



# NEC3 Professional Services Contract (PSC3)

**Contract between Eskom Holdings SOC Ltd  
(Reg No. 2002/015527/30)**

**and TBA  
(Reg No. \_\_\_\_\_ )**

**for Appointment of Professional Engineering Services  
for the Design of the Kusile Boilers Reheater Drying  
Facility**

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

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

<b>Document reference</b>	<b>Title</b>	<b>No of pages</b>
<b>C1.1</b>	<b>Form of Offer &amp; Acceptance</b> [to be inserted from Returnable Documents at award stage]	<b>[•]</b>
<b>C1.2a</b>	<b>Contract Data provided by the <i>Employer</i></b>	<b>[•]</b>
<b>C1.2b</b>	<b>Contract Data provided by the <i>Consultant</i></b> [to be inserted from Returnable Documents at award stage]	<b>[•]</b>
<b>C1.3</b>	<b>Securities proforma</b>	<b>[•]</b>

# C1.1 Form of Offer & Acceptance

**Offer**

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

**Appointment of Professional Engineering Services for the design of the  
Kusile Boilers Reheater Drying Facility**

The tenderer, identified in the Offer signature block, has

<i>either</i>	examined the documents listed in the Tender Data and addenda thereto as listed in the Returnable Schedules, and by submitting this Offer has accepted the Conditions of Tender.
<i>or</i>	examined the draft contract as listed in the Acceptance section and agreed to provide this Offer.

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 *Consultant* 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.

The offered total of the Prices exclusive of VAT is	<b>R</b>
Value Added Tax @ 14% is	<b>R</b>
The offered total of the Prices inclusive of VAT is	<b>R</b>
(in words)	

If Option E or G apply, for each offered total insert in brackets, "(Not Applicable – Cost reimbursable)"

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 *Consultant* 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

## 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 Consultant 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: The Scope

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.



## C1.2 PSC3 Contract Data

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

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

1. Please read the relevant clauses in the conditions of contract before you enter data. The number of the clause which requires the data is shown in the left hand column for each statement however other clauses may also use the same data.
2. The PSC3 options are identified by shading in the left hand column. In the event that the option is not required select and delete the whole row.
3. Where the symbol "[●]" is used data is required to be inserted relevant to the clause and statement which requires it.]

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

Clause	Statement	Data
1	<b>General</b>	
	The <i>conditions of contract</i> are the core clauses and the clauses for main Option	
	dispute resolution Option and secondary Options	<p><b>A: Priced contract with activity schedule</b></p> <p><b>W1: Dispute resolution procedure</b></p> <p><b>X2: Changes in the law</b></p> <p><b>X5: Sectional Completion</b></p> <p><b>X7: Delay damages</b></p> <p><b>X9: Transfer of rights</b></p> <p><b>X10: <i>Employer's Agent</i></b></p> <p><b>X11: Termination by the <i>Employer</i></b></p> <p><b>X18: Limitation of liability</b></p> <p><b>Z: <i>Additional conditions of contract</i></b></p>
	of the NEC3 Professional Services Contract (April 2013) <sup>1</sup>	
10.1	The <i>Employer</i> is (Name):	<b>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</b>
	Address	<b>Registered office at Megawatt Park, Maxwell Drive, Sandton, Johannesburg</b>

<sup>1</sup> Available from Engineering Contract Strategies Tel 011 803 3008 Fax 011 803 3009 and [www.ecs.co.za](http://www.ecs.co.za)

Tel No. 013 699 7339

Fax No. [•]

11.2(9) The *services* are **Professional Engineering Services for design of the Kusile Boilers Reheater Drying Facility**

11.2(10) The following matters will be included in the Risk Register  
**Employee safety during plant walkdowns  
Timeous availability of boiler plant technical data**

11.2(11) The Scope is in **Part 3: Scope of Work**

12.2 The *law of the contract* is the law of **the Republic of South Africa**

13.1 The *language of this contract* is **English**

13.3 The *period for reply* is **2 days**

13.6 The *period for retention* is **5 years following Completion or earlier termination.**

## 2 The Parties' main responsibilities

25.2	The <i>Employer</i> provides access to the following persons, places and things	access to	access date
		1 Kusile Power Station	01 August 2022
		2 [•]	[•]
		3 [•]	[•]

## 3 Time

31.2 The *starting date* is. **01 August 2022**

11.2(3) The *completion date* for the whole of the *services* is. **09 September 2022**

11.2(6)	The <i>key dates</i> and the <i>conditions</i> to be met are:	Condition to be met	key date
		1 SHEQ Requirements	05 August 2022
		2 Phase 1 Activities	19 August 2022
		3 Phase 2 Activities	02 September 2022
		4 Phase 3 Activities	09 September 2022

31.1 The *Consultant* is to submit a first programme for acceptance within **5 days of the Contract Date.**

32.2 The *Consultant* submits revised programmes at intervals no longer than **5 days.**

## 4 Quality

40.2 The quality policy statement and quality plan are provided within **4 days of the Contract Date.**

42.2 The *defects date* is **52 weeks after Completion of the whole of the services.**

<b>5</b>	<b>Payment</b>							
50.1	The <i>assessment interval</i> is	<b>between the 25<sup>th</sup> day of each successive month.</b>						
50.3	The <i>expenses</i> stated by the <i>Employer</i> are	<table border="1"> <thead> <tr> <th>Item</th> <th>Amount</th> </tr> </thead> <tbody> <tr> <td>[•]</td> <td>[•]</td> </tr> <tr> <td>[•]</td> <td>[•]</td> </tr> </tbody> </table>	Item	Amount	[•]	[•]	[•]	[•]
Item	Amount							
[•]	[•]							
[•]	[•]							
51.1	The period within which payments are made is	<b>4 weeks.</b>						
51.2	The <i>currency of this contract</i> is the	<b>South African Rand</b>						
51.5	The <i>interest rate</i> is	<p>the publicly quoted prime rate of interest charged by [•] Standard Bank of South Africa Limited at the time an amount payable in SA Rand was due,</p> <p>and</p> <p>the LIBOR rate applicable at the time for amounts due in other currencies. LIBOR is the 6 month London Interbank Offered Rate quoted under the caption “Money Rates” in The Wall Street Journal for the applicable currency or if no rate is quoted for the currency in question then the rate for United States Dollars, and if no such rate appears in The Wall Street Journal then the rate as quoted by the Reuters Monitor Money Rates Service (or such service as may replace the Reuters Monitor Money Rates Service) on the due date for the payment in question, adjusted <i>mutatis mutandis</i> every 6 months thereafter and as certified, in the event of any dispute, by any manager employed in the foreign exchange department of The Standard Bank of South Africa Limited, whose appointment it shall not be necessary to prove</p>						
<b>6</b>	<b>Compensation events</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>7</b>	<b>Rights to material</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>8</b>	<b>Indemnity, insurance and liability</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>						

82.1	The <i>Consultant's</i> total liability to the <i>Employer</i> for all matters arising under or in connection with this contract, other than the excluded matters, is limited to	The total of the Prices
9	<b>Termination</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.
10	<b>Data for main Option clause</b>	
A	<b>Priced contract with activity schedule</b>	
21.3	The <i>Consultant</i> prepares forecasts of the total expenses at intervals of no longer than	1 week.
11	<b>Data for Option W1</b>	
W1.1	The <i>Adjudicator</i> is	the person selected from the ICE-SA Division (or its successor body) of the South African Institution of Civil Engineering Panel of Adjudicators by the Party intending to refer a dispute to him. (see <a href="http://www.ice-sa.org.za">www.ice-sa.org.za</a> ). If the Parties do not agree on an Adjudicator the Adjudicator will be appointed by the Arbitration Foundation of Southern Africa (AFSA).
	Address	[•]
	Tel No.	[•]
	Fax No.	[•]
	e-mail	[•]
W1.2(3)	The <i>adjudicator nominating body</i> is:	the Chairman of the ICE-SA Division (or its successor body) of the South African Institution of Civil Engineering. (See <a href="http://www.ice-sa.org.za">www.ice-sa.org.za</a> ).
W1.4(2)	The <i>tribunal</i> is:	arbitration
W1.4(5)	The <i>arbitration procedure</i> is	the latest edition of Rules for the Conduct of Arbitrations published by The Association of Arbitrators (Southern Africa) or its successor body.
	The place where arbitration is to be held is	[•] South Africa
	The person or organisation who will choose an arbitrator	
	<ul style="list-style-type: none"> <li>if the Parties cannot agree a choice or</li> <li>if the <i>arbitration procedure</i> does not state who selects an arbitrator, is</li> </ul>	the Chairman for the time being or his nominee of the Association of Arbitrators (Southern Africa) or its successor body.
12	<b>Data for secondary Option clauses</b>	
X2	<b>Changes in the law</b>	
X2.1	The law of the project is	South African

<b>X5</b>	<b>Sectional Completion</b>			
X5.1	The <i>completion date</i> for each <i>section</i> of the <i>services</i> , within activity schedule, is:	<b>section</b>	<b>description</b>	<b>completion date</b>
		1	SHEQ Requirements	05 August 2022
		2	Phase 1 Activities	19 August 2022
		3	Phase 2 Activities	02 September 2022
		4	Phase 3 Activities	09 September 2022
<b>X5 &amp; X7</b>	<b>Sectional Completion and delay damages used together</b>			
X7.1 X5.1	Delay damages for late Completion of each <i>section</i> of the <i>services</i> are:	<b>section</b>	<b>description</b>	<b>amount per day</b>
		2	SHEQ Requirements	R2% per day of total of prices
		2	Phase 1 Activities	R2% per day of total of prices
		3	Phase 2 Activities	R2% per day of total of prices
		4	Phase 3 Activities	R5% per day of total of prices
<b>X9</b>	<b>Transfer of rights</b>	There is no reference to Contract Data in this Option and terms in italics used in this Option are identified elsewhere in this Contract Data.  Also Refer to Z1		
<b>X10</b>	<b>The Employer's Agent</b>			
X10.1	The <i>Employer's Agent</i> is			
	Name:	Dorothy Mbonane		
	Address	Kusile Power Station		
	The authority of the <i>Employer's Agent</i> is	Project Manager		
<b>X11</b>	<b>Termination by the Employer</b>	There is no reference to Contract Data in this Option and terms in italics used in this Option are identified elsewhere in this Contract Data.		
<b>X18</b>	<b>Limitation of liability</b>			
X18.1	The <i>Consultant's</i> liability to the <i>Employer</i> for indirect or consequential loss is limited to:	<b>R0.00 (Zero Rand)</b>		
X18.2	The <i>Consultant's</i> liability to the <i>Employer</i> for Defects that are not found until after the <i>defects date</i> is limited to:	<b>The total of the Prices</b>		

X18.3	The <i>end of liability date</i> is	<b>five years after Completion of the whole of the services/task order.</b>
<b>Z</b>	<b>The <i>Additional conditions of contract</i> are</b>	<b>Z1 to Z14 always apply.</b>

#### **Z1 Cession delegation and assignment**

- Z1.1 The *Consultant* 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 *Consultant* 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 *Consultant* 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 *Employer* within two weeks of the Contract Date of the key person who has the authority to bind the *Consultant* on their behalf.
- Z2.3 The *Consultant* 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 *Consultant* in writing.

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

- Z3.1 Where a change in the *Consultant's* legal status, ownership or any other change to his business composition or business dealings results in a change to the *Consultant's* B-BBEE status, the *Consultant* notifies the *Employer* within seven days of the change.
- Z3.2 The *Consultant* 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*.
- Z3.3 Where, as a result, the *Consultant's* B-BBEE status has decreased since the Contract Date the *Employer* may either re-negotiate this contract or alternatively, terminate the *Consultant's* obligation to Provide the Services.
- Z3.4 Failure by the *Consultant* 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 those stated in core clause 91. The payment on termination includes a deduction of the forecast of the additional cost to the *Employer* of completing the whole of the *services* in addition to the amounts due in terms of core clause 92.1.

#### **Z4 Confidentiality**

- Z4.1 The *Consultant* 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 *Consultant*, enters the public domain or to information which was already in the possession of the *Consultant* at the time of disclosure (evidenced by written records in existence at that time). Should the *Consultant* disclose information to Others in terms of clause 23.1, the *Consultant* ensures that the provisions of this clause are complied with by the recipient.
- Z4.2 If the *Consultant* is uncertain about whether any such information is confidential, it is to be regarded as such until notified otherwise by the *Employer*.
- Z4.3 In the event that the *Consultant* is, at any time, required by law to disclose any such information which is required to be kept confidential, the *Consultant*, 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 *Consultant* 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 *Employer's* project works or any portion thereof, in the course of Providing the Services and after Completion, requires the prior written consent of the *Employer*. All rights in and to all such images vests exclusively in the *Employer*.

**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, or the *Adjudicator* does not constitute a waiver of rights, and does not give rise to an estoppel unless the Parties agree otherwise and confirm such agreement in writing.

**Z6 Provision of a Tax Invoice. Add to core clause 51**

- Z6.1 The *Consultant* (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.

**Z7 Notifying compensation events**

- Z7.1 Delete from the last sentence in core clause 61.3, "unless the *Employer* should have notified the event to the *Consultant* but did not".

**Z8 *Employer's* limitation of liability**

- Z8.1 The *Employer's* liability to the *Consultant* for the *Consultant's* indirect or consequential loss is limited to R0.00 (zero Rand)

**Z9 Termination: Add to core clause 90.1, at the second main bullet point, fourth sub-bullet point, after the words "against it":**

- Z9.1 or had a business rescue order granted against it.

**Z10 Delay damages: Addition to secondary Option X7 Delay damages (if applicable in this contract)**

Z10.1 If the *Consultant's* payment of delay damages reaches the limits stated in this Contract Data for Option X7 or Options X5 and X7 used together, the *Employer* may terminate the *Consultant's* obligation to Provide the Services.

Z10.2 If the *Employer* terminates in terms of this clause, the procedures on termination are those stated in core clause 91. The payment on termination includes a deduction of the forecast of the additional cost to the *Employer* of completing the whole of the *services* in addition to the amounts due in terms of core clause 92.1.

## 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 *Consultant* or a third party, such party's employees, agents, or Subconsultants or Subconsultant'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 *Consultant*, or any member thereof in the case of a joint venture, or its employees, agents, or Subconsultants or the Subconsultant's employees,

**Corrupt Action** means the offering, giving, taking, or soliciting, directly or indirectly, of a good or service to unlawfully or illegally influence the actions of an Affected Party,

**Fraudulent Action** means any unlawfully or illegally intentional act or omission that misleads, or attempts to mislead, an Affected Party, in order to obtain a financial or other benefit or to avoid an obligation or incurring an obligation,

**Obstructive Action** means a Committing Party unlawfully or illegally destroying, falsifying, altering or concealing information or making false statements to materially impede an investigation into allegations of Prohibited Action, and

**Prohibited Action** means any one or more of a Coercive Action, Collusive Action Corrupt Action, Fraudulent Action or Obstructive Action.

Z11.1 A Committing Party may not take any Prohibited Action during the course of the procurement of this contract or in execution thereof.

Z11.2 The *Employer* may terminate the *Consultant's* obligation to Provide the Services if a Committing Party has taken such Prohibited Action and the *Consultant* 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 *Consultant's* obligation to Provide the Services for this reason.

Z11.3 If the *Employer* terminates the *Consultant's* obligation to Provide the Services for this reason, the amounts due on termination are those intended in core clauses 92.1 and 92.2.

Z11.4 A Committing Party co-operates fully with any investigation pursuant to alleged Prohibited Action. Where the *Employer* does not have a contractual bond with the Committing Party, the *Consultant* ensures that the Committing Party co-operates fully with an investigation.

## Z12 Insurance

- Z12.1 Replace core clause 81 with the following:
- 81.1 When requested by a Party, the other Party provides certificates from his insurer or broker stating that the insurances required by this contract are in force.
- 81.2 The *Consultant* provides the insurances stated in the Insurance Table A from the *starting date* until the earlier of Completion and the date of the termination certificate.

**INSURANCE TABLE A**

<b>Insurance against</b>	<b>Minimum amount of cover</b>	<b>For the period following Completion of the whole of the services or earlier termination</b>
Liability of the <i>Consultant</i> for claims made against him arising out of his failure to use the skill and care normally used by professionals providing services similar to the <i>services</i>	Commercial and business to determine. [Delete this note after inserting]	Commercial and business to determine [Delete this note after inserting]
Liability for death of or bodily injury to a person (not an employee of the <i>Consultant</i> ) or loss of or damage to property resulting from an action or failure to take action by the <i>Consultant</i>	<b><u>Loss of or damage to property:</u></b> The replacement cost where not covered by the <i>Employer's</i> insurance  The <i>Employer's</i> policy deductible, as at Contract Date, where covered by the <i>Employer's</i> insurance  <b><u>Bodily injury to or death of a person:</u></b> The amount required by the applicable law.	Commercial and business to determine [Delete this note after inserting]
Liability for death of or bodily injury to employees of the <i>Consultant</i> arising out of and in the course of their employment in connection with this contract	The amount required by the applicable law	Commercial and business to determine [Delete this note after inserting]

- 81.3 The *Employer* provides the insurances stated in the Insurance Table B.

**INSURANCE TABLE B**

<b>Insurance against or name of policy</b>	<b>Minimum amount of cover or minimum limit of indemnity</b>
Assets All Risk	Per the insurance policy document
Contract Works insurance	Per the insurance policy document
Environmental Liability	Per the insurance policy document
General and Public Liability	Per the insurance policy document
Transportation (Marine)	Per the insurance policy document

Motor Fleet and Mobile Plant	Per the insurance policy document
Terrorism	Per the insurance policy document
Cyber Liability	Per the insurance policy document
Nuclear Material Damage and Business Interruption	Per the insurance policy document
Nuclear Material Damage Terrorism	Per the insurance policy document

### Z13 Nuclear Liability

- Z13.1 The *Employer* is the operator of the Koeberg Nuclear Power Station (KNPS), a nuclear installation, as designated by the National Nuclear Regulator of the Republic of South Africa, and is the holder of a nuclear licence in respect of the KNPS.
- Z13.2 The *Employer* is solely responsible for and indemnifies the *Consultant* or any other person against any and all liabilities which the *Consultant* or any person may incur arising out of or resulting from nuclear damage, as defined in Act 44 of 1999, save to the extent that any liabilities are incurred due to the unlawful intent of the *Consultant* or any other person or the presence of the *Consultant* or that person or any property of the *Consultant* or such person at or in the KNPS or on the KNPS site, without the permission of the *Employer* or of a person acting on behalf of the *Employer*.
- Z13.3 Subject to clause Z13.4 below, the *Employer* waives all rights of recourse, arising from the aforesaid, save to the extent that any claims arise or liability is incurred due or attributable to the unlawful intent of the *Consultant* or any other person, or the presence of the *Consultant* or that person or any property of the *Consultant* or such person at or in the KNPS or on the KNPS site, without the permission of the *Employer* or of a person acting on behalf of the *Employer*.
- Z13.4 The *Employer* does not waive its rights provided for in section 30 (7) of Act 44 of 1999, or any replacement section dealing with the same subject matter.
- Z13.5 The protection afforded by the provisions hereof shall be in effect until the KNPS is decommissioned.

### Z14 Asbestos

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

- AAIA** means approved asbestos inspection authority.
- ACM** means asbestos containing materials.
- AL** means action level, i.e. a level of 50% of the OEL, i.e. 0.1 regulated asbestos fibres per ml of air measured over a 4 hour period. The value at which proactive actions is required in order to control asbestos exposure to prevent exceeding the OEL.
- Ambient Air** means breathable air in area of work with specific reference to breathing zone, which is defined to be a virtual area within a radius of approximately 30cm from the nose inlet.
- Compliance Monitoring** means compliance sampling used to assess whether or not the personal exposure of workers to regulated asbestos fibres is in compliance with the Standard's

requirements for safe processing, handling, storing, disposal and phase-out of asbestos and asbestos containing material, equipment and articles.

**OEL** means occupational exposure limit.

**Parallel Measurements** means measurements performed in parallel, yet separately, to existing measurements to verify validity of results.

**Safe Levels** means airborne asbestos exposure levels conforming to the Standard's requirements for safe processing, handling, storing, disposal and phase-out of asbestos and asbestos containing material, equipment and articles.

**Standard** means the *Employer's* Asbestos Standard 32-303: Requirements for Safe Processing, Handling, Storing, Disposal and Phase-out of Asbestos and Asbestos Containing Material, Equipment and Articles.

**SANAS** means the South African National Accreditation System.

**TWA** means the average exposure, within a given workplace, to airborne asbestos fibres, normalised to the baseline of a 4 hour continuous period, also applicable to short term exposures, i.e. 10-minute TWA.

Z14.1 The *Employer* ensures that the Ambient Air in the area where the *Consultant* will Provide the Services conforms to the acceptable prescribed South African standard for asbestos, as per the regulations published in GNR 155 of 10 February 2002, under the Occupational Health and Safety Act, 1993 (Act 85 of 1993) ("Asbestos Regulations"). The OEL for asbestos is 0.2 regulated asbestos fibres per millilitre of air as a 4-hour TWA, averaged over any continuous period of four hours, and the short term exposure limit of 0.6 regulated asbestos fibres per millilitre of air as a 10-minute TWA, averaged over any 10 minutes, measured in accordance with HSG248 and monitored according to HSG173 and OESSM.

Z14.2 Upon written request by the *Consultant*, the *Employer* certifies that these conditions prevail. All measurements and reporting are effected by an independent, competent, and certified occupational hygiene inspection body, i.e. a SANAS accredited and Department of Employment and Labour approved AAIA. The *Consultant* may perform Parallel Measurements and related control measures at the *Consultant's* expense. For the purposes of compliance the results generated from Parallel Measurements are evaluated only against South African statutory limits as detailed in clause Z14.1. Control measures conform to the requirements stipulated in the AAIA-approved asbestos work plan.

Z14.3 The *Employer* manages asbestos and ACM according to the Standard.

Z14.4 In the event that any asbestos is identified while Providing the Services, a risk assessment is conducted and if so required, with reference to possible exposure to an airborne concentration of above the AL for asbestos, immediate control measures are implemented and relevant air monitoring conducted in order to declare the area safe.

Z14.5 The *Consultant's* personnel are entitled to stop working and leave the contaminated area forthwith until such time that the area of concern is declared safe by either Compliance Monitoring or an AAIA approved control measure intervention, for example, per the emergency asbestos work plan, if applicable.

Z14.6 The *Consultant* continues to Provide the Services, without additional control measures presented, on presentation of Safe Levels. The contractually agreed dates to Provide the Services, including the Completion Date, are adjusted accordingly. The contractually agreed dates are extended by the notification periods required by regulations 3 and 21 of the Asbestos Regulations, 2001.

Z14.7 Any removal and disposal of asbestos, asbestos containing materials and waste, is done by a registered asbestos contractor, instructed by the *Employer* at the *Employer's* expense, and conducted in line with South African legislation.

## C1.2 Contract Data

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

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

1. The tendering consultant is advised to read both the NEC3 Professional Services Contract, April 2013 and the relevant parts of its Guidance Notes (PSC3-GN)<sup>2</sup> in order to understand the implications of this Data which the tenderer is required to complete. An example of the completed Data is provided on pages 158 & 159 of the PSC3 April 2013 Guidance Notes.
2. The number of the clause in the PSC3 which requires the data is shown in the left hand column for each statement however other clauses may also use the same data.
3. Whenever a cell is shaded in the left hand column it denotes this data is optional in PSC3 and would be required in relation to the option selected. The *Employer* should already have made the selection and deleted the rows not required.

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

Clause	Statement	Data
10.1	The <i>Consultant</i> is (Name): Address Tel No. Fax No.	
22.1	The <i>key people</i> are: 1 Name: Job: Responsibilities: Qualifications: Experience: 2 Name: Job Responsibilities: Qualifications: Experience:	<b>CV's (and further <i>key persons</i> data including CVs) are appended to Tender Schedule entitled .</b>
11.2(3)	The <i>completion date</i> for the whole of the <i>services</i> is	
11.2(10)	The following matters will be included in the Risk Register	

<sup>2</sup> Available from Engineering Contract Strategies Tel 011 803 3008 Fax 011 803 3009 or [www.ecs.co.za](http://www.ecs.co.za)

11.2(13)	The <i>staff rates</i> are:	<b>name/designation</b>	<b>rate</b>
	<b>Either complete here or cross refer to a schedule in Part C2.2</b>		
25.2	The <i>Employer</i> provides access to the following persons, places and things	<b>access to</b>  <b>1 Admin building</b> <b>2 Ablution facilities</b> <b>3 Unit 1</b>	<b>access date</b>
31.1	The programme identified in the Contract Data is		
50.3	The <i>expenses</i> stated by the <i>Consultant</i> are	<b>item</b>	<b>amount</b>
<b>A</b>	<b>Priced contract with activity schedule</b>		
11.2(14)	The <i>activity schedule</i> is in		
11.2(18)	The tendered total of the Prices is	<b>R</b>	<b>(in figures)</b>  <b>(in words), excluding VAT</b>

## PART 2: PRICING DATA

### PSC3 Option G

<b>Document reference</b>	<b>Title</b>	<b>No of pages</b>
C2.1	Pricing assumptions : Option G	[•]
C2.2	<i>Staff rates, expenses and the task schedule.</i>	[•]

## C2.1 Pricing assumptions: Option G

### How work is priced and assessed for payment

From Option G: Term contract

Identified and defined terms	11 11.2	(17) The Price for Services Provided to Date is, for each Task, the total of the Time Charge for work which has been completed on time based items on the Task Schedule and a proportion of the lump sum price for each other item on the Task Schedule which is the proportion of work completed on that item.  (20) The Prices are  the Time Charge for items described as time based on the Task Schedule and the lump sum price in the Task Schedule for each other item.
------------------------------	------------	---

From the Core Clauses:

Identified and defined terms	11.2	(13) The Time Charge is the sum of the products of each of the <i>staff rates</i> multiplied by the total staff time appropriate to that rate properly spent on work in this contract.
------------------------------	------	--

and

Assessing the amount due	50.3	The amount due is  the Price for Services Provided to Date, the amount of the <i>expenses</i> properly spent by the <i>Consultant</i> in Providing the Services and other amounts to be paid to the <i>Consultant</i> less amounts to be paid by or retained from the <i>Consultant</i> .  Any tax which the law requires the <i>Employer</i> to pay to the <i>Consultant</i> is included in the amount due.
--------------------------	------	--

In effect Option G is a cost reimbursable form of contract with work ordered by the *Employer* on a Task by Task basis using the Task Schedule to compile the cost of carrying out a Task.

*Expenses* are calculated separately and added to the amount due for the services provided.

### Staff rates and expenses

Tendering consultants are advised to consult the NEC3 Professional Services Contract Guidance Notes before entering *staff rates* into Contract Data, or in section C2.2 which follows.

This is because *staff rates* can be established in one of three ways:

rates for named staff,  
rates for categories of staff, or

rates related to salaries paid to staff.

Rate adjustment for inflation, if necessary, can be based either on actual salary adjustments or by using Option X1: Price adjustment for inflation. See pages 13 and 14 of the PSC3 Guidance Notes.

*Expenses* associated with employing a staff member in Providing the Services can be listed separately either by the *Employer* in Contract Data provided by the *Employer* or by the *Consultant* in Contract Data provided by the *Consultant*.

As only the *expenses* listed may be claimed by the *Consultant*, all other cost to the *Consultant* associated with Providing the Services must be included within the *staff rates*.

Rate adjustment for inflation of *expenses* is explained on page 15 of the PSC3 Guidance Notes.

## C2.2 Staff rates, expenses & the task schedule

This section can be used when the *staff rates* and *expenses* are considerable in number and more conveniently located here than in the Contract Data. Entries in the Contract Data should refer to this section of Part 2.

State whether the *staff rates* and *expenses* exclude or include VAT.

**1. The staff rates are:**

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE
1.1.1	<b><u>Head office costs</u></b>			
1.1.1.1	Office administration and project support	Month	3	
1.1.2	<b><u>Piping Engineering</u></b>			
1.1.2.1	Design Engineer Piping	Hour	520	
1.1.2.2	Design Engineer Civils	Hour	200	
1.1.2.3	Draughtsperson	Hour	312	
1.1.3	<b><u>C&amp;I and Electrical Engineering</u></b>			
1.1.3.1	Design engineer	Hour	160	
1.1.4	<b><u>Mechanical Engineering</u></b>			
1.1.4.1	Senior - Mechanical Design Engineer	Hour	136	
1.1.4.2	Design engineer	Hour	120	
1.1.5	<b><u>Process Engineering</u></b>			
1.1.5.1	Senior Process Engineer	Hour	72	
1.1.6	<b><u>Safety</u></b>			
1.1.6.1	Safety Officer	Hour	120	
1.1.7	<b><u>Project Management</u></b>			
1.1.7.1	Project Manager	Hour	40	
1.1.7.2	Office Admin	Hour	24	
TOTAL (In Rands)				

**The expenses are:**

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE
1.1.1	<b><u>P&amp;G Fixed Items</u></b>			
	<u>SHEQ Obligations</u>			
1.1.1.2	PPE (per employees)	Number	7	
1.1.1.3	Induction (per employees)	Number	7	
1.1.1.4	Medicals (per employees)	Number	7	
1.1.1.5	Covid -19 requirements consumables	Item	1	
1.1.2	<b><u>P &amp; G Time Related</u></b>			
1.1.2.1	Transport - Site Based Resources	km	14549	
1.1.2.2	Site Visits: (Head Office Resources)	km	4547	
TOTAL(in Rands)				

## PART 3: SCOPE OF WORK

<b>Document reference</b>	<b>Title</b>	<b>No of pages</b>
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C3.1	<i>Employer's Scope</i>	
C3.2	Annexure A: SHEQ Requirements	
C3.3	Consultant's Scope	
	Total number of pages	

## C3.1: EMPLOYER'S SCOPE

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## Description of the services

### Executive overview

The Kusile boiler is equipped with a three-stage superheater and two-stage reheater. According to the Benson principle, the entire supplied feed water is evaporated above the Benson point and after superheating in the convection heating surfaces supplied as superheated live steam to the HP section of the turbine. After first expansion, the steam flows through the reheat section and is passed to the IP section of the turbine. There are no provisions made for reheater drying for the Kusile boiler.

During normal operation of the boiler, steam flows through the tubes and pitting will not initiate, thus initiation occurs only during shutdowns or outages when the steam in the reheater and superheater tubes is allowed to condense. A proven pro-active requirement to eliminate and prevent this failure mechanism is drying the reheater tubing during extended shutdowns or layup (i.e. outages).

The service required at this stage is the design, drafting and sizing of Reheater Drying System which consists of utility air pipelines and compressors. The parameters of the scope of work are defined in this document.

BTF due to pitting corrosion have been on the rise across the entire Eskom Power Stations. These failures contribute to high UCLF and impact the availability of electricity to the consumer and the country at large.

It is therefore imperative to guard against pitting corrosion by implementing Reheater Drying System. It calls for qualified *Consultant* to provide KPS with complete design that will successfully alleviate/reduce significantly the BTF due to pitting corrosion.

The SOW entails the following:

- 1) This project aims to size new compressors and design new pipelines connecting from the compressors to header where provision had been made for the connection. Currently an alternative method is used to preserve reheater section of the boiler to avoid failures due to pitting corrosion.
- 2) The project has been structured by the products to be easily identified, new and existing connection points, utility air pipelines and compressors. Each system requires both modification and as built.
- 3) Approved for construction drawings must be issued and updated to as built after construction.
- 4) EOJ (End of Job) documentation must be issued to the *Employer* at the end of the job.

The project will be conducted within the below phases and deliverables:

Phase 1	<ul style="list-style-type: none"> <li>• Air Compressor sizing and selection report.</li> <li>• P&amp;ID &amp; PFDs in editable (CAD, MicroStation etc) and pdf format.</li> <li>• Hydraulic Analysis of the piping system (Design report).</li> </ul>
Phase 2	<ul style="list-style-type: none"> <li>• Basic and Detail Design Development (2 options)</li> <li>• Piping stress analysis (Piping design package and certificate of design).</li> <li>• 3D model of the design for reviews.</li> <li>• Electrical Design of the system.</li> </ul>
Phase 3	<ul style="list-style-type: none"> <li>• Basic &amp; Detailed Design Reports</li> <li>• End-of phase documentation and reports.</li> <li>• Technical/Equipment Specification.</li> <li>• Mechanical Bill of Quantities.</li> <li>• Civil Bill of Quantities.</li> </ul>

## Interpretation and terminology

### The following abbreviations are used in this Scope

Abbreviation	Meaning given to the abbreviation
Abbreviation	Explanation
BOQ	Bill of Quantities
BS	British Standards
EN	European Norm
OEM	Original Equipment Manufacturer
O&M	Operating and Maintenance Manual
BTF	Boiler Tube Failure
ECN	Engineering Change Notification
ECSA	Engineering Council of South Africa
KPS	Kusile Power Station
NEC	New Engineering Contract
PSC	Professional Services Contract
PEC	Professional Engineering Certificate
QMS	Quality Management System
SOW	Scope of Work
PPE	Personal Protection Equipment
UCLF	Unplanned Capability Loss Factor
CM	Configuration Management
KKS	Kraftwerk Kennzeichen System
EoP	End of Phase
AIA	Approved Inspection Authority
BU	Business Unit
COID Act	Compensation for Occupational Injuries and Diseases Act
EP	Emergency Preparedness
ERfW	Environmental Regulations for Workplaces
GAR	General Administrative Regulations
GSR	General Safety Regulations
LDV	Light Delivery Vehicle
LoG	(COID) Letter of Good Standing
NEMA	National Environmental Management Act

OHS	Occupational Health and Safety
OHS Act	Occupational Health and Safety Act and Regulations, 85 of 1993

## Specification and description of the services

The scope of work entails the following:

- 1) Comprehensive review of the existing boiler design to cater for RH drying.
- 2) Amends the design as required after incorporating RH drying design. The amendments are to be presented to the relevant change management committees within Eskom.
- 3) Prepare and present at least 2(two proposed solutions to address the current challenge of RH dryness
- 4) Taking design liability for any changes in the design as a result of queries during the design and construction period.
- 5) Take full accountability for all design clarification updates or changes
- 6) Attend to technical queries including review and acceptance of Method Statements, Risk Assessments, Data Packs and inspection plans.
- 8) Independent verification testing (Required ADHOC – verification of required dryness to prevent pitting, sample acquisition and review of results);
- 9) Signoff of the Works and issuing of Professional Engineering Certificates (PECs) and all handover requirements.
- 10) Consultant to do all necessary testing/verifications/inspections/design reviews to ensure there are no issues related to professional sign off and accountability upon completion of the project.
- 11) Preparation and issuing of as-built drawings and handover documentation.
- 12) Design (conceptual & detailed) and further studies.
- 13) Design, obtain licensing/approvals/permissions from relevant authorities for permission to create a new intersection or amendment to the pressure envelope or pressure parts.
- 14) Conduct follow up technical studies to confirm the current site conditions and suitability of the modification as well as best/suitable locations to connect to the boiler circuit

## Stage 1 Preparation

The appointed *Consultant* provides design assurance of the Reheater drying facility construction *works* and takes full accountability and professional liability for design changes. The *Consultant* takes full responsibility and accountability as the NEC *Consultant NEC3 PSC* and as detailed herein.

The *Consultant* reviews the design for completeness and constructability and proposes value-adding changes that will lead to significant cost and/or time savings for the *Employer*. The outcome of the design review is presented to the *Employer* for acceptance; any changes accepted by the *Employer* are made by the *Consultant*.

The *Consultant* compiles the design (conceptual & detailed) for the implementation of the Reheater Drying Facilities in accordance with the relevant standards, legislation and the *Employer's* Design Review Procedure. The *Consultant* conducts all necessary further studies, and compiles and submits all necessary design information to comply to the relevant design code.

The Consultant is required to:

- 1) Review all existing available information and previously compiled reports.
- 2) Perform the necessary site inspections prior to commencement of the works.
- 3) Provide adequate resources for the required works.
- 4) Ensure that the design scope is carried out in full.
- 5) Ensure compliance to the various design codes
- 6) provide costs and a scheduled time frame of the works.
- 7) Provide daily feedback on the status of the works as requested.
- 8) Coordinate the inputs/designs from all Eskom disciplines where required.
- 9) Comply with all Eskom specific policies, procedures and guidelines.
- 10) Adhere to all applicable South African governing legislation.
- 11) Produce all deliverables for the works
- 12) The appointed Consultant takes full accountability and liability for design changes and provides design assurance of the works.

Project deliverables must include the following:

- 1) Air Compressor sizing and selection report.
- 2) Hydraulic Analysis of the piping system (Design report).
- 3) Piping stress analysis (Piping design package and certificate of design).
- 4) Electrical Design of the system.
- 5) P&ID & PFDs in editable (CAD, MicroStation etc) and pdf format.
- 6) 3D model of the design for reviews.
- 7) Basic & Detailed Design Reports.
- 8) End-of phase documentation and reports.
- 9) Technical/Equipment Specification.
- 10) Mechanical Bill of Quantities.
- 11) Civil Bill of Quantities.

### Stage 2 Concept

The Consultant is required produce two preferred options that adequately address the reheater drying requirements.

The chosen design concept report must cater for all units at Kusile power station. The Consultant must establish a complete design, i.e., to produce all the component specifications, engineering drawings and other design documentation for procurement, fabrication, installation, construction and commissioning.

### Stage 3: Design development

The Consultant is required to perform a due diligence review of two selected options, the design (incl. investigative reports) for the Reheater Drying Facilities including all supporting infrastructure. This assessment is performed by means of a comprehensive review of the following receivables:

- 1) All related design reports.
- 2) Investigation reports
- 3) Mass Energy Balance
- 4) Design drawings (detailed design report);
- 5) Bills of Quantities.
- 6) Works Information and Specifications.
- 7) Operating and Maintenance Manuals.
- 8) Construction Quality Assurance Plans.
- 9) DWS checklists.
- 10) DWS technical advisory notes.

### Stage 4: Production information

The new compressor and dryers need to be sized to achieve a minimum of fifteen Reheater volume exchanges prior to the boiler flue gas temperature reducing to 150 C. This needs to happen within an hour. Considering the size of Kusile boilers the required levels of "dryness" cannot be achieved using existing compressors on site.

Therefore, the request is for an external contractor to design a new system that utilizes the forced drying method. The compressor is nonproduction and will only be operated during unit shutdown.

A new tapping point is required to introduce air into the steam circuit. This will be installed on the cold reheat piping, LBC12, or hot reheat piping, LBB12. The cold reheat pipeline and hot reheat pipeline material and dimensions are as follows respectively:

Main line material: BS EN 10216 – 16Mo3

Size: 720ID x 28WT

Main line material: BS EN 10216 – 16Mo3

Size: 526ID x 18WT

The system is only operated during boiler shut down after the pressure has been released. However, during normal unit operation, the system will experience cold reheat or hot reheat conditions and thus the following design conditions have been selected:

Pressure: 70 bar

Temperature: 577°C

During the detail design, the following base parameters should be utilised for the tapping point and valve arrangement to allow for a degree of standardisation:

Material: BS EN 10216 – 16Mo3

Size tubing: 88,9OD X 5,6WT

Size valve: Weld-in DN80 Globe and Gate valves

**Stage 5: Manufacture, Installation and Construction Information:**

Not applicable

**Stage 6: Post Practical Completion**

The Consultant to address any outstanding design issues and feedback and assisting with familiarising Project users with the design works.

**Constraints on how the *Consultant* Provides the Services.**

**Management meetings**

Regular meetings of a general nature will be convened and chaired by the *Employer’s Agent* as follows:

Title and purpose	Approximate time & interval	Location	Attendance by:
Project Kick-off Meeting	3 days Contract Award	Kusile Power Station	Employer, Contractor and Others
SHEQ Requirements Clarification Meeting	3 days after Kick – off meeting	Kusile Power Station	Employer, Contractor and Others
Execution Progress Meeting	Daily	Kusile Power Station	Employer, Contractor and Others
Overall contract progress and feedback	Weekly on Thursdays	Kusile Power Station	<i>Employer</i> and <i>Contractor</i>
Risk register and compensation events	Daily	Kusile Power Station	Employer, Contractor and Others
Other	as and when required		<i>Employer, Contractor and Others</i>

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

All meetings shall be recorded using minutes or a register prepared and circulated by the person who convened the meeting. 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.

### **Consultant's key persons**

**The Consultant is to provide an organogram showing the following as a minimum:**

*Consultant* company management organogram including key personnel contact details  
*Consultant* project team organogram indicate the lines of authority and contact details

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

Not applicable

### **Documentation control and retention**

#### **Identification and communication**

#### **Communication**

All contractual communication between the *Employer's Agent* and *Consultant* to be in a document format according to PSC3 attached to emails and not a message in the email itself.

Each communication letter is to indicate the type of notification in the subject and the period of reply thereof. Other Key personnel (if any) for official communication between the *Employer* and the *Consultant* will be agreed upon in writing at the Kick-off Meeting.

#### **Documentation**

Document Identification and relevant report templates to be issued by *Employer's Agent* after contract award.

#### **Retention of documents**

Clause 13.6 states that the *Consultant* retains copies of drawings, specifications, reports and other documents which record the *services* in one (1) electronic copy and one (1) hardcopy. The time period for which the *Consultant* is to retain such documents is the *period for retention* stated in the Contract Data.

### **Records and forecasting of expenses**

Refer to clause 21.3 (Option A) no additional requirements

### **Records and forecasting of the Time Charge**

Not applicable

### **Invoicing and payment**

Within one week of receiving a payment certificate from the *Employer's Agent* in terms of core clause 50.2, the *Consultant* provides the *Employer* with a tax invoice showing the amount due for payment equal to that stated in the *Employer's Agent's* payment certificate.

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

- The assessment based on the activities completed.

The *Consultant* shall address the tax invoice to ESKOM HOLDINGS SOC Ltd and include on it the following information:

Name and address of the *Consultant* and the *Employer's Agent*.

The contract number and title.

*Consultant's* VAT registration number.

The *Employer's* VAT registration number 4740101508.

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

- The invoice is to be submitted to **invoiceseskomlocal@eskom.co.za** once confirmed with the payment certificate.

### **Contract change management**

Standard PSC3 forms to be used for communication for contract change between the *Employer's Agent* and *Consultant*.

### **Inclusions in the programme**

Refer to Clause 31 and Clause 32.

Note: Clause 32.2 only the following condition applies

The *Consultant* submits a revised programme to the *Employer* for acceptance

- within the period for reply after the *Employer* has instructed him to,

### **Quality management**

#### **System requirements**

The *Consultant* shall comply with the system requirements contained in Annexure A to this Scope

#### **Information in the quality plan**

The *Consultant* shall comply with the quality requirements contained in Annexure A to this Scope

### **The Parties use of material provided by the *Consultant***

#### ***Employer's* purpose for the material**

Clause 70.1 states that the *Employer* has the right to use the material provided by the *Consultant* for the purpose stated in the Scope.

#### **Restrictions on the *Consultant's* use of the material for other work**

The *Consultant's* is restricted the use of material provided by him for any other third party.

**Transfer of rights if Option X 9 applies**

There is no exception from X9.

The *Consultant* provide to the *Employer* the legal documents which transfer these rights to the *Employer*. The *Consultant* to submit an applicable format of transfer notification.

The *Consultant* shall not challenge or assist any other party challenging at any time the validity or ownership of any of the intellectual property rights relating to the material created and developed for this contract.

**Management of work done by Task Order**

Not applicable.

**Health and safety**

Clause 25.4 states that the *Consultant* acts in accordance with the health and safety requirements stated in the Scope.  
The *Consultant* shall comply with the health and safety requirements contained in Annexure A to this Scope

**Procurement**

**BBBEE and preferencing scheme**

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

**Other constraints**

Delete if not required or state any other constraints that may be applicable to people employed by the *Consultant* and change the heading to suit the subject matter.

**Preferred subconsultants**

Not applicable

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

Not applicable.

**Limitations on subcontracting**

Not applicable.

**Attendance on Subconsultants**

Not applicable.

### Correction of Defects

No additions or exclusions from clause 41.2

### Working on the *Employer's* property

- Applicable plant permits are required prior to plant access.
- Reflectors to be always worn onsite for clear visibility
- Detailed activities schedule including date and time and updates are required for plant access.
- Toilet facilities are available within the Power Station boundaries.
- Potable water supply.
- Medical services are available at the medical centre in case of emergency and expenses incurred are for the *Consultant's* account.
- *Employer's* entry and security control, permits, and site regulations are to be adhered to.
- The *Consultant* complies with the access and controls procedures issued by Kusile Power Station.
- The *Consultant* shall obtain copies of such requirement from the *Employer's Agent*.

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

#### People Restriction

People are restricted to the Affected Property only

#### Hours of Work

The *Consultant* is restricted to hours only applicable to site access from 07h00 to 16h15. Any other remote work can be carried out remotely after these hours.

The *Consultant* keeps records of his people working on the *Employer's* property. The *Employer's Agent* shall have access to these records at any time.

#### Conduct

The *Consultant* and his employees are required to always maintain professional and ethical conduct, which upholds the Eskom Values to the highest standard.

Should the *Consultant's* employees be found to contravene the Eskom Values, Life Saving Rules and /or any of the aforementioned regulations, the *Consultant* must institute disciplinary action, which may include removal from site, until the disciplinary process is concluded.

### Cooperating with and obtaining acceptance of Others

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

- 1) The *Consultant* refers to core clause 23.1 about cooperation generally as well as details about Others with whom the *Consultant* may be required to work. See clause 11.2(7) for the definition of Others.
- 2) Requirements for liaison with and acceptance from statutory authorities or inspection agencies may be required.

**Things provided by the *Employer***

The following is supplied by the *Employer*:

- Office facilities
- Furniture
- IT Equipment
- Parking space

**Cataloguing requirements by the *Consultant***

Technical Information for each proposed equipment to be handed over by the *Consultant* as part of technical reports for cataloguing by the *Employer*.

**List of drawings**

**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.

All other necessary drawing will be supplied after Contract Award.

Drawing number	Revision	Title
0.90-27290	0	GENERAL ISOMETRIC PIPING COLD REHEAT SYSTEM
0.90-27291	0	GENERAL ISOMETRIC PIPING HOT REHEAT SYSTEM

## C3.2 ANNEXURE A: SAFETY, HEALTH, ENVIRONMENT AND QUALITY REQUIREMENTS

### 2.6 Roles and Responsibilities

#### 2.6.1 Appointed contractors and sub- contractors

**Note 1:** Most of the roles and responsibilities listed apply to both appointed contractors and any sub-contractors. Where some of the listed do not apply to both, then the specific responsibilities will be listed and titled. The contractors shall:

1. Carry out all duties as listed in section 8, 9 and 10, the various other regulations that form part of the OHS Act.
2. Carry accountability and responsibility for the safety and health of their employees and their sub-contractors within their working area, as contemplated by section 37(2) of the OHS Act;
3. Shall keep a record of all employees including the sub- contractor employees, including date of induction, relevant skills and licenses and be able to produce this list at the request of the Kusile Power Station Project Manager.
4. Ensure that all their appointees are made aware of their accountabilities and responsibilities in terms of their appointment and that they advise and assist these appointees in the execution of their duties.
5. Ensure that the minimum legislative, regulatory and Kusile Power Station SHE requirements are complied with on all work sites.
6. Compile a SHE (health and safety) file where all relevant health and safety records must be kept for each work site.
7. The sub- contractor must hand over a consolidated (to include any sub- contractor's files) health and safety file to the Kusile Power Station project manager on completion of the project. This is to include all drawings, designs, lists of materials used and other applicable information about the completed project, as well as the list of sub- contractors, the agreement, and the type of work completed.
8. The appointed contractor must provide the project manager **with a certified copy of his/her Compensation Commissioner's valid letter of good standing before the commencement of work and any future renewal letters obtained during the project for record-keeping purposes.** The letter of good standing shall reflect the name of the contractor's company. The nature of business reflected on the issued Logs must be in line with the issued scope of work. Similarly, the appointed contractor must provide the Kusile Power Station project manager with all the valid letters of good standing from their sub- contractors.
9. Appoint competent staff to perform the project work and ensure that all employees are trained in the health and safety aspects relating to such work and that the employees understand the hazards associated with all other work being carried out on the project.
10. Ensure that all employees are conversant with all relevant work procedures and that they adhere to such procedures. Similarly (without removing the appointed contractors' responsibilities), ensure that their sub- contractors and their employees are conversant with all relevant work procedures and that they adhere to such procedures.
11. Co-ordinate the activities of all the sub- contractors in the interests of safety and health;

12. Ensure that potential contractors (whom they intend appointing) submitting tenders have made detailed provision for the cost of safety and health measures throughout the project.
13. Stop his /her employees and any sub- contractors if project work is not in accordance with the safety health and environmental plan or if such work poses a threat to the health and safety of persons or a risk of degradation to the environment.
14. Only appoint contractors to do work, if satisfied that the contractor has the necessary competencies and resources to perform the work safely.
15. Appoint full-time competent employees in writing to supervise the performance of all specified work throughout the contract period.

**Note 2:** No work may commence and or continue without the presence of the project manager or project supervisor during performance of the contracted work.

**Note 3:** In determining the number of competent supervisors, the nature and scope of work being performed, shall be taken into consideration.

**Note 4:** If a sufficient number of competent employee(s) have been appointed to assist the works supervisor, the works supervisor may supervise more than one site.

16. Appoint a safety officer full time as per project risk.
17. Not victimise or dismiss employees, by virtue of the employees divulging health and safety information or suspecting such information has been divulged, in the interests of health and safety requirements.
18. Follow a process of disciplinary action if any of their employees or their sub- contractor employees has transgressed any of the requirements of the health and safety specification, safety and health plans, site rules or any other requirements.
19. Ensure that all appropriate precautions are taken to protect persons (visitors, members of the public, and other contractors) present at work or in the vicinity of a construction site against all risks that may arise from such site.
20. Ensure that pre-task risk assessments are conducted and documented daily and prior to the starting of any new task, irrespective of whether it is a repetitive task or not.
21. Take prime responsibility for all aspects of environmental management associated with the project activity for which they are responsible.
22. Provide any sub- contractor who is making a bid to perform work on Kusile Power Station's behalf, with the relevant sections of the documented Kusile Power Station's SHE Specification.
23. Principal contractors are required to approve sub- contractor's health and safety plans if they meet all the requirements.
24. Prior to having pre-employment and periodic medicals fitness examinations conducted, person/man job specifications must be compiled and handed to the occupational health practitioner.
25. Ensure that pre-employment, periodic and exit medicals are carried out on their employees. Medical assessments must be conducted by a registered Occupational Health Practitioner. During the pre-employment medical, where employees will be required to work at heights, they will also be required to undergo the required employee physical and psychological fitness examinations.

**Note 5:** should the appointed contractor or his/her sub- contractors entertain visitors on site, they will be held responsible for the provision and wearing PPE.

26. Where performing work with the environment, ensure that minimal damage is done and that where an Environment Management Plan is in place, then adhere to the plan.

27. Must have a substance abuse program which must be in line with the requirements of the OHS Act.
28. Ensure that no alcohol or other intoxicating substances are brought on to, or remains on the work sites.

**Note 6:** Kusile power station will not tolerate the presence of anyone who is or who appears to be under the influence of alcohol or any other intoxicating substance whilst performing work for them or on any work site.

29. Ensure that all equipment and tools used comply with OHS Act requirements with respect to condition, use, care, storage, maintenance, and the management of these;
30. Ensure that all incidents are reported and investigated timeously by competent incident investigators.
31. Be involved in all of their sub- contractor's investigations.
32. Establish health and safety committees, hold such committee meetings on all sites, and ensure that sub- contractors participate in their health and safety meetings.
33. Chair their own health and safety committee meetings and record such meetings.
34. Appoint sufficient number of health and safety representatives in terms of legislative requirements and ensure that the sub- contractors appoint health and safety representatives for their work sites.
35. When appointing contractors, advise the project manager in writing timeously and obtain his/her approval prior to them commencing work.
36. Shall keep a record of all employees including the sub- contractor's employees, including date of induction, relevant skills and licenses and be able to produce this list at the request of the Kusile power station Project Manager.

### 2.6.3 Site Managers

1. Assist the contractor and/or the safety officer in conducting site induction training for new staff and site visitors.
2. Communicate to all employees under their control on any hazardous and related work procedures, before any work commences and thereafter, at such times as may be determined by a risk assessment.
3. Ensure that the minimum legislative and Kusile power station SHE requirements are complied with on all work sites.
4. Stop any work that is not in accordance with the safety and health plan or if such work poses a threat to the safety and health of persons or a risk of degradation to the environment.
5. Ensure that risk-based personal protective equipment (PPE) has been issued and employees wear/use the PPE as instructed.
6. Inspect such PPE on a regular basis and record the inspections.
7. Ensure that all incidents are reported to the client and are investigated as stipulated in the latest revision of the OHS Incident Management Procedure (32-95).
8. Be involved in all investigations that occur within their area of responsibility.
9. Carry out audits and or inspections on their sub- contractors on instructions of their contractor.
10. Ensure that employees under their control are conversant with all relevant work procedures and that they adhere to such procedures.

11. Ensure that daily or pre-task risk assessments are conducted and documented daily and prior to the starting of any new task, irrespective of whether it is a repetitive task. Ensure that the team are involved in the abovementioned risk assessments.
12. Hold toolbox talks at the start of each day/ task to discuss health and safety issues as well as confirming the requirements of the daily risk assessments.
13. Ensure that all appropriate precautions are taken to protect persons (visitors, members of the public, and other contractors) present at work or in the vicinity of a construction site against all risks that may arise from such site.
14. Ensure that no alcohol or other intoxicating substances are brought on to, or remains on, the premises / work sites and that no employee remains on site if he/she is under the influence. Furthermore, report such instances to contract management.
15. Ensure that all equipment and tools used on site comply with OHS Act requirements with respect to condition, use, care, storage, maintenance, and the management of these.
16. Not victimise their employees by virtue of their employees divulging health and safety information or suspecting such information has been divulged, in the interests of health and safety requirements (reference – section 26 of the OHS Act).
17. Where any work is performed which involves the environment, ensure that minimal damage is done to the environment and that where an Environment Management Plan is in place, then the plan adhere to the plan.
18. Stop any employee or contractor from performing work which is not in accordance with the appointed contractor's and or sub- contractor's health and safety plan which poses a threat to the health and safety of persons.

#### **2.6.4 Contractor site supervisor or Contract Supervisor**

Must:

1. Be competent to perform the required supervisory tasks; have attended a supervision or legal liability competent training and a 3 years supervision experience.
2. Ensure their employees and all sub- contractors comply with the required statutory and Kusile Power Station requirements.
3. Inspect all work done by the employees and all sub- Contractors to ensure adherence to Kusile Power Station's standards and specifications
4. Conduct follow-up inspections to ensure findings are closed out and preventative action is in place.
5. Ensuring a Safe working environment is established and maintained by the contractor for the elimination of unsafe acts by all people whilst on the project site.
6. Discuss all SHE related problems with the relevant contractor management timeously in the first instance and thereafter the Kusile power station project manager in the second instance relating to procedure requirements, non-conformances identified, corrective actions, audits and inspection schedules.
7. Ensuring that quality records are maintained in accordance with legislative and Kusile power station requirements.
8. Continual liaison between the appointed contractor, sub- contractors and employees.

9. Ensures that employees and sub- contractors are aware of latest standards, procedures, work instructions and safety regulations issued by Kusile Power Station.
10. Conduct site Inspections for compliance to SHE requirements and compiles the relevant inspection reports.
11. Participate in all sub- contractor incident investigations.
12. Participate in the appointed contractor's emergency preparedness planning.
13. Ensure that their own employees and those of any sub- contractor are competent to perform the tasks assigned.
14. Issue site instructions on behalf of the appointed contractor where and when the sub- contractors deviate from safety requirements.
15. Assist the appointed contractor with the handing over process, in particular the SHE file and relevant documentation.

#### **2.6.5 Contractor Health and Safety officer**

1. The Safety Officer must be suitably qualified with recognised safety qualification and relevant experience.
2. Must be full time on site as per project risk.
3. Promote a SHE culture within the organisations involved in the project / contract.
4. The contractor's safety and health officer shall assist in the control of all health and safety-related matters on the sites.
5. Be involved in the developing the project SHE plan and SHE policy.
6. Be in constant liaison and cooperate with Kusile power station's SHE professionals responsible for providing them with a health and safety service.
7. Ensure that this SHE specification is adhered to by his/her appointed contractor and is submitted to any sub- contractors.
8. Conduct audits and inspections of all work sites for the duration of the project.
9. Be involved in the organisations incident investigations when required.
10. Participate in the organisation's statutory and non-statutory health and safety committees' meetings.
11. Conduct organisational, site and visitor induction training.
12. Stop any employee or contractor from performing work which is not in accordance with the appointed contractor's and or sub- contractors' health and safety plan which poses a threat to the health and safety of persons.
13. Carry out audits and or inspections on their contractors at least monthly and any sub- contractors on instructions of their contractor;
14. Carry out frequent behaviour observations of employees under their control at least monthly and any sub- contractors on instructions of their contractor.

## **1. Specification**

### **3.1 Scope of work**

The scope of work entails the following:

- 1) This project aims to size new compressors and design new pipelines connecting from the compressors to header where provision had been made for the connection. Currently an alternative method is used to preserve reheater section of the boiler to avoid failures due to pitting corrosion.
- 2) The project has been structured by the products to be easily identified; new and existing connection points, utility air pipelines and compressors. Each system requires both modification and as-built.
- 3) Approved for construction drawings must be issued and updated to as-built after construction.
- 4) EOJ (End of Job) documentation must be issued to the Employer at the end of the job.

The project will be conducted within the below phases and deliverables:

Phase 1	<ul style="list-style-type: none"> <li>• Air Compressor sizing and selection report.</li> <li>• P&amp;ID &amp; PFDs in editable (CAD, MicroStation etc) and pdf format.</li> <li>• Hydraulic Analysis of the piping system (Design report).</li> </ul>
Phase 2	<ul style="list-style-type: none"> <li>• Basic and Detail Design Development (2 options)</li> <li>• Piping stress analysis (Piping design package and certificate of design).</li> <li>• 3D model of the design for reviews.</li> <li>• Electrical Design of the system.</li> </ul>
Phase 3	<ul style="list-style-type: none"> <li>• Basic &amp; Detailed Design Reports</li> <li>• End-of phase documentation and reports.</li> <li>• Technical/Equipment Specification.</li> <li>• Mechanical Bill of Quantities.</li> <li>• Civil Bill of Quantities.</li> </ul>

### 3.2 Legal Compliance

#### 3.2.1 Section 37(2) (Legal) Agreement

A section 37(2) agreement must be signed between Kusile Power Station and the appointed contractor at the time of awarding the contract. The appointed contractor must ensure that a section 37(2) agreement is compiled between the appointed contractor and all their sub- contractors for the contract.

The original copy of the section 37(2) Agreement must be retained by the contractor and a copy retained by the responsible project manager.

A copy of all the agreements must form part of the respective appointed contractor's SHE file.

**Note:** The agreement must be signed by both parties i.e Kusile Power Station (GX) Project Manager and the Appointed Contractor. The authorization shall not be issued to the appointed contractor without the signed 37(2) document.

#### 3.2.2 Site Access requirements

The OHS file package must be submitted to the OHS department electronically **1 week** before the agreed project commencement date.

Before the successful Contractor commences with any work, the Kusile Power Station Project Manager/Contract Manager shall ensure that;

- A copy of the SHE Specification document is in the possession of the principal contractor as well as the Kusile Power Station baseline risk assessment.

- The responsible person of the contracting company and the Kusile Power Station project manager/contract manager have signed the Kusile Power Station section 37 (2) agreement.
- The appointment of the appointed Contractor have been concluded and signed by the Contractor and Appointed Project Manager.
- The SHE plan has been discussed with the responsible person of the contracting company and approved in writing by the Kusile Power Station Contract Manager.
- A task specific baseline risk assessment must be part of the SHE Plan and accompanied by a risk assessment procedure applied. A monitoring and review plan must form part of the baseline risk assessment
- Where a Sub Contractor(s) is appointed by the Appointed Contractor, the Contractor supplies the applicable Kusile Power Station SHE specifications to the Sub Contractor(s).
- Where a Sub Contractor(s) is appointed by the Appointed Contractor, the safety file for the sub-contractor must also be submitted to safety department for approval
- The OHS department shall assess and give written feedback to the contract manager.
- The safety file shall be approved by a form of a written letter, the letter shall authorise the appointed contractor to commence with site establishment.

### **3.2.3 Hazardous work by children (Child Labour)**

The constitution of the Republic of South Africa, in the “Bill of Rights” is clear on the rights of children, especially when it comes to:

1. being protected from exploitative labour practices;
2. not to be required or permitted to perform work or provide services that
  - i. are inappropriate for a person of that child’s age; or
  - ii. Place at risk the child’s well-being, education, physical or mental health or spiritual, moral or social development; and the Basic Conditions of Employment Act, Chapter six Section 43 “Prohibition of employment of children”.

Before resorting to the use of child labour, due consideration must be given to the rights of the child in terms of the constitution. Where work is being performed which is not prohibited in terms of the constitution, then such work must be conducted in terms of the OHS Act “Regulations on Hazardous Work by Children in South Africa” with emphasis on paragraph 2 Purpose and Interpretation. Kusile Power Station does not condone the use of child labour and therefore all effort must be exercised and child labour should not be used.

### **3.2.4 OHS Act**

The appointed contractor and sub- contractors shall have an up to date copy of the OHS Act and regulations which will be available to all employees.

### **3.2.5 Legislative compliance**

All contractors will comply with all the legislation pertaining to this contract being:

The appointed contractor and all sub- contractors which may be appointed by the principal contractor will comply with all the legislation pertaining to the issued scope of work.

## **3.3 Requirements specific to the issued scope of work**

The issued scope of work falls under a high-risk category as the Contractor will be designing, sizing equipment required and further studies, compiles specifications and quantifies the *works* required to

implement the Reheater Drying. The *Consultant* provides construction supervision and professional engineering services for the *works*.

**In compliance with legal and other requirements, the following requirements must be complied with fully:**

- Employees must be medical fit to perform the task.
- Medical certificates of fitness that are valid must be part of the safety file package including identification documents of the employees and their competency certificates.
- The safe work procedures must indicate how scope of work will be done safely without endangering the health and safety of employees.
- The Appointed Contractor to ensure that all persons who work at height or who will be required to do rescue at height shall receive three days of FAS training and two days of rescue training in accordance with unit standard 229998 and 229995 employees that will be working at heights are trained to the correct Unit standard.
- A detailed Risk Assessment to be submitted for all working at height activities, developed by a competed fall protection planner.
- The working at height Risk assessment to be supported with a sound rescue plan.
- Submit a detailed SHE plan which must be suitable, practical, site specific, well-documented and a workable SHE document, compiled to satisfy the requirements of the OHS Act 85 of 1993, the Sub-'s safety specifications and other relevant legislation. The SHE plan must be aligned in terms of suitability and adequacy to the extent of the scope of work. The SHE plan should detail how health and safety would be implemented while on site looking at the scope of work as well as any legal and other requirements applicable to the project to be carried out.
- The SHE plan must show and describe the assignment of responsibilities, procedures and actions to be taken in the process of implementing and maintaining the SHE plan as well as include how deviations/non-conformances shall be managed.
- The SHE plan must be accepted by the OHS functionary before commencement of work.
- The method statements must be approved in writing by the Eskom Kusile Generation Project Manager assigned for this project.
- The method statements must be approved in writing by the Eskom Kusile Generation Project Manager assigned for this project.
- The contractor must identify suitable PPE required for the activities including the identification of appropriate tools.
- The contractor must submit job descriptions supported by proof of competencies for all employees.
- First aid appointments must be made to meet the requirements, appointees must be trained to level 2 from SAQA approved training provider.
- Applicable legal appointments must form part of the safety file with competency certificates per appointment.
- The appointed contractor must submit a Covid-19 risk assessment and Covid-19 management plan in line with the guidelines as issued by the Department of Employment and Labour.
- No vulnerable employees are allowed to come to Kusile site as identified by the Department of Employment and Labour.
- The appointed contractor must supply employees with at least 2 cloth masks over and above other masks that may be required due to the risk of the activities.
- The appointed contractor must supply hand gloves and hand sanitizers to the employees

- The transport used to transport employees must be disinfected as per prescribed frequency
- All risk assessments must be compiled by competent person, who has a certificate of competency for Risk Assessment from SAQA approved training provider.

### **Confined Spaces**

#### **Confined Spaces**

- At least one door or manhole giving access to each confined space must be provided with a means to lock such door or manhole in the open position. A confined space warning sign must also be attached next to such entrance of a confined space when entry into this area will be required.
- The door or manhole concerned must be locked in the open position and a confined space warning sign attached before any person is allowed to enter such confined space. The locking, or other preventative measure, must constitute an integral part of the isolation required before the permit to work is issued.
- Before any door giving access to a confined space is closed, the person closing such door must ensure that there are no persons inside the confined space, and that all tools, equipment and debris have been removed.
- Where a confined space can be isolated and adequately ventilated, this must be done before the space is environmentally tested and certified. Thereafter a gas test certificate, environmental certificate as well as a safe entry certificate (where required) must be issued before any person is allowed to enter.
- In addition:
  - i. Adequate ventilation, gas monitoring and thermal stress monitoring (heat stress – WBGT index - cold stress) must be maintained while persons remain in the space.
  - ii. Only approved lighting and portable electrical tools shall be allowed, (Refer Electrical Machinery Regulation 10 of the Act).
  - iii. A permit to work must be issued.

### **3.4 Safety, Health and Environmental file package requirements**

#### **The following documentation must form part of the SHE file:**

- The appointment contractor and each sub-contractor shall each have a SHE Policy that shall be duly signed by an authorised signatory concerning the protection of the health and safety of contractor's personnel and others in and about the execution of the works, including a description of his organisation and the arrangements for carrying out and reviewing such policy.
- A copy of the SHE Policy shall be provided as a tender returnable. Tenderers shall furthermore supply method statements containing sufficient detailed information to demonstrate compliance to this Schedule.
- Proof of communication of the SHE policy to employees must be attached with the submitted signed SHE policy.
- All contractors shall prominently display a copy of the policy in the workplace where the contractor's personnel normally report for service.

- The sub-contractor's SHE Plan shall demonstrate the management process and procedures that shall be adopted to ensure compliance to requirements listed in this schedule and other contract documents requirements.
- These management processes shall identify each activity, the foreseeable internal and external hazards, the specific precautions and controls that shall be necessary to ensure that the Works commence and continue safely and without risks to health or to adjacent operations
- The SHE Plan shall further demonstrate the Contractor's commitment to safety, health and environmental requirements and shall, as a minimum include the following elements:
  - Compliance to this SHE specification
  - Relevant applicable legal and other requirements as per issued scope of work.
  - Roles and responsibilities.
  - Process for hazard identification and risk assessment including monitoring and review plans, a further identification of opportunities must be part of the process. Interested and affected parties must be clearly outlined.
  - Process for change management.
  - Process for employee training, competency, communication, awareness and participation.
  - Process for incident management and investigation.
  - Process for setting objectives and programmes.
  - Process in place to review the SHE plan.
  - Process for performance management and monitoring.
  - Process for internal audits.
  - Process for document and records management.
  - Planning of conduct of work activities including planning for changes and emergency work
  - Personal Protective Equipment procedure and rules.
  - Emergency planning and fire risk management
  - Vehicle and driver behavior safety
  - Competency, training, appointments
  - Communication and awareness
  - Identification of Environmental Aspects, their associated impacts, mitigation measures and management thereof.
- Management commitment and visible felt leadership
- The sub- contractors SHE Plan shall be reviewed from time to time (and in any event as and when required by the client) to ensure that it fully addresses all the issues and complies with these requirements to the satisfaction of the client.

**The following competencies are mandatory for this type of work:**

- Risk assessor competency

- Level 2 first aider competency
- Supervisor competencies i.e. Technical competencies, legal Liability, HIRA, Incident investigations and safety for supervisor's course.
- SHE Rep competency
- Safety officer competency
- PDP and driver licences where applicable
- Emergency Coordinator and Evacuation wardens
- Incident Investigator

### 3.5 Costing for SHE within the Project

The SHE costing must be itemised and must take into consideration the scope of work. The appointed contractor must make sure that he/she made adequate provision for the cost of health and safety measures during tendering process. However, this does not replace the normal SHE requirements pertaining to the organisation in terms of the OHS Act, General Safety Regulations 2 and Section 8 (2)(e).

### 3.6 COID

The appointed contractor and all his/her sub- contractors shall be registered and in good standing with compensation fund or with a licensed compensation insurer as contemplated in the compensation for occupational injuries and diseases Act , 1993 ( Act No. 130 of 1993). The obligation lies with the contractors to ensure that the LoG remain valid throughout the contract period. A copy of the LoG must be filed in the contractor SHE files.

### 3.7 Legal and other Appointments

- For the duration of the contract, the appointed contractor and all sub- contractors shall appoint competent employees who will meet the requirements of the OHS Act.
- Where appointments are made, contractors shall ensure that the appointees have been suitably trained and or informed of their responsibilities before getting them to accept such appointment.
- The relevant statutory appointments shall be made in accordance with the requirements of the OHS Act which includes the requirement of a competent person being appointed in the relevant roles. The statutory appointments must reflect the extent of the scope of work issued.

### 3.8 Eskom Life-saving Rules

1. Six Life-saving rules have been developed that will apply to all Eskom Employees, agents, consultants, and **contractors**. Failure to adhere to these rules by any Eskom employee or employee of an Appointed Contractor or sub- contractor will be considered a serious transgression. These

rules are being implemented to prevent serious injury or death of any employee, labour broker or contractor working in any area within Eskom.

2. If any contractual work will be performed on any Eskom premises (including delivery of any product), then the rules **shall be obeyed** by any contractor and their employees.

The Life-saving rules are:

RULE	DESCRIPTION OF RULE
Rule 1	<b>OPEN, ISOLATE, TEST, EARTH, BOND, AND/OR INSULATE BEFORE TOUCH</b> ( That is plant, any plant operating above 1000 V)
Rule 2	<b>HOOK UP AT HEIGHTS</b> Working at height is defined as any work performed above a stable work surface or where a person puts himself/herself in a position where he/she exposes himself/herself to a fall from or into.
Rule 3	<b>BUCKLE UP</b> 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	<b>BE SOBER</b> No person is allowed to be under the influence of intoxicating liquor or drugs while on duty
Rule 5	<b>PERMIT TO WORK</b> Where an authorisation limitation exists, no person shall work without the required permit to work.
Rule 6	<b>NO REVERSING WITHOUT A SPOTTER/FLAGMAN</b> Whenever a construction vehicle has to reverse, there must be a flagman to guide the driver at all times.

Eskom will take a stance of zero tolerance on these rules.

Non-compliance to a Life Saving rule will be considered serious misconduct and will lead to serious disciplinary action, which may include dismissal.

This is to ensure that **every person** who works on or visits an Eskom **returns home safely to his or her family.**

### 3.9 Substance Abuse

1. Alcohol and substance abuse pose a significant threat to any business, more so in industrial incidents and the driving of vehicles. Eskom is therefore, entitled to take reasonable steps to ensure that intoxicated persons are identified and prevented from entering Eskom.
2. General Safety Regulation 2A is clear on the legal stance regarding intoxication.
3. The alcohol and drug permissible level is 0%.
4. All contractors shall comply with Eskom's procedure 32-37 ("Substance Abuse Procedure"), taking into account that this is an Eskom Life-saving Rule number 4: BE SOBER").
5. Due to COVID-19, ESKOM as suspended ad hoc alcohol test at entry points. Alcohol tests will only be performed when there is reasonable evidence that an employee is under the influence of alcohol.
6. Contractors are encouraged to compile their own manual and to carry out alcohol testing of their own employees when there is reasonable evidence that the employee is under the influence of alcohol. The legislative alcohol level is deemed to be zero.
7. Test records must be treated as "Confidential" and filed in the employees' personal file.

### **3.10 Contractor organisational Structure**

#### **3.10.1 Appointed Contractor Organogram**

The appointed contractor must provide an organisational organogram related to this contract, depicting all the levels of responsibility from the CEO down to the supervisors responsible for the contract. List the relevant positions held, names of appointees and legal appointments. The organogram must be accompanied by CV's of the workforce as well as proof of competencies.

The appointed contractor must ensure that all sub- contractors comply with this requirement. The appointed contractor is responsible for keeping copies of all the organograms as well as submitting them with the SHE plan. All organograms shall be updated timeously when appointments are changed.

This diagram must be kept up to date and filed in the project SHE files.

#### **3.10.2 Sub- Contractor/s Organogram**

1. Sub- contractors are required to compile their company organogram for the project, listing the reporting structure from their CE down to their project supervisors. The diagram must list the names, positions held and any appointments made.
2. This diagram must be kept up to date, a copy of which must be given to the appointed contractor and a copy filed in the relevant project SHE files.
3. This diagram must be kept up to date and filed in the project SHE files.

### **3.11 Risk assessment (refer sec 8 & 9 of the OHS Act)**

It is a legal requirement in terms of Section 8 (2)(d) of the OHS Act for an employer to carry out risk assessments, to establish which risks and hazards are attached to the health and safety of persons due to any work which is performed, any article or substance which is, handled, stored, transported.

Kusile Power Station shall prepare and provide a Baseline Risk Assessment for an intended work as per the scope of work to the contractor as part of the contract package.

The appointed contractor shall develop a risk assessment in line with Section 8 (2)(d) of the OHS Act, in alignment to Eskom 32-520 procedure. Emerging risks and hazards must be managed during the duration of the contract. This means that if there are significant changes to a process or activity, or any new process, then these should also be subjected to risk assessment.

All risks must be rated. Activity based risk assessments shall be conducted by a competent person of the Appointed Contractor.

#### **3.11.1 High Risk Activities**

When the appointed contractor and/or his contractors are working in an area where a high health and safety hazard exists, the appointed contractor shall:

- Ensure that permanent and adequate on-site supervision is available for the entire duration of the work that is being conducted.
- Ensure correct PPE is worn for the task
- Provide, erect and maintain all the required barricading, lighting, flags, flashing lights, or other safety control equipment to enable operations to proceed in a safe manner;

- Maintain, at all times, defined access ways, which are clear of objects or obstructions, so as to allow for emergency vehicle entry ;and
- Provide any temporary protective shielding required for protecting nearby operations, at his own cost.
- The appointed contractor shall on a daily basis and for every task to be performed, conduct an issue based risk assessment with all contractors' personnel involved with the task(s). The issue based risk assessment shall form the basis of the daily pre-job briefings / tool box talks prior to the start of work. Proof of communication that contractor employees were involved in the assessment will be noted on a standard form, which shall be kept at the job site during the job execution.
- The completed risk assessment must be signed by a competent risk assessor.

### **3.12 Working at Height Procedure**

#### **3.12.1 General Requirements**

Persons may only work from a fall risk position if a site-specific fall protection plan is in place and correctly implemented and consists of the following:

1. A fall protection plan developer must be appointed in writing.
2. Baseline risk assessment, which is specific and incorporates the working at height risk assessment, as well as the site-specific risk assessment, has been completed for the work to be conducted.
3. Safe working procedure/task analysis and work instructions, approved by a competent person, are in place.
4. The procedure addressing the inspection, testing and maintenance of all fall protection equipment is in place.
5. A fall rescue plan detailing the necessary procedure, personnel and suitable equipment required to affect a rescue of a person in the event of a fall incident to ensure that the rescue procedure is implemented immediately following the incident. Appropriate training, as determined by the risk assessment, has been provided.
6. Appropriate fall prevention equipment and fall arrest equipment have been issued and used when there is a fall exposure.
7. There are equipment inspection procedures and up-to-date inspection records.
8. Individuals are medically fit to work at height, and records of this are kept.
9. A site-specific risk assessment is performed.

While work is in progress, adequate warning signs and/or barricades shall be used in all areas where there is a risk of persons being injured by materials or equipment falling from the work area. Barricades should be continuous and easily visible.

A drop zone shall be established with appropriate warning signs and barricading, warning personnel below of workers above and potential falling objects.

#### **3.12.2 Every employer shall ensure that work at height is:**

1. Properly planned;

2. Appropriately supervised; and
3. Carried out in a manner that is, as far as is reasonably practicable, safe and that its planning includes the selection of work equipment.

### **3.13 Fire Equipment and maintenance**

1. All firefighting equipment's that have been provided shall:
  - a. Be clearly labelled
  - b. Conspicuously numbered
  - c. Entered in a register
  - d. Inspected monthly by a competent person
2. Tested and serviced at recommended intervals by an accredited supplier
3. Results entered in the register and signed by competent person.

### **3.14 First Aid and Equipment**

1. The requirements of the OHS Act GSR 3 must be observed.
2. First Aid appointments must be made to meet the requirements, this includes construction sites. Appointees must be trained to level 2. It is good practice for all employees to be trained to at least level 1.
3. When appointing employees for work sites, cognisance must be taken into account the type of work performed, the distance teams are working apart and the terrain to be covered if an emergency should arise.
4. A list of emergency numbers must be displayed on the notice boards and made accessible for all employees.
5. Appointed contractor must ensure that his /her employees and sub- contractor employees are familiar with the emergency numbers.
6. Contractors shall have one first aid box for the first 5 persons and thereafter one for every 50 or team of workers on site or part thereof, taking into account the type of work performed and the distance between teams.
7. More first aid boxes shall be provided in accordance with the risk assessment. Boxes must be available and accessible for the immediate treatment of injured persons at the workplace.
8. For offices, signs indicating where the first aid box or boxes are kept as well as the name and contact details of the first aider of such first aid box or boxes shall be erected.
9. The appointed contractor and sub- contractor shall ensure that alternative arrangements be made for incidents occurring after working hours.

### **3.15 SHE Communication Systems**

- Appointed contractor/s and their sub- contractors must develop a communication procedure outlining how they intend to communicate SHE issues to their staff, the mediums they will employ and how they will measure the effectiveness of their SHE communication. Communications shall include:
  - ✓ The daily Tool box talks that shall be documented and accompanied by proof that employees were part of the talks.
  - ✓ Pre- job briefing before commencement of tasks and post- job briefing after the completion of the task.
  - ✓ Any shift handover must be documented where applicable

- Where project meetings are conducted on site, SHE shall be included as a standing agenda point and minutes of these meetings shall be available on site at all times. Minutes of meeting must be compiled and filed in the relevant SHE files. All employees shall have access to these minutes. Attendance register shall be kept for all the health and safety meetings.

### **3.16 SHE Committees**

1. The appointed contractor shall establish statutory health and safety committee in terms of Section 19 of the OHS Act, Act. Similarly, sub- contractors shall establish their own statutory health and safety committee.
2. All sub- contractors shall be members of the appointed contractor's safety committee.
3. The Committee shall meet to discuss SHE issues concerning the current work being performed, training, upcoming work and SHE requirements, incidents and lessons learned specific SHE problems, safety performance, action plans and other relevant SHE issues.
4. SHE representatives for a workplace shall be members of the relevant workplace safety committees (Refer to Section 19 (2) (a) of the OHS Act).
5. The number of persons nominated by employer must not be more than the Health and Safety Representatives on that specific statutory health and safety committee. (Refer to Section 19(2)(c) of the OHS Act)
6. A statutory health and safety committee meeting shall be held at least 3 monthly (where medium to high risk work is involved, more frequent if required), and all sub- members of the committee shall attend the meeting.
7. Statutory health and safety committees may make recommendations to the appointed contractor and the project manager and the Inspector at DoL.
8. All health and safety committees shall discuss all projects related OHS Act Section 24 and 25 incidents and other notified serious incidents.
9. Health and safety committees shall follow up on incident investigation recommendations and shall keep record of all recommendations made by the committee.
10. Statutory health and safety committees may make recommendations for the revision of current standards, procedures and practices.
11. The sub- contractor and sub- contractors shall ensure that statutory and non-statutory health and safety committees carry out their duties.
12. The chairperson of the health and safety committees shall be selected and sub- by the contractor. The sub- chairperson must be competent to chair meetings and be able to make informed decisions.

### **3.17 Non-statutory health and safety committees**

1. Where there are large worksites, then non-statutory sub-committee must be established within that worksite to assist with the communication of health and safety related matters between the statutory health and safety committee and the workplace.
2. The duties and responsibilities of the non- statutory health and safety committees will be the same as the statutory safety committee

### **3.18 SHE Training**

1. The appointed contractor, when making a bid for this project shall provide a breakdown list of the SHE training requirements and the costing of such requirements. Similarly, sub- contractor must provide the same requirements when bidding with the appointed contractor.
2. The scope of training includes but is not limited to the type of work being performed. Additional to the requirements, will be that the appointed contractor and sub- contractors must have the

appropriate qualifications, certificates and employees should always be under competent supervision.

3. Where legislative and Kusile power station recommended appointments are made, the relevant training shall be given to those appointees prior to the acceptance of those appointments.
4. When there is an amendment to the Acts and/or to the regulations, SHE specification and SHE plan, all affected staff shall undergo the applicable refresher training.
5. Appropriate time must be set aside for training (induction and other) of all employees.
6. Records of all training and qualifications of all contractor employees must be kept on the SHE file.

### **3.19.1 Induction training**

The appointed contractor shall ensure that all his / her employees, sub- contractors and their employees have undergone the Kusile Power Station Safety contractor management induction training prior to commencing work on site and shall be renewed annually.

Appropriate time must be set aside for training (induction and other) of all Contractors' personnel including the annual re-induction training.

1. Attendance registers must be completed of any induction training given, which must indicate that they have received and understood the induction training.
2. Prior to attending the induction training, all employees must undergo a pre-employment medical examination and found fit for duty. A copy of the certificate of fitness must be kept in the SHE file on site for the duration of the project.
3. All employees and visitors on site shall carry the proof of induction training.
4. MS teams will be used as a platform for inductions to contain the spread of COVID-19.

### **3.19.2 Site specific induction training**

The appointed contractor shall ensure that all his / her employees and sub- contractor employees undergo site specific work induction with regard to the approved project SHE plan, general hazards prevalent on site, risk assessment, rules and regulations, and other related aspects. Records of site specific induction must be kept in the safety file

The induction training should also include identification of sensitive features such as wetlands/vlei areas, red data species, graves, etc.

### **3.19.3 Visitors to site induction**

1. Visitors to the site shall be required to undergo and comply with the appointed contractor's site-specific safety induction prior to being allowed access to site.
2. All visitors must remain in the care and custody of a person (host) who has been properly inducted. No visitors are permitted to undertake any work onsite, of any nature.
3. Visitors who have completed site induction must be provided with a record of proof of Induction training.

### **3.19.4 Requirements for vehicles**

1. The appointed contractor must have a system/ process to manage vehicle access to laydown area/site.
2. The appointed contractor must maintain their vehicles in a roadworthy condition and a vehicle license must be valid at all times.
3. Contractor vehicles can be subject to inspections by the contract/project manager

4. Vehicles which are not roadworthy will not be permitted to be used on site.
5. Precautions shall be taken to secure all loads properly. Loads projecting from vehicles shall be securely loaded and in daytime a red flag and during darkness a red light or red reflective material shall be attached to the extreme end of such projecting material.
6. All vehicles must be fitted with fire extinguisher and first aid kit.
7. Activities such as loading and offloading of material/equipment must be included in the fall protection plan and the risk assessment if there is a risk of falling.

### **3.19.5 Requirements for Drivers**

8. The driver must have a valid national licence for the type of vehicle used.
9. The driver must have level 1 first aid training and basic fire extinguisher training
10. It is the responsibility of the driver to ensure:
  - a. Their passengers wear seat belts whilst the vehicle is in motion.
  - b. Comply with all traffic road rules, safety, direction and speed signs.
  - c. Ensure that vehicle loads are properly secured prior to moving off.
  - d. Ensure that vehicles are not overloaded.
11. No drivers or operators may text, talk on cell phones or two way radios whilst driving, unless a hands free kit is used.
12. All drivers of such vehicles are to have valid medical fitness certificates.
13. Drivers of light vehicles must avoid stopping or parking in the vicinity of machines. At least 30 (thirty) meters must be left clear between such a vehicle and such a machine
14. Drivers/operators shall be responsible for the travel-worthiness of all loads conveyed by them.

### **3.19.6 Housekeeping and Order**

1. All contractors shall maintain a high standard of housekeeping within their sites and vehicles for the duration of the project.
2. Prompt disposal of waste materials, scrap and rubbish is essential.
3. Materials/objects shall not be left unsecured in elevated areas –falling objects may cause serious injuries/fatalities.
4. Nails protruding through timber shall be bent over or removed so as not to cause injury.
5. All packaging material including boxes, pallets, crates, etc. to be removed from the work area immediately.
6. On completion of his / her work, the contractor is responsible for clearing his / her work area of all materials, scrap, temporary buildings and building bases to the satisfaction of the client/agent.
7. In cases where an inadequate standard of housekeeping has developed, compromising safety and cleanliness, anyone has the responsibility to bring it to the attention of the appointed contractor in the first instance and the Eskom Kusile project/site manager in the second instance.

8. The Kusile power station Project/Site Manager has the right to instruct the appointed contractor and sub- contractors to cease work until the area has been tidied up and made safe. Neither additional costs nor extension of time to the contract shall be allowed as a result of such a stoppage. Failure to comply with this requirement will result into site cleaning by another cleaning contractor company at the cost of the appointed contractor.
9. The sub- contractor shall carry out regular safety/housekeeping inspections (at least weekly) to ensure maintenance of satisfactory standards. The appointed contractor shall document the results of each inspection and shall maintain records for viewing.
10. All contractors must comply to the Kusile Power Station Barricading practice note: 240-131824200.

### **3.20 Workplace Signage and Colour Coding**

1. When using, an explosive power tool the appropriate signage shall be erected, warning people of its use.
2. The principal contractors shall provide signage where work is conducted and where unauthorised entry is prohibited and/or where alerting and cautioning passers-by to be aware of potential dangers.
3. The meanings of the appropriate symbolic signage must be discussed during induction training and toolbox talks.
4. Where possible, within workshops, work areas and established premises, the appropriate sign indicating the meaning of symbolic safety signs must be displayed.

### **3.21 Tools and Equipment**

1. Contractors shall ensure that all tools and equipment are identified, safe to be used and is maintained in a good condition.
2. Contractors shall ensure that all tools and equipment are listed on an inventory list, be regularly inspected at least monthly or as required by legislation and risk assessments.
3. The equipment should be numbered or tagged so that it can be properly monitored and inspected.
4. All tools that emit noise shall be clearly marked with the emitted noise levels
5. Where applicable, tools and equipment must have the necessary approved test or calibration documentation prior to being brought onto the project and the records shall form part of the SHE plan. Maintenance calibration shall be undertaken in terms of the manufacturer's requirements.
6. All fuel driven equipment must be properly maintained in accordance with the manufacturer's recommendations and legal requirements.
7. Kusile power station reserves the right to inspect tools or items of equipment brought to site by contractors for use on this project.
8. Explosive power tools must be treated with extreme caution and be operated by specially trained employees.
9. Should Kusile Power Station personnel find any item that is inadequate, faulty, unsafe or in any other way unsuitable for the safe and satisfactory execution of the work for which it is intended, the Kusile Power Station personnel shall advise the contractor in writing and the contractor shall forthwith remove the item from site and replace it with a safe and adequate substitute.
10. Pneumatic tools must be used according to the manufacture's specifications.
11. Users of the pneumatic tools must be trained in the use of such tools.
12. Pneumatic tools must be inspected regularly and defective tools must be removed from site.
13. Where defective tools and equipment's are identified, such tools and equipment shall be removed out of site immediately, locked away to prevent further use until such time as the tool or piece of equipment has been repaired.

14. Contractors shall ensure that the appropriate records are kept for all tools and equipment used on the project. Such tools and equipment's shall be subjected to regular inspections.

Machinery, tools and equipment Machinery is considered as any article or a combination of articles assembled, arranged or connected and which is used or intended to be used for converting any form of energy to perform work, or which is used, or intended to be used, whether incidental thereto or not, for developing, receiving, storing, containing, conforming, transmitting, transferring or controlling any form of energy.

The requirements for the use of machinery are covered in the various regulations of the Occupational Health and Safety Act.

There are strict requirements regarding the supervision and use of machinery. Since incorrectly used machinery or using unsafe machinery can cause serious harm and/or damage, it is important to ensure that all mechanical equipment is safeguarded in order to protect the health and safety of persons who may be exposed to such mechanical equipment, and also to ensure that competent persons operate the machinery.

### **3.21.1 Hand tools**

1. All hand tools (hammers, chisels, spanners, etc.) must be recorded on a register and inspected by the appointed supervisor on a monthly basis as well as by users prior to use.
2. Tools with sharp points in tool boxes must be protected with a cover.
3. The hand tools should be numbered or tagged and colour coded so that it can be properly monitored and inspected.
4. All files and similar tools must be fitted with handles.
5. Tools with sharp points in tool boxes must be protected with a cover.
6. No make-shift tools allowed at Kusile Power Station.

### **3.21.2 Eskom SHE audits**

Kusile Power Station shall evaluate the principal contractor SHE performance on monthly basis against the legal, Kusile Power Station requirements, SHE specification and the contractors SHE plans as scope of works falls under a high risk category according to Kusile Power Station audit methodology risk matrix. These audits shall be attended by the contractor's site manager or the safety officer.

If there are any findings / non-compliance identified as serious in these audits, an activity will be stopped for that specific appointed contractor and sub- contractor. Refer to section on "Work Stoppage" in this SHE Specification.

**Note:** Kusile power station reserves the right to conduct unannounced audits and inspections on contractors

### **3.21.3 Contractor audits**

The appointed contractor is required to audit their sub- contractors on the implementation of their SHE Plan on a monthly basis or when the scope of work changes. A summary of the findings and the proposed corrective actions shall be submitted to Kusile Power Station OHS department within one week after completion of the audit and a copy of the audit report shall be submitted to the sub- contractor within 7 days of the audit.

### **3.22 Smoking**

The national smoking policy must be adhered to. At Kusile Power Station smoking is permitted in designated areas only (Eskom Smoking Procedure 32-36).

### **3.23 Cellular Phones**

The national requirements regarding the use of cellular phones must be adhered to, in particular when driving and or operating mobile equipment and or machinery.

## **3.24 General Requirements as per the cellular phone usage generation directive**

- Cell phones shall not be used while operating any crane, hoist, powered industrial trucks, pay loaders, forklifts or other lifting device.
- Not be used while engaged in any job task that requires the use of the hands and/or the full attention of the employee, contractor, or visitor (i.e. fire watch, equipment operator, operating a valve, etc).
- Be turned off in any area containing flammable/combustible vapours, e.g. turpentine system, methanol system, fuelling stations, oil and propane storage tanks, flammable/combustible material storage areas.
- Not to be used when climbing and descending any form of staircase.
- Not to be used for text messaging whilst walking.

### 3.25 Medicals

**Note:** Kusile Power Station will only accept medical surveillances conducted by an Occupational Health Practitioner who holds a qualification in occupational health.

1. Appointed contractors must ensure that their employees and their sub- contractor employees have a medical surveillance program whereby their employees under go entry, periodic and exit medical fitness examinations.
2. In order for the appropriate medical examinations to be conducted, each employee must have a man job specification, which must indicate the description of work, list of hazards and potential occupational exposure limits, physical hazards and required physical attributes.
3. Medical fitness certificates shall be renewed annually for employees who are working on site. This shall be maintained until completion of the contract.
4. The appointed contractor must ensure that his / her employees and sub- contractor employees have undergone pre-entry medical examination before starting work on the contract.
5. The sub- contractor shall provide a documented process for managing those employees who are issued with a conditional certificate of fitness.

### 3.26 Personal Protective Equipment Requirements

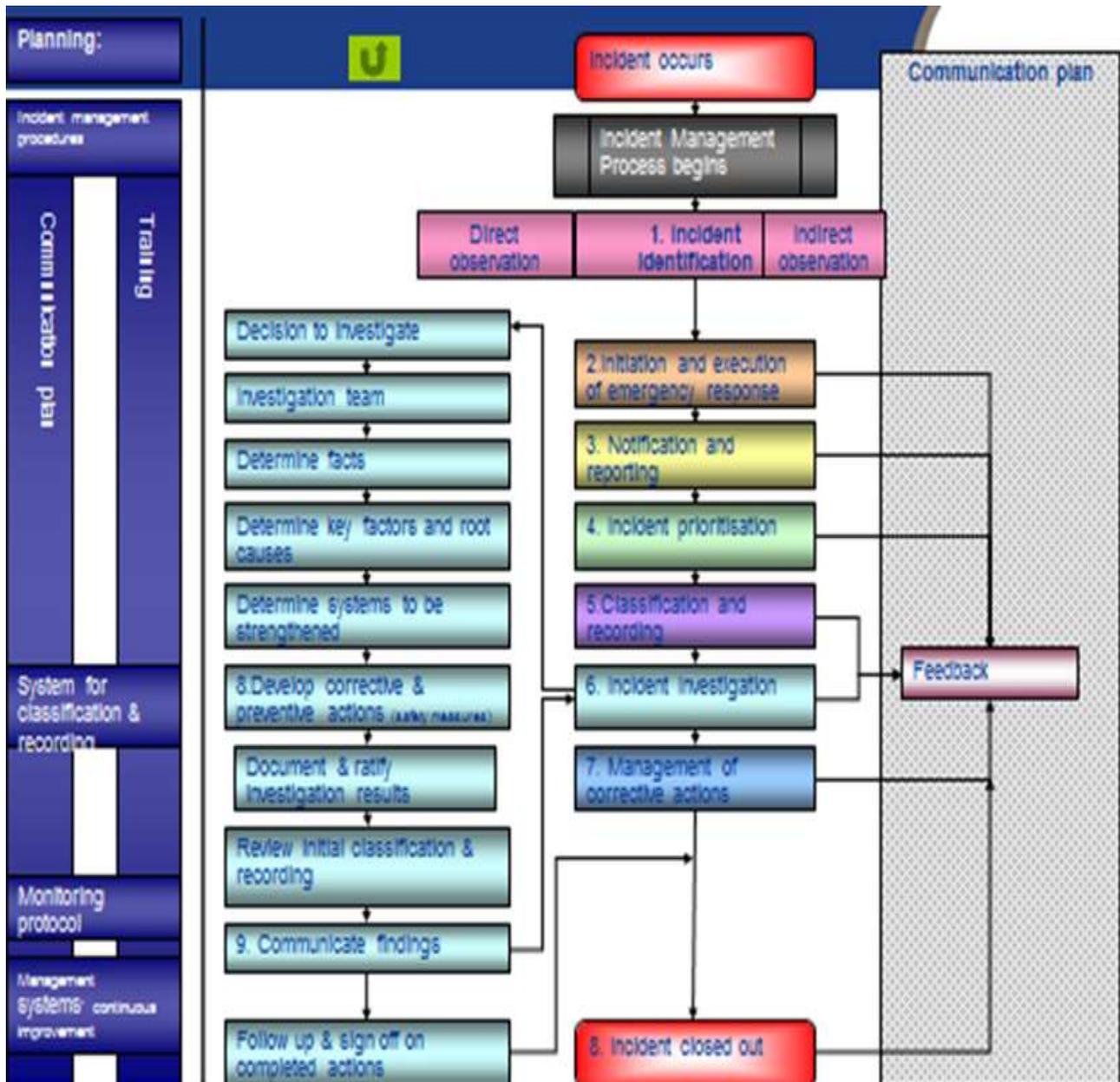
1. The appointed contractor must provide a detailed programme that includes the issuing, maintenance and replacement of PPE for all his employees and sub- contractors on site.
2. All contractors shall comply with the requirements of GSR 2 of the OHS Act.
3. The risk based PPE matrix must be compiled detailing the types of PPE that is required to be issued to employees performing the respective tasks.
4. Additional PPE shall be identified from task risk assessments for specific areas and tasks.
5. All contractors shall ensure that their visitors wear and use the correct PPE whilst on worksites.
6. Where PPE is required and visitors are not in possession of, then it is the individual contractor's responsibility to provide the PPE.
7. All PPE purchased and used by all contractor employees including visitors must comply with the relevant SANS standards.
8. Where deemed as a requirement, then high visibility vests shall be worn.

### 3.27 Incident Investigation

- All incidents shall be investigated in terms of OHS Act General Administrative Regulations 8 and 9, using Eskom Procedure 32-95 as a reference, and where injuries as

contemplated in sections 24 and 25 have been sustained, be reported to the Department of Labour.

- Appointed contractor must develop their own incident management procedure that is in line with Eskom procedure 32-95.
- The appointed contractors shall use the standard General Administrative Regulation Annexure 1 "Recording of an Incident" form for all incident investigation reports.
- The objective of incident investigation, should not only be a legal requirement, but should establish why and how the incident occurred and find out the real root cause of the incident and to decide on precautionary measures that are required to address the root cause to prevent any further recurrences of the same or similar incidents.



### 3.28 Emergency Management

The appointed contractor must develop their own emergency management procedure detailing the possible emergencies that could arise due to the activities that they conduct at Kusile Power Station premises and how they will evacuate their laydown areas in case of any emergency. The contractor emergency management procedure must be in line with Kusile Power Station emergency response plan.

The appointed contractor must familiarise themselves with the Kusile Power Station emergency response plan and procedure. Periodic emergency drills must be undertaken to test the effectiveness of the plan. This must be recorded and provided on request.

#### **Fire Safety**

The Contractor shall develop fire safety and evacuation procedures for any area under his control prior to the commencement of any work thereon. The procedure shall take into consideration the size of the area, types of work being done (e.g. cutting, welding, grinding, etc.), amount of combustible materials present etc. It shall take account of any hot work permit arrangements and all other applicable fire and evacuation procedures. All Contractor's Personnel entering and working on the Project Site, and other places, if any, as may be specified under the Contract as forming part of the Site, shall be trained in fire safety and emergency evacuation and any other duties they are required to perform e.g. Fire Warden.

The contractor shall be at all-times available for any meetings and interventions that are arranged by the Safety department in the sake of fire safety and emergency planning.

The contractor must develop a fire safety procedure for the construction site prior to commencing work. The procedure must take into consideration the size of the site/s, the type of work performed and amount of combustible materials. Cognisance of OHS Act CR 29 must be made.

It must be developed in accordance with the hot work permit of the Eskom Plant Safety Regulations, Eskom Fire Risk Management requirements and all other applicable Regulations. All workers entering and working in the construction site need to be trained in fire safety and any duties they are required to perform.

A suitable fire warning system for alerting site personnel of fire shall be provided, and capable of being heard in all areas of the site.

Appropriate portable extinguishers must be available on the construction site and in cases of hot work, be readily available at the location.

Storage of combustible and flammable liquid in the construction site is not permitted unless stored in approved flammable cabinets or outdoors away from the buildings.

Site Smoking Restrictions must be enforced. No open flames are permissible and where hot work is performed, the work areas must be cleared of any combustibles prior to commencement of work.

### **3.29 Non-Conformance and Compliance**

1. Any non-compliance to any health and safety requirement in this SHE specification is subject to discipline in terms of the Eskom Procurement and Supply Management Procedure.
2. The appointed contractors are required to implement a non-conformance procedure (if not already in place) for issuing to contractors for transgressions. The procedure can include "quality" related non-conformance issues. Similarly, sub- contractors must implement a non-conformance procedure.
3. The procedure for the issuing and closing off of non-conformance reports shall be strictly adhered to.
4. Contractor project management must monitor the close out non-conformances issued, in not doing so; any recommendations made may not be implemented.
5. Where non-conformances are issued by Kusile Power Station, then one of the close-out steps of the procedure will be for the offender to be called by the responsible project manager to explain the non-conformance issued and what plan is in place to prevent a recurrence of the non-conformance.
6. Should the contractor fail to provide adequate PPE to their employees for the tasks being performed and/or to visitors; failure to enforce the wearing of such PPE will be viewed as a transgression of the legislative and Kusile power station requirements.

### **3.30 Work Stoppage**

1. Any person may stop any activity where an unsafe act or unsafe condition that poses or may pose an imminent threat to the safety and health of an individual or create a risk of degradation of the environment.

2. This includes any unauthorised work or service performed by, or legally or contractually non-compliant acts or omissions by, any contractor contracted to work at that site.
3. Work stoppages that are initiated due to SHE concerns, non-compliance, or poor performance related to the contractor's works or services shall not warrant any financial compensation claim lodged against Kusile Power Station where the contractor has not met the requirements defined legally or contractually.
4. Where stoppages are carried out, the required non-conformance report shall be raised.
5. All work stoppages ideally should be investigated and documented by contract custodians.

### **3.31 Hours of Work**

The requirements of the Basic Conditions of Employment Act, Chapter Two "Regulation of Working Time" must be adhered to. All contractors are required to maintain an accurate record of time worked by each employee.

#### **3.31.1 Normal work**

All work conducted on site shall fall within the legal requirements in accordance with the Basic Conditions of Employment Act. Contractors will notify their Kusile Power Station supervisor or project manager of any work that needs to be performed after hours according to the agreed arrangements. (The application needs to be submitted timeously). Where applicable, the notification should include proof of application, for overtime, to the Department of Labour and /or the letter of approval from the Department of Labour.

#### **3.31.3 Overtime**

When overtime is required to be performed, the sub- contractors shall inform the appointed contractor of such action. The appointed contractor shall inform the Kusile Power Station project manager of such function. Contractors shall be aware of the effects of human fatigue and regulate overtime accordingly. The baseline risk assessment must be reviewed to include the management of overtime work.

### **3.32 Omissions from Safety and Health Requirements Specification**

By drawing up this SHE specification Kusile power station has endeavoured to address the most critical aspects relating to SHE issues in order to assist the contractor to adequately provide for the health and safety of employees on site.

Should Kusile Power Station not have addressed all SHEQ aspects pertaining to the work that is tendered for, the contractor needs to include it in the SHE plan and inform Kusile Power Station of such issues when signing the contract.

The principal contractor must submit their monthly safety statistics on the last day of the month at the OHS department.

### **3.33 Contract Sign-Off**

On completion of the project, all sub- contractors shall close out their project documentation; SHE files and forward such to the appointed contractor. The appointed contractor shall likewise close out his/her project documentation and SHE files and forward such to the Kusile Power Station project manager.

### **3.34 Environmental Management Requirements**

#### **3.34.1 Compliance Obligations**

- a) The contractor and or supplier shall have a documented and implemented environmental management system e.g. environmental policy, operational procedures relating to their activities, Environmental Aspects and Impacts Register.
- b) The contractor and or supplier shall prepare an environmental management plan relating to their activities that will be carried out. The environmental management plan shall be based on, amongst others, Eskom Kusile Power Station's OEMP and any other applicable environmental legislation. The environmental

management plan must include all the aspects and impacts relating to the activity and address the principle of continual improvement;

c) The contractor and or supplier employees shall attend induction on environmental management prior to commencement of work at Kusile Power Station.

d) The contractor and or supplier shall comply with all Eskom Kusile Power Station environmental requirements such as policies, standards and procedures.

e) The contractor shall appoint trained and competent personnel in writing, who will have the responsibilities of implementing all environmental requirements on a specific contract.

f) Non-conformance and All spills/emergency incidents shall be reported to Eskom Contract Manager and Environmental Officer(s) immediately on occurrence, such reports must include but not limited to the following information:

- The date and time of the incident
- The cause of the non-conformance/incident;
- The proposed actions to correct and prevent recurrence.

g) Eskom Kusile Power Station shall issue non-conformances where there are deviations from Eskom Kusile Power Station Procedures and any other environmental requirements, and the Contractor or Supplier shall be responsible to provide an action plan and close out of such non-conformances timeously.

h) Environmental Incident Investigations shall be done jointly where responsible managers and the environmental team from Eskom and the Eskom subsidiary or contractor are present.

i) Environmental Incident investigation shall be done in accordance to Eskom Environmental Incident Management Procedure (240-133087117).

j) The contractor or supplier shall be responsible to ensure duty of care during execution of work at Kusile Power Station and shall be liable for the costs for the costs of remedying pollution, environmental degradation and consequent adverse health effects as indicated on the NEMA principles below:

National Environmental Management Act 107 of 1998 (NEMA) principles:

- Duty of care and remediation of environmental damage

Every person who causes, has caused or may cause significant pollution or degradation of the environment must take reasonable measures to prevent such pollution or degradation from occurring, continuing or recurring, or, in so far as such harm to the environment is authorized by law or cannot reasonably be avoided or stopped, to minimize and rectify such pollution or degradation of the environment.

- Polluter Pays Principle

The costs of remedying pollution, environmental degradation and consequent adverse health effects and of preventing, controlling or minimizing further pollution, environmental damage or adverse health effects must be paid for by those responsible for harming the environment.

k) The contractor and or supplier shall allocate funds for the implementation of environmental requirements.

l) All contractors shall abide to Eskom Zero Liquid Effluent Discharge through the process of reuse and recycling.

m) All waste generated during the execution of the scope of work shall be managed in accordance with Kusile Power Station Waste Management Work Instruction (240-105776552) and in compliance with applicable environmental legislation and bylaws.

n) All contractors should be aware of Eskom SHEQ Policy.

o) All contractors must take into account environmental consideration when carrying out Risk Assessments.

p) All equipment used on site must be in good working condition and no fuel and/or oil leaks on any plant will be tolerated.

### **3.34.2 Records to be kept onsite For Environmental Management**

The following minimum records shall be kept on sites:

a) Contractor site specific Environmental Management Plan and Environmental aspect and impact register;

Environmental aspect must be identified, and how they should be mitigated and also be communicated to employees. Proof of communication must be available

b) Environmental Incident registers and investigation reports;

Incident must be reported immediately or within 24 hours of occurrence, investigation must take place within 7 days and concluded with 30 days, lesson learned must be shared with employees. Record of environmental incidents must be made available.

c) Non-conformance register;

When non-conformances are closed, they should be investigated and close-out within the agreed timeframes.

d) Complaints register;

Where complaints are raised they should be reported to Kusile Environmental management Department, be investigated and closed out.

e) Waste disposal register

f) Hazardous Substances registers and SDS where applicable;

Where hazardous substances are used, a register should be maintained and all SDS should be available and communicated to employees.

g) Records of audit reports and audit findings close-out, where applicable;

Records of audit and how findings where closed should be maintained.

h) Records of environmental inspections conducted.

Monthly environmental inspection should be conducted and records of inspections should be maintained.

j) Licences for Landfill sites/Waste Treatment plant for all waste streams generated and disposed by the contractor.

k) Registration certificate for a waste service provider appointed by the contractor

l) Safe disposal certificates or weighbridge certificates for all waste disposed.

### 3.34.3 Tender Submission Documentation

The following documentation shall be submitted with all tender submissions:

a) Environmental Policy

b) Aspect and impact register or an environmental management plan (relevant to the scope of work)

c) Environmental Management System Certificate (if certified) if not, an environmental management system manual or procedures

d) Waste Management Plan

e) Proof of training of persons performing activities that could have significant impact on the environment.

### 3.35 Quality requirements

It is important that all the contractors or service providers at Eskom meet the minimum requirements of ISO 9001 quality management system to maintain a high standard of products or services rendered to Eskom.

It is therefore important that the contractor demonstrate commitment to the development, implementation and maintenance of its Quality management system which complies with the requirements of ISO 9001 standard.

This type of work falls under category 2 of quality requirements, The Supplier shall submit a valid ISO 9001:2015 certificate or submit the following evidence:

- Quality (SHEQ) Manual

- Quality (SHEQ) Policy

- Quality (Business) Objectives

- Control of documented procedure

- Procedure for control of non-conformity and corrective action.

- Documented information for defined roles, responsibilities and authorities.

- Procedure for control of externally provided products and services/purchase order.

- Latest copy of the internal management system audit Including Nonconformity, correction and /or corrective action.

- Project quality plan

- Quality control plan (QCP), Inspection Test plan (ITP) or previous work done.
- Completed and signed Form A.

**4. Permit to Work System (PTW)**

The Eskom Permit to Work System (PTW) specify and provide requirements for the application of compulsory health and safety standards and procedures for the safeguarding of Plant and persons. This system forms an integral part of the approval process for work under the Work Coordination Process. The following Eskom Regulations shall be complied with:

- Eskom Plant Safety Regulations, GGR 0992;
- Eskom Operating Regulations for High Voltage Systems, ESKPVAEY6

The contractor shall ensure that adequately experienced personnel with the required levels of education are nominated by the contractor to attend all relevant training specific to the Appointments required by the roles. Training shall be provided free of charge by Eskom, however, the candidates time shall be for the contractors own account.

**5. Acceptance**

Null

**6. Revisions**

Date	Rev.	Compiler	End user

## **C3.3: CONSULTANT 'S SCOPE**