



NEC3 Term Service Contract (TSC3)

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

and ***The Contractor***
(Reg No. xxxxxx)

for **The provision of Office and Ablution facilities Cleaning at
Kriel Power Station for a period of 5 years for Outside
plant**

Contents:	No of pages
Part C1 Agreements & Contract Data	[1 - 16]
Part C2 Pricing Data	[17 - 20]
Part C3 Scope of Work	[21 - 41]

CONTRACT No.

PART C1: AGREEMENTS & CONTRACT DATA

Contents:	No of pages
C1.1 Form of Offer and Acceptance	[3 - 5]
C1.2a Contract Data provided by the <i>Employer</i>	[6 - 15]
C1.2b Contract Data provided by the <i>Contractor</i>	[16]

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:

The provision of Office cleaning and ablutions at Kriel Power Station for a period of 5yrs for Outside plant

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

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

Options A	The offered total of the Prices exclusive of VAT is	R
	Sub total	R
	Value Added Tax @ 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:**

(Insert name and address of organisation)

Name &
signature of
witness

Date

Tenderer's CIDB registration number:

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

Acceptance

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

The terms of the contract, are contained in:

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

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

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

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

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

Signature(s)

Name(s)

Capacity

**for the
Employer**

(Insert name and address of organisation)

Name &
signature of
witness

Date

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

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

Note:

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

•

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

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

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

For the tenderer:**For the Employer**

Signature

Name

Capacity

On behalf
ofName &
signature
of witness

Date

(Insert name and address of organisation)

C1.2 TSC3 Contract Data

Part one - Data provided by the *Employer*

Clause	Statement	Data
1	General	
	The <i>conditions of contract</i> are the core clauses and the clauses for main Option:	
		A: Priced contract with price list
	dispute resolution Option	W1: Dispute resolution procedure
	and secondary Options	X1 – Price Adjustment for Inflation
		X2 – Changes in the Law
		X17 – Low Service Damage
		X18 – Limitation of Liability
		X19 Task Order
		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: 2002/015527/30), a juristic person incorporated in terms of the company laws of the Republic of South Africa G Bonga
	Address	Registered office at Megawatt Park, Maxwell Drive, Sandton, Johannesburg
	Tel No.	017 615 2300
	Fax No.	N/A
10.1	The <i>Service Manager</i> is (name):	T Methula
	Address	Kriel Power Station Bethal Ogies Road Kriel 2271
	Tel	(017) 615 2609
	Fax	-086 667 5402

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

e-mail

thandi.methula@eskom.co.za

11.2(2)	The Affected Property is	Kriel Power Station
11.2(13)	The <i>service</i> is	The provision of Office cleaning and ablutions at Kriel Power Station for a period of 5years for Outside plant
11.2(14)	The following matters will be included in the Risk Register	As stipulated in the Site information section of this contract.
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	24 hrs
2	The Contractor's main responsibilities	
21.1	The <i>Contractor</i> submits a first plan for acceptance within	As per Task Order , agreed between Service Manager and Contractor
3	Time	
30.1	The <i>starting date</i> is (proposed)	Acceptance occurs when the Employer signs tenderer's (i.e. Consultant's) offer. Effective Date = Start of the next calendar month when Consultant receives one fully completed original copy of Agreements and Contract Data plus schedule of deviations.
30.1	The completion date is (proposed)	
4	Testing and defects	
		Should the vehicle not be available due to repair or breakdown, an equivalent hired vehicle is to be made available so as not to cause any interruptions with supply.
4.1	Delay Damages	Any unavailability of service is R1500.00 per day.
5	Payment	
50.1	The <i>assessment interval</i> is	On or as close as possible to the 25th day of each successive month.
51.1	The <i>currency of this contract</i> is the	South African Rand
51.2	The period within which payments are made is	4 weeks.
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 LIBOUR rate applicable at the time for amounts due in other currencies. LIBOR is the 6 month London Interbank Offered Rate quoted under the caption "Money Rates" in The Wall Street Journal for the applicable currency or if no rate is quoted for the currency in question then the rate for United States Dollars, and if no such rate appears in The Wall Street Journal then the rate as quoted by the Reuters Monitor Money Rates Service (or such service as may replace the Reuters Monitor Money Rates Service) on the due date for the payment in question, adjusted *mutatis mutandis* every 6 months thereafter (and as certified, in the event of any dispute, by any manager employed in the foreign exchange department of The Standard Bank of South Africa Limited, whose appointment it shall not be necessary to prove.

6	Compensation events	(If the optional statement for this section is not used, no data will be required for this section)
	These are additional compensation events:	As per NEC3 TSC Core Clause 6 Compensation Event 60.1
7	Use of Equipment Plant and Materials	The Equipment must be used to ensure that all works are executed within specified scope of work and time.
8	Risks and insurance	
80.1	These are additional <i>Employer's</i> risks	1. As per NEC3 TSC Core Clause 8 Risks and Insurance Risks - 80.1 and insurance 83.1 and 83.2
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	whatever the <i>Contractor</i> deems necessary in

	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:	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	The termination will be as per NEC3 TSC clause 90 and reasons will be within clause 91 and procedure followed will be as per clause 92
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	4 weeks.
11	Data for Option W1	
W1.1	The <i>Adjudicator</i> is (Name)	An Adjudicator will be jointly appointed when the need arises and 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.
	Address	N/A
	Tel No.	N/A
	Fax No.	N/A
	e-mail	N/A
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	The Chairman for the time being or his nominee
	- if the arbitration procedure does not	of the Association of Arbitrators (Southern

state who selects an arbitrator, is

Africa) or its successor body.

12 Data for secondary Option clauses				
X1	Price adjustment for inflation			
X1.1	The base date for indices is	One month prior to tender closing date		
	The proportions used to calculate the Price Adjustment Factor are:	proportion	linked to index for	Index prepared by
	Labour	55	C3	SEIFSA
	Transport	15	L-2	SEIFSA
	Other Items	15	CPI	A (P0141 – Stats SA)
		15	non-adjustable	
		100		
X2	Changes in the law	No data is required for this Option		
	N/A			
X10	Employers Agent	T Methula		
X11	Termination by the Employer	The contract will be terminated at any given moment, if contractor does comply to conditions and defaulted any given scope		
X17	Low Service Damage	Low Service damage is R1500 per day		
X18	Limitation of liability	N/A		
X18.1	The <i>Contractor's</i> liability to the <i>Employer</i> for indirect or consequential loss is limited to	R0.00 (zero Rand)		
X18.2	For any one event, the <i>Contractor's</i> liability to the <i>Employer</i> for loss of or damage to the <i>Employer's</i> property is limited to	the amount of the deductibles relevant to the event described in the "Format TSC3" insurance policy available on http://www.eskom.co.za/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	<p>The total of the Prices other than for the additional excluded matters.</p> <p>The <i>Contractor's</i> total liability for the additional excluded matters is not limited.</p> <p>The additional excluded matters are amounts for which the <i>Contractor</i> is liable under this</p>		

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 Employer's property, Plant and Materials),
death of or injury to a person and
Infringement of an intellectual property right.**

X18.5	The <i>end of liability date</i> is	
X19	Task Order	
X19.5	The <i>Contractor</i> submits a Task Order programme to the <i>Service Manager</i> within	Within the same day of receiving the Task Order
Z	The <i>additional conditions of contract</i> are	Z1 to Z11 always apply.

Z1 Cession delegation and assignment

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

Z2 Joint ventures

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

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

- Z3.1 Where a change in the *Contractor's* legal status, ownership or any other change to his business composition or business dealings results in a change to the *Contractor's* B-BBEE status, the *Contractor* notifies the *Employer* within seven days of the change.
- Z3.2 The *Contractor* is required to submit an updated verification certificate and necessary supporting documentation confirming the change in his B-BBEE status to the *Service Manager* within thirty days of the notification or as otherwise instructed by the *Service Manager*.

- Z3.3 Where, as a result, the *Contractor's* B-BBEE status has decreased since the Contract Date the *Employer* may either re-negotiate this contract or alternatively, terminate the *Contractor's* obligation to Provide the Works.
- Z3.4 Failure by the *Contractor* to notify the *Employer* of a change in its B-BBEE status may constitute a reason for termination. If the *Employer* terminates in terms of this clause, the procedures on termination are P1, P2 and P4 as stated in clause 92, and the amount due is A1 and A3 as stated in clause 93.

Z4 Ethics

- Z4.1 Any offer, payment, consideration, or benefit of any kind made by the *Contractor*, which constitutes or could be construed either directly or indirectly as an illegal or corrupt practice, as an inducement or reward for the award or in execution of this contract constitutes grounds for terminating the *Contractor's* obligation to Provide the Service or taking any other action as appropriate against the *Contractor* (including civil or criminal action).
- Z4.2 The *Employer* may terminate the *Contractor's* obligation to Provide the Service if the *Contractor* (or any member of the *Contractor* where the *Contractor* constitutes a joint venture, consortium or other unincorporated grouping of two or more persons or organisations) is found guilty by a competent court, administrative or regulatory body of participating in illegal or corrupt practices.

Such practices include making of offers, payments, considerations, or benefits of any kind or otherwise, whether in connection with any procurement process or contract with the *Employer* or other people or organisations and including in circumstances where the *Contractor* or any such member is removed from the an approved vendor data base of the *Employer* as a consequence of such practice.

- Z4.3 Notwithstanding the provisions of core clause 90.2, the procedures on termination in terms of this clause are P1, P2 and P4 as stated in the core clause 92 and the amount due is A1 and A3 as stated in core clause 93.

Z5 Confidentiality

- Z5.1 The *Contractor* does not disclose or make any information arising from or in connection with this contract available to Others. This undertaking does not, however, apply to information which at the time of disclosure or thereafter, without default on the part of the *Contractor*, enters the public domain or to information which was already in the possession of the *Contractor* at the time of disclosure (evidenced by written records in existence at that time). Should the *Contractor* disclose information to Others in terms of clause 25.1, the *Contractor* ensures that the provisions of this clause are complied with by the recipient.
- Z5.2 If the *Contractor* is uncertain about whether any such information is confidential, it is to be regarded as such until notified otherwise by the *Service Manager*.
- Z5.3 In the event that the *Contractor* is, at any time, required by law to disclose any such information which is required to be kept confidential, the *Contractor*, to the extent permitted by law prior to disclosure, notifies the *Employer* so that an appropriate protection order and/or any other action can be taken if possible, prior to any disclosure. In the event that such protective order is not, or cannot, be obtained, then the *Contractor* may disclose that portion of the information which it is required to be disclosed by law and uses reasonable efforts to obtain assurances that confidential treatment will be afforded to the information so disclosed.
- Z5.4 The taking of images (whether photographs, video footage or otherwise) of the Affected Property or any portion thereof, in the course of Providing the Service and after the end of the *service period*, requires the prior written consent of the *Service Manager*. All rights in and to all such images vests exclusively in the *Employer*.
- Z5.5 The *Contractor* ensures that all his subcontractors abide by the undertakings in this clause.

Z6 Waiver and estoppel: Add to core clause 12.3:

- Z6.1 Any extension, concession, waiver or relaxation of any action stated in this contract by the Parties, the *Service Manager* or the *Adjudicator* does not constitute a waiver of rights, and does not give rise to an estoppel unless the Parties agree otherwise and confirm such agreement in writing.

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

- Z7.1 The *Contractor* undertakes to take all reasonable precautions to maintain the health and safety of persons in and about the execution of the *service*. Without limitation the *Contractor* accepts that the *Employer* may appoint him as the "Principal Contractor" (as defined and provided for under the Construction Regulations 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 *service*; and undertakes, in and about the execution of the *service*, to comply with the Construction Regulations and with all applicable health & safety laws and regulations and rules, guidelines and procedures otherwise provided for under this contract and ensures that his Subcontractors, employees and others under the *Contractor's* direction and control, likewise observe and comply with the foregoing.
- Z7.2 The *Contractor*, in and about the execution of the *service*, complies with all applicable environmental laws and regulations and rules, guidelines and procedures otherwise provided for under this contract and ensures that his Subcontractors, employees and others under the *Contractor's* direction and control, likewise observe and comply with the foregoing.

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 *Service Manager* in terms of core clause 51.1, the *Contractor* provides the *Employer* with a tax invoice in accordance with the *Employer's* procedures stated in the Service Information, showing the amount due for payment equal to that stated in the payment certificate.
- Z8.2 If the *Contractor* does not provide a tax invoice in the form and by the time required by this contract, the time by when the *Employer* is to make a payment is extended by a period equal in time to the delayed submission of the correct tax invoice. Interest due by the *Employer* in terms of core clause 51.2 is then calculated from the delayed date by when payment is to be made.
- Z8.3 The *Contractor* (if registered in South Africa in terms of the companies Act) is required to comply with the requirements of the Value Added Tax Act, no 89 of 1991 (as amended) and to include the *Employer's* VAT number 4740101508 on each invoice he submits for payment.

Z9 Notifying compensation events

- Z9.1 Delete from the last sentence in core clause 61.3, "unless the *Service Manager* should have notified the event to the *Contractor* but did not".

Z10 Employer's limitation of liability

- Z10.1 The *Employer's* liability to the *Contractor* for the *Contractor's* indirect or consequential loss is

limited to R0.00 (zero Rand)

Z10.2 The *Contractor's* entitlement under the indemnity in 82.1 is provided for in 60.1(12) and the *Employer's* liability under the indemnity is limited to compensation as provided for 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.

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

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

C1.2 Contract Data

Part two - Data provided by the *Contractor*

Notes to a tendering contractor:

1. Please read both the both the NEC3 Term Service Contract (June 2005) and the relevant parts of its Guidance Notes (TSC3-GN)³ in order to understand the implications of this Data which the tenderer is required to complete.
2. The number of the clause which requires the data is shown in the left hand column for each statement however other clauses may also use the same data
3. Where a form field like this [] appears, data is required to be inserted relevant to the option selected. Click on the form field **once** and type in the data. Otherwise complete by hand and in ink.

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

³ Available from Engineering Contract Strategies Tel 011 803 3008 Fax 011 803 3009

Clause	Statement	Data
10.1	The <i>Contractor</i> is (Name): Address Tel No. Fax No.	
11.2(8)	The <i>direct fee percentage</i> is The <i>subcontracted fee percentage</i> is	
11.2(14)	The following matters will be included in the Risk Register	
24.1	The key persons are: 1 Name: Job: Responsibilities: Qualifications: Experience:	

A	Priced contract with price list	
11.2(12)	The <i>price list</i> is in	Section 3
11.2(19)	The tendered total of the Prices is (excluding VAT)	R

PART 2: PRICING DATA

TSC3 Option A

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

C2.1 Pricing assumptions: Option A

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 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

C2.2 the *price list*

Note:

Tenderers shall allow in their rates for the cost of all materials, labour, transport, profit, supervision and all other costs which may be incurred in the proper execution of the works (access, compressed air, water, electricity etc). This could also include, but not be limited to, levies payable to any industrial councils, associations, etc that may be due by the tenderer, the cost of compliance to legislation, for instance regarding Health and Safety, compliance with Labour Legislation, etc.

PRICE LIST

ITEM	DESCRIPTION	UNIT	QTY	Rate	Amount
0	PRELIMINARY AND GENERAL				
1	SITE ESTABLISHMENT	SUM (Once Off)	1		
2	SITE DE-ESTABLISHMENT	SUM (Once Off)	1		
3	SITE MANAGER X 1	MONTHLY	60		
4	Supervisor x 2	MONTHLY	60		
5	SAFETY OFFICER X 1	MONTHLY	60		
6	SAFETY, HEALTH, ENVIRONMENTAL AND QUALITY REQUIREMENTS (EXCLUDING PPE)	SUM (Once Off)	1		
7	PPE	SUM (yearly)	5		
8	TRANSPORT	MONTHLY	60		
9	OPERATIONAL COST	MONTHLY	60		
	Sub total				
100	CLEANING SERVICE REQUIRED BASED ON THE SCOPE				
101	SECURITY BUILDING & TURNSTILES (445 m ²)	Daily and as and when	60		
102	EMD OFFICE BUILDING (390 m ²)	Daily and as and when	60		
103	MMD OFFICE BUILDING (242 m ²)	Daily and as and when	60		

104	EMD/MMD WORKSHOP (2 736 m²)	Daily and as and when	60		
105	EMD/MMD ABLUTION BLOCKS (372 m²)	Daily and as and when	60		
106	EMD/MMD LADIES ABLUTION BLOCK (63 m²)	Daily and as and when	60		
107	RIGGERS BUILDING (148 m²)	Daily and as and when	60		
108	CONTAINOR TOILET FACILITIES (Next to security turnstile entrance)	Daily and as and when	60		
109	PLATERSHOP BUILDING (1 100 m²)	Daily and as and when	60		
110	MAINTENANCE TRAINING BUILDING (1 038 m²)	Daily and as and when	60		
111	NORTH BLOCK ABLUTION (650 m²)	Daily and as and when	60		
112	COAL LAB BUILDING (117 m²)	Daily and as and when	60		
113	LABORATORY BUILDING (960 m²)	Daily and as and when	60		
114	CID BUILDING (145 m²)	Daily and as and when	60		
115	MEDICAL/FIRE STATION BUILDING (812 m²)	Daily and as and when	60		
116	ENGINEERING BUILDING (1 014 m²)	Daily and as and when	60		
117	MAIN OFFICE BUILDING (2 223 m²)	Daily and as and when	60		
118	OFFICE SERVICES BUILDING (264 m²)	Daily and as and when	60		
119	PREFAB NEXT OPPOSITE OFFICE SERVICES(EP centre) (105 m²)	Daily and as and when	60		
120	INDABA BUILDING (489 m²)	Daily and as and when	60		
121	ECAS/CANTEEN BUILDING (928 m²)	Daily and as and when Plus doing the following every Wednesdays and Fridays: SCRUBBING OF KITCHEN DRAINS &	60		

		COVERS USING DRAIN CLEANER			
		DECONTAMINATION OF THE MAIN KITCHEN			
		<ul style="list-style-type: none"> disinfection of all tables pressure cleaning of floor tiles washing of kitchen, dining area and VIP walls Removing grimes underneath the stoves. scrubbing of cooking equipment's (cooking stoves) removing grimes 			
121	SOWETO BUILDING (569 m ²)	Daily and as and when	60		
122	CED BUILDING (916 m ²)	Daily and as and when	60		
123	SIEMENS BUILDING(260m ²)	Daily and as and when	60		
124	OUTAGE BUILDING (489 m ²)	Daily and as and when	60		
125	MILL SQUAD BUILDING (720 m ²)	Daily and as and when	60		
126	CIVIL MAINTENANCE BUILDING (320 m ²)	Daily and as and when	60		
127	BUYING/TRANSPORT BUILDING (602 m ²)	Daily and as and when	60		
128	STORES BUILDING (4 752 m ²)	Daily and as and when	60		
129	STEINMULLER BUILDING (263 m ²)	Daily and as and when	60		

130	CAPE CONTRACTOR'S BUILDING (102 m ²)	Daily and as and when	60		
131	ROTEK BUILDING (540 m ²)	Daily and as and when	60		
132	SULZER BUILDING (142 m ²)	Daily and as and when	60		
133	HP PUMP HOUSE (210 m ²)	Daily and as and when	60		
134	KWANALA HALL (1 380 m ²)	Daily and as and when	60		
135	KWANALA CONFERENCE CENTRE (364 m ²)	Daily and as and when	60		
136	IT STORE ROOM (81 m ²)	Daily and as and when	60		
137	MAIN SILO COMPLEX CONTROL ROOM AND TOILETS (BACK OF STORES SALVAGE YARD) (77 m ²)	Daily and as and when	60		
138	COAL PLANT OPERATORS CABIN AND TOILETS (BEHIND MILLS SQUAD) (136 m ²)	Daily and as and when	60		
139	WASHING OF CARPETS (12 50 m ²) AND UPHOLSTERY CHAIRS (5 166)	As and when required.	60		
140	SOUTHGATE SECURITY OFFICE (12 m ²)	Daily and as and when	60		
141	SECURITY MAIN ENTRANCE clean daily (445m ²)	Daily and as and when	60		
142	SIEMENS BULIDING (168m2)	Daily and as and when	60		
143	SIEMENS VERANDER (102m2)	Daily and as and when	60		
144	NEW OUTAGE ADDITIONAL BUILDING(additional/new)	Daily and as and when	60		

	(36m2)				
145	NEW OUTAGE ADDITIONAL BUILDING (additional/new) (27m2)	Daily and as and when	60		
146	NEW OUTAGE ADDITIONAL BUILDING (additional/new)(24m2)	Daily and as and when	60		
147	NEW OUTAGE ADDITIONAL BUILDING (additional/new) (36m2)	Daily and as and when	60		
148	NEW OUTAGE ADDITIONAL BUILDING (additional/new)(36m2)	Daily and as and when	60		
149	CHANGE ROOMS next to MMD (additional/new) (24M2)	Daily and as and when	60		
150	HUB Building (in town)284M2	Daily and as and when	60		
151	Compressor ladies changeroom container- 24M2	Daily and as and when	60		
152	Horticulture Building(264m2)	Daily and as and when	60		
153	Laboratory analysis container(32m2)	Daily and as and when	60		
154	WASHING OF POOL VEHICLES AT TRANSPORT (20 PER DAY) AND ONLY 5 ON FRIDAY	Daily	60		
155	ECAS/KITCHEN- WASHING OF VERANDER IN FRONT OF DINING AREA DELIVERY AREA 136m2)	Daily and as and when	60		

156	WASHING OF SWILL DUSTBINS AT THE KITCHEN/ECAS: BINS(WHITE)x 8 and BIG DUSTBINS WITH WHEELS(WHITE)x2	Daily	60		
157	Podokie (Oscar) 12m2 NEXT TO CIVIL.	Daily and as and when	60		
158	Washing of chairs and couches (5000)	As and when required.	60		
TOTAL TENDER AMOUNT (Excluding VAT and CPA)					

Item no.	Description	Unit	Qty	Rate	Amount
300	Rates for overtime during Weekdays and Saturdays:		monthly		
301	Supervisor	Hour	60		
302	Safety Officer	Hour	60		
303	Cleaners	Hour	60		
400	Rates for overtime during Sundays and Public Holidays:		monthly		
401	Supervisor	Hour	60		
402	Safety Officer	Hour	60		
403	cleaners	Hour	60		

Document reference	Title : The provision of Office cleaning and ablutions at Kriel Power Station for a period of 5 years for Outside plant	No of pages
	This cover page	
C3.1	<i>Employer's</i> Service Information	
C3.2	<i>Contractor's</i> Service Information	
	Total number of pages	

C3.1: EMPLOYER'S SERVICE INFORMATION

WORKS INFORMATION

SECTION 1 - GENERAL INFORMATION

1. Site Inspection and Discussions

The *contractor* acknowledges that he has satisfied himself, before submitting his tender, as to the layout of the premises, the quantities and nature of work and labour, materials and equipment necessary for the completion of the offices and ablutions cleaning services, additional services, the means of access to the premises and, in general, shall himself obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect his contract.

2. Supervision

- 2.1 The *contractor* is expected to provide the total infrastructure to competently fulfill the requirements of this contract. This shall include adequate management and supervision at all levels.
- 2.2 The *contractor* is required to submit a staff structure indicating management and supervisory levels. Eskom's contract manager must approve any change to such staff structure and after such approval; the *contractor* shall submit an updated staff structure to the contract manager.

3. Meetings and inspections

- 3.1 Site meetings between *the contractor* and Eskom management shall be held at regular intervals.
- 3.2 Inspections of the areas to be cleaned shall be carried out every week by both contractor senior staff and Eskom representatives. Should there be problems identified during such inspections, actions shall be taken to ensure rectification of those deviations.

SECTION 2 - GENERAL SCOPE OF WORK

1. Description of the service

Provision of cleaning service for offices and ablution facilities at Kriel Power Station for a period of 5 years

Please note: According to Eskom daily means the area must be kept clean daily and at all times.

1.1 Resilient floor (vinyl or linoleum)

A. Sweep with dust control Mops	A. DAILY
This replaces the old fashioned broom and is highly magnet to dust and have the electrostatic charge.	
B. Burnish with floor machine	EVERY SECOND WEEK
This is done with an industrial polisher which actual burnish the polish on the floor surface giving it a highly-glossed non-slippery finished.	
C. Wash traffic areas	DAILY
After floor has seen heavy traffic for a lengthy period .obviously wear and tear to the glossy surface can be expected .when this occurs the floor coating is then applied to its original gloss finish	
1.12 Parquet and wooden flooring	DAILY
A. As for resilient flooring	
1.13 Ceramic tiles, quartzite	DAILY
A. Sweep and control mops	DAILY
B. Damp mop or machine –buff according to situation	DAILY
C. Machine and scrub	MONTHLY
D. Stripping of floors	EVERY TWO MONTHS
1.14 Internal concrete and Grano	DAILY
A. Sweep	DAILY
B. Damp mop only	DAILY
1.15 Rugs and Carpets	DAILY
A.Scrub wooden tiles with special shampoo and polish	DAILY
B. Remove spot marks from carpets and shampoo when necessary	DAILY
1.16 Waste disposal	DAILY
• Empty office and toilet dustbins	
A. Empty and clean dust bins	DAILY
B. Remove rubbish to agreed location	DAILY
1.17 Dusting	DAILY
A.Dust all horizontal surface to height of two (2 meters)	DAILY
B.Dust accessible high ledges and fittings	
C. Dust all vertical surfaces (walls and cabinets)	DAILY
D. Wipe all telephones	DAILY
E. Dust windows still at low levels	DAILY
F. Dust blinds and windows	DAILY
G. Dust light and lights fittings	DAILY

1.18 Walls and Paint work	
A .Wash and spot clean marks from lights, doors and door handles ,walls up to 2M and cabinets, lockers wood and steel .	DAILY
1.19 Glass and Metal work	DAILY
A. Spot clean glass doors	DAILY
B. Clean and polish all bright metal fitting	DAILY
1.20 Foyers and entrances	DAILY
A. Sweep all entrance steps, wash and polish	DAILY
B. Clean door mats and walls	DAILY
C. Damp the concrete entrances.	DAILY
1.21 Stairs	DAILY
A. Clean and polish hand rails and fittings	DAILY
B. Maintain landings, treads and rises according to finish	DAILY
C. Fire escape –sweep and wash	DAILY
1.22 Toilets, Wash rooms (showers)and additional requirements to kitchen	
A. Empty and clean all waste receptacles /bins	CONTINUOUSLY
B. Clean and sanitize all bowls, basin, urinals	CONTINUOUSLY
C. Clean mirrors	DAILY
D. Clean and polish all bright metal fitting	DAILY
E. Clean walls, doors and door handles	DAILY
F. Clean showers and shower doors , wall tiles, scrub the floor tiles and clean drains pipes	CONTINUOUSLY
G. Wash all kinds of dishes (Plates, sourcers, cups, Tupperware, big stainless steel carriers when there is a function)	CONTINUOUSLY
H. Defrost and clean fridges	ONCE A MONTH
I. Clean microwaves	DAILY
J. Clean kitchen cupboards	ONCE A MONTH
1.23 Miscellaneous	
A. Polish all wooden desk tops and cabinets	ONCE A WEEK
B. Clean boardroom	CONTINUOUSLY
C. Wash carpets and upholstery furnisher	WHEN NECESSARY
1.24 Windows and portioning glass	
A .Clean accessories exterior and interior of all windows	ONCE A MONTH
B. Clean both faces and partition glasses	DAILY
C. Clean windows at security, main building, all other offices	CONTINUOUSLY
1.25 ADDITIONAL SERVICES	
B. Car washing Wash Eskom pool (approximately 10 per day) including vacuum cleaning .cleaning area and water were washing of vehicles taking place will be supplier by Eskom .All necessary equipment and cleaning material will be supplied by the supplier .	DAILY
C. Medical Centre and fire station The wet rocks system must be used to clean these areas.(specific method ,sanitizers and chemicals) Chemical using on site	DAILY
	WEEKLY

<p>Chemicals, Equipment and Machines</p> <ul style="list-style-type: none"> • Wooden tiles shampoo and polish • Strep chemical • Self-shine liquid polish • Handy andy • Furniture –spray polish • Bleach • Buffing/scrubber machine x2 with pads • Vacuum cleaner x 4 (1) for transport department. • Toilet bowl • Jeyes fluid • Sanitizer for employees • Pine gel • Floor stripping chemical • Oven cleaner • Window lane • Drain cleaner • All purpose • Caustic soda <p>Equipment</p> <ul style="list-style-type: none"> • Dusting microfibre cloths (replaced yearly) <ul style="list-style-type: none"> • Dishwashing cloths (replaced every 6 months) • Wooden brooms • Yellow mop bucket trolleys with handles • Industrial-microfibre mops • Heavy rubber gloves • Dust pans with brooms long handle set • Toilet brushes with holders • Feather dusters with long arms • Feather duster with short arms • Step ladders • Plastic Buckets • Window cleaner sets with long and short arms • Floor wiper with handles with accessories • Caution portable boards • 20M extension cord x 2 (1 for transport carwash) • Hose pipes x2 – 30M x 20mm for kitchen and transport with fittings • Black plastic bags(large)for refuse removal • Dustbin plastic bags for office bins • Scoring steel pot • Scrubbing brushes(small) • Carpet washer machine x1 • Pressure cleaning machine x2 for transport and kitchen 	
<p>Kitchen</p> <ul style="list-style-type: none"> • Bacterex (SABS 1853) • Sunlight liquid (SABS 1828) • Fatslov (SABS 1828) 	DAILY
<p>1.26 Working hours Monday to Thursday 07h00-16h15 Friday 07h00- 12h00 Lunch time:30 minutes Weekends and public holidays Additional shift required from 19h00-07h00</p>	

In the following areas:	
North ablution block 650m ² EMD / MMD ablution blocks 372m ² EMD / MMD ladies ablution blocks 372m ² Mill squad building 720m ² Coal plant operator's cabin and toilets behind mill squad 136m ² Toilets behind mills squad 136m ² Security building & Turnstiles 445m ² Station cleaning 230m ²	

NB: Additional shift will also be utilized to clean ablution facilities during functions at building inside and outside the power station.

Additional staff will also be required during outage. working shifts as well.

The ladies' ablutions will be cleaned by ladies and men ablution will be cleaned by men.

2. General scope of work

The *contractor* will be responsible for the planning of the cleaning activities and the supply and delivery to site of all cleaning equipment, materials and services needed during the cleaning.

The *contractor* shall supply their own offices, appropriate storage facilities for cleaning equipment and chemicals. Eskom will provide the power supply.

All equipment used for cleaning purposes shall be maintained in good order and conform to statutory requirements.

The cleaning contractor should take note that Kriel Power Station has a duty to achieve or sustain a 5-star NOSA rating of which housekeeping plays a major role on, thus reliance will be on this contract.

Cleaning staff shall at all times be presentable and conduct themselves in accordance with Kriel Power Station accepted practices.

3. Cleanliness

The objective of a cleaning contract is to achieve and maintain clean and safe offices and ablution facilities. The activities indicated in the office cleaning scope are an employer's estimate of activities and time intervals needed to achieve clean offices and ablutions. It remains the responsibility of the *contractor* to ensure that these estimates are sufficient and to adjust these estimates whenever necessary and ensure clean offices and ablutions.

4. Amendment of scope of work or schedule

- 4.1 Eskom may at any time amend, alter the scope or extend the service and the *contractor* shall be obliged to execute such amendments.
- 4.2 Should such variation or amendment result in the *contractor* incurring additional cost, Eskom shall be obliged to compensate the *contractor* for the reasonable cost thereof. Should such a variation or amendment have the effect of a cost saving to the *contractor*, then the *contractor* shall be obliged to pass a reasonable part of these costs on to Eskom.
- 4.3 Should such modification or variation occur, then the modification must be confirmed in writing by Eskom, and the proposed contract be amended accordingly before payment will be effected.

5. Consumables

The *contractor* must supply all cleaning equipment, chemicals and consumables, which must be listed. Except as otherwise expressly provided herein, the *contractor* shall supply all labour, supervision, tools, equipment and consumable materials, and each and every item of expense necessary for the performance of the work, which shall include but not limited to the scope as defined in the specification of scope.

6. Resource requirements

6.1 All resource requirements will remain flexible to increase or decrease during the contract period with corresponding rate changes.

6.2 The resources shall be controlled by Eskom operating support managers and operating support contract supervisors.

7. STANDARD SHEQ REQUIREMENTS TO ALL ENTERING AND PERFORMING WORK ON ESKOM HOLDINGS SOC (PTY) LTD PREMISES

7.1 SAFETY

- The contractor shall conduct a safety inspection and hold a meeting with all employees once per month.
- The minutes of the meeting must be handed in to Eskom not later than the 4th last working day of the current month.
- The contractor is responsible to ensure the safety of all employees as far as practicable without risk to their health.
- The contractor must provide Eskom with a report of each employee's yearly medical screening not later than end February of every year.
- The contractor is responsible to report all safety deficiencies to Eskom immediately for action.
- The site supervisor must keep the companies Contractors Safety File updated and hand it in for Auditing purposes on a quarterly basis.

- **Safety Equipment**

- Appropriate safety equipment such as a self-contained breathing apparatus, life buoys and lifelines shall be made available by the Employer's Representative at a relevant places at the plant, e.g. chlorine house, etc. The Contractor will be responsible for maintenance of this safety equipment.
 - The Employer shall initially provide all exposed moving parts of machinery with safety guards. These guards shall be maintained and repaired by the employer.
 - The Contractor shall train his employees at the plants in the use of safety equipment.
 - No employee shall be allowed to work unaccompanied at and/or on potentially dangerous equipment and areas, e.g. chlorinating equipment / house, etc.
 - The contractor shall hold at least once a month a safety meeting and keep records thereof for perusal by the asset owner as and when required. The meeting will also include a work team discussion and a discussion regarding IBI. The employer will attend the meeting as and when required to ensure effective implementation of the program. Date list to be provided to the employer by the contractor.
 - The contractor is required to attend the station's main safety meeting which is held once a month and give feedback as required.
 - The minutes of the Safety and work team session meetings must be handed in to Eskom not later than the 1st working day of the next month.
 - The contractor must provide Eskom with a report of each employee's yearly medical screening not later than end March of the year.
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- The contractor is responsible to report all safety deficiencies to Eskom immediately for action.

Safety Officer

Develop and Maintain a Safety Risk Programme

Administer the safety incident reporting systems and check that the reporting, recording and investigation systems are in compliance with statutory and all Generation mandatory requirements.

Coordinate Safety Training Programme

Implement a marketing programme to create a safety awareness amongst all employees.

Perform any other legitimate activity as required.

Contractor to supply the following in order to perform the aforementioned works:

- Tools: (Supplied by the Contractor)
- Wheelbarrows
- Brooms
- Feather dusters
- Specialised tools such as pressure cleaners and vacuums will be provided by the Employer. Sufficient tools to be provided according to the number of cleaners assigned to perform works in the specified plant.
- Personal Protective Equipment (P.P.E): (Supplied by the Contractor)
- Safety Boots
- Safety Glasses
- Ear Plugs
- Overalls displaying **Company name**
- Hard hats as per ESKOM requirements

Specialized Personal Protective Equipment (P.P.E) such as Safety Harnesses will be provided by the contractor, and the training required utilizing the equipment. Procedures for spillages will be provided before contract award. Personal Protective Equipment (P.P.E) to be provided to all Employees as and when required, damaged Personal Protective Equipment (P.P.E) must be replaced.

a. ENVIRONMENTAL MANAGEMENT SYSTEM

- All service providers appointed to render any services within Eskom Kriel Power Station are required to comply with the station's Environmental Management System requirements.
 - All service providers appointed to render any services within Eskom Kriel Power Station are required to comply with the station's Environmental Management System requirements.
 - NB: Before commencing with any work, the service providers are required to visit the station's environmental section for evaluation. The station's environmental practitioner will evaluate the services to be rendered by the service provider and therefore allocate relevant legal and other requirements documents which the contractor shall comply with during the works. The service provider together with Eskom's Environmental practitioner shall sign in the Environmental Agreement Register to indicate that the agreement is reached.
 - The service provider shall then commence with the works but paying inordinate attention towards implementing the relevant legal and other requirements measures as agreed in the register. Failure to comply with this agreement may ultimately lead to the termination of this contract. This requirement shall also be clearly stipulated in the NEC contracts between Eskom Kriel Power Station and any service providers.
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- It should always be noted that Kriel Power Station is ISO14001 certified and therefore promotes Integrated Environmental Management (IEM) philosophy which aims to achieve a desirable balance between conservation and development. All activities taking place within Kriel Power Station must consider section 28 of the National Environmental Management Act (107 of 1998) which makes provision for the duty of care approach. The contractor's team must commit to review and to continually improve environmental management, with the objective of improving overall environmental performance. The Contractor must consult with Kriel Environmental section on a regular basis for on-going assistance and advices.

The EMS shall clearly cover the following areas as per ISO 14001;

- Environmental policy
- Environmental legal and other requirements
- Risk Assessments/Aspects & Impacts Register
- Improved management of monitoring and measurement documentation (e.g. devices calibration certificates)
- Provision of necessary resources (e.g. computers, adequate human resource) and allocation of roles and responsibility (through clear appointments) to achieve effective implementation of the EMS.
- Continuous commitment towards complying with operational controls such as work instructions, operational procedures, etc. (either provided by the Contractor or by Eskom) as well as emergency preparedness and response procedures/plans.
- The contractor shall continually evaluate the compliance to legal requirements (e.g. sewage treatment plant permits and other applicable legislation); this should also be documented within the monthly environmental site inspections reports.
- Kriel Power Station's procedure for non-conformity, corrective action and preventive actions shall be followed in case of the environmental incidents.
- Setting of KPI's and
- Contingency plans.

Environmental Management Programmes

- Environmental Management Programmes shall be established and maintained to ensure that objectives and targets are achieved.
- Audits
Audits covering various Environmental aspects, Safety, Operational, IBI and Maintenance Management at the plant shall be carried out within an acceptable interval to ensure compliance with statutory requirements and Eskom's policies, Directives, procedures etc.

Handling of waste produced by the Contractor

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

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

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

Waste from the cleaning and maintenance of equipment

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

NB: There will be no chemical store in coke bottle, the chemicals will be labelled proper storage containers

Stockpiling of waste

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

Appointments

- The Service manager needs to approve all new appointments / persons / interviews of fix term contractors / temporary contractors / permanent employees / site management appointed at Kriel Power Station.

Hazardous waste

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

b. QUALITY MANAGEMENT**Quality management system**

The *Contractor* shall be required to demonstrate by means of a Contract Quality Plan (CQP) that this organisation is so structured that all the requirements of the specification will be properly monitored and controlled. The Contract Quality Plan (CQP), which must include the Quality Control Plan (QCP), is to be drafted in accordance with QM-58 and the Supplier Contract Quality Requirement Specification (QM58). The Quality documents are to be submitted for approval to *the Project Manager* within thirty (30) days after a contract has been awarded to the *Contractor*.

No work may commence unless the Contract Quality Plan and Quality Control Plan documents have been approved in writing and a copy submitted to *the Project Manager*. The *Contractor*, in conjunction with *the Project Manager* must sign off all Quality Control documents after completing all work as per the agreed scope. The *Contractor* to submit a copy of the final signed off documents/data packages to *the Project Manager* within one (1) week after completion of work.

The *Contractor* shall be required to read and fully understand the contents of the Supplier Contract Quality Requirement Specification (QM58) and a copy is to be kept in possession or on premises.

The Supplier Contract Quality Requirement Specification (QM58) shall remain applicable in the event of the contract being extended or modified for reasons permitted.

By signature and acceptance of this contract the *Contractor* acknowledges and agrees to comply with and adhere to Eskom's policies and procedures (current and/or latest revisions) including the Supplier Contract Quality Requirement Specification (QM58).

Contract Quality Management Plan Requirement

The *Contractor* prepares a contract quality management plan that, where appropriate, indicates the following:

- Indicates the interface with the *Contractors* quality system and applicable documents such as procedures and work instructions
-

- Establishes communication channels between the *Contractor* and the *Project Manager* in respect of quality and the integration of such with the prescribed contract communication channels
- Indicates how specific subcontractors will be monitored
- Identifies items or activities for which quality control plans will be prepared
- Identifies the specifications, drawings and acceptance criteria for material for which quality control plans are not required
- Identifies the areas or processes requiring special controls
- Identifies the *Contractor's* Management Representative and personnel responsible for the control of quality activities and their relationship to the *Contractor's* management structure
- Identifies the documents which are to be submitted to the Project Manager
- Indicates the *Contractor's* quality monitoring programme

The *Contractor* periodically updates the contract quality management plan to reflect changes in any of the above details. The frequency of such updates is determined by the Project Manager but will not be greater than one year.

Quality Control Plan

The *Contractor's* or Subcontractor's quality control plans cover inspection and test proposals for items or activities to be supplied as part of the *works*.

The quality control plan indicates the following as appropriate:

- The identification of the item.
- The material.
- A list of the sequence of operations including inspections and tests.
- The identification of the specification, drawings or procedures for each operation.
- The acceptance criteria with reference to the appropriate technical specification, in-house, national or international standard and relevant clause number.
- The inspections and tests the *Contractor* has nominated for hold and witness points.
- Provision for inspections and tests nominated by the *Project Manager*.
- Provision for inspection status indication.
- Inspection and test records which are generated by the *Contractor*.

The quality control plans are reviewed by the *Project Manager* to allow for insertion of his specific requirements, including hold and witness points, prior to commencement of work. The *Contractor* does not commence work until the *Project Manager* accepts.

8. SPECIFICATIONS

SPECIFICATION, PROCEDURES, STANDARDS, POLICIES, ACTS

	Origin	Type	No. / shts. / rev.	Description
1	Eskom	Standard	240-62196227	Life-saving Rules Standard
2	Eskom	Procedure	32-93:	Vehicle and Drive Safety Management Procedure
3	Kriel Power Station	Procedure	ESP 32-345	Vehicle Safety Specifications
4	Kriel Power Station			Vehicle Requirement Checklist

5	Eskom	Act Agreement	37(2)	OHSA 37(2) Agreement 240-59678141
6	Kriel	Procedure	RSR0001	Safety, Health And Environment Requirements For Contractors At Kriel P/S
7		ACT		Occupational Health and Safety Act and Regulations No85 of 1993.
8	Eskom	Policy	32-727	Safety, Health, Environmental And Quality Policy
9	ISO 9001	Procedure	QM-58	Supplier Contract Quality Requirements Specification
10	Eskom	Procedure	32-245	Waste Management Procedure
11	Eskom	Procedure	32-418	Working from Heights Procedure
12	Eskom	Standard	34-1710	Provision and Use of Personal Protective Equipment
13	Eskom	Procedure	32-681:	Plant Safety Regulation
14	Kriel Power Station	Procedure	RER 0221	Environmental Management System: Waste Management Procedure
15	Kriel Power Station	Procedure	RER 0207	Environmental Management System Manual
16	Kriel Power Station	Procedure	RER 0093	Environmental Management System: Competence, Training & Awareness
17	Eskom	Standard	36-775	Welding Control Standard
18	Eskom	Procedure	ESKASAAA	Approval Of Personnel Performing Quality Related Special Processes On All Eskom Plant
19	Eskom - Generation	Procedure	OPS 3450/17-2	Standard Specification For Quality Assurance, Quality Control And Inspection Requirement
20	Kriel Power Station	Procedure	RER 0223	Oil Spillage Response Procedure
21	Eskom	Policy	32-36	Smoking Policy
22	Eskom	Procedure	32-407	Behaviour Observation Procedure
23	Kriel Power Station	Procedure	RIR0113	Kriel Emergency Management Response Plan

9. INVOICING AND PAYMENT

Within one week of receiving a payment certificate from the *Service Manager* in terms of core clause 51.1, the *Contractor* provides the *Employer* with a tax invoice showing the amount due for payment equal to that stated in the *Service Manager's* payment certificate.

The *Contractor* shall address the tax invoice to:

Eskom Holdings SOC Limited
 Reg. No. 2002/015527/06
 Accounts Payable
 Att. Malinda Holder
 Kriel Power Station
 Private Bag X5009
 Kriel 2271

The Contractor keeps records of all invoices submitted and paid up to the end of the project, as well as details of Actual Costs. Assessments will be done on the 25th of each month.

Office and Ablution Cleaning at Kriel Power Station

MPKRI10346GX

All invoices are hand delivered to the Kriel Finance Department (Account payables) and include on each invoice the following information:

Name and address of the *Contractor* and the *Service Manager*;

The contract number and title;

Contractor's VAT registration number;

The *Employer's* VAT registration number 4740101508;

Description of service provided for each item invoiced based on the Price List;

Total amount invoiced excluding VAT, the VAT and the invoiced amount including VAT

10. PROJECT METHODOLOGY

▪ General

The *Contractor* is responsible for carrying out all activities and supplying everything necessary to provide the *Works* in accordance with the requirements of the *Works Information*. This includes clarifying and co-ordination with plant engineers, and the *Employers Representative*. A fully integrated, working system is provided which meets safety, reliability and operability criteria and performs all modulating control, binary control, safety and protection functions and supervisory functions as detailed in the *Works Information*.

It is the responsibility of the *Contractor* throughout the execution of the different contract activities to address to and obtain acceptance from the *Employers Representative*:

▪ Construction on Site

The *works* forming part of the testing and commissioning, is not embarked on until the *Employers Representative's* acceptance has been obtained for construction and erection work performed in this stage.

▪ Installation, Inspection and Testing

This stage is the installation, inspection and testing of all supplied items forming part of the whole of the *works*. This stage includes all field equipment and testing system functionality.

Such tests as may be required by the *Employers Representative* are carried out by the *Contractor* after erection to prove compliance with the *Works Information* irrespective of any tests, which may have been carried out at the manufacturer's factory. The *Employer* reserves the right to appoint representatives to inspect all parts during erection and to be present at any of the tests specified. The *Employers Representative* is free to specify hold and witness points during the installation and testing stages of the project. The *Contractor* issues preliminary notification of such hold and witness points to the *Employers Representative*, and confirms such hold and witness points at least seven days prior to the test activity. The *Contractor* provides the entire test Equipment required for site testing.

▪ Commissioning

This is defined as bringing into service all items of the *works* as specified, meeting the requirements of the functional *Works Information* and plant performance including all necessary testing and verification of the stated performance. The equipment covered by the *Works Information* is installed and complete in all respects by the dates stated in the Accepted Programme.

The *Contractor* commissions the installed system according to his commissioning procedures that will be handed to the *Employers Representative* for acceptance before commissioning may commence.

The *Contractor* will notify the *Employers Representative* 24 hours prior to commissioning to allow for the notification of relevant role players to be available as witnesses.

■ Completion

In accordance with the *Works* information, *the works* is completed by the *Completion Dates* as per the latest agreed programme between the *Employer and Contractor*.

11. CONTRACTOR'S RESPONSIBILITY**■ Access to the contractor's and subcontractor(s) premises and facilities**

The *Contractor* and/or its subcontractor gives access to the *Supervisor* and/or the Authority/Agency and the Regulator where appropriate to their premises and facilities at reasonable times to conduct quality assessments, audits, surveillances and inspections to establish compliance with the contractual requirements.

■ Inspection And Testing

The *Contractor* gives at least 72 hours advance notification to the *Supervisor* or the Authority for inspection/test and hold or witness points, which require their attendance. The *Contractor* confirms readiness for inspection at least 24 hours prior to the test.

The *Contractor* ensures that all work has been fully inspected, accepted and documented prior to requesting any inspection by the *Supervisor*.

■ Kriel Permit To Work System

The *Contractor* will ensure that he/she is informed of all the requirements of Eskom's Plant Safety Regulations and ORHVS and that he/she at all times comply to the requirements of these Regulations.

The *Contractor* will ensure that all his supervisors who are directly involved with Eskom's Permit to Work System, shall be trained and on successful completion of Kriel's authorization / evaluation process will be authorized as "Responsible Persons".

The Responsible Person shall ensure that:

- The conditions of permits and cautionary notices are strictly adhered to
- The lockout procedures, mechanical as well as electrical, are strictly adhered to and any deviations shall be corrected immediately
- The safe work procedures as laid down by Kriel Power Station and as determined by the Risk Assessment, shall be followed
- The workers register and cautionary notices are discussed daily with workers

■ Safety Management

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 a fire, report the location and extent of the fire to the Electrical Operating Desk at extension 2555.
 - Take the necessary action to safe guard the area to prevent injury and spreading of the fire.
-

Reporting Of Accidents

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

Barricading And Screens

- The Contractor provides and installs barricades and warning devices to ensure that equipment and persons are not exposed to danger or to prevent access to dangerous areas.
- All welding, flame cutting and grinding work are properly screened to protect persons from any injury.
- All gratings are covered with adequate protective screening when welding or flame cutting in the vicinity.
- Ensure construction regulation file compiles
- Updated and signed once a month by the Safety Officer

Speed Limit

- All vehicles are driven with due consideration for personnel and property.
- A maximum speed limit of 40 kilometres per hour and 10 kilometres per hour within the Units is adhered to on the premises at all times.

12. STATUTORY APPOINTMENTS

The Principal Contractor must compile a statutory occupational health, safety and environmental structure for the contract and the relevant people must be appointed in writing. Copies of these appointments should be available on site for inspection and audits.

The Principal Contractor must also compile an organogram for the project.

List of minimum statutory appointments required (where applicable), as required by the OHS Act:

OHS Act, Section 16(2)	Employer
OHS Act, GMR 2(1)	Supervision of Machinery
OHS Act, GMR 2(7)	Assist the designated person
OHS Act, CR 6(1)	Construction Supervisor
OHS Act, CR 6(2)	Construction Supervisor
OHS Act, Section 17	Health and Safety Rep
OHS Act, GAR 9	Incident investigation
OHS Act, CR 19	Explosive Powered Tools
OHS Act, GSR 3	First Aiders

13. SITE SERVICES AND PROCEDURES

Workshops and Stores

- The *Contractor* shall provide, for his own use adequate size offices.
- A cleaning service must also be provided.
- Domestic rubbish will be removed free of charge.
- The *Contractor* shall dismantle and clear off site all such infrastructure at the direction of the *Employer* on completion of the contract.
- No such dismantling and clearance work shall be carried out without prior approval by the *Employer*.
- Any electrical equipment or appliances used by the *Contractor* shall conform to the applicable South African Safety standards and Kriel standard PSR 010, and shall be maintained in safe and proper working condition.
- The *Employer* shall have the right to stop the *Contractor's* use of any electrical equipment or appliance, which in the *Employer's* opinion does not conform to the foregoing.

Site Location

- The *site supervisor* will indicate the boundary of the site.
- The *Contractor* is to mark the boundaries of his site clearly.
- The *Contractor* is to ensure that all his material and equipment is always within the boundaries of his site.
- A site for the *Contractor* will be provided within easy access to the *Works*. (The exact position will be determined on site).
- The *Contractor* will include in his tendered price for all costs for further treatment of the yard area that he considers necessary.
- The *Contractor* shall also include for such items as security, watch and access arrangements to his yard area, as he deems necessary.
- The *Contractor* shall not occupy any site area other than that located to him
- On completion of the *Works* on Site, all areas allocated to the *Contractor* shall be re-instated to their former condition to the satisfaction of *Employer*

Contractor's site

The Contractor supplies, installs, properly maintains and removes all temporary construction facilities and utilities necessary for the complete performance of the Works including the following:

- Any damage to installed lighting is repaired at the Contractor's expense.
 - The reticulation of electricity, water and any other services required by the Contractor from a supplied central distribution point.
 - Hazardous Substances
 - Transportation on and off site
 - Telephone connections may be available and the Contractor applies via the Services Manager for a connection. Connection fees and calls are for the Contractor's account.
 - Compressed air and gases
 - Maintenance of lay-down and storage areas
 - Electric panels and distribution wiring for erection and within Contractor's yard
 - The Contractor is responsible for any fees charged by the client for connections up to their electric panels
 - Security of Contractor's yard
 - Temporary lighting to ensure safe working conditions.
-

Accommodation

The provision of accommodation for Contractor's personnel is the responsibility of the Contractor. The Contractor or any of his employees or subcontractors is not allowed to use the Employer's dining facilities.

Toilet Facilities

The Employer provides the Contractor access to toilet facilities. Temporary chemical toilets are provided by the Contractor where deemed necessary.

Medical Facilities

- The Contractor provides a First Aid service to his employees and subcontractor. In the case where these prove to be inadequate, like in the event of a serious injury, the Employer's Medical Centre and facilities are available.
- Outside the Employer's office hours, the Employer's First Aid Services are only available for serious injuries and life threatening situations.
- The Employer is entitled, however, to recover the costs incurred, in the use of the above Employer's facilities, from the Contractor.

Refuse Disposal

The Employer provides special colour coded bins for refuse disposal. These bins are emptied by the Employer.

The Contractor ensures that all workers under his control strictly adhere to the correct use of refuse bins:

Maroon bins:	Scrap metal only
White bins:	Ash
Yellow bins:	Lagging and general household rubbish, dust, coal dust and sand

For the full duration of the works, the Contractor is responsible to keep the work area clean of any rubble, and to place all refuse into the bins provided.

Supply of Electricity

- *Employer* will make available to the *Contractor* 220/230-volt electrical supply free of charge from the closest existing point of supply.
- The *Contractor* is to make provision for the necessary extensions and plug points.

Water

Employer will make available reasonable quantities of potable water required for the purposes of this contract

Telephones and Telecommunications

Should the *Contractor* require a telephone service he shall make his own arrangements with the Employers Representative

Roads

Access roads to the site are surfaced and complete.

Compressed Air

- Compressed air at 6 bars will be available on site subject to advice by the Contractor of the quantity required.
 - Facilities for water and compressed air are indicated with Eskom colour coding.
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14. SECURITY ARRANGEMENTS

1. The Contractor applies for temporary access permits (Contractor's Permit) at the Security gate, prior to the Possession Date.
 2. The Contractor personnel are required to be in possession of a Contractor's Permit at all times.
 3. All Contractors' permits are submitted to Protective Services when the workers leave the site after completion of the works.
 4. In order to assist Protective Services with the **issuing of permits** and the identification of personnel on site, the Contractor supplies a list of all personnel that he intends using on site, at least 24 hours prior to entry of the Security Area.
 5. This list is delivered to Protective Services, or is faxed to (017) 615 2602
 6. The list, identified with the Contractor's name, contains the following information:
 7. Employee Name
 8. ID Number
 9. Company
 10. Validity date
 11. Eskom Safety Co-ordinator signature
 12. Eskom Project Manager signature
 13. Copy of the first page of the ID book of every employee of the Contractor, photocopied to reduce the size to 65%.
 14. To speed up the process of gaining access to the site, the Contractor compiles detailed lists of all tools and equipment to be taken on site before arriving at the Power Station Security gate.
 15. A special Tool List form is available at Protective Services.
 16. An authorised copy of this list is retained to be used again when the tools and equipment is removed from site after the completion of the works.
 17. The Contractor's visitors and all personnel conform at all times to the security arrangements in force at the site.
 18. Application forms for visitors are filled in by the Contractor's Site Manager and approved by the Project Manager, one day before the visit and submitted to the Employer's Protective Services office.
 19. Visitors are not allowed on site if the necessary forms are not in the possession of security staff.
 20. The Chief of Protective Services may, with valid cause, remove any of the Contractor's personnel from the site, either temporarily or permanently, without any prejudice. 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.
 21. No unauthorised vehicles are allowed on site.
 22. Only Contractor's vehicles with displayed Contract Vehicle Permits disks are allowed on site.
 23. Contract Vehicle Applications are directed to the Project Manager.
 24. The Contractor is restricted to the working areas associated with his place of work.
 25. The Contractor is forbidden to enter any other areas, and must ensure that his employees abide by these regulations.
 26. Parking inside the power station is strictly forbidden, except for loading purposes.
 27. No recruiting of casual labour is done on Eskom premises, including the area outside the Power Station Security Gate.
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Transport

The *Contractor* shall make his own arrangements for transport of material and/or personnel on or to site in accordance with the site procedures and regulations.

The tenderer shall include in his tender price for any special tools and equipment to be used on site for the execution of the works.

Non-destructive examination will be deemed to be included in the tender price unless otherwise specified.

The *Contractor* shall allow in his tender price for tests as he considers or might be required by Eskom to satisfy himself that the work is sound.

The *Contractor* shall allow in his tender price for competent full time site supervision for the duration of the Contract.

Scaffold will be deemed to be included in the tender price unless otherwise specified.

Any craneage required for the execution of the Works will be supplied by Eskom if it is available. Should craneage be unavailable the *Contractor* shall negotiate a price with Eskom for the supply thereof. Arrangements for such craneage must be made in advance at least two weeks prior to the required date. No extension of time and / or claim for standing time will be granted should the *Contractor* not conform with his specification.

Any design from Kriel's Engineering Department is only for information additional to the Scope of Work. Tenderers are to be based on the Scope of Work and the specifications. If any discrepancy arises between the design and the Scope of Work then Kriel is to be contacted for clarification.

Eskom carries no responsibility for unforeseen delays unless such a delay is negotiated within 24 hours of the occurrence and written agreement is submitted by Eskom.

C4: Site Information

1. General

The Kriel Power Station is situated approximately half way between Bethal and Ogies on the R545, being just over 30 km from each town and 10 km north-west of Kriel town.

2. Climate

Kriel Power Station is situated in a summer rainfall area with an average annual precipitation of about 750 mm falling almost entirely during the months of October to April. The average rainfall per month generally exceeds 40 mm during this period, although drought periods do occur which can last for 20 days or longer. Drought periods occur most frequently during the months of October/November and March/April. January is statistically the highest rainfall month with an average monthly rainfall of about 130 mm. June has the lowest rainfall with an average monthly rainfall of about 7 mm.

Approximately 85% of the annual rainfall occurs in the summer months and heavy falls of 125 to 150 mm occasionally occur in a single day. The annual average number of thunderstorms is about 75. These storms are often violent with severe lightning and strong (but short-lived) gusty winds and are sometimes accompanied by hail. This region has among the highest hail frequencies in South Africa; about 4 to 7 occurrences (depending mainly on altitude) may be expected annually.

January is normally the hottest month with an average daily maximum temperature of 27°C with a mean daily temperature in winter being about 16°C. Winter average daily temperatures vary from 18, 5°C maximum to -1°C minimum. The extreme temperatures recorded range from 34, 7°C to minus 12, 4°C for the period 1920 - 1984. (Source: Weather Bureau, Pretoria)

Winds are generally light to moderate except during thunderstorms. Generally the prevailing wind directions are from the North West during the day and from the east at night. During daytime, the prevailing winds are from the north-western direction. During night-time, the prevailing winds are from the north-eastern direction. The highest recorded average wind speed is 17, 6 km/hour. The average wind velocity over the year is 14, 5 km/hour.

(Source: Brewer & Conlin, 1996, Reference 4, page 2.5.)

3 Weather Data

The assumed 1 in 10 year rainfall figures are:

Month	Cumulative rain (mm)	No of days with rainfall > 10mm
January	200	6
February	150	6
March	120	5
April	110	4
May	40	3
June	20	2
July	30	2
August	30	2
September	60	3
October	140	6
November	160	7
December	170	6
