

**Turbine and Boiler High Pressure valves restilliting from unit 1 to 6 for a period of 5yrs  
at Kriel Power Station**



## NEC3 Term Service Contract (TSC3)

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

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

**for Turbine and Boiler High Pressure valves restilliting from  
unit 1 to 6 for a period of 5yrs  
at Kriel Power Station**

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

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## **PART C1:        AGREEMENTS & CONTRACT DATA**

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## C1.1 Form of Offer & Acceptance

### Offer

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

**Turbine and Boiler High Pressure valves restilling from unit 1 to 6 for a period of 5yrs  
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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
	Value Added Tax @ 15% is	R
	The offered total of the amount due inclusive of VAT is <sup>1</sup>	R
	(in words)	

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

Signature(s)

Name(s)

Capacity

**For the  
tenderer:**

(Insert name and address of organisation)

Name &  
signature of  
witness

Date

Tenderer's CIDB registration number:

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

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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

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

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

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

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

Signature(s)

Name(s)

Capacity

**for the  
Employer**

\_\_\_\_\_  
(Insert name and address of organisation)

Name &  
signature of  
witness

Date

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

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

Note:

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

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

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

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

**For the tenderer:**

**For the Employer**

Signature

Name

Capacity

On behalf  
of

*(Insert name and address of organisation)*

*(Insert name and address of organisation)*

Name &  
signature  
of witness

Date

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## C1.2 TSC3 Contract Data

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

Clause	Statement	Data
1	<b>General</b>	
	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	
		X2 Changes in the law
		X17: Low service damages
		X18: Limitation of liability
		X19: Task Order
		Z: <i>Additional conditions of contract</i>
	of the NEC3 Term Service Contract April 2013 <sup>2</sup> (TSC3)	
10.1	The <i>Employer</i> is (name):	Eskom Holdings SOC Ltd (reg no: 2002/015527/30), a state owned company incorporated in terms of the company laws of the Republic of South Africa G Bonga
	Address	Registered office at Megawatt Park, Maxwell Drive, Sandton, Johannesburg
	Tel No.	017 615 2300
	Fax No.	[•]
10.1	The <i>Service Manager</i> is (name):	Sonwabile Maboza
	Address	Kriel Power Station – Outage Department
	Tel	013 295 9042
	Fax	N/A
	e-mail	mabozasn@eskom.co.za

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

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11.2(2)	The Affected Property is	<b>Turbine and Boiler High Pressure valves restilting from unit 1 to 6 for a period of 5yrs at Kriel Power Station</b>
11.2(13)	The <i>service</i> is	<b>Turbine and Boiler High Pressure valves restilting from unit 1 to 6 for a period of 5yrs at Kriel Power Station</b>
11.2(14)	The following matters will be included in the Risk Register	<ul style="list-style-type: none"> <li>- <b>Long Lead Spares</b></li> <li>- <b>Unprotected Strikes</b></li> </ul>
11.2(15)	The Service Information is in	<b>Part 3: Scope of Work and all documents and drawings to which it makes reference.</b>
12.2	The <i>law of the contract</i> is the law of	<b>the Republic of South Africa</b>
13.1	The <i>language of this contract</i> is	<b>English</b>
13.3	The <i>period for reply</i> is	<ul style="list-style-type: none"> <li>- <b>Within 2 working days non outage periods</b></li> <li>- <b>During Outages within 12 hours including weekends and public holidays</b></li> </ul>
<b>2</b>	<b>The Contractor's main responsibilities</b>	<b>Data required by this section of the core clauses is also provided by the Contractor in Part 2 and terms in italics used in this section are identified elsewhere in this Contract Data</b>
21.1	The <i>Contractor</i> submits a first plan for acceptance within	<b>Level 3 within two weeks after Contract Date</b>
<b>3</b>	<b>Time</b>	
30.1	The <i>starting date</i> is.	<b>TBC</b>
30.1	The <i>service period</i> is	<b>5Yrs</b>
<b>4</b>	<b>Testing and defects</b>	<b>As per section X18 and section 4.3.2</b>
<b>5</b>	<b>Payment</b>	
50.1	The <i>assessment interval</i> is	<ul style="list-style-type: none"> <li>- <b>25th day of each successive month</b></li> <li>- <b>Service manager may when deemed necessary request Bi-Weekly payment assessments or on the completion of work</b></li> </ul>
51.1	The <i>currency of this contract</i> is the	<b>South African Rand</b>
51.2	The period within which payments are made is	<b>14 or 30 days as per Eskom Finance Procedures.</b>
51.4	The <i>interest rate</i> is	<b>the publicly quoted prime rate of interest</b>

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(calculated on a 365 day year) charged by from time to time by the Standard Bank of South Africa Limited (as certified, in the event of any dispute, by any manager of such bank, whose appointment it shall not be necessary to prove) for amounts due in Rands and

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

6	<b>Compensation events</b>	There is no reference to Contract Data in this section of the core clauses and terms in italics used in this section are identified elsewhere in this Contract Data
7	<b>Use of Equipment Plant and Materials</b>	There is no reference to Contract Data in this section of the core clauses and terms in italics used in this section are identified elsewhere in this Contract Data
8	<b>Risks and insurance</b>	
80.1	These are additional <i>Employer's</i> risks	<b>1. Time delays</b> <b>2. Poor workmanship</b> <b>3. [•]</b>
83.1	The <i>Employer</i> provides these insurances from the Insurance Table	as stated for "Format TSC3" available on <a href="http://www.eskom.co.za/Tenders/InsurancePolicies/Procedures/Pages/EIMS_Policies_From_1_April_2014_To_31_March_2015.aspx">http://www.eskom.co.za/Tenders/InsurancePolicies/Procedures/Pages/EIMS_Policies_From_1_April_2014_To_31_March_2015.aspx</a> (See Annexure A for basic guidance).
83.1	The <i>Employer</i> provides these additional insurances	as stated for "Format TSC3" available on <a href="http://www.eskom.co.za/Tenders/InsurancePolicies/Procedures/Pages/EIMS_Policies_From_1_April_2014_To_31_March_2015.aspx">http://www.eskom.co.za/Tenders/InsurancePolicies/Procedures/Pages/EIMS_Policies_From_1_April_2014_To_31_March_2015.aspx</a> (See Annexure A for basic guidance)
83.1	The <i>Contractor</i> provides these additional insurances:	[•]



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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	<b>the amount of the deductibles relevant to the event described in the "Format TSC3" insurance policy available on <a href="http://www.eskom.co.za/Tenders/InsurancePolicies/Procedures/Pages/EIMS_Policies_From_1_April_2014_To_31_March_2015.aspx">http://www.eskom.co.za/Tenders/InsurancePolicies/Procedures/Pages/EIMS_Policies_From_1_April_2014_To_31_March_2015.aspx</a></b>
83.1	The insurance against loss of or damage to the <i>works</i> , Plant and Materials is to include cover for Plant and Materials provided by the <i>Employer</i> for an amount of [●]	
83.1	The minimum amount of cover for insurance in respect of loss of or damage to property (except the <i>Employer's</i> property, Plant and Materials and Equipment) and liability for bodily injury to or death of a person (not an employee of the <i>Contractor</i> ) arising from or in connection with the <i>Contractor's</i> Providing the Service for any one event is:	<b>whatever the <i>Contractor</i> deems necessary in addition to that provided by the <i>Employer</i>.</b>
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:	<b>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)..</b>
<b>9</b>	<b>Termination</b>	<b>There is no reference to Contract Data in this section of the core clauses and terms in italics used in this section are identified elsewhere in this Contract Data.</b>
<b>10</b>	<b>Data for main Option clause</b>	
<b>A</b>	<b>Priced contract with price list</b>	
20.5	The <i>Contractor</i> prepares forecasts of the final total of the Prices for the whole of the Task Order at intervals no longer than	<ul style="list-style-type: none"> <li>- <b>Total Contract financial forecast on a monthly basis</b></li> <li>- <b>Cost to completion during Outages on a weekly basis</b></li> </ul>
<b>11</b>	<b>Data for Option W1</b>	
W1.1	The <i>Adjudicator</i>	<b>the person selected from the ICE-SA Division (or its successor body) of the South African Institution of Civil Engineering Panel of Adjudicators by the Party intending to refer a dispute to him. (see <a href="http://www.ice-sa.org.za">www.ice-sa.org.za</a>). If the Parties do not agree on an Adjudicator the Adjudicator will be appointed by the Arbitration Foundation of Southern Africa (AFSA).</b>
W1.2(3)	The <i>Adjudicator nominating body</i> is:	<b>the Chairman of ICE-SA a joint Division of the South African Institution of Civil Engineering and the Institution of Civil Engineers (London)</b>

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		(see <a href="http://www.ice-sa.org.za">www.ice-sa.org.za</a> ) or its successor body.
W1.4(2)	The <i>tribunal</i> is:	arbitration
W1.4(5)	The <i>arbitration procedure</i> is	the latest edition of Rules for the Conduct of Arbitrations published by The Association of Arbitrators (Southern Africa) or its successor body.
	The place where arbitration is to be held is	Republic of South Africa
	The person or organisation who will choose an arbitrator	
	- if the Parties cannot agree a choice or	the Chairman for the time being or his nominee
	- if the arbitration procedure does not state who selects an arbitrator, is	of the Association of Arbitrators (Southern Africa) or its successor body.
<b>12</b>	<b>Data for secondary Option clauses</b>	
<b>X2</b>	<b>Changes in the law</b>	There is no reference to Contract Data in this Option and terms in italics are identified elsewhere in this Contract Data.
<b>X17</b>	<b>Low service damages</b>	
X17.1	The <i>service level table</i> is in	As per Annexure "B"
<b>X18</b>	<b>Limitation of liability</b>	
X18.1	The <i>Contractor's</i> liability to the <i>Employer</i> for indirect or consequential loss is limited to	R0.0 (zero Rand)
X18.2	For any one event, the <i>Contractor's</i> liability to the <i>Employer</i> for loss of or damage to the <i>Employer's</i> property is limited to	the amount of the deductibles relevant to the event described in the "Format TSC3" insurance policy available on <a href="http://www.eskom.co.za/Tenders/InsurancePoliciesProcedures/Pages/EIMS_Policies_From_1_April_2014_To_31_March_2015.aspx">http://www.eskom.co.za/Tenders/InsurancePoliciesProcedures/Pages/EIMS_Policies_From_1_April_2014_To_31_March_2015.aspx</a>
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 <ul style="list-style-type: none"> <li>the total of the Prices at the Contract Date and</li> <li>the amounts excluded and unrecoverable from the <i>Employer's</i> insurance (other than the resulting physical damage to the <i>Employer's</i> property which is not excluded) plus the applicable deductibles in the <i>Employer's</i> assets and works / maintenance policies available on <a href="http://www.eskom.co.za/Tenders/InsurancePoliciesProcedures/Pages/EIMS_Policies_From_1_April_2014_To_31_March_2015.aspx">http://www.eskom.co.za/Tenders/InsurancePoliciesProcedures/Pages/EIMS_Policies_From_1_April_2014_To_31_March_2015.aspx</a></li> </ul>
X18.4	The <i>Contractor's</i> total liability to the <i>Employer</i> , for all matters arising under or in connection with this contract, other than	the total of the Prices other than for the additional excluded matters.

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	the excluded matters, is limited to	<p><b>The <i>Contractor's</i> total liability for the additional excluded matters is not limited.</b></p> <p><b>The additional excluded matters are amounts for which the <i>Contractor</i> is liable under this contract for</b></p> <ul style="list-style-type: none"> <li>• Defects due to his design, plan and specification,</li> <li>• Defects due to manufacture and fabrication outside the <b>Affected Property</b>,</li> <li>• loss of or damage to property (other than the <i>Employer's</i> property, Plant and Materials),</li> <li>• death of or injury to a person and</li> <li>• infringement of an intellectual property right.</li> </ul>
X18.5	The <i>end of liability date</i> is	<b>12 months after the end of the <i>service period</i>.</b>
<b>X19</b>	<b>Task Order</b>	
X19.5	The <i>Contractor</i> submits a Task Order programme to the <i>Service Manager</i> within	<ul style="list-style-type: none"> <li>- <b>5 days of receiving the Task Order</b></li> <li>- <b>Additional Emergency Conditions Apply</b></li> </ul>
<b>Z</b>	<b>The <i>additional conditions of contract</i> are</b>	<b>Z1 to Z12 always apply.</b>

**Z1 Cession delegation and assignment**

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

**Z2 Joint ventures**

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

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

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

**Z4 Confidentiality**

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

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

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

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

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

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

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

**Z8 Notifying compensation events**

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

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

**Z9 Employer's limitation of liability**

- Z9.1 The *Employer's* liability to the *Contractor* for the *Contractor's* indirect or consequential loss is limited to R0.00 (zero Rand)
- Z9.2 The *Contractor's* entitlement under the indemnity in 82.1 is provided for in 60.1(12) and the

**Turbine and Boiler High Pressure valves restituting from unit 1 to 6 for a period of 5yrs  
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*Employer's liability under the indemnity is limited to compensation as provided for in core clause 63 and X19.11 if Option X19 Task Order applies to this contract.*

**Z10 Termination: Add to core clause 91.1, at the second main bullet point, fourth sub-bullet point, after the words "against it":**

Z10.1 or had a business rescue order granted against it.

**Z11 Ethics**

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

Affected Party	means, as the context requires, any party, irrespective of whether it is the <i>Contractor</i> or a third party, such party's employees, agents, or Subcontractors or Subcontractor's employees, or any one or more of all of these parties' relatives or friends,
Coercive Action	means to harm or threaten to harm, directly or indirectly, an Affected Party or the property of an Affected Party, or to otherwise influence or attempt to influence an Affected Party to act unlawfully or illegally,
Collusive Action	means where two or more parties co-operate to achieve an unlawful or illegal purpose, including to influence an Affected Party to act unlawfully or illegally,
Committing Party	means, as the context requires, the <i>Contractor</i> , or any member thereof in the case of a joint venture, or its employees, agents, or Subcontractors or the Subcontractor's employees,
Corrupt Action	means the offering, giving, taking, or soliciting, directly or indirectly, of a good or service to unlawfully or illegally influence the actions of an Affected Party,
Fraudulent Action	means any unlawfully or illegally intentional act or omission that misleads, or attempts to mislead, an Affected Party, in order to obtain a financial or other benefit or to avoid an obligation or incurring an obligation,
Obstructive Action	means a Committing Party unlawfully or illegally destroying, falsifying, altering or concealing information or making false statements to materially impede an investigation into allegations of Prohibited Action and
Prohibited Action	means any one or more of a Coercive Action, Collusive Action Corrupt Action, Fraudulent Action or Obstructive Action.

Z 11.1 A Committing Party may not take any Prohibited Action during the course of the procurement of this contract or in execution thereof.

Z 11.2 The *Employer* may terminate the *Contractor's* obligation to Provide the Service if a Committing Party has taken such Prohibited Action and the *Contractor* did not take timely and appropriate action to prevent or remedy the situation, without limiting any other rights or remedies the *Employer* has. It is not required that the Committing Party had to have been found guilty, in court or in any other similar process, of such Prohibited Action before the *Employer* can terminate the *Contractor's* obligation to Provide the Service for this reason.

**Turbine and Boiler High Pressure valves restilliting from unit 1 to 6 for a period of 5yrs  
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- Z 11.3 If the *Employer* terminates the *Contractor's* obligation to Provide the Service for this reason, the procedures and amounts due on termination are respectively P1, P2, P3 and P4, and A1 and A3.
- Z 11.4 A Committing Party co-operates fully with any investigation pursuant to alleged Prohibited Action. Where the *Employer* does not have a contractual bond with the Committing Party, the *Contractor* ensures that the Committing Party co-operates fully with an investigation.

**Z12 Contract Financial Commitments**

- Z12.1 Task orders will be issued by the *Service Manager* on an "as and when" required basis. The liability of the *Employer* is limited to the total of the Prices stated in the specific Task Order and not the total Price stated in the Service Information. The *Employer* is not obliged to issue any Task Order to the *Contractor* despite the *Contractor* being awarded the contract.

## **Turbine and Boiler High Pressure valves restilling from unit 1 to 6 for a period of 5yrs at Kriel Power Station**

### **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. The Contractor must obtain its own advice. Details of the insurance itself are available from the internet web link given below.*

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

[http://www.eskom.co.za/Tenders/InsurancePoliciesProcedures/Pages/EIMS\\_Policies\\_  
From\\_1\\_April\\_2014\\_To\\_31\\_March\\_2015.aspx](http://www.eskom.co.za/Tenders/InsurancePoliciesProcedures/Pages/EIMS_Policies_From_1_April_2014_To_31_March_2015.aspx)



**Turbine and Boiler High Pressure valves restilliting from unit 1 to 6 for a period of 5yrs  
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**Annexure B: Table of low service damages (X17)**

<b>Low Service Damage Description</b>	<b>Value of Low Service Damages</b>	<b>Limit of Low Service Damage</b>
Service delaying the Outage Critical Path (Delaying other <i>Contractor(s)</i> from starting/completing their work)	1.5% of Task Order per day	Limited to 10% of the Task Order value
Service delays not finishing as per agreed upon Programme submitted to the <i>Service Manger</i>	1% of Task Order per day	Limited to 10% of the Task Order value
Submission of documents as per agreed upon CDSS in this <i>service agreement</i>	0.5% of Task Order per day	Limited to 10% of the Task Order value
Rework due to poor workmanship.	2% of Task Order per day	Limited to 10% of the Task Order value
Daily Progress Updated Programme	0.5% of Task Order per day	Limited to 10% of Task Order Value
No response of NCR within 3 days	1% of Task Order per day	Limited to 10% of Task Order Value

**Turbine and Boiler High Pressure valves restilliting from unit 1 to 6 for a period of 5yrs  
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## C1.2 Contract Data

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

Clause	Statement	Data
10.1	The <i>Contractor</i> is (Name): Address Tel No. Fax No.	
11.2(8)	The <i>direct fee percentage</i> is The <i>subcontracted fee percentage</i> is	% %
11.2(14)	The following matters will be included in the Risk Register	
11.2(15)	The Service Information for the <i>Contractor's</i> plan is in:	
21.1	The plan identified in the Contract Data is contained in:	
24.1	The key people are: 1 Name: Job: Responsibilities: Qualifications: Experience: 2 Name: Job: Responsibilities: Qualifications: Experience:	
CV's (and further key person's data including CVs) are in _____.		
<b>A</b>	<b>Priced contract with price list</b>	
11.2(12)	The <i>price list</i> is in	<b>Part 2. C2.1 Pricing assumptions: Option A</b>
11.2(19)	The tendered total of the Prices is	<b>R</b>

**Turbine and Boiler High Pressure valves restlliting from unit 1 to 6 for a period of 5yrs  
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**PART 2: PRICING DATA**

**TSC3 Option A**

**Turbine and Boiler High Pressure valves restliting from unit 1 to 6 for a period of 5 yrs at Kriel Power Station**

## C2.1 Pricing assumptions: Option A

### How work is priced and assessed for payment

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

**Identified and defined terms** 11  
11.2 (12) The Price List is the *price list* unless later changed in accordance with this contract.

(17) The Price for Services Provided to Date is the total of

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

(19) The Prices are the amounts stated in the Price column of the Price List. Where a quantity is stated for an item in the Price List, the Price is calculated by multiplying the quantity by the rate.

This confirms that Option A is a priced contract where the Prices are derived from a list of items of service which can be priced as lump sums or as expected quantities of service multiplied by a rate or a mix of both.

### Function of the Price List

Clause 54.1 in Option A states: "Information in the Price List is not Service Information". This confirms that instructions to do work or how it is to be done are not included in the Price List but in the Service Information. This is further confirmed by Clause 20.1 which states, "The *Contractor* Provides the Service in accordance with the Service Information". Hence the *Contractor* does **not** Provide the Service in accordance with the Price List. The Price List is only a pricing document.

### Link to the *Contractor's* plan

Clause 21.4 states "The *Contractor* provides information which shows how each item description on the Price List relates to the operations on each plan which he submits for acceptance". Hence when compiling the *price list*, the tendering contractor needs to develop his first clause 21.2 plan in such a way that operations shown on it can be priced in the *price list* and result in a satisfactory cash flow in terms of clause 11.2(17).

### Preparing the *price list*

Before preparing the *price list*, both the *Employer* and tendering contractors should read the TSC3 Guidance Notes pages 14 and 15. In an Option A contract, either Party may have entered items into the *price list* either as a process of offer and acceptance (tendering) or by negotiation depending on the nature of the *service* to be provided. Alternatively the *Employer*, in his Instructions to Tenderers or in a Tender Schedule, may have listed some items that he requires the

## **Turbine and Boiler High Pressure valves restlliting from unit 1 to 6 for a period of 5yrs at Kriel Power Station**

*Contractor* to include in the *price list* to be prepared and priced by him.

It is assumed that in preparing or finalising the *price list* the *Contractor*:

- Has taken account of the guidance given in the TSC3 Guidance Notes relevant to Option A;
- Understands the function of the Price List and how work is priced and paid for;
- Is aware of the need to link operations shown in his plan to items shown in the Price List;
- Has listed and priced items in the *price list* which are inclusive of everything necessary and incidental to Providing the Service in accordance with the Service Information, as it was at the time of tender, as well as correct any Defects not caused by an *Employer's* risk;
- Has priced work he decides not to show as a separate item within the Prices or rates of other listed items in order to fulfil the obligation to complete the *service* for the tendered total of the Prices.
- Understands there is no adjustment to items priced as lump sums if the amount, or quantity, of work within that item later turns out to be different to that which the *Contractor* estimated at time of tender. The only basis for a change to the (lump sum) Prices is as a result of a compensation event.

### **Format of the *price list***

(From the example given in an Appendix within the TSC3 Guidance Notes)

Entries in the first four columns in the *price list* in section C2.2 are made either by the *Employer* or the tendering contractor.

If the *Contractor* is to be paid an amount for the item which is not adjusted if the quantity of work in the item changes, the tendering contractor enters the amount in the Price column only, the Unit, Expected Quantity and Rate columns being left blank.

If the *Contractor* is to be paid an amount for an item of work which is the rate for the work multiplied by the quantity completed, the tendering contractor enters the rate which is then multiplied by the Expected Quantity to produce the Price, which is also entered.

If the *Contractor* is to be paid a Price for an item proportional to the length of time for which a service is provided, a unit of time is stated in the Unit column and the expected length of time (as a quantity of the stated units of time) is stated in the Expected Quantity column.

**Turbine and Boiler High Pressure valves restlliting from unit 1 to 6 for a period of 5yrs  
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Item No	Description	Total Value
100	Total P&G'S (100)	
200	Total value for the Restiliting of Valves as per Works Information (200)	
Total of the Prices (excluding VAT)		

**Turbine and Boiler High Pressure valves restlliting from unit 1 to 6 for a period of 5yrs  
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**1.1.1 Restilting Of Valves**

Restelliting of Valves as per Works Information	VALVE SIZE	TYPE	QTY	Site Rate	QS Rate	Amount
VALVE DESCRIPTION	VALVE SIZE	TYPE	QTY	Site Rate	QS Rate	Amount
DST A&B WARMING STM CONTROL V/V	100 MM	CONT	9			
CRH TO DST A&B ISOL V/V	100 MM	GATE	9			
DST A&B WARMING STEAM ISOL VALVE	100 MM	GATE	9			
HPH 7 A B/STEAM ISOL V/V	200 MM	GATE	9			
HPH 7 B B/STEAM ISOL V/V	200 MM	GATE	9			
DA DRAIN ISOL VALVE	200 MM	GATE	9			
DA DRAIN ISOL VALVE	200 MM	GATE	9			
DA FILLING VALVE	200 MM	GATE	9			
HPH 6 A B/STEAM ISOL V/V	250 MM	GATE	9			
HPH 6 B B/STEAM ISOL V/V	250 MM	GATE	9			
DST A&B WARMING STEAM OUTL ISOL V/V	300 MM	GATE	9			
CRH STEAM TO DA ISOL VALVE	350 MM	GATE	9			
SFP SUCTION ISOLATING VALVE	400MM	GATE	9			
BLED STEAM TO DA ISOL VALVE	450 MM	GATE	9			
CRH STEAM TO DA ISOL VALVE	450 MM	GATE	9			

**Turbine and Boiler High Pressure valves restlliting from unit 1 to 6 for a period of 5yrs  
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CRH TO DST A&B ISOL V/V	80 MM	GATE	9			
CRH STM TO DA CONTROL VALVE	300 MM	GLOBE	9			
DST A&B WARMING STEAM NRV	350 MM	NRV	9			
HPH 7 B/STEAM NRV	350 MM	NRV	9			
CRH STEAM TO DA NRV	450 MM	NRV	9			
HPH 6 B/STEAM PA NRV	300 MM	NRV	9			
HPH 6 B/STEAM PA NRV	350 MM	NRV	9			
DA IP BLED STM SUPPLY NRV	350 MM	NRV	9			
DA IP BLED STM SUPPLY NRV	400 MM	NRV	9			
CRH STEAM PA NRV	630 MM	NRV	9			
CRH STEAM PA NRV	630 MM	NRV	9			
Horizontal NRV	400MM	NRV	9			
Horizontal NRV	450MM	NRV	9			
EFP A DISCHARGE NRV	250MM	NRV	9			
EFP B DISCHARGE NRV	250MM	NRV	9			
<b>TOTAL AMOUNT</b>						



**1.1.2 High pressure heaters**

VALVE No	VALVE DESCRIPTION	VALVE SIZE	TYPE	Qty	Workshop repair	Site Repair	QS Rate	Amount
RP72S502	HP HTR 7B HWL CONTROL ISOL. V/V	100MM	GATE	9				
RP71S502	HP HTR 7A HWL CONTROL ISOL. V/V	100MM	GATE	9				
RP62S502	HP HTR 6B HWL CONTROL ISOL. V/V	150MM	GATE	9				
RP61S502	HP HTR 6A HWL CONTROL ISOL. V/V	150MM	GATE	9				
RP62S501	HP HTR 6B NWL CONTROL ISOL. V/V	150MM	GATE	9				
RP61S501	HP HTR 6A NWL CONTROL ISOL. V/V	150MM	GATE	9				
RP72S501	HP HTR 7B NWL CONTROL ISOL. V/V	150MM	GATE	9				
RP71S501	HP HTR 7A NWL CONTROL ISOL. V/V	150MM	GATE	9				
RF71S304	HP HEATER 7A UPPER STANDPIPE CONNECTION	150MM	GATE	9				
RF72S304	HP HEATER 7B UPPER STANDPIPE CONNECTION	150MM	GATE	9				
RF71S303	HP HTR 7A LOWER STANDPIPE CONNECTION	150MM	GATE	9				
RF72S303	HP HTR 7B LOWER STANDPIPE CONNECTION	150MM	GATE	9				
RF61S304	HP HEATER 6A UPPER STANDPIPE CONNECTION	150MM	GATE	9				
RF62S304	HP HEATER 6B UPPER STANDPIPE CONNECTION	150MM	GATE	9				
RF61S303	HP HTR 6A LOWER STANDPIPE CONNECTION	150MM	GATE	9				
RF62S304	HP HTR 6B LOWER STANDPIPE CONNECTION	150MM	GATE	9				
RP61S601	HP HTR 6A TO DA NON RETURN V/V	150MM	NRV	9				
RP62S601	HP HTR 6B TO DA NON RETURN V/V	150MM	NRV	9				
<b>TOTAL AMOUNT</b>								

1.1.3 LP Heaters

VALVE No	VALVE DESCRIPTION	VALVE SIZE	TYPE	Qty	Workshop repair	Site Repair	QS Rate	Amount
RN20S503	LP HTR 2 EMERG DRN CTRL V/V INL ISOL V/V	250 MM	CONT	9				
RN40S001	LP HEATER 4 EMERG DRN V/V TO MTC	150 MM	GATE	9				
RN30S503	LP HEATER 3 EMERG DRN CV INL IV	200 MM	GATE	9				
RN30S504	LP HEATER 3 EMERG DRN CV OUTL IV	200 MM	GATE	9				
RN40S501	LP HEATER 4 DRN PMP SUCT H.I.V.	200 MM	GATE	9				
RN20S504	LP HEATER 2 EMERG DRN CV OUTL ISOL V/V	250 MM	GATE	9				
RN30S502	LP HEATER 3 DIST DRN CV TO HTR 2 OUTL IV	250 MM	GATE	9				
RM10S501	LPH 1&2 COND INLET ISOL V/V	300 MM	GATE	9				
RM70S501	LPH 1&2 COND BYPASS ISOL V/V	300 MM	GATE	9				
RM70S503	LPH 3 COND BYPASS ISOL V/V	300 MM	GATE	9				
RN40S502	LP HEATER 4 DRN PMP DISCH H.I.V.	80 MM	GATE	9				
RM40S402	LP HTR 4 CNDS OUTL DRN V/V	150 MM	GLOBE	9				
RN40S601	LP HEATER 4 DRN PMP DISCH NRV	80 MM	NRV	9				
RN30S002	LP HTR 3 CNDS DRN CTRL V/V TO LPH 2 F/BX	250 MM	PLUG	9				

TOTAL AMOUNT
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**1.1.4 Air Evacuation Valves**

VALVE No	VALVE DESCRIPTION	VALVE SIZE	TYPE	Qty	Workshop repair	Site Repair	QS Rate	Amount
AEV 57A	MAE AIR SUCT NRV A	250 MM	CHECK	9				
AEV 57B	MAE AIR SUCT NRV B	250 MM	CHECK	9				
AEV 62A	BFPT AIR EJECT AIR NRV A	80 MM	CHECK	9				
AEV 62B	BFPT AIR EJECT AIR NRV B	80 MM	CHECK	9				
MSV 80	QSAE STEAM SUPPLY ISOL V/V	125 MM	GATE	9				
CWVAEV 55A	MTC AIR SUCT ISOL V/V A	150 MM	GATE	9				
AEV 55B	MTC AIR SUCT ISOL V/V B	150 MM	GATE	9				
AEV 56B	MAE AIR SUCT ISOL V/V B	250 MM	GATE	9				
AEV 65	QSAE AIR SUCT ISOL VALVE	250 MM	GATE	9				
CWV	H2 COOLERS INLET ISOLATING VALVE	250 MM	GATE	9				
AEV 61A	BFPT AIR EJECT AIR ISOL V/V	80 MM	GATE	9				
AEV 61B	BFPT AIR EJECT AIR ISOL V/V	80 MM	GATE	9				
MSV 7341	QSAE STM SUPPLY CNTRL V/V	100 MM	GLOBE	9				
AEV 66	QSAE AIR SUCT NRV	250 MM	NRV	9				
CWV 23A	MAE PUMP A DISCH 10% LEAK-OFF NRV	80 MM	NRV	9				
CWV 23B	MAE PUMP B DISCH 10% LEAK-OFF NRV	80 MM	NRV	9				
<b>TOTAL AMOUNT</b>								<b>R -</b>

VALVE No	VALVE DESCRIPTION	VALVE SIZE	TYPE	Qty	Workshop repair	Site Repair	QS Rate	Amount
CWV 7346	H2 CW TEMP CONTR VALVE	250 MM	CONT	9				
VD11S401	SECONDARY COOLING PUMP A NRV	200 MM	NRV	9				
VD12S401	SECONDARY COOLING PUMP B NRV	200 MM	NRV	9				
VD13S401	SECONDARY COOLING PUMP C NRV	200 MM	NRV	9				
VD21S601	PRIMARY COOLING PUMP A DISCHARGE NRV	250 MM	NRV	9				
VD22S601	PRIMARY COOLING PUMP B DISCHARGE NRV	250 MM	NRV	9				
VS23S601	PRIMARY COOLING PUMP C DISCHARGE NRV	250 MM	NRV	9				
<b>TOTAL AMOUNT</b>								

1.1.6 LP Bypass Spray Water Valves

VALVE No	VALVE DESCRIPTION	VALVE SIZE	TYPE	Qty	Workshop repair	Site Repair	QS Rate	Amount
CV 178 A	LP BYPASS SPRAY WATER INLET VALVE	150 MM	GATE	9				
CV 178 B	LP BYPASS SPRAY WATER OUTLET VALVE	150 MM	GATE	9				
CV 3810	LP BYPASS SPRAY WATER CONTROL VALVE	100 MM	CV	9				
CV 180	LP BYPASS SPRAY WATER CONTROL VALVE BYPASS	150 MM	CV	9				
TOTAL AMOUNT								

1.1.7 Boiler Valves

VALVE No	VALVE DESCRIPTION	VALVE SIZE	TYPE	QTY	Rate	QS Rate	Amount
AR5112	HP BYPASS VALVE 1-4	200 MM	GLOBE	9			
FIG 23928W	MAIN STEAM STOP VALVE 1-4	200 MM	GATE	9			
MSV200	HRH SAFETY VALVE 1-4	350 MM	SAFETY	9			
FIG 24940W	CIRC PUMP SUCTION STOP VALVE	305 MM	GATE	9			
FIG 24940W	CIRC PUMP DISCHARGE STOP VALVE	305 MM	GATE	9			
FIG 24940W	CIRC PUMP LEAK-OFF ISOL BYPASS VALVE	125 MM	GATE	9			
FIG 24940W	COLL VESSEL 33 % DRAIN STOP VALVE	200 MM	GATE	9			
FIG 24940W	COLL VESSEL 66 % DRAIN STOP VALVE	200 MM	GATE	9			
	COLL VESSEL 33 % REGULATING STOP VALVE	200 MM	CONTROL	9			
TOTAL AMOUNT							

### 1.1.8 MAINTENANCE -PRELIMINARY & GENERALS

	Work Force	Units	Hours	Rate	QS Rate	Amount
1	Transport (limited to 2 vehicles for 120km return trip per day per vehicle)	Km	7200			
2	Health and Safety File	Sum	1			
3	Medicals	Annually	5			
4	PPE	Sum	5			
5	Tools	Sum	5			
6	Site establishment	Once-off	1			
7	Site de-establishment	Once-off	1			
8	FME Covers	Sum	20			
	<b>WORKFORCE</b>					
<b>NORMAL HOURS</b>						
1	Supervisor	Hours	9600			
2	Technicians/Fitter and Turners (x2)	Hours	19200			
3	Assistant(x2)	Hours	19200			
<b>SATURDAY HOURS</b>						
1	Supervisor	Hours	960			
2	Technicians/Fitter and Turners (x2)	Hours	1920			
3	Assistant(x2)	Hours	1920			
<b>SUNDAYS / PUBLIC HOLIDAY HOURS</b>						
1	Supervisor	Hours	960			
2	Technicians/Fitter and Turners (x2)	Hours	1920			
3	Assistant(x2)	Hours	1920			

## PART C3: SCOPE OF WORK

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## **1 Description of the service**

### **1.1 Executive overview**

1. The scope of work includes conducting stellite repairs on the identified valves, as per the agreed scope with the Employer's engineering representative.
2. This scope includes on-site in-situ repairs as well as off-site repairs at the Contractor's workshop.
3. Determination of in-situ or off-site repairs will be agreed upon between the Contractor and the Employer's representative. For off-site repairs, the Contractor will be responsible to transport the valve, gaskets, nuts and bolts to and from Kriel Power Station. Removal and installation of the valve will be done by Kriel Power Station.
4. The Contractor is responsible for providing manpower, consumables and any other resource/s required to perform the valve re-stellite and other activities required to return the valve to its intended state.
5. The Contractor is required to provide all equipment and associated engineering services including design requirements and design calculations, as required by the applicable plant area design code to fulfil and execute the requirements of the scope of work to provide a fully operational system.
6. This contract will service the requirements of outages and as-required repairs by Kriel maintenance department.
7. All rigging equipment and resources will be provided by Eskom.

### **Valve repair scope of work**

1. A QCP must be generated and approved by the Employer's Quality personnel, System Engineer, Welding engineer and AIA, before job commences.
2. Strip valve and inspect seats. If upon inspections, valve seats stellite is found to be worn or damaged, a technical notification or equivalent visual inspection report shall be compiled and handed over to engineering for approval of re-stellite repairs. Photos of the noted defects shall accompany all technical notification or visual inspection reports.
3. If required, valve seats to be machined and cleaned to remove old damaged satellite overlay.
4. If required, base material repair welding shall be done before the new weld overlay with stellite can take place.
5. All seats must be PMI tested to verify the base material and the overlay chemical composition of the seat.
6. If seats are removed from the valve body only machining or abrasive cutting will be allowed. Under no circumstance will flame cutting be allowed.
7. A weld map and pictures must be submitted with the QCP to verify if base material weld build up will be required before stellite overlay welding. Sizes must be included of the required weld thicknesses/layers.
8. All welding procedure qualifications that will be used must be submitted with the QCP for approval.
9. Any heat treatment (as per the qualified WPS) will be done using calibrated recorders to generate the heat treatment chart. The HT chart and calibration certificate must be included in the final data pack.
10. Valve re-stelliting will range between 3mm and 6mm depending on the valve's size and operating conditions or application.

11. The exact re-stelliting thickness must be discussed and approved by Employer's system engineer in line with the relevant qualified procedure.
12. The re-stelliting will therefore be done on a case-to-case basis depending on the extent of damage on a particular valve. The thickness of stellite overlay must be within the ranges qualified on the welding procedure.
13. Upon completion of re-stelliting, the Contractor must carry out PT testing on the seats as well as the valve body through an independent company.
14. After NDE is completed valve to be blue checked.

If valve is repaired off site, perform pressure test

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

### **Service Information**

Task orders will be issued by the *Service Manager* on an "as and when" required basis. The liability of the *Employer* is limited to the total of the Prices stated in the specific Task Order and not the total Price stated in the Service Information. The *Employer* is not obliged to issue any Task Order to the *Contractor* despite the *Contractor* being awarded the contract.

The *Contractor* will be notified by the *Service Manager* a minimum a month in advance if he becomes aware of any Outage dates that is delayed with 2months or brought forward.

Emergency Task Orders may be given at any time by the *Service Manager* and different conditions needs to be adhered to as per 2.13 Management of work done by Task Order

*Contractor* to adhere to the following documentation within the Service Information:

- ORHVS – Regulations – EPC – 32-846
- 36-681 Rev01 – Plant Safety Regulations
- RLR0037 – Management and control of the Declared Outage Permit
- Driven Machinery Regulations 1988
- Project Controls Requirements – 240-85065548

Scaffolding will be provided by the *Service Manager*, when the *Contractor* requires scaffolding he needs to request it from the *Service Manager*.

Electrical Installation Regulations to be adhered to, all electrical boards must be inspected and tested before connecting to a power supply and then a CoC must be issued

## **1.3 Works Information – Valves**

The valves to be restellited to the original dimension

- The Contractor develop and submit QCP for approval by the end user – System Engineer prior to commence of any activities in the Works Information or Scope of Work issued
- Visual Inspection (internal and external valve body and components) to be carried out together with Eskom and contractor Quality Inspector. Take photos if necessary. The inspection sheet to be completed per valve
- Valves to be inspected (NDT or Visual) must first be released by Eskom's Quality Inspector. All relevant control sheets must be completed (signed by both Eskom's and Contractor's Quality Inspector.
- Spindle of valve to be inspected for scoring, pitting and erosion and surface crack tested (NDT) and conduct dimensional checks. Perform spindle run out test. Spindle to be repaired or replaced if damage or bend

- All gland retaining studs and nuts to be removed and inspected. All studs and nuts to be of same dimension with respect to the valve.
- Gland stuffing boxes to be cleaned and inspected and conduct dimensional checks. Worn press-in neck rings in stuffing boxes are to be replaced. Preformed packing graphite rings are to be used on all valves (as per the OEM specification)
- Valve bonnet retaining nuts and studs are to be removed and inspected for damage to threads, corrosion and stretching of studs. Replace if damaged or out of specification.
- Studs holes to be inspected for thread damage and repaired as required. All nuts to be free and not seized on studs. When a valve is assembled, ensure that washers are in place and (at least 3-4 threads is exposed on the studs when nuts are tightened)
- Special attention to be paid to gasket sealing areas. Gaskets are to be checked to conform to the recommended material with respect to temperature and pressure rating per valve. Ensure correct gasket dimension
- Valves fitted with pressure seals to be inspected for wear of retaining segments and segment location areas. Plug jacking screws to be inspected for thread damage and should not be seized. All heads to be inspected for stretching, splitting or oversize. Replace retaining screws as required.
- Pressure seals to be replaced, ensuring correct size and density. Plug size and body size to be checked to ensure tolerances are correct to avoid extrusions of pressure seal.
- All open valves, pipes, to be closed by the contractor to avoid ingress of debris. Covers to be constructed as to prevent persons from removing them. Plastic will not be acceptable for this purpose
- The contractor is to provide secure storage for all valve components. The contractor at his own cost will replace lost components.
- Artisans to be available during pressure test for nipping of glands, which are leaking, to carry out any necessary rework, and to assist with commissioning of valves with actuators
- Magnetic particle testing or suitable NDE (eg. UT or Replication( remnant life monitoring ( Eskom Standard GST 36-702)) will be carried out on valves and may necessitate in situ repairs or replacing valve bodies
- When the valve is open, Contractor to cover all openings to prevent the ingress of debris, covers is to be constructed so as stop unauthorized person from removing them. Covering with plastic sheeting is insufficient for this purpose
- QCP showing all witness, inspection and hold points to be provided by the contractor with tender and approved by Eskom before any work commences.
- Contractor to have his/her staff available during pressure test and unit commissioning to fix any defects that might arise during test since the valves are part of the pressure test.
- The contractor shall provide a technical report of the inspection findings and repairs conducted on every valve. The report should as a minimum include the following:
  - The initial condition of the valve after stripping – report on debris, wear, and defects noted on the valves and associated components.
  - The repairs/replacements conducted to restore the valves mechanical integrity
  - Measured dimensions vs. allowable tolerances
  - List of recommended actions and/or spares for the next overhaul
  - Photographs of all notable defects
- The following activities are the minimum activities expected to be carried out by the Contractor, the actual list can only be done after inspections. There are other activities that will be done but are depending on the inspection and before doing they must be confirmed with the Project Manager for time and cost.
- No valve or valve component to leave site without the authorization from the Project Co-ordinator, issuing a gate release document.

### **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 Project Manager for acceptance before commissioning may commence

The Contractor will notify the Project Manager 24 hours prior to commissioning to allow for the notification of relevant role players to be available as witnesses

OPS to indicate plant readiness to all stakeholders prior to start perform the commissioning activities.

### Completion:

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

Data pack to be provided with electronic copies to the Project Manager, System Engineer and the Document centre for storage.

### Call out response times

1. call out response time during outages must not exceed 2 hours from time of call.
2. call out response time during normal maintenance must not exceed 2 hours from time of call

## 1.4 Interpretation and terminology

The following abbreviations are used in this Service Information:

Abbreviation	Meaning given to the abbreviation
OBL	Outside battery limits

## 2 Management strategy and start up.

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

The *Contractor* will submit a plan to the *Service Manager* for acceptance within the period stated in the service agreement.

Requirements which are to be incorporated into the *Contractor's* plan:

- Document 240-85065548 requirements (project controls for contractors)
- Level 4 programme when Task Order is provided to the *Contractor*

### 2.2 Management meetings

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

Title and purpose	Approximate time & interval	Location	Attendance by:
Risk register and compensation events	Discussions to take place as soon as a risk is notified	<i>Service Manager's</i> office	<i>Contractor, Service Manager, Co-ordinator and Contracts Supervisor</i>
Overall contract progress and feedback	Weekly basis during Outages Thursdays 14:00-15:00	<i>Service Manager's</i> office	<i>Service Manager, Contractor, Co-ordinator and Contracts supervisor</i>
Daily Outage Progress	Daily 10:00am during outages	Outage Boardroom	Outage Execution Manager, Planner, <i>Service Manager, Co-</i>

			ordinator and Contract Supervisors
Daily Safety Toolbox Talks	Daily before work starts on site with signed attendance registers by <i>Contractor's</i> employees and signed off minutes by the <i>Contractor's</i> Site Manager	<i>Contractors</i> Yard	<i>Contractor</i> and his employees
<i>Contractor</i> Weekly Safety Meeting	Wednesdays during Outages 11:00-12:00	Outage Boardroom	Safety Officers, Supervisors, Outage planners and Co-ordinators
Plant Safety Walk down	Tuesdays 08:00am and Thursdays 08:00am during Outages	Outside the unit on Outage shutter door	Safety Officers, Supervisors, Outage planners and Co-ordinators
<i>Contractors</i> Meeting	Daily 15:00pm during outages	<i>Service Manager's</i> office	Outage Co-ordinator, <i>Contractor</i> , <i>Contractor</i> Planner and Supervisor

If the *Contractor* can't attend any meeting his feedback should be formally communicated through to the *Service Manager*.

The *Contractor* will provide a detailed feedback report on a daily basis during Outages providing accurate feedback on the status of *service* carried out by the *Contractor*. This report should indicate accurate progress of *service* and if any constraints are experienced, the *Contractor* to communicate with the *Service Manager* and mitigate the risks with action plans.

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

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

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

The *Contractor* to provide a key list of personnel who will carry out the work on site with their qualifications attached. A company organogram will be needed by the *Service Manager* to communicate accordingly to comply with the NEC3 Term Services Contract communication structures. *Contractor* to refer to Kriel Power Station *Contractor* SHE Requirements RSR0001

## 2.4 Plant Safety Regulations Permits

It is the sole responsibility of the *Contractor* to ensure at all times there is an authorised Responsible Person to take out permits for the execution of the *service*. The *Employer* will provide all training necessary for the selected *Contractor's* personnel to be authorised on Eskom Plant Safety Regulation.

## 2.5 Provision of bonds and guarantees

Not Applicable

## 2.6 Documentation control

Documentation requirements covers the life cycle of the project from the initial engineering stages through to installation and commissioning including operating, maintenance and the training stages of the project. Not only must these documents be comprehensive and complete but comply with strict document control and revision procedures.

The *Contractor* is responsible to plan the supply of the documentation during the various project stages and to provide the documentation in accordance with the *Contractor* Document Submission Schedule (CDSS). A document is thus any written or pictorial information describing, defining, specifying or certifying activities, requirements, procedures or results.

All the drawings issued by the *Employer* for this contract is copyright protected and are not to be copied by the *Contractor*.

It is the responsibility of the *Contractor* to update any drawings that may have changed due to modifications on the plant. These drawings should be submitted and registered correctly by the *Contractor* to the drawing office at Kriel Power Station.

The *Contractor* submits all documentation on a formal transmittal form to the *Service Manager*.

All manuals, documents, drawings and engineering documentation shall be presented in British English in both software and hardware.

All Communications will be filed and kept on site at all times as it is crucial to have the correct communication structures. These communication documents should at all times adhere to the NEC 3 Term Service Contract communication requirements.

### Contractor Document Submission Schedule (CDSS)

Document Name/Description	Date/Time documents to be submitted
A programme in Primavera format as referred to document number (240-85065548)	One week after receipt of task order
Baseline risk assessment	A month before start of the work
QCP's	A month before start of the work
<i>Contractor's</i> Safety file	Two week before start of work
Inspection report	24 hours after stripping activity
Daily progress report	After Every Shift
Technical report and data pack	Within 14 days of completion of the services

## 2.7 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 Ltd  
Reg. No. 2002/015527/30  
Accounts Payable  
Email to: [Invoiceseskomlocal@eskom.co.za](mailto:Invoiceseskomlocal@eskom.co.za)

The *Contractor* keeps records of all invoices submitted and paid up to the end of the project, as well as details of Actual Costs.

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

*Contractor* is required to follow the correct process to ensure the payment is effected in accordance with contractual payment terms.

*Contractor* is required to follow the correct process to ensure payment is effected in accordance with contractual payment terms:

### 2.6.1 Service related invoices

- a) Once the *service* have been delivered/completed both parties have to agree that the *service* has been delivered/completed successfully prior to invoicing
- b) An assessment payment certificate must be completed between the *Contractor* and *Service Manager* according to the *service* performed. Both parties have to sign the assessment/certificate
- c) A copy of assessment/payment certificate must be obtained by the *Contractor* to enable the creation of an invoice and to prevent any discrepancies. A copy of the assessment/payment certificate must be attached to the original invoice
- d) *Service Manager* performs a service entry and Goods Receipt on the SAP system. (Assessment/Payment Certificate issued as a source document for Service Entry Goods Receipt)
- e) *Service Manager* will forward the Service entry and Goods Receipt Note number to the *Contractor* within 3 working days after the service has been rendered and the Assessment/Payment certificate signed
- f) *Contractor* must forward the original invoices together with a copy of the Assessment/Payment certificate to the Eskom Documentation Centre.

### 2.6.2 Goods Delivered Invoices

- a) Once the Goods are delivered, the *Service Manager* performs a Goods Receipt on the SAP system. (The delivery note is used as source document for Goods Receipt. The invoice should not be used as a delivery note)
- b) *Service Manager* will then forward the Goods Receipt note to the Vendor immediately or within 3 working days after the Goods are delivered.
- c) Vendors must then forward the Invoices together with a copy of the Assessment/Payment certificate to the Eskom Documentation Centre

### 2.6.3 Invoices linked to commodity prices

- a) The requirements are the same as for Goods Delivered Invoices.
- b) Invoices which are linked to commodity prices will result in CPA (Contract Price Adjustment).
- c) Attach a copy of the material invoice that has been previously paid to the CPA invoice, as well as the calculation sheet and all indices attached other than SEIFSA.
- d) The relevant Eskom Department will then complete the CPA calculation sheet and forwards it to the Eskom Documentation Centre.

### 2.6.4 Retention Invoices

- a) The requirements are the same as for Goods Delivered and service related Invoices.
- b) Where Retention is applicable on the contract, the Eskom SAP system will automatically create the Retention, and the amount deducted from the invoiced amount.
- c) Invoices related to retentions release require a defect or completion certificate and a retention release certificate from the *Service Manager* and must be attached to the original invoice. The original invoice for the retention to be released must be accompanied by the approved and signed completion/defect certificate and retention release certificate and forwarded by the *Service Manager* to the Documentation Centre to effect payment.



### 2.6.5 Foreign exchange Invoices

- a) The requirements are the same as for Goods Delivered and service related Invoices.
- b) The following has to be attached to the Invoice before it will be processed: Commercial invoice. Bill of entry (SAD500), SARS release notification, Customs worksheet, Bill of Lading or Airway Bill and approved Exchange Control Approval (EXCON).

### 2.6.6 General Information related to Eskom Invoices

- a) *Contractor* must ensure that the Service Entry and Goods Receipt Note number appears on the invoice. (It can be printed or hand written on the invoice).
- b) Eskom Purchase Order number must appear on invoice.
- c) Invoices must be VAT compliant in line with the VAT Act requirements.
- d) Invoices submitted must reflect the bank account details. A once off copy of the banking details may be forwarded to the Documentation Centre and it will be attached to each scanned invoice.
- e) Invoices must be original or certified as an original in line with the VAT Act. No electronic invoices will be accepted.
- f) Eskom's correct name "**Eskom Holdings SOC Limited**" must appear on the invoice.
- g) The Eskom VAT registration number: **4740 101 508** must appear on the invoice.
- h) No pro-forma invoices will be accepted.
- i) *Contractor* cannot be utilized by Eskom for more than 3 times without a contract being established.

Note:

1. Invoices must be delivered to the Eskom Documentation Centre, as this will speed up the payment process and ensure that invoices are not lost and payments delayed. There is no need for *Service Manager* to sign invoices as they perform Goods Receipt in the system. The assessment certificate and Goods Receipt serves as the approval of payment.
2. Eskom Documentation Centre will review invoices according to a checklist and on completion scan the documentation into Accounts Payable processing system (Documentation can only be scanned where the Purchase order no. and Goods Receipt Note no. is reflected on the invoice, and the invoice complies with the VAT Act).
3. Invoices are processed and released for payment by Accounts Payable Section only where the source documentation is 100% correct)

## 2.8 Contract change management

Any change of the *Contractor's* company ownership should be communicated through to the *Service Manager*. Failing to do this may lead to contract termination with legal consequences.

The correct processes and procedures will be communicated through to the *Contractor* by the *Service Manager*.

If the *Employer's Service Manager* change the *Contractor* will be notified by the *Employer* as soon as possible to ensure that the *Contractor* follow the correct communication channels.

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

To substantiate the Defined Cost of Compensation Events, the *Employer* may require the *Contractor* to keep records of amounts paid by him for people employed by the *Contractor*, Plant and Materials, work subcontracted by the *Contractor* and Equipment.

The *Contractor's* Site Manager will complete the site daily log and this will be submitted to the *Service Manager* for his signature before 12 am of the following morning barring weekends. The Friday and weekend logs will be submitted before 12 am Mondays. The log will include but not be limited to the following:

- Date and day.
- Weather.
- Site Conditions.
- Work Done.
- People who are employed by the *Contractor*
- Work sub-contracted by the *Contractor*
- Any incidents during that period.

Any communication and documentation during this service agreement to be filed in the contract file. This file is always in the possession of the Service Manager.

## **2.10 Insurance provided by the *Employer***

As stated in Contract Data and as per Annexure A within this Service Agreement.

## **2.11 Training workshops and technology transfer**

The *Service Manager* may request a detailed workshop or bar charts which fit into the logic and time span of the Accepted Programme, and reflects the required manufacturing completion dates.

The *Contractor* should create a programme for training on the plant for the *Employer's* nominated employees if required from the *Service Manager*.

This training should be relevant for the *Employer's* employees to perform front line fault finding or maintenance.

## **2.12 Design and supply of Equipment**

Details of the design of Equipment is shared with the *Service Manager*, not necessarily for his acceptance but, as an assurance that the Equipment will be able to allow the *Contractor* to Provide the Service efficiently and without delay.

Also the *Employer* may wish to exercise constraints or include witness and hold points during manufacture, assembly or delivery of such Equipment.

The *Contractor* submits particulars of the design of an item of equipment to the *Service Manager* for acceptance when the *Service Manager* instructs him to. A reason for not accepting is that the design of the item will not allow the *Contractor* to provide the service in accordance with the Service Information, accepted plan or the applicable law.

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

### **2.13.1 Equipment**

The *Contractor* is to hand over a serviceable plant to the *Employer* by the end of this contract.

### **2.13.2 Information and other things**

The *Contractor* has the right to use Equipment, Plant, and Materials as stated in this Service Information provided by the *Employer* to provide the *service*.

At the end of the *service period* the *Contractor* returns all Equipment and surplus materials to the *Employer*. Provides items of equipment for the *Employer's* use as stated in the Service Information and provides information and other things as stated in the Service Information.

## **2.14 Management of work done by Task Order**

A Task is work within the *service* which the *Service Manager* may instruct the *Contractor* to carry out within a stated period of time.

A signed Task Order is the *Service Manager's* instruction to carry out a Task.

Task Completion is when the *Contractor* has done all the work in the Task and corrected Defects which would have prevented the *Employer* or Others from using the Affected Property and Others from doing their work.

Task Completion Date is the date for completion stated in the Task Order unless later changed in accordance with this contract.

**A Task Order includes:**

- A detailed description of the work in the Task
- A priced list of items of work in the Task in which items taken from the Price List are identified.
- The starting and completion dates for the Task
- Conditions of the *service agreement* is in accordance with the Task Order issued

The *Service Manager* consults the *Contractor* about the contents of a Task Order before he issues it.

The Prices for items in the Task price list which are not taken from the Price List are assessed in the same way as compensation events.

No Task Order is issued after the end of the service period.

Work will not commence on site without the *Contractor* receiving a signed detailed task order that has been agreed upon by the *Service Manager* and the *Contractor*.

It is the *Contractors* responsibility to provide the *Service Manager* a detailed Task Order programme for acceptance within the period stated in the Contract Data.

Only when the Task Order programme is accepted and agreed upon by the *Service Manager* and the *Contractor* will any work commence on site.

**When any emergencies do arise, it is required from the *Contractor* to adhere to the following terms:**

- The *Contractor* will be informed of emergencies when the *Service Manager* first becomes aware of it.
- Response time within 2 hours for any communication when the *Contractor* acknowledges the emergency.
- Provide a programme within 8 hours after Task Order provided to the *Contractor*
- Mobilise within 5 hours after Task Order have been accepted by both parties.

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

#### 3.1 Health and safety risk management

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.

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.

#### 3.2 Environmental constraints and management

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.

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 *Service Manager*) 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.
- 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.

### 3.3 Quality assurance requirements

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 *Contractor* shall comply with all *Employer's* requirements as set out in QM-58 (Supplier Contract Quality Specification).

The *Contractor* further ensures that the subcontractor's programmes comply with the requirements of the Service Information.

The *Contractor* notifies the *Service Manager* of any changes to the Quality System and obtains agreement prior to implementation on existing orders and contracts, or sub orders and sub contracts.

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).

### 3.3.1 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 *Service 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 *Service 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 *Service Manager* but will not be greater than one year.

### 3.3.2 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 *service*.

The quality control plan indicates the following as appropriate:

- The identification of the item.
- 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 *Service Manager*.
- Provision for inspection status indication.
- Inspection and test records which are generated by the *Contractor*.
- Competence of the people-Level II welding inspector, Coded welders, N3 Fitters /Boiler makers
- Personnel qualifications from approved training and accredited institute
- ITPs and welding procedures
- Material certificates
- Organogram indicating the quality person and his/her duties
- Adhere to the QM58
- Follow the Eskom welding rule book

The quality control plans are reviewed by the *Service 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 *Service Manager* accepts.

The *Contractor* shall comply with:

- a) The Occupational Health and Safety Act, 1993, and all Regulations made there under.
- b) All *Employer* Safety and Operating Procedures, which are attached hereto.

The *Contractor* acknowledges that he is fully aware of the requirements of all the above and undertakes to employ only people who have been duly authorised in terms thereof and who have received sufficient safety training to ensure that they can comply therewith.

The *Contractor* undertakes not to do, or not to allow anything to be done which will contravene any of the provisions of the Act, Regulations or Safety and Operating Procedures.

The *Contractor* shall appoint a person who will liaise with the *Employer* Safety Officer responsible for the premises relevant to this contract. The person so appointed shall on request:

- a) Supply the *Employer* Safety Officer with copies of minutes of all Health and Safety Committee meetings, whenever he is required to do so.
- b) Supply the *Employer* Safety Officer with copies of all appointments in respect of employees employed on this contract, in terms of the Act and Regulations and shall advise the *Employer* Safety Officer of any changes thereto.

*Employer* may, at any stage during the currency of this agreement be entitled to:

- a) Do safety audits at the *Contractor's* premises, its work places and on its employees.
- b) Refuse any employees, sub-*Contractor* or agent of the *Contractor* access to its premises if such person has been found to commit any unlawful act or any unsafe working practice or is found to be not authorised or qualified in terms of the Act.
- c) Issue the *Contractor* with a work stoppage order or a compliance order should *Employer* become aware of any unsafe working procedures or conditions or any non-compliance with the Act, Regulations and Procedures by the *Contractor* or any of its Employees, sub-*Contractors* or agents. Stoppages of this nature will not constitute a compensation event.

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 (Authorised Supervisors and Responsible Persons must be appointed as Construction Supervisor)

OHS Act, CR 6(2) – Assistant Construction Supervisor

OHS Act, Section 17 - Health and Safety Rep

OHS Act, GAR 9 – Incident investigation

OHS Act, CR 12 – Demolition work

OHS Act, CR 19 – Explosive Powered Tools

OHS Act, CR 22 – Electrical installations and machinery

OHS Act, GSR 3 – First Aiders

## 4 Procurement

### 4.1 People

#### 4.1.1 Minimum requirements of people employed

It is the Contractor's sole responsibility to ensure all its employees have permits to perform work in the Republic of South Africa.

#### 4.1.2 BBBEE and preferencing scheme

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.

The *Contractor* is required to submit an updated verification certificate and necessary supporting documentation confirming the change in his B-BBEE status to the *Employer* within thirty days of the notification or as otherwise instructed by the *Employer*.

Where, as a result, the *Contractor's* B-BBEE status has decreased since the *starting date* the *Employer* may either re-negotiate this contract or alternatively, terminate the *Contractor's* obligation to provide the *service*.

Failure by the *Contractor* to notify the *Employer* of a change in its B-BBEE status may constitute a reason for termination will be dealt with according to the NEC3 TSC penalty/termination clauses

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

N/A

### 4.2 Subcontracting

#### 4.2.1 Preferred subcontractors

The *Employer* may list which subcontractors or suppliers the *Contractor* is required to enter into subcontracts with.

If the *Contractor* subcontracts work, he is responsible for providing the Service as if he had not subcontracted. This contract applies as if a Subcontractor's employees and equipment were the *Contractor's*.

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

When the *Contractor* uses a Subcontractor he needs to engage with him on a NEC basis. The Subcontractor needs adhere to all processes, policies and procedures of Eskom as service should be provided as if not subcontracted to Eskom.

All reporting will happen based on the NEC standard forms or as agreed upon in the Kick off meeting.

#### 4.2.3 Limitations on subcontracting

The *Contractor* submits the name of each proposed Subcontractor to the *Service Manager* for acceptance. A reason for not accepting the Subcontractor is that the appointment will not allow the *Contractor* to Provide the Service.

The *Contractor* does not appoint a Subcontractor until the *Service Manager* accepted them.



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

The Subcontractor should attend all morning feedback Outage meetings to provide accurate feedback on the progress of *service*. Assessment meetings between *Service Manager* and the *Contractor* should be avoided by the Subcontractor.

### **4.3 Plant and Materials**

#### **4.3.1 Specifications**

Plant and Materials are defined as items intended to be included in the Affected Property. This will refer to replacement of worn or defective parts, routine replacement as part of regular preventative maintenance and supply of spare parts.

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

The *Service Manager* arranges for the *Employer* to allow the *Contractor* access if it is needed for correcting a Defect.

The *Contractor* needs to correct a Defect within one day or when the first available opportunity arises.

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

The Contractor will do all procurement of materials according to own procurement processes. All materials purchased by the *Contractor* to be installed to Affected Property will be kept and preserved according to the storage relevant specification. The *Contractor* may at any point be requested by the *Service Manager* to submit the storage and preserving specification for any material or plant. All plant and material to be stored at an area demarcated by the *Service Manager* and it is the responsibility of the *Contractor* to prepare the area and make it comply with the storage and preserving specification.

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

The *Contractor* does not deliver those Plant and Materials which the Service Information states are to be tested or inspected before delivery until the *Service Manager* has notified the *Contractor* that they have passes the test or inspection.

All holding points on QCP should have been adhered to and signed off by both parties before accepting any material or goods on site.

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

The *Employer* has service air operating at 600 kPa that the Contractor is allowed to use. Other facilities provided by the *Employer* can be seen in Section 5.8 of this contract.

## 5 Working on the Affected Property

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

- The *Contractor* applies for temporary access permits (*Contractor's* Permit) at the Security gate, prior to the Possession Date.
- The *Contractor* personnel are required to be in possession of a *Contractor's* Permit at all times.
- All *Contractor* personnel are issued with a temporary access permit (*Contractor's* Permit) which contains the following information:
  - Name
  - ID Number
  - Company
  - Validity date
- All *Contractors'* permits are 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* supplies a list of all personnel that he intends using on site, at least 24 hours prior to entry of the Security Area.
- This list is delivered to Protective Services, or is faxed to (017) 615 2602
- The list, identified with the *Contractor's* name, contains the following information:
  - Employee Name
  - Employee ID Number
  - Eskom Safety Co-ordinator signature
  - *Service Manager* signature
- Copy of the first page of the ID book of every employee of the *Contractor*, photocopied to reduce the size to 65%.
- 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.
- A special Tool List form is available at Protective Services.
- 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.
- The *Contractor's* visitors and all personnel conform at all times to the security arrangements in force at the site.
- Application forms for visitors are filled in by the *Contractor's* Site Manager and approved by the *Employers* Representative, one day before the visit and submitted to the *Employer's* Protective Services office.
- Visitors are not 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 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.
- No unauthorised vehicles are allowed on site.
- Only *Contractor's* vehicles with displayed Contract Vehicle Permits disks are allowed on site.
- Contract Vehicle Applications are directed to the *Employers* Representative.
- The *Contractor* is restricted to the working areas associated with his place of work.
- The *Contractor* is forbidden to enter any other areas, and must ensure that his employees abide by these regulations.
- Parking inside the power station is strictly forbidden, except for loading purposes.
- No recruiting of casual labour is done on Eskom premises, including the area outside the Power Station Security Gate.

### 5.1.2 Eskom Life Saving Rules:

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

Rule 1: Open, Isolate, Test, Earth, Bond, And / Or Insulate before touch - that is any plant operating above 1 000 V.

Rule 2: Hook up at heights - no person may work at height where there is a risk of falling.

Rule 3: Buckle up – no person may drive any vehicle on Eskom business and/or on Eskom premises: unless the driver and all passengers are wearing seat belts.

Rule 4: Be sober (no person is allowed to work under the influence of drugs and alcohol.)

Rule 5: Use a permit to work – where an authorization limitation exists, no person shall work without the required permit to work.

- Kriel Power Station Health and Safety Standards
- Specifications for *Contractors* attached to the Invitation to Tender. This procedure will be handed over during tender enquiry and will enable the successful Tenderer to compile a Health & Safety plan that has to be approved by the *Employer* prior to commencement of work.
- Compliance with Eskom & Kriel No Smoking Policy
- Adhere to the OHS Act 85 of 1993
- All staff will undergo Safety Induction, presented by Kriel Risk Management Department
- *Employer's* site regulations, covering the following:
  - Clean lines
  - Storage of material
  - Safety precautions and fire prevention
  - Permits to work
  - Other *Contractor's* work
  - Representation of *sub-contractors*
  - Constant Supervision for hot work
  - Handing over of *works*
  - *Contractor's* Site
  - Disposal of waste, oil residue and sludge
  - Hot Work permit for welding
  - Working at heights
  - Working in and around an area that contains flammable substances
  - Testing for combustible gases
  - Availability of fire extinguishers when working in an area that contains flammable
  - Substances

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

The *Contractor* provides the necessary resources to carry out the *service* as stated in the Service Information.

The *Contractor* provides everything to carry out the Service Information of this contract unless where otherwise stated in this Service Agreement. Everything that should be provided by the *Employer* is stated in this Service Agreement, anything not stated in the Service Agreement should be provided by the *Contractor* to execute the work as stated in the Service Information

It is very important that the *Contractor* keeps records of his people working on the Affected Property, including those of his Subcontractors. The *Service Manager* shall have access to all records of the *Contractor* and Subcontractor at any time when deemed necessary.

### 5.3 Health and safety facilities on the Affected Property

Any emergency equipment or fire suppression systems to be utilized by the *Contractor* when an emergency arise

Please refer to SHE Requirements for *Contractors* – Refer to RSR0001 Heading 8.1

### 5.4 Environmental controls, fauna & flora

General environmental requirements referred to in section 3 above, Kriel Power Station ISO14001

### 5.5 Cooperating with and obtaining acceptance of Others

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

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

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

The *Contractor* will at all times keep record of his equipment on site with relevant inspections carried out. Inspection reports should be accessible by the *Service Manager* at any given time when he deems necessary.

All equipment or tools signed in by the *Contractor* should strictly adhere to the gate access rules and procedures.

All Equipment including hired should be inspected and approved before accepted on site.

The *Contractor* will keep records of all hired Equipment to execute the Service Information

### 5.7 Equipment provided by the *Employer*

It is the responsibility of the *Contractor* to provide his Equipment list to the *Service Manager* with all calibration certificates etc.

The *Employer* provides Equipment as stated in the Service Information, anything not stated in the Service Information the *Contractor* have to provide and already accounted for in the Price List.

### 5.8 Site services and facilities

#### 5.8.1 Provided by the *Employer*

The *Employer* will provide in the way of water, waste disposal, ablutions, fire protection and lighting (etc) on the Affected Property. Power will be provided by the *Employer* the *Contractor* needs to ensure his own cabling, connections, DB Boards and CoC certificates of installations and connections.

#### Refuse Disposal

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

The *Contractor* ensures that all workers under his control strictly adhere to the correct use of refuse bins as stated in the Plant.

#### 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.
- All Electrical boards must be inspected and tested before connecting to a power supply and then a CoC must be issued by the *Contractor*
- The *Contractor* will adhere to the Electrical Installation Regulations of 1992

#### **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*.

#### **Toilet Facilities**

The *Employer* provides the *Contractor* access to toilet facilities.

Temporary chemical toilets are provided by the *Contractor* where deemed necessary.

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

- 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 discretion of the *Service Manager* on completion of the contract.
- No such dismantling and clearance work shall be carried out without prior approval by the *Service Manager*.
- 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 boundary of the site is within the Power Station boundary fences.
- 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 if needed. (The exact position will be determined on site).
- The *Contractor* will ensure further treatment of the yard area to keep all neat and tidy at all times.
- The *Contractor* shall also include for such items as security, watch and access arrangements to his yard area.
- The *Contractor* shall not occupy any site area other than that located to him
- On completion of the service on Site, all areas allocated to the *Contractor* shall be re-instated to their former condition to the satisfaction of *Employer*

### **Contractor's site requirements**

- The *Contractor* supplies, installs, properly maintains and removes all temporary construction facilities and utilities necessary for the complete performance of the *service*
  - Including the following:
    -
- The *Contractor's* yard should adhere to sound housekeeping, failing with this the *Employer* may use another *Contractor* to clean up the *Contractor's* yard. These costs will be carried by the *Contractor*.
- 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 to be contained as per Eskom requirements.
- 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
- 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. The shop next to the main office building may be utilized by the *Contractors*.

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

All waste introduced to and/or produced on *Employer's* Premises by the *Contractor* for this order, 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 1994 Ref.: BN0621-16296-5. (A copy of this document is available at the Power Station for reference purposes).

Provide sufficient storage containers, labelled depicting general or hazardous waste and store in a designated storage area

No hazardous waste may be stored for a period of more than 90 days on the Kriel Power Station's premises  
Ensure that all hazardous waste is disposed of at a licensed Class H disposal site. A copy of the hazardous waste disposal certificate must be submitted to the *Service Manager*.

Ensure that the *Contractor's* site does comply with the general good housekeeping practices. Redundant material will be removed to allocated sites. No scrap shall be stored in the *Contractor's* yard. Scrap is to be cleared from Site daily.

## **5.10 Hook ups to existing works**

Any work performed at heights, must adhere to the correct safety standards, procedures and specifications stated in the Health and safety risk management of Kriel Power Station. Refer to RSR0001 heading 5.7

## **5.11 Tests and inspections**

### **5.11.1 Description of tests and inspections**

The *Contractor* gives at least 48 hours in 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.

The *Contractor* and the *Employer* provide materials, facilities and samples for tests and inspections as stated in the Service Information.

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

The *Contractor* shall ensure that surfaces to be protected are inspected in order to evaluate extent of surface preparation for which he will be responsible. All inspection arrangements with Kriel Power Station Engineering Department will be made 24 hours in advance.

6 List of drawings

6.1 Drawings issued by the *Employer*

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

Drawing number	Revision	Title



C4: Site Information

PART 4: SITE INFORMATION

Document reference	Title	No of pages
C4	This cover page	1
	Site Information	2
	Total number of pages	3

## PART 4: SITE INFORMATION

### General description

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.

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.)

### Existing buildings, structures, and plant & machinery on the Site

Not applicable. The *Contractor* to specify any information required if necessary.

### Subsoil information

Not applicable. The *Contractor* to specify any information required if necessary.

### Hidden services

All known services will be brought to the attention of the *Contractor* by *Employers Representative*. Should the *Contractor* encounter any other services in the work area, he will immediately bring them to the attention of the *Employers Representative* who will issue instructions as to what actions are to be taken.

The protection of all pipes, gauges and plant is of extreme importance. Should any damage take place, which is due to the *Contractors* negligence, another *Contractor* will be brought onto site to affect repairs. All costs will be to the account of the *Contractor* who caused damage.

## Other reports and publicly available information

*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