station began in the early seventies. Construction also started in the early seventies and the station began operating at full capacity early 1979. When Duvha was completed in 1979, it was the largest coal-fired station in the Southern Hemisphere. Duvha consists of six 600MW units at an installed capacity of 3 600MW.

4.2 Data Item Descriptions

A. Working hours

i. Normal / Overtime hours

- a) Normal time will be deemed as any work during working hours from 7:00 – 16:30, 5 days per week, Monday to Friday.
- b) Overtime hours will be deemed as any activity for which Contractor receive a request to work after normal hours during the week, Monday to Friday including Saturday will be charged at the normal rate X 1,5. Any activity for which Contractor receive a request to work on Sunday or a Public holiday, will be charged at the normal rate X 2. The time would include his traveling time and all travelling cost.
- c) Where a unit start-up or outage or other work is being conducted outside normal office hours, the Contractor shall, in order to provide the works, be present at the event concerned at the Employer's request, provided such requests is provided at a notice period reasonable for the circumstances, by the Supervisor or his delegate.
- d) The contractor shall make provisions for 24hour standby every day for work on calls made by Eskom personnel, and shall make all resources available to continue the worked called for.

A reasonable notice period shall be deemed to be:

One day for general meetings,

Seven days for a planned outage,

One hour for a unit trip, as soon as possible but not longer than 3 hours and

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One hour for a health or safety hazard or a plant emergency that could lead to a trip or other loss of generating capacity

iv. The Contractor reports to the power station or any other site for meetings, seminars, conferences, etc. as notified by the Supervisor or his delegate.

4.3 Additional conditions

- i. This contract and all information associated with its management are confidential and may not be divulged beyond the provisions stated within the contract. Should the Contractor violate this condition, the Employer may terminate this contract forthwith and nullifying any outstanding or further claims by the Contractor.
- ii. Neither the Contractor nor the key persons may have any interest, pecuniary, material or otherwise in any work arising from, impacting, or influencing the Contractor's ability to impartially fulfil the Scope of this contract, be it of a service or supply nature. The Contractor and the key persons are to declare any interest, pecuniary, material or otherwise, in any tender, offer or quotation to the Project Manager for any other work, supply or service, to the Employer's Agent at the time when such tender, offer or quotation is submitted. The Project Manager's interpretation of a situation shall apply where there is a conflict.

4.3.1.1 Submission of Reports

- i. The Contractor keeps equipment and labour reports for inspection, and submits it monthly to the Project Manager.
- ii. The Contractor submit reports to the Project Manager within 5 (Five) days before the end of each month. The format of all reports is approved by the Project Manager prior to submission.
- iii. All quotations and Invoices includes the following table per item(see sample):

SAP line item:		
Item name (as per price list):		
Item price (as per price list):		
Quantity:		(Units of measure)
Description:		
Item Total		

- iv. Each task order includes the starting and completion date.

4.3.1.2 Quality requirements

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- i. The Contractor complies with the Employer's Quality Requirements as specified in Eskom Generation Standard GGS 0462 in to the Scope.
- ii. For a job where the Employer deems that a quality plan is necessary, the quality control documentation is submitted to the Supervisor or his delegate within 3 (Three) days after the job is requested, prior to the start of the job.

4.3.1.3 Defects Correction Period

- i. Due to the different nature of defects, and the different risks associated with trips, the defect correction period as specified in the Contract Data varies per defect, as indicated by the Employer.

Priority 1 – 24 hours – All modifications which may affect the operations at Duvha Power Station.

Priority 2 – 2 days – Investigations and feasibility studies.

Priority 3 – 1 week – Repairs.

5 Site roads

- The *Contractor's* vehicles may use the roads. Vehicle access to some conveyor belts is restricted.
- Any costs incurred from damage caused to underground services, structures, roads, etc. as a result of the *Contractor* not using the prescribed routes, will be recovered from the *Contractor*.

6 Medical facilities

- The *Contractor* provides a first aid service to his employees and Subcontractors. In the case where these prove to be inadequate, like in the event of a serious injury, the *Employer's* medical centre and facilities will be available.
- Outside the *Employer's* office hours, the *Employer's* first aid services will only be available for serious injuries and life threatening situations.
- The *Employer* shall be entitled, however, to recover the costs incurred, through the use of the above *Employer's* facilities, from the *Contractor*.

7 Refuse disposal

- The Employer will provide and empty special colour coded bins for refuse disposal.
- For the full duration of the *works*, the *Contractor* is responsible to keep the work areas clean of any rubble, and to dispose all refuse to a registered dumpsite. Such a dumpsite is not available at Duvha Power Station.
- All waste introduced and/or produced on Eskom's premises by the *Contractor* for this Contract, must be handled in accordance with the minimum requirements for the Handling and Disposal of Hazardous Waste in terms of Government Legislation as proclaimed by the Department of Water Affairs and Forestry Act 1994 Ref.: ISBN0621 - 16296-5.

8 Accommodation

The provision of accommodation for the *Contractor's* personnel shall be the responsibility of the *Contractor*.

9 *Employer's catering facilities*

- The *Contractor* or any of his employees or Sub *Contractors* will not be allowed to use the *Employer's* dining facilities, unless a specific agreement has been made between the *Contractor* and Eskom Catering and Accommodation Services (ECAS).
- The *Contractor* or any of his employees or Sub *Contractors* may purchase take-away meals from the fast foods outlet on site.

10 Telecommunication

Connections are available. The contractor applies via the Project Manager for a connection. Connection fees and calls are for the Contractor's account.

11 Provisions for entering the Duvha's premises.

Licences

- All drivers, who drive on site, must produce their provincial license.
- Anyone who operates a mobile machine or vehicle must be passed out by the mine and have a license for that specific machine.

Vehicles

- All vehicles shall be in a roadworthy condition. The vehicles shall be inspected by the Diesel service department before these vehicles may be used on site.
- All vehicles entering the Duvha's premises shall be fitted with safety belts. (This includes all delivery vehicles).
- All vehicles transporting passengers on the back shall be fitted with the canopy and the approved seats with seat belts.

Speed Limit

- All vehicles must be driven with due consideration for personnel and property. A maximum speed limit of 40 kilometres per hour will be adhered to on the premises at all times.

12 Provisions for entering the *Employer's* premises.

Security arrangements

- The *Contractor* applies for temporary access permits (*Contractor's* Permit) at the Security gate. The *Contractor's* personnel shall be required to be in the possession of a *Contractor* Permit at all times.
- All *Contractor* personnel shall be issued with a temporary access permit (*Contractor* Permit) which will contain the following information:
 - Name
 - ID Number
 - Company

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- Validity date
- All *Contractor* permits must be submitted to Protective Services when the workers leave the Site after completion of the works.
- In order to assist Protective Services with the issuing of permits and the identification of personnel on Site, the *Contractor* is to supply a list of all personnel that he intends using on Site, at least 24 hours prior to entering the Security area. This list must be delivered to Protective Services, or can be faxed to (013) 690 0348. The list identified with the *Contractor's* name, is to contain the following information:
 - Employee Name.
 - Employee ID Number.
 - Eskom Safety Co-ordinators signature.
 - Eskom Project Manager's signature.
 - Copy of the first page of the ID book of every employee of the Contractor, photocopied to reduce the size to 65%.
- The list of details has to be completed on the special form appended to the *Contractor's* Safety Manual.
- To speed up the process of gaining access to the Site, the Contractor must compile detailed lists of all tools and equipment to be taken on Site before arriving at the Power Station Security gate. A special Tool List form is available at Protective Services. An authorised copy of this list must be retained and used again when the tools and Equipment is removed from Site after completion of the works.
- The Contractor's visitors and personnel shall conform to the security arrangements in force at the Site at all times. Application forms for visitors must be filled in by the Contractor's site manager and approved by the Employer, one day before the visit and submitted to the Employer's Protective Services office. Visitors will not be allowed on Site if the necessary forms are not in the possession of security staff.
- The Chief of Protective Services may, with valid cause, remove any of the *Contractor's* personnel from Site, either temporarily or permanently. He may deny access to the Site to any person whom, in the opinion of the said Chief of Protective Services, constitutes a security risk.
- No unauthorised vehicles will be allowed on Site. Contract vehicle application should be directed to the *Project Manager*.
- The *Contractor* will be limited to the *working areas* associated with the *works*. The *Contractor* is forbidden to enter any other areas, and must ensure that his employees abide by these regulations.
- Parking inside the power station is strictly forbidden, except for loading proposes.
- No recruiting of casual labour may be done on Eskom premises, including the area outside the power station security gate.

13 Safeguarding of Plant and Material

The *Contractor* is responsible for the safeguarding, care and security of all items whilst in the *Contractor's* custody and control, until the *Employer* has taken over the *works*.

14 Health and safety

Health and safety

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Occupational Health and Safety Act 85 of 1993 – SECTION 37

- In accordance with Section 37 (2) of the Act, the *Contractor* is appointed by the *Employer* as a mandatory to assume the duties and responsibilities as stipulated in Annexure 9 to the Contract. The *Contractor* ensures compliance with all requirements of the Act and any instruction or notification that enhances those requirements.
- The *Contractor's* person appointed on the form in Annexure 9 is a competent person as defined in the General Machinery Regulations, Section 2.1 of the Act.
- The *Contractor* acknowledges that he is fully aware of all the requirements of the Occupational Health and Safety Act and undertakes to employ only staff who have been duly authorised in terms thereof and who receive sufficient safety training to ensure that they can comply therewith.
- The *Contractor* undertakes not to do, and 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* shall appoint a person who liaises with the Eskom Safety Officer, responsible for the premises relevant to the Contract. The person appointed shall on request:
 - Supply the Eskom Safety Officer with copies of minutes of all Health and Safety Committee meetings, whenever required.
 - 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 notify the Eskom Safety Officer of any changes thereto.
- Eskom may, at any stage during the currency of this contract:
 - perform safety audits at the *Contractor's* premises, its work place and its employees;
 - refuse any employee, subcontractor or agent of the *Contractor* access to its premises if such person is found to commit any unsafe act or any unsafe working practice or is found not to be duly authorised nor qualified in terms of the Act;
 - issue the *Contractor* with a stop work order or a compliance order should the *Employer* become aware of any unsafe working procedure or condition or any non-compliance with the Act, Regulations and Procedures referred to in the Occupational Health and Safety Act - and all Regulations made thereunder as well as all the *Employer's* Safety and Operating Procedures.

14.1 Plant Safety Regulations

The *Employer* shall on request from the *Contractor*; isolate required plant from all sources of danger as described in the Plant Safety Regulations.

The *Employer* shall on request, make available a copy of the latest revision of the Plant Safety Regulations available to the *Contractor*.

The *Contractor* shall conform to all rules and regulations applicable to Plant Safety and shall complete the Workman's Register prior to working on the plant.

At every permit change the *Contractor* shall ensure he withdraws himself/herself/his staff for that period of permit suspension/revocation and thereafter only proceed with the *works* after signing onto the new permit.

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The *Contractor* to ensure that he/she/all sub-contractors/personnel/staff/his visitors are medically, physically and psychologically fit to enter the Duvha Power Station, and specifically any confined space.

The *Contractor* is prohibited from entering Radiation Areas. The Project Manager in exceptional cases shall give special permission.

The onus is on the *Contractor* to ensure that the correct confined space requirements are met and that gas tests have been done by the *Employer* prior to entry into any confined space or hazardous plant areas.

The *Contractor* shall ensure that all personnel including himself is competent to carry out the *works*. Proof of competency for technical and safety aspects must be available as and when required on site.

14.2 ACCESS

14.2.1 Limited Access Register (LAR)

The LAR is for the person in charge of the plant to maintain control over activities taking place on his plant that are not covered by the Plant Safety Regulation and Operating Regulations for High Voltage Systems. Activities that are allowed to be carried out under the LAR must not require a permit and must satisfy the following criteria:

1. They must not involve danger to the person carrying out the activity;
2. No plant isolations must be required;
3. There must be no risk of a production loss;
4. The duration of the activity must be less than 12 hours;
5. The activity must be carried out by a skilled person.

It is very important that the person who plans to do an activity on a plant under the LAR informs the person in charge of the plant (ASS on the panel or PPO at WTP) of what will be done. This means verbally telling the person in charge of the plant what will be done and not just signing the LAR book. The LAR book must also be signed.

It is also important that as soon as the activity is completed the person, who was doing the activity, notify (verbally) the person in charge of the plant that conditions are back to normal and that the LAR has been signed off. Just signing the LAR book is not sufficient.

14.2.2 RESTRICTED AREA

- a) Where access is prohibited for the purpose of power system protection and security, or to protect the health and **safety** of persons, such an area is regarded as a **restricted area**.
- b) A person must obtain permission for access to a **restricted area** through an **approved** system such as the **limited access register**.
- c) Typical examples of **restricted areas** are:
 - (i) Switch rooms.
 - (ii) Equipment Rooms, and
 - (iii) Areas where gas and environmental testing must be performed before access is allowed.
- d) Issue of keys to **restricted areas** for inspections/activity only

For more information please refer to Plant Safety Regulation C11.

14.3 Health and Safety Arrangements

The *Contractor* shall comply with the guidelines set out in the Duvha Power Station Safety Manual SAS 0012. The sheet on the first page must be completed by the *Contractor's* Site Manager and submitted to the *Employer* before taking possession of the *works*.

The *Contractor* compiles a Safety File with all the relevant information as prescribed by the Eskom Construction Regulations Assessment SAS 0012-2. This Safety File must be approved and signed by a Duvha Safety Officer before the *Contractor* and his personnel may attend the Health and Safety Induction Course. This Safety File must be reviewed by the Safety Officer on a yearly basis.

The *Contractor* ensures that all his personnel attend a Health and Safety Induction Course prior to starting with their work. The Safety Risk Department presents the induction course at Duvha Power Station. Arrangements are to be made with Safety Risk Management by the *Contractor*. The *Contractor* submits the following information to Safety Risk Management before the induction course:

- All the forms from the Safety Manual (SAS0012) relevant to the work;
- Medical certificates of the *Contractor's* personnel indicating that the personnel are fit to perform the work.

The *Contractor* to ensure that all appointments required are completed and that the appointee and appointees fully understand their responsibilities and are competent and trained to execute their duties. The appointees/appointee shall ensure that all duties are carried out and records are kept by the *Contractor* for review/audit by the *Employer* or Inspector of Machinery.

Duvha Safety Risk Management has the right and authority to visit and inspect the *Contractor's* work place or Site establishment.

The *Employer* shall be entitled to instruct the *Contractor* to stop work, without penalty to the *Employer*, where the *Contractor's* personnel fail to conform to safety standards or contravene health and safety regulations. The *Employer* is entitled to cause the *Contractor* to discipline his employees and to submit disciplinary action, and submit a report to the *Employer*. The *Contractor* shall implement addition health and safety precautions where necessary.

The *Contractor* supplies and ensures that his employees wear all the necessary personal protective equipment at all times.

The *Contractor* ensures that everyone entering Duvha Power Station under his supervision are medically, physically and psychologically fit to enter Duvha Power Station.

A Registered Professional Occupational Health Practitioner shall carry out the medical examination, at the *Contractors* cost, and the examination shall include the following tests: Eye Test, Blood Pressure, Heart Function, Hearing Test and Lung Function. A thorough examination should be done and previous physical injuries, as well as occupational diseases/complications should be covered.

If at any point in time during the execution of the Works, the *Contractor* has a radiation-related incident/exposure, the onus is on the *Contractor* to immediately notify the *Employer*, the Medical Station, the Risk Manager and the Safety Risk Management Department. The onus thereafter is for the *Contractor* to immediately arrange, at his/her cost, for blood samples to be taken by a Registered Laboratory and for this sample to be sent to the Excellerator Laboratory in Cape Town for full radiation

exposure tests. This test results are then to be discussed with the Duvha Occupational Health Practitioners, who will then advise the Power Station Management on the risk, if any, of the incident/exposure.

The *Contractor* shall and will take full responsibility and accountability for all other people/staff/personnel/labour that he/she employs or utilises, whether in full-time/part-time/contract basis, in executing the Works or other work whilst on the *Employers* premises.

The *Contractor* shall understand, participate and be fully competent in the NOSA Safety Management Systems that the *Employer* complies with.

The *Contractor* shall ensure that only Safety Harnesses are used for all work carried out in elevated positions, as defined in the Occupational Health and Safety Act, No 85 of 1993 or any other Code of Practice or standard or the draft Construction Regulations. Before any work at heights above 2 meters may be performed, the *Contractor* must complete "Criteria for Working at Heights" form and wait for approval from the *Employer* managers. Nobody may wear a Safety Harness in any Lift at any time.

All Safety Equipment or Machinery used shall only be those that comply with the SABS Codes of Quality and Practice or any Code as stipulated in the Occupational Health and Safety Act, No 85 of 1993, and any amendments thereto.

The *Contractor* shall at all times consider himself as "Employer", as defined in the Occupational Health and Safety Act, No 85 of 1993, and shall not consider himself as under supervision or management of the *Employer* with regard to Health and Safety Requirements but only from a Commercial Contractual Condition of Contract. Under no circumstances shall the *Contractor* consider himself a sub-ordinate or being given supervision.

The *Contractor* shall provide and maintain his own facilities as required in the Occupational Health and Safety Act, No 85 of 1993 or any other Code of Practice or standard or the draft Construction Regulations, if not agreed contractually or arranged by the *Employer*.

The *Contractor* shall have Safety Systems in place at his premises for the total contract period and these shall include the following:

1. Safety Management Structure and Compliance to these
2. Statutory Appointments
3. Records and documentation of all Risk and Hazard Analyses.
4. Planned Job Observations Records and Documents.
5. Employment history and records of all personnel, part-time or full-time or contract labour.
6. Medical History of all personnel, part-time or full-time or contract labour
7. Training and Competency Records with regard to Safety, Health and Environment.
8. Training and Competency Records with regard to the skills he uses to carry out the Works or any other works in the *Employers* premises.
9. Compensation Commissioner records and proof of registration.
10. Records and documentation with regard to any sub-contractor or labour-only contracts he places or uses to carry out the *Works* or any other works in *Employers* premises.
11. Personal Protective Equipment and Safety Equipment Inspection, training and competency records and documentation.
12. Employment contracts for all sub-contractor or labour-only contracts.
13. Compliance to a Safety System, such as NOSA or any other system that is similar in nature.

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14. Records of all incidents or accidents, Category A, B, C or D and vehicle accidents, incurred during execution of this *Works* or any other *Works* in the *Employers* premises.
15. Records of all man-hours, including sub-contractors or labour-only contracts, the *Contractor* spends on the *Employers* premises.
16. Written Safe Work Procedures for all hazardous tasks the *Contractor* executes on the *Employers* premises.
17. A Fall Protection Plan for all elevated work the *Contractor* does on the *Employers* premises.
18. Environmental Plan and awareness training.
19. Induction training records of his staff by himself/herself.
20. Minimum wage compliance for the different skills and to which Bargaining Council compliance is made to and proof of membership, if any.
21. Risk Assessment of this type of works
22. Proof of Pre-Job briefing session attendance for each task
23. Proof of authorisation/accreditation from Department of Labour and or other Statutory Body for this type of works, if applicable
24. Emergency Evacuation and Rescue Plan for the hazardous tasks related to the works.

14.4 Fire Precautions

Any tampering with the *Employer's* fire equipment is strictly forbidden.

All exit doors, fire escape routes, walkways, stairways, stair landings and access to electrical distribution boards must be kept free of obstruction, and not be used for work or storage at any time. Fire fighting equipment must remain accessible at all times.

In case of fire, report the location and extent of the fire to the Electrical Operating Desk at extension 2222, 2235/6..

Take the necessary action to safe guard the area to prevent injury and the spreading of the fire.

No contractor will conduct any Hot Work without a Hot Work Permit. Falling sparks and welding slag, when carrying out hot work, is prohibited. The onus is on the *Contractor* to prevent and contain falling sparks. All hot work above zero metre boiler and turbine floors must be adequately protected and screened to prevent falling sparks.

14.5 Reporting of accidents

The *Employer* follows an accident prevention policy that includes the investigation of all accidents involving personnel and property. This is done with the intention of introducing control measures to prevent a recurrence of the same incidents. The *Contractor* is expected to fully co - operate to achieve this objection. The *Employer* must be informed immediately of any Category B, C and D incidents. Category A incidents and any damage to property or equipment must be reported to the *Employer* with in 24 hours. Incident investigation report forms to be completed within 24 hours for category A, B, or C or D injuries.

Radiation incidents must be reported immediately.

In reporting Category C and D incidents, the *Contractor* shall include submit the following documents, or any additional as required by the *Employers* investigation team.

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1. Proof of Contract of Employment.
2. Proof of WCL notification to Department of Labour.
3. Proof of Medical Doctors Note/Certificate detailing nature of injury and period of rest.
4. Death Certificate, if Category C fatality.
5. Risk and Hazard Analysis, if not in place prior to injury.
6. Written Safe Working Procedure, if not in place prior to injury.

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

14.6 Radiation protection

The *Contractor* conforms to Duvha procedure HMS0002 when performing any industrial radiography.

14.7 Hazardous Substances

It is required in terms of the General Administrative Regulation (Regulation 7) that any Manufacture, Importer, Seller or Supplier of hazardous chemical substances shall supply the receiver, free of charge with sufficient information for the user. This requirement will enable the user to introduce the necessary measures as regards the protection of the health and safety of persons. It is therefore the responsibility of the supplier (dealing directly with Eskom) to supply the information as per attached list. If information is not available for whatever reason, the Supplier must indicate on the form and give reasons to Eskom. Stop 2011-06-02

14.8 Environmental Responsibilities

General

To protect the *Employer's* environmental interests, the *Contractor* complies with all relevant and appropriate environmental legal requirements contained in governmental notices, laws and regulations promulgated by the national and provincial governments.

The *Contractor* accepts all responsibility, accountability and liability associated with such legal requirements.

The *Contractor* provides the *Employer* with a product and service falling in the scope of Act 36 of 12874 or Hazardous Substances Act no 15 of 1973. The *Contractor* provides the *Employer* with all the necessary information to comply with the legal requirements of Government Notice R1179 in Government Gazette No 16596 of 25 August 1995 (Exposure of employees to Hazardous Chemical Substances) and Section 10 of the Fertilizers, Farm Feeds, Agricultural Remedies and Stock Remedies Act, No 36 of 1947 (Registered pesticides, fertilizers and agricultural remedies, including herbicides ("weed killer").

The *Contractor* adheres to all environmental legislation.

14.9 Land Management

Veld fires

The *Contractor* takes all precautions to control fires. A veld fire management plan is submitted to the *Project Manager* 2 weeks after the Contract Date for acceptance. The *Contractor* establishes and maintains firebreaks to prevent any spread of veld fires.

Erosion control

The *Contractor* takes all the necessary precautions to eliminate or minimise erosion of the *works*. Any work done is subject to acceptance by the *Project Manager*.

Any erosion damage must be repaired and the areas restored to their original condition. Such repair work is carried out as soon as possible after damage occurred.

14.10 Safety

The *Contractor* complies with the Occupational Health and Safety Act.

The *Contractor* complies with the Eskom Plant Safety Regulations and the Operating Regulations for High Voltage Systems when performing activities on the *works*.

Safety plan

The *Contractor* maintains a safety plan in accordance with the OHSA.

The *Contractor* provides safety statistical information on a monthly basis to the *Project Manager*, on the 15th of every month. Details of the reporting format and information required, are obtained from the *Project Manager*.

14.11 Standard isolation procedures

The *Contractor* designs a standard isolation procedure for the use of his workforce, as reference and training guide, to be submitted to and accepted by the *Project Manager* 2 weeks before the *possession date*. The purpose is to impress upon his workforce, the importance of safety in preventing injury to personnel, or damage to plant. The safe shut down sequence and step-by-step isolation sequence, must be listed in the procedure, in line with Eskom's Plant Safety Regulations.

14.12 Permit-to-Work arrangements

- The *Contractor* implements a Permit-to-Work system with lock-out facilities in accordance with the Eskom Plant Safety Regulations.

14.13 Meetings

The *Contractor* attends meetings as instructed by the *Project Manager*. Daily and monthly meetings are envisaged, as a minimum.

14.14 Quality

Quality Management shall comply to the *Employer's* standard GGS0462 - Quality Requirements for Engineering and Construction Works, as required in form A & B of the *Employer's* standard GGS0462, included in the Works Information.

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The *Contractor* complies with the Occupational Health and Safety Act 85 of 1993.

Personal Protective Equipment

The *Contractor* supplies, maintains and ensures that his personnel at all times wear personal protective equipment as required, including at least hard hats, safety glasses, overalls, hearing protection and safety shoes.

Safety Regulations of the *Employer*

- The *Contractor* shall conform to the Eskom Plant Safety Regulations.
- The *Employer* shall on request, make available a copy of the latest revision of the Plant Safety Regulations available to the *Contractor*.

Health and Safety Arrangements

- The *Contractor* must ensure that all his personnel attend a Health and Safety Induction Course prior to starting with any work. The Induction Course is presented by the *Employer's* Safety Risk Department at Duvha Power Station. Arrangements are to be made with Safety Risk Management by the *Contractor*.
- The *Contractor* shall comply with the guidelines set out in the Duvha Power Station Safety Manual SAS 0012. The sheet on the first page must be completed by the *Contractor* and submitted to the *Project Manager* before starting any work. This sheet will be valid for the duration of the contract.
- Safety Risk Management has the right and authority to visit and inspect the *Contractor's* work place or site yard and the *working areas* to ensure that tools; machinery and Equipment comply with the minimum safety requirements.
- The *Project Manager* may instruct the *Contractor* to stop work, where the *Contractor's* personnel fail to conform to safety standards or contravene health and safety regulations. Such stop-work order is not a compensation event. The *Project Manager* may instruct the *Contractor* to discipline his employees and to submit a disciplinary action report to the *Project Manager*. The *Contractor* shall implement addition health and safety precautions where necessary.

15. Barricading and screens

- The *Contractor* will provide and install barricades and warning devices to ensure that equipment and persons are not exposed to danger or to prevent access to dangerous areas. All welding, flame cutting and grinding work shall be properly screened to protect persons from any injury.

All gratings shall be covered with adequate protective screening when welding or flame cutting in the vicinity.

17. Environmental controls, fauna & flora

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All work complies with relevant environmental regulations as required.

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

18. Housekeeping

The *Contractor's* Equipment does not impair the operation of the plant or access to the plant.

19. SERVICES AND OTHER THINGS PROVIDED BY THE *EMPLOYER*

Items

ITEM	DATE BY WHICH IT WILL BE SUPPLIED
220V AND 380V POWER SUPPLY IS AVAILABLE AT THE EXISTING PLUGS (UNINTERRUPTED POWER SUPPLY NOT GUARANTEED).	STARTING DATE
WATER IS AVAILABLE AT THE EXISTING POINTS.	STARTING DATE
SANITARY FACILITIES PERMANENT FACILITIES TO SERVE THE POWER STATION TERRACE ARE PROVIDED BY THE EMPLOYER	
TOILET FACILITIES THE EMPLOYER PROVIDES THE CONTRACTOR ACCESS TO TOILET FACILITIES, FREE OF CHARGE.	
WASTE REMOVAL HOUSEHOLD WASTE REMOVAL TO THE BINS, AS PROVIDED ON THE SITE BY THE EMPLOYER, IS THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR COMPLIES WITH EMPLOYER'S POLICY FOR WASTE MANAGEMENT ON SITE, POLICY. 004/4100.	