



NEC3 Engineering & Construction Contract

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

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

for Duvha Installation of Lighting Systems

Contents:	No of pages
Part C1 Agreements & Contract Data	[•]
Part C2 Pricing Data	[•]
Part C3 Scope of Work	[•]
Part C4 Site Information	[•]

CONTRACT No. [Insert at award stage]

Part C1: Agreements & Contract Data

Contents:	No of pages
C1.1 Form of Offer and Acceptance	[•]
[to be inserted from Returnable Documents at award stage]	
C1.2a Contract Data provided by the <i>Employer</i>	[•]
C1.2b Contract Data provided by the <i>Contractor</i>	[•]
[to be inserted from Returnable Documents at award stage]	
C1.3 Proforma Guarantees	[•]

C1.1 Form of Offer & Acceptance

Duvha Installation of Lighting Systems**Offer**

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

Duvha Installation of Lighting Systems

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

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

Options A	The offered total of the Prices exclusive of VAT is	R [•]
Option A	The first forecast of the total Defined Cost plus the Fee exclusive of VAT is	R [•]
	Sub total	R [•]
	Value Added Tax @ 15% is	R [•]
	The offered total of the amount due inclusive of VAT is ¹	R [•]
	(in words) [•]	

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

Signature(s)

Name(s)

Capacity

**For the
tenderer:**

(Insert name and address of organisation)

Name &
signature of
witness

Date

Tenderer's CIDB registration number (if applicable)

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

Duvha Installation of Lighting Systems**Acceptance**

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

The terms of the contract, are contained in:

Part C1	Agreements and Contract Data, (which includes this Form of Offer and Acceptance)
Part C2	Pricing Data
Part C3	Scope of Work: Works Information
Part C4	Site Information

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

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

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

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

Unless the tenderer (now *Contractor*) within five working days of the date of such receipt notifies the Employer in writing of any reason why he cannot accept the contents of this agreement, this agreement shall constitute a binding contract between the Parties.

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.

Duvha Installation of Lighting Systems**Schedule of Deviations to be completed by the *Employer* prior to contract award**

Note:

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

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

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

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

For the tenderer:**For the Employer**

Signature

Name

Capacity

On behalf of

*(Insert name and address of organisation)**(Insert name and address of organisation)*

Name & signature of witness

Date

C1.2 ECC3 Contract Data

Part one - Data provided by the *Employer*

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

Clause	Statement	Data
1	General	
	The <i>conditions of contract</i> are the core clauses and the clauses for main Option	
	dispute resolution Option	A: Priced contract with activity schedule
	and secondary Options	W1: Dispute resolution procedure
		X2: Changes in the law
		X5: Sectional Completion
		X7: Delay damages
		X16: Retention
		X17: Low performance damages
		X18: Limitation of liability
		Z: Additional conditions of contract
	of the NEC3 Engineering and Construction Contract, April 2013 (ECC3)	
10.1	The <i>Employer</i> is (Name):	Eskom Holdings SOC Ltd (reg no: 2002/015527/30), a state owned company incorporated in terms of the company laws of the Republic of South Africa
	Address	Registered office at Megawatt Park, Maxwell Drive, Sandton, Johannesburg
10.1	The <i>Project Manager</i> is: (Name)	Takalani Mashamba
	Address	Duvha Power Station
	Tel	+27 11 800 3344
	Fax	+27 86 600 0028
	e-mail	mashamta@eskom.co.za
10.1	The <i>Supervisor</i> is: (Name)	Andile Nqayane
	Address	Duvha Power Station
	Tel No.	+27 13 690 0385

Duvha Installation of Lighting Systems

Fax No.

e-mail

11.2(13)	The <i>works</i> are	Duvha Installation of Lighting Systems	
11.2(14)	The following matters will be included in the Risk Register	Unavailability of Responsible Person or authorised supervisor	
11.2(15)	The <i>boundaries of the site</i> are	Duvha Power Station Installation of Lighting Systems	
11.2(16)	The Site Information is in	Part 4: Site Information of the scope of work	
11.2(19)	The Works Information is in	Part 3: Scope of Work and all documents and drawings to which it makes reference.	
12.2	The <i>law of the contract</i> is the law of	the Republic of South Africa	
13.1	The <i>language of this contract</i> is	English	
13.3	The <i>period for reply</i> is	one week	
2	The Contractor's main responsibilities	Duvha Installation of Lighting Systems	
3	Time		
11.2(3)	The <i>completion date</i> for the whole of the works is	12 Months	
11.2(9)	The <i>key dates</i> and the <i>conditions</i> to be met are:	Condition to be met	key date
		1 Start date	Completion: 12(12) months after the contract is awarded.
30.1	The <i>access dates</i> are:	Part of the Site	Date
		1 Installation of Lighting system	After the contract is awarded
		2	
		3	
31.1	The <i>Contractor</i> is to submit a first programme for acceptance within	One (1) weeks of the Contract Date.	
31.2	The <i>starting date</i> is	1 May 2022	
32.2	The <i>Contractor</i> submits revised programmes at intervals no longer than	One (1) week (Schedule and cashflow)	

Duvha Installation of Lighting Systems

35.1	The <i>Employer</i> is not willing to take over the <i>works</i> before the Completion Date.	[No data needed if this statement is included]
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4 Testing and Defects

42.2	The <i>defects date</i> is	52 weeks after Completion of the whole of the <i>works</i>.
43.2	The <i>defect correction period</i> is	08 hours for emergencies or breakdowns and 4 working days for normal defects.
	except that the <i>defect correction period</i> for	Four (4) days
	and the <i>defect correction period</i> for	Four (4) days

5 Payment

50.1	The <i>assessment interval</i> is	25th day of each successive month.
51.1	The <i>currency of this contract</i> is the	South African Rand.
51.2	The period within which payments are made is	30 days
51.4	The <i>interest rate</i> is	<p>the publicly quoted prime rate of interest (calculated on a 365 day year) charged from time to time by the Standard Bank of South Africa Limited (as certified, in the event of any dispute, by any manager of such bank, whose appointment it shall not be necessary to prove) for amounts due in Rands and</p> <p>(ii) the LIBOR rate applicable at the time for amounts due in other currencies. LIBOR is the 6 month London Interbank Offered Rate quoted under the caption "Money Rates" in The Wall Street Journal for the applicable currency or if no rate is quoted for the currency in question then the rate for United States Dollars, and if no such rate appears in The Wall Street Journal then the rate as quoted by the Reuters Monitor Money Rates Service (or such service as may replace the Reuters Monitor Money Rates Service) on the due date for the payment in question, adjusted <i>mutatis mutandis</i> every 6 months thereafter and as certified, in the event of any dispute, by any manager employed in the foreign exchange department of The Standard Bank of South Africa Limited, whose appointment it shall not be necessary to prove.</p>

6 Compensation events

60.1(13)	The place where weather is to be recorded is:	Duvha Power Station
	The <i>weather measurements</i> to be recorded for each calendar month are,	<p>the cumulative rainfall (mm)</p> <p>the number of days with rainfall more than 10 mm</p>

Duvha Installation of Lighting Systems

the number of days with minimum air temperature less than 0 degrees Celsius

the number of days with snow lying at 09:00 hours South African Time

and these measurements:

The *weather measurements* are supplied by

The South African weather Services

The *weather data* are the records of past *weather measurements* for each calendar month which were recorded at:

Duvha Power Station

and which are available from:

the South African Weather Bureau and included in Annexure A to this Contract Data provided by the *Employer*

60.1(13)	Assumed values for the ten year return <i>weather data</i> for each <i>weather measurement</i> for each calendar month are:	As stated in Annexure A to this Contract Data provided by the <i>Employer</i> . Note: If this arrangement is used, delete the rows above for 60.1(13) and delete this note.
7	Title	There is no reference to Contract Data in this section of the core clauses and terms in italics used in this section are identified elsewhere in this Contract Data.
8	Risks and insurance	
80.1	These are additional <i>Employer's</i> risks	1. Availability of an AP (Appointed Person) /RP (Responsible Person) Safety risk
84.1	The <i>Employer</i> provides these insurances from the Insurance Table	as stated for "Format A (Contractors All Risk insurance Policy) available on request from Eskom Insurance Management Services (See Annexure B for basic guidance)
84.1	The <i>Contractor</i> provides these additional insurances:	?
84.2	The insurance against loss of or damage to the <i>works</i> , Plant and Materials is to include cover for Plant and Materials provided by the <i>Employer</i> for an amount of	100 000.00
84.2	The minimum limit of indemnity for insurance in respect of loss of or damage to property (except the <i>works</i> , Plant, Materials and Equipment) and liability for bodily injury to or death of a person (not an employee of the <i>Contractor</i>) caused by activity in connection with this contract for any one event is	whatever the <i>Contractor</i> deems necessary in addition to that provided by the <i>Employer</i>.
84.2	The minimum limit of indemnity for insurance in respect of death of or bodily injury to employees of the <i>Contractor</i> arising out of and in the course of their	As prescribed by the Compensation for Occupational Injuries and Diseases Act No. 130 of 1993 and the <i>Contractor's</i> common law liability for people falling outside the scope of

Duvha Installation of Lighting Systems

	employment in connection with this contract for any one event is	the Act with a limit of Indemnity of not less than R500 000 (Five hundred thousand Rands).
9	Termination	<p>Clause 90.1 In writing either party should send a notification giving reasons for terminating the contractor's obligation and if the reasons comply with this contract, then a termination certificate should be issued to both parties.</p> <p>Clause 90.2 The contractor may terminate only for the reasons identified in the termination table and the employer may terminate for any reason. Refer to Clause 90.3, 90.4 and 90.5</p>
10	Data for main Option clause	
A	Priced contract with activity schedule	Option A to be used.
60.6	The <i>method of measurement</i> is	As stated in Part C2.1, Pricing Assumptions.
11	Data for Option W1	
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 www.ice-sa.org.za). If the Parties do not agree on an Adjudicator the Adjudicator will be appointed by the Arbitration Foundation of Southern Africa (AFSA).
	Address	TBA
	Tel No.	[•]
	Fax No.	[•]
	e-mail	[•]
W1.2(3)	The <i>Adjudicator nominating body</i> is:	the Chairman of ICE-SA a joint Division of the South African Institution of Civil Engineering and the London Institution of Civil Engineers. (See www.ice-sa.org.za) or its successor body.
W1.4(2)	The <i>tribunal</i> is:	arbitration.
W1.4(5)	The <i>arbitration procedure</i> is	the latest edition of Rules for the Conduct of Arbitrations published by The Association of Arbitrators (Southern Africa) or its successor body.
	The place where arbitration is to be held is	South Africa
	The person or organisation who will choose an arbitrator	
	- if the Parties cannot agree a choice or	the Chairman for the time being or his nominee
	- if the arbitration procedure does not state who selects an arbitrator, is	of the Association of Arbitrators (Southern Africa) or its successor body.
12	Data for secondary Option clauses	

Duvha Installation of Lighting Systems

X2	Changes in the law											
X5	Sectional Completion											
X5.1	The <i>completion date</i> for each <i>section</i> of the <i>works</i> is:	<table><thead><tr><th>Section</th><th>Description</th><th>Completion date</th></tr></thead><tbody><tr><td>1</td><td>Installation of Lighting system</td><td></td></tr><tr><td>2</td><td></td><td></td></tr></tbody></table>	Section	Description	Completion date	1	Installation of Lighting system		2			
Section	Description	Completion date										
1	Installation of Lighting system											
2												
X7	Delay damages											
X7.1	Delay damages for Completion of the whole of the <i>works</i> are	R1500 per day to the maximum of 4 % aligned to the milestone contract value as per the baseline program.										
X16	Retention											
	The <i>retention percentage</i> is	10% of the total contract value										
X17	Low performance damages											
X17.1	The amounts for low performance damages are: Performance level <ul style="list-style-type: none">Two or more days late delivery of equipment after the agreed upon date as per the project schedule will amount to R2500 per day.											
X18.2	For any one event, the <i>Contractor's</i> liability to the <i>Employer</i> for loss of or damage to the <i>Employer's</i> property is limited to:	the amount of the deductibles relevant to the event described in the insurance policy format selected in the data for clause 84.1 above, which policy is available on http://www.eskom.co.za/Tenders/InsurancePolicies/Procedures/Pages/EIMS_Policies_From_1_April_2014_To_31_March_2015.aspx										
X18.3	The <i>Contractor's</i> liability for Defects due to his design which are not listed on the Defects Certificate is limited to	The greater of <ul style="list-style-type: none">the total of the Prices at the Contract Date andthe amounts excluded and unrecoverable from the <i>Employer's</i> assets policy for correcting the Defect (other than the resulting physical damage which is not excluded) plus R15M first amount payable in terms of the <i>Employer's</i> assets policy.										
X18.4	The <i>Contractor's</i> total liability to the <i>Employer</i> for all matters arising under or in connection with this contract, other than excluded matters, is limited to:	the total of the Prices other than for the additional excluded matters. The <i>Contractor's</i> total liability for the additional										

		<p>excluded matters is not limited.</p> <p>The additional excluded matters are amounts for which the <i>Contractor</i> is liable under this contract for</p> <ul style="list-style-type: none"> • Defects due to his design which arise before the Defects Certificate is issued, • Defects due to manufacture and fabrication outside the Site, • loss of or damage to property (other than the <i>works</i>, Plant and Materials), • death of or injury to a person and • infringement of an intellectual property right.
X18.5	The <i>end of liability date</i> is	<p>(i) 1(One) year after the <i>defects date</i> for latent Defects and</p> <p>(ii) the date on which the liability in question prescribes in accordance with the Prescription Act No. 68 of 1969 (as amended or in terms of any replacement legislation) for any other matter.</p> <p>A latent Defect is a Defect which would not have been discovered on reasonable inspection by the <i>Employer</i> or the <i>Supervisor</i> before the <i>defects date</i>, without requiring any inspection not ordinarily carried out by the <i>Employer</i> or the <i>Supervisor</i> during that period. If the <i>Employer</i> or the <i>Supervisor</i> do undertake any inspection over and above the reasonable inspection, this does not place a greater responsibility on the <i>Employer</i> or the <i>Supervisor</i> to have discovered the Defect.</p>
Z	The Additional conditions of contract are	Z1 to Z12 always apply.
Z1	Cession delegation and assignment	
	Z1.1	The <i>Contractor</i> does not cede, delegate or assign any of its rights or obligations to any person without the written consent of the <i>Employer</i> .
	Z1.2	Notwithstanding the above, the <i>Employer</i> may on written notice to the <i>Contractor</i> cede and delegate its rights and obligations under this contract to any of its subsidiaries or any of its present divisions or operations which may be converted into separate legal entities as a result of the restructuring of the Electricity Supply Industry.
Z2	Joint ventures	
	Z2.1	If the <i>Contractor</i> constitutes a joint venture, consortium or other unincorporated grouping of two or more persons or organisations then these persons or organisations are deemed to be jointly and severally liable to the <i>Employer</i> for the performance of this contract.
	Z2.2	Unless already notified to the <i>Employer</i> , the persons or organisations notify the <i>Project</i>

Duvha Installation of Lighting Systems

Manager within two weeks of the Contract Date of the key person who has the authority to bind the *Contractor* on their behalf.

- Z2.3 The *Contractor* does not alter the composition of the joint venture, consortium or other unincorporated grouping of two or more persons without the consent of the *Employer* having been given to the *Contractor* in writing.

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

- Z3.1 Where a change in the *Contractor's* legal status, ownership or any other change to his business composition or business dealings results in a change to the *Contractor's* B-BBEE status, the *Contractor* notifies the *Employer* within seven days of the change.
- Z3.2 The *Contractor* is required to submit an updated verification certificate and necessary supporting documentation confirming the change in his B-BBEE status to the *Project Manager* within thirty days of the notification or as otherwise instructed by the *Project Manager*.
- Z3.3 Where, as a result, the *Contractor's* B-BBEE status has decreased since the Contract Date the *Employer* may either re-negotiate this contract or alternatively, terminate the *Contractor's* obligation to Provide the Works.
- Z3.4 Failure by the *Contractor* to notify the *Employer* of a change in its B-BBEE status may constitute a reason for termination. If the *Employer* terminates in terms of this clause, the procedures on termination are P1, P2 and P3 as stated in clause 92, and the amount due is A1 and A3 as stated in clause 93.

Z4 Ethics

- Z4.1 Any offer, payment, consideration, or benefit of any kind made by the *Contractor*, which constitutes or could be construed either directly or indirectly as an illegal or corrupt practice, as an inducement or reward for the award or in execution of this contract constitutes grounds for terminating the *Contractor's* obligation to Provide the Works or taking any other action as appropriate against the *Contractor* (including civil or criminal action).
- Z4.2 The *Employer* may terminate the *Contractor's* obligation to Provide the Works if the *Contractor* (or any member of the *Contractor* where the *Contractor* constitutes a joint venture, consortium or other unincorporated grouping of two or more persons or organisations) is found guilty by a competent court, administrative or regulatory body of participating in illegal or corrupt practices.
- Such practices include making of offers, payments, considerations, or benefits of any kind or otherwise, whether in connection with any procurement process or contract with the *Employer* or other people or organisations and including in circumstances where the *Contractor* or any such member is removed from the an approved vendor data base of the *Employer* as a consequence of such practice.
- Z4.3 Notwithstanding the provisions of core clause 90.2, the procedures on termination in terms of this clause are P1, P2 and P3 as stated in the core clause 92 and the amount due is A1 and A3 as stated in core clause 93.

Z5 Confidentiality

- Z5.1 The *Contractor* does not disclose or make any information arising from or in connection with this contract available to Others. This undertaking does not, however, apply to information which at the time of disclosure or thereafter, without default on the part of the *Contractor*, enters the public domain or to information which was already in the possession of the *Contractor* at the time of disclosure (evidenced by written records in existence at that time). Should the

Duvha Installation of Lighting Systems

Contractor disclose information to Others in terms of clause 25.1, the *Contractor* ensures that the provisions of this clause are complied with by the recipient.

Z5.2 If the *Contractor* is uncertain about whether any such information is confidential, it is to be regarded as such until notified otherwise by the *Project Manager*.

Z5.3 In the event that the *Contractor* is, at any time, required by law to disclose any such information which is required to be kept confidential, the *Contractor*, to the extent permitted by law prior to disclosure, notifies the *Employer* so that an appropriate protection order and/or any other action can be taken if possible, prior to any disclosure. In the event that such protective order is not, or cannot, be obtained, then the *Contractor* may disclose that portion of the information which it is required to be disclosed by law and uses reasonable efforts to obtain assurances that confidential treatment will be afforded to the information so disclosed.

Z5.4 The taking of images (whether photographs, video footage or otherwise) of the *works* or any portion thereof, in the course of Providing the Works and after Completion, requires the prior written consent of the *Project Manager*. All rights in and to all such images vests exclusively in the *Employer*.

Z5.5 The *Contractor* ensures that all his subcontractors abide by the undertakings in this clause.

Z6 Waiver and estoppel: Add to core clause 12.3:

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

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

Z7.1 The *Contractor* undertakes to take all reasonable precautions to maintain the health and safety of persons in and about the execution of the *works*. Without limitation the *Contractor*:

- accepts that the *Employer* may appoint him as the "Principal Contractor" (as defined and provided for under the Construction Regulations 2014 (promulgated under the Occupational Health & Safety Act 85 of 1993) ("the Construction Regulations") for the Site;
- warrants that the total of the Prices as at the Contract Date includes a sufficient amount for proper compliance with the Construction Regulations, all applicable health & safety laws and regulations and the health and safety rules, guidelines and procedures provided for in this contract and generally for the proper maintenance of health & safety in and about the execution of *works*; and
- undertakes, in and about the execution of the *works*, to comply with the Construction Regulations and with all applicable health & safety laws and regulations and rules, guidelines and procedures otherwise provided for under this contract and ensures that his Subcontractors, employees and others under the *Contractor's* direction and control, likewise observe and comply with the foregoing.

Z7.2 The *Contractor*, in and about the execution of the *works*, complies with all applicable environmental laws and regulations and rules, guidelines and procedures otherwise provided for under this contract and ensures that his Subcontractors, employees and others under the *Contractor's* direction and control, likewise observe and comply with the foregoing.

Z8 Provision of a Tax Invoice and interest. Add to core clause 51

Z8.1 Within one week of receiving a payment certificate from the *Project Manager* in terms of core clause 51.1, the *Contractor* provides the *Employer* with a tax invoice in accordance with the *Employer's* procedures stated in the Works Information, showing the amount due for payment

Duvha Installation of Lighting Systems

equal to that stated in the payment certificate.

Z8.2 If the *Contractor* does not provide a tax invoice in the form and by the time required by this contract, the time by when the *Employer* is to make a payment is extended by a period equal in time to the delayed submission of the correct tax invoice. Interest due by the *Employer* in terms of core clause 51.2 is then calculated from the delayed date by when payment is to be made.

Z8.3 The *Contractor* (if registered in South Africa in terms of the companies Act) is required to comply with the requirements of the Value Added Tax Act, no 89 of 1991 (as amended) and to include the *Employer's* VAT number 4740101508 on each invoice he submits for payment.

Z9 Notifying compensation events

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

Z10 *Employer's* limitation of liability

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

Z10.2 The *Contractor's* entitlement under the indemnity in 83.1 is provided for in 60.1(14) and the *Employer's* liability under the indemnity is limited.

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

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

Z12 Addition to secondary Option X7 Delay damages (if applicable in this contract)

Z12.1 If the amount due for the *Contractor'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 *Contractor's* obligation to Provide the Works using the same procedures and payment on termination as those applied for reasons R1 to R15 or R18 stated in the Termination Table.

Duvha Installation of Lighting Systems**Annexure A: One-in-ten-year-return weather data obtained from SA Weather Bureau for [weather station]**

If any one of these *weather measurements* recorded within a calendar month, before the Completion Date for the whole of the *works* and at the place stated in this Contract Data is shown to be more adverse than the amount stated below then the *Contractor* may notify a compensation event.

	<i>Weather measurement</i>				
Month	Cumulative rainfall (mm)	Number of days with rain more than 10mm	Number of days with min air temp < 0 deg.C	Number of days with snow lying at 08:00 CAT	[Other measurements if applicable]
January	119	11	0	0	N/A
February	127	9	0	0	N/A
March	132	9	0	0	N/A
April	84	7	0	0	N/A
May	56	4	0	0	N/A
June	33	3	0	0	N/A
July	36	3	0	0	N/A
August	48	4	0	0	N/A
September	74	6	0	0	N/A
October	109	10	0	0	N/A
November	117	11	0	0	N/A
December	119	12	0	0	N/A

Only the difference between the more adverse recorded weather and the equivalent measurement given above is taken into account in assessing a compensation event.

Duvha Installation of Lighting Systems**Annexure B: Insurance provided by the Employer**

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

1. For the purpose of works contracts, insurance provided by Eskom (the *Employer*) has been arranged on the basis of “project” or “contract” value, where the value is the total of the Prices at Completion of the whole of the works including VAT.

A “project” is a collection of contracts or work packages to be undertaken as part of a single identified capital expansion or refurbishment of a particular asset or facility.

A “contract” is a single contract not linked to or being part of a “project”.

2. For ECC3 there are three main “formats” of cover and deductible structure; Format A, Format B and Format Dx.

Format A is for a project or contract value less than or equal to R350M (three hundred and fifty million Rand) inclusive of VAT.

Format B is for a project or contract value greater than R350M (three hundred and fifty million Rand) inclusive of VAT.

In the case of contracts / packages within a project:

- For a contract / package of R50M which is part of a R400M project, Format B will apply
- For a contract / package of R250M which is part of a R6 billion project, Format B will apply;
- For a contract / package of R120M which is part of a R350M project Format A will apply;

For a contract which is not part of a project the same limits apply:

- For a contract of R50M, Format A will apply
- For a contract of R355M, Format B will apply.

Format Dx applies only to Distribution Division projects and contracts. If a Distribution Division project or contract exceeds the Format A limit, the Eskom Insurance Management Services [EIMS] need to be contacted for advice on how to formulate the insurance cover. Cover and deductibles for Distribution Division are per the relevant policy available on the internet web link given below.

Format A generally applies to Transmission Division projects and contracts. If a Transmission Division project or contract exceeds the Format A limit, the Eskom Insurance Management Services [EIMS] need to be contacted for advice on how to formulate the insurance cover.

3. Tendering contractors should note that cover provided by the *Employer* is only per the policies available on the internet web link listed below and may not be the cover required by the tendering contractor or as intended by each of the listed insurances in the left hand column of the Insurance Table in clause 84.2. In terms of clause 84.1 “the *Contractor* provides the insurances stated in the Insurance Table except any insurance which the *Employer* is to provide”. Hence the *Contractor* provides insurance which the *Employer* does not provide and in cases where the *Employer* does provide insurance the *Contractor* insures for the difference between what the Insurance Table requires and what the *Employer* provides.
4. When the Marine Insurance is required the *Contractor* needs to obtain a copy of the latest edition of Eskom’s Marine Policies Procedures found at internet website given below.
5. Further information and full details of all Eskom provided policies and procedures may be obtained from:

http://www.eskom.co.za/live/content.php?Item_ID=9248

C1.2 Contract Data

Part two - Data provided by the *Contractor*

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

Whenever a cell is shaded in the left hand column it denotes this data is optional. If not required select and delete the whole row, otherwise insert the required Data.]

Notes to a tendering contractor:

1. Please read both the NEC3 Engineering and Construction Contract (April 2013) and the relevant parts of its Guidance Notes (ECC3-GN)² 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 156 to 158 of the ECC3 (April 2013) Guidance Notes.
2. The number of the clause which requires the data is shown in the left hand column for each statement however other clauses may also use the same data
3. Where a form field like this [] appears, data is required to be inserted relevant to the option selected. Click on the form field **once** and type in the data. Otherwise complete by hand and in ink.

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

Clause	Statement	Data
10.1	The <i>Contractor</i> is (Name): Address Tel No. Fax No.	
11.2(8)	The <i>direct fee percentage</i> is The <i>subcontracted fee percentage</i> is	% %
11.2(18)	The <i>working areas</i> are the Site and	
24.1	The <i>Contractor's</i> key persons are: 1 Name: Job: Responsibilities: Qualifications: Experience: 2 Name: Job Responsibilities: Qualifications: Experience:	

² Available from Engineering Contract Strategies Tel 011 803 3008, Fax 011 803 3009 or see www.ecs.co.za

Duvha Installation of Lighting Systems

		CV's (and further key persons data including CVs) are appended to Tender Schedule entitled _____.		
11.2(3)	The <i>completion date</i> for the whole of the works is			
11.2(14)	The following matters will be included in the Risk Register			
11.2(19)	The Works Information for the <i>Contractor's</i> design is in:			
31.1	The programme identified in the Contract Data is			
A	Priced contract with activity schedule			
11.2(20)	The <i>activity schedule</i> is in	(in figures) (in words), excluding VAT		
11.2(30)	The tendered total of the Prices is			
	Data for Schedules of Cost Components	Note "SCC" means Schedule of Cost Components starting on page 60, and "SSCC" means Shorter Schedule of Cost Components starting on page 63 of ECC3 (April 2013).		
A	Priced contract with activity schedule	Data for the Shorter Schedule of Cost Components		
	The percentage for adjustment for Equipment in the published list is	Minus %		
22 in SSCC	The rates of other Equipment are:	Equipment	Size or capacity	Rate
61 in SSCC	The hourly rates for Defined Cost of design outside the Working Areas are Note: Hourly rates are estimated 'cost to company of the employee' and not selling rates. Please insert another schedule if foreign resources may also be used	Category of employee		Hourly rate
62 in SSCC	The percentage for design overheads is	%		

63 in SSCC	The categories of design employees whose travelling expenses to and from the Working Areas are included in Defined Cost are:			
21 in SSCC	The published list of Equipment is the last edition of the list published by The percentage for adjustment for Equipment in the published list is	%		
22 in SSCC	The rates of other Equipment are:	Equipment	Size or capacity	Rate

C1.3 Forms of Securities

Pro formas for Bonds & Guarantees

For use with the NEC3 Engineering & Construction Contract (June 2005)

[Note to contract compiler:

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

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

Option X4: Parent company guarantee
Option X13: Performance Bond
Option X14: Advanced payment to the *Contractor*

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

Option X16: Retention (not used with Option F)

The *Contractor* may provide a Retention Money Guarantee in the form stated here. When the *Employer* receives and accepts a Retention Money Guarantee exactly in the form stated he will instruct the *Project Manager* not to assess any amount be retained in terms of secondary Option X16.

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

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

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

Pro forma Parent Company Guarantee (for use with Option X4)

(to be reproduced exactly as shown below on the letterhead of the Contractor's Parent Company)

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

Date:

Dear Sirs,

Parent Company Guarantee for Contract No

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

Eskom Holdings SOC Ltd

(the *Employer*) and

{Insert registered name and address of the *Contractor*}

(the *Contractor*), for

{Insert details of the *works* from the Contract Data}

(the *works*).

I/We the undersigned

on behalf of the *Contractor's*
parent company

of physical address

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

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

Signed at _____ on this _____ day of _____ 200_

Signature(s)	
Name(s) (printed)	
Position in parent company	
Signature of Witness(s)	
Name(s) (printed)	

Duvha Installation of Lighting Systems**Pro forma Performance Bond – Demand Guarantee (for use with Option X13)***(to be reproduced exactly as shown below on the letterhead of the Contractor's Parent Company)*

Eskom Holdings SOC Ltd
Megawatt Park
Maxwell Drive
Sandton
Johannesburg

Date:

Dear Sirs

Reference No. [●] *[Drafting Note: Bank reference number to be inserted]***Performance Bond – Demand Guarantee:** *[Drafting Note: Name of Contractor to be inserted]*Project [] Contract Reference: *[Drafting Note: Contractor contract reference number to be inserted]*

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

Duvha Installation of Lighting Systems

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

Signed at _____

Date _____

For and behalf of the Bank

Bank Signatory: _____

Bank Signatory: _____

Witness: _____

Witness: _____

Bank's seal or stamp

PART 2: PRICING DATA
ECC3 Option A

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

C2.1 Pricing assumptions: Option A

How work is priced and assessed for payment

Clause 11 in NEC3 Engineering and Construction Contract, (ECC3) Option A states:

Identified and defined terms	11	
	11.2	(20) The Activity Schedule is the <i>activity schedule</i> unless later changed in accordance with this contract.

(27) The Price for Work Done to Date is the total of the Prices for

- each group of completed activities and
- each completed activity which is not in a group.

A completed activity is one which is without Defects which would either delay or be covered by immediately following work.

(30) The Prices are the lump sum prices for each of the activities on the Activity Schedule unless later changed in accordance with this contract.

This confirms that Option A is a lump sum form of contract where the work is broken down into activities, each of which is priced by the tendering contractor as a lump sum. Only completed activities are assessed for payment at each assessment date; no part payment is made if the activity is not completed by the assessment date.

Function of the Activity Schedule

Clause 54.1 in Option A states: "Information in the Activity Schedule is not Works Information or Site Information". This confirms that specifications and descriptions of the work or any constraints on how it is to be done are not included in the Activity Schedule but in the Works Information. This is further confirmed by Clause 20.1 which states, "The *Contractor* Provides the Works in accordance with the Works Information". Hence the *Contractor* does **not** Provide the Works in accordance with the Activity Schedule. The Activity Schedule is only a pricing document.

Link to the programme

Clause 31.4 states that "The *Contractor* provides information which shows how each activity on the Activity Schedule relates to the operations on each programme which he submits for acceptance". Ideally the tendering contractor will develop a high level programme first then resource each activity and thus arrive at the lump sum price for that activity both of which can be entered into the *activity schedule*.

Preparing the *activity schedule*

Generally it is the tendering contractor who prepares the *activity schedule* by breaking down the work described within the Works Information into suitable activities which can be well defined, shown on a programme and priced as a lump sum.

The *Employer*, in his Instructions to Tenderers or in a Tender Schedule, may have listed some items that he requires the *Contractor* to include in his *activity schedule* and be priced accordingly.

It is assumed that in preparing his *activity schedule* the *Contractor*:

- Has taken account of the guidance given in the ECC3 Guidance Notes pages 19 and 20;
- Understands the function of the Activity Schedule and how work is priced and paid for;

Duvha Installation of Lighting Systems

- Is aware of the need to link the Activity Schedule to activities shown on his programme;
- Has listed and priced activities in the *activity schedule* which are inclusive of everything necessary and incidental to Providing the Works in accordance with the Works Information, as it was at the time of tender, as well as correct any Defects not caused by an *Employer's* risk;
- Has priced work he decides not to show as a separate activity within the Prices of other listed activities in order to fulfil the obligation to complete the *works* for the tendered total of the Prices.
- Understands there is no adjustment to the lump sum Activity Schedule price if the amount, or quantity, of work within that activity later turns out to be different to that which the *Contractor* estimated at time of tender. The only basis for a change to the Prices is as a result of a compensation event.

An activity schedule could have the following format:

Item No.	Programme Reference	Activity description	Price

C2.2 the *activity schedule*

The Prices List

DUVHA POWER STATION - COST ENGINEERING					
LIGHTING SYSTEMS INSTALLATION					
ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
CIVIL WORKS					
1	Design, Tesing and Commissioning				
1.1	Designs for miniature substation and ring main unit (RMU) plinths, and the high mast pole foundations	ea	3		R -
1.2	Reinfored concrete	m ³	65		R -
1,3	Excavation	m ³	115		R -
1,4	Backfilling	m ³	15		R -
1,5	Bolts and miscellaneous items	ea	100		R -
1,6	Construction of the 35MPa miniature substation and ring main unit (RMU) plinths, and the high mast pole foundations	ea	15		R -
1,7	Geotech Study	ea	2		R -
Balance Brought Forward					R -
ELECTRICAL WORKS					
2	Excavations				
2,1	Excavate for cable trenche to the eskom standard	m	6100		R -
2,2	Cable trench backfilling and compacting to the eskom standard	m	6100		R -
3	Distribution Board				
3,1	Supply of 400V/63A outdoor standalone main distribution board	ea	3		R -
3,2	Installation of 400V/63A outdoor standalone main distribution board	ea	3		R -
3,3	Supply of 400V/250A outdoor standalone main distribution board	ea	2		R -
3,4	Installation of 400V/250A outdoor standalone main distribution board	ea	2		R -
4	Miniature Substation				
4,1	Supply of 11/0.4kV, 800kVA miniature substation	ea	1		R -
4,2	Installation of 11/0.4kV, 800kVA miniature substation	ea	1		R -
4,3	Installation of 11/0.4kV, 315kVA miniature substation	ea	1		R -

5	Ring Main Unit (RMU)					
5,1	Installation of ring main unit	ea	3		R	-
6	Street Light Pole					
6,1	Supply of 9m street light pole	ea	46		R	-
6,2	Installation of 9m street light pole	ea	46		R	-
7	High Mast Pole					
7,1	Supply of 40m high mast pole	ea	10		R	-
7,2	Installation of 40m high mast pole	ea	10		R	-
8	Cabling					
8,1	Supply of 4mm2 suffix unarmoured cable	m	2600		R	-
8,2	Installation and terminations of 4mm2 suffix unarmoured cable	m	2600		R	-
8,3	Supply of 16mm2 PVC armoured cable	m	2600		R	-
8,4	Installation and terminations of 16mm2 PVC armoured cable	m	2600		R	-
8,5	Supply of 25mm2 PVC armoured cable	m	1900		R	-
8,6	Installation and terminations of 25mm2 PVC armoured cable	m	1900		R	-
8,7	Supply of 150mm2 XLPE armoured cable	m	1600		R	-
8,8	Installation and terminations of 150mm2 PVC armoured cable	m	1600		R	-
9	Lighting					
9,1	Supply of 100W HPS T streetlight	ea	46		R	-
9,2	Installation of 100W HPS T streetlight	ea	46		R	-
9,3	Supply of 1000W HPS flood light	ea	50		R	-
9,4	Installation of 1000W HPS flood light	ea	50		R	-
9,5	Supply of 110W HPS bulkhead light	ea	66		R	-
9,6	Installation of 110W HPS bulkhead light	ea	66		R	-
10	Design, Testing and Commissioning					
10,1	Refurbishment of existing 200kVA miniature substation	ea	3		R	-
11	Design, Testing and Commissioning					
11,1	Coal Stock Yard high mast lighting design	ea	1		R	-
11,2	Coal Stock Yard street lighting design	ea	1		R	-
11,3	Cooling Tower Screen Washing Bays lighting design	ea	1		R	-
11,4	Ash Water Return Plant lighting design	ea	1		R	-
11,5	Sluice Booster and Process Pump Houses lighting design	ea	2		R	-
11,6	Certificate of Compliance for 230V installation	ea	3		R	-
11,7	Certificate of Compliance for 400V installation	ea	14		R	-
11,8	Certificate of Compliance for 11kV installation	ea	5		R	-
Balance Brought Forward					R	-

Total	R	-
Vat	R	-
Total Amount	R	-

Document reference	Title	No of pages
	This cover page	1
C3.1	<i>Employer's Works Information</i>	40
C3.2	<i>Contractor's Works Information</i>	1
	Total number of pages	42

C3.1: EMPLOYER'S WORKS INFORMATION

1. INTRODUCTION	7
2. SUPPORTING CLAUSES	7
2.1 SCOPE	7
2.1.1 Ring Main Unit System	7
2.1.2 Coal Stock Yard	7
2.1.3 Coal Stock Yard Tired Road	7
2.1.4 Cooling Tower Screen Washing Bays	8
2.1.5 Ash Water Return Plant	8
2.1.6 Sluice Booster and Process Pump Houses	8
2.1.7 Purpose	8
2.1.8 Applicability	8
2.2 NORMATIVE/INFORMATIVE REFERENCES	8
2.2.1 Normative	8
2.2.2 Informative	9
2.3 DEFINITIONS	10
2.3.1 Disclosure Classification	10
2.4 ABBREVIATIONS	10
2.5 ROLES AND RESPONSIBILITIES	10
2.6 PROCESS FOR MONITORING	10
2.7 RELATED/SUPPORTING DOCUMENTS	10
2.8 ROLES AND RESPONSIBILITIES	11
2.9 EMPLOYER'S DESIGN	11
3. SCOPE OF WORKS	12
3.1 GENERAL	12
3.2 CIVIL SCOPE	13
3.2.1 Design	13
3.2.2 Survey of Proposed Locations	13
3.2.3 Geotechnical Investigation	13
3.2.3.1.1 Location of Underground Infrastructure	13
3.2.3.1.2 Dynamic Cone Penetrometer testing	13
3.2.3.1.3 Geotechnical Report	13
3.2.4 Construction	14
3.2.5 Handover	14
3.3 ELECTRICAL SCOPE	15
3.3.1 Distribution Board	15
3.3.2 Miniature Substation	15
3.3.3 Ring Main Unit (RMU)	15
3.3.4 Lighting	15
3.3.5 Trenching	15
3.3.6 Power Cabling	15
3.3.7 Existing Miniature Substations	15
4. DRAWINGS ISSUED BY THE EMPLOYER	16
5. ACCEPTANCE	16
6. REVISIONS	16
7. DEVELOPMENT TEAM	ERROR! BOOKMARK NOT DEFINED.
8. ACKNOWLEDGEMENTS	ERROR! BOOKMARK NOT DEFINED.

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9. [APPENDIX](#)ERROR! BOOKMARK NOT DEFINED.

INTRODUCTION

The Duvha Power Station's Coal Stock Yard, Cooling Tower Screen Washing Bays, Coal Stock Yard Tired Road, Ash Water Return, Sluice Booster and Process Pump Houses do not have sufficient lighting system installed. The deficiency of lighting in these areas presents safety risk for personnel who occupies or work at any of those areas during the night.

Safety Department conducted the lighting survey and recommended that a sufficient lighting system be installed in all areas.

The recommendation requisites a lighting system with lux level that complies with relevant Eskom Standard, SANS and Occupational Health and Safety Act to be installed in these areas.

SUPPORTING CLAUSES

SCOPE

The scope of work covers the detail design, provision, construction, installation, testing and commissioning of the following electrical system:

Ring Main Unit System.

The scope includes:

- ring main units (RMUs),
- miniature substation (MiniSub)
- power cables,
- cable trenches,
- distribution board
- concrete foundations (plinths)

Coal Stock Yard

The scope includes:

- lighting system design
- highmasts inclusive of their concrete foundations
- distribution board (db)
- Steel frame for db
- power cables

Coal Stock Yard Tired Road

The scope includes:

- lighting system design
- distribution board (db)
- Steel frame for db
- power cables

Cooling Tower Screen Washing Bays

- lighting system design
- distribution board (db)
- steel frame for db
- power cables

Ash Water Return Plant

- lighting system design
- distribution board (db)
- steel frame for db
- power cables

Sluice Booster and Process Pump Houses

- lighting system design
- distribution board (db)
- steel frame for db

Purpose

The aim of the document is to define scope of work for lighting system installation requirements associated with the mentioned areas.

Applicability

This document shall apply to the Duvha Power Station only.

NORMATIVE/INFORMATIVE REFERENCES

Normative

- SANS 10142-1: The wiring of premises Part 1: Low-voltage installations
- SANS 10142-2: The wiring of premises Part 2: Medium-voltage installations above 1 kV a.c. not exceeding 22 kV a.c. and up to and including 3 MVA installed capacity
- SANS 10100: The structural use of concrete
- SANS 10160: Basis of structural design and actions for buildings and industrial structures
- SANS 10144: Detailing of steel reinforcement for concrete
- SANS 282: Bending dimensions and scheduling of steel reinforcement for concrete
- SANS 1024: Welded steel fabric for reinforcement of concrete
- SANS 5863: Concrete tests - Compressive strength of hardened concrete
- SANS 2001: Construction Works (All applicable parts)
- SANS 10225: High Mast Design

~~SANS 10389-1: Exterior Lighting~~

SANS 2001-CC1: Construction works Part CC1: Concrete works (structural)

SANS 2001-CC2: Construction works Part CC2: Concrete works (minor works)

SANS 121: Hot dip galvanized coatings on fabricated iron and steel articles - Specifications and test methods

SANS 5862-1: Concrete tests - Consistence of freshly mixed concrete - Slump test

SANS 5861-2: Concrete tests - Sampling of freshly mixed concrete

SANS 5864: Concrete tests - Compressive strength of hardened concrete

SANS 2001: Construction Works (All applicable parts)

Occupational Health and Safety Act, (Act No. 85 of 1993)

National Environmental Management Act, 1998 (Act 107 of 1998)

National Environmental Management Waste Act, 2008 (Act 59 of 2008)

The National Water Act (Act No. 36 of 1998);

The Environmental Conservation Act (Act No 73 of 1989);

Informative

240-55714363 - Coal Fired Power Stations Lighting and Small Power Installation Standard.

240-109607450 - Plant Identification Work Instruction

240-86973501 - Engineering Drawing Standard – Common Requirements

240-48929484 - Verification and Validation Guideline

240-10960732 - Eskom Plant Abbreviation Standard

240-76992014 - Technical Document and Record Management Work Instruction

474-58 (Rev1) - Document and Records Management

240-53113685 - Design Review Procedure

240-53114002 - Engineering Change Management Procedure

240-48197042 - Procedure for the Management of Technology Obsolescence

240-44271204 - Process Control Manual for Managing Engineering Delivery

240-56356396 - Earthing and Lighting Protection

240-56364545 - Structural Design and Engineering Standard

240-57127955 - Geotechnical and Foundation engineering standard

240-86973501 - Engineering drawing Standard

240-56227443 - Requirements for Control and Power Cables for Power Station Standard

240-56062752 - Medium Voltage Miniature Substations for Systems with Nominal Voltages of 3.3kV ,6.6kV 11kV and 22kV Standard

240-56030406 Free Standing Metal Enclosed Ring Main Units for Systems with Nominal Voltages from 11kV to 33kV Standard

32-245 - Eskom Waste Management Standard

32-727 - Eskom Safety, Health, Environment and Quality (SHEQ) Policy

DEFINITIONS

- None

Disclosure Classification

Controlled disclosure: controlled disclosure to external parties (either enforced by law, or discretionary).

ABBREVIATIONS

Abbreviation	Description
N/A	Not Applicable
SANS	South African National Standards
MW	Mega Watt
MV	Medium Voltage
LV	Low Voltage
V	Voltage
DB	Distribution Board
RMU	Ring Main Unit
GPR	Ground Penetration Radar
CoC	Certificate of Compliance
N/A	Not Applicable
ISO	International Organisation of Standards
SHEQ	Safety, Health, Environmental & Quality
SE	System Engineer
PSR	Plant Safety Regulations
QA	Quality Assurance
QC	Quality Control
QCP	Quality Control Plan

ROLES AND RESPONSIBILITIES

The *Contractor* ensures that the requirements of this scope are met. It is the role of the Electrical Lead Engineer to ensure that all electrical installation requirements are catered for in this scope. It is also the role of the *Employer* that the scope is executed in accordance with this document.

PROCESS FOR MONITORING

- N/A

RELATED/SUPPORTING DOCUMENTS

- Coal Stock Yard Tired Road Lighting System Layout

-
- Coal Stock Yard Lighting System Layout
 - 0.57/55006 Sheet 8 - Duvha Power Station MV and LV Electric Diagram
 - D-DT-0854 - MV Power Cable Trench Details.
 - D-DT-0854 MV Power Cable Trench Details.
 - D-DT-0859 Mini-substation Plinth
 - D-DT-0863 Ring Main Unit Plinth.

ROLES AND RESPONSIBILITIES

Compiler: The document compiler is responsible for ensuring that this document is up-to-date and that this document is not a duplication of an existing documentation, regarding the document's objectives and content.

Functional Responsibility: The Functional Responsible Person shall determine if the document is fit for purpose, before the document is submitted for authorisation.

Authoriser: The document authoriser is a duly delegated person with the responsibility to review the document for alignment to business strategy, policy, objectives and requirements. He/she shall authorise the release and application of the document.

Lead Discipline Engineer: The role of the Lead Discipline Engineer is to manage the technical integrity of the design and be accountable for the management of the interfaces within their specific engineering domain. In addition, the Lead Discipline Engineer coordinates the discipline specific activities for the particular package/plant/system/asset such as Protection, Telecommunications, Control, Metering, Turbine, Boiler, Bulk Materials Handling (BMH), Civil, Electrical, Control and Instrumentation (C&I), Chemical, Low Pressure Services (LPS), etc. In addition, the Lead Engineer is accountable for the provision and establishment of all documentation required for a Design Review. The Lead Discipline Engineer is to ensure that a system of check sheets is being used in the review process and before the design review package is put together for the end of phase design review meeting he reviews and signs off on these documents.

Furthermore, design review procedure 240-53113685 defines roles and responsibilities, which are applicable in the development of this design phase.

Contractor: It is the role of the *Contractor* to conduct the works in accordance with the details provided in this document.

EMPLOYER'S DESIGN

The *Employer* has conducted the conceptual designs for the required of ring main unit and lighting systems, as listed in section 2.7 of this document.

The concept designs were conducted as the basis for evaluating suitable power supply points for the lighting system, identification of proposed cable routes, identify locations for the new electrical equipment and mainly verification of load flow study on the proposed power supply points.

The *Contractor* need to use these concept designs (where available) and provides the detail designs prior manufacturing, construction and installation.

SCOPE OF WORKS

GENERAL

The *Contractor's* scope includes the following:

- provision of detail designs
- construction and installation
- testing
- commissioning
- handover.

The *Contractor* remains liable to hand over a complete and functioning ring main unit system and lighting system for the mentioned areas as per the requirements of this scope and in compliance with the standards listed in section 2.2 of this document.

The *Contractor* submits equipment data sheet for any equipment to the *Employer* for acceptance before installation. It is the *Contractor's* responsibility to confirm that equipment provided for the installation is accepted (signed) by the *Employer* prior to construction or installation.

The *Contractor* provides all tools, equipment and personnel required to execute and implement the *Contractor's* responsibilities detailed in this document.

The *Contractor* remains liable for all works conducted as per the requirements of this document.

The *Contractor* submits a fully detailed Method Statement and Quality Control Plan (QCP) to the *Employer* in two week's time prior commencing of work, for review and acceptance.

The *Contractor* provides and submits the detail design report and drawings to the *Employer* for review and acceptance, hard copy formats. The hard copy drawings need to be A3 size and in Eskom template. The accepted drawings will be use as "Construction Copy" and can be revised if need be, using alphabets as revision number.

The *Contractor* submits the installation layouts and drawings as part of a handover to the *Employer* for his record keeping, both in soft (CAD preferred) and hard copy formats. A hard copy drawings need to have an "As Build" stamp and signed by a competent ECSA registered engineer or technologist. All hand over drawing need to be revision one (Rev 1).

The site consists of underground services, it is the *Contractor's* responsibility to ensure that these services are not damaged when excavating holes and trenches for installations.

Any discrepancy or ambiguity between the *Employer's* specification or scope of works is immediately brought to the attention of the *Employer* for clarification.

The *Contractor* submits Certificate of Compliance (CoC) after commissioning the installation in compliance with the SANS 10142.

CIVIL SCOPE

Design

The *Contractor* is responsible for the detailed designs of the RMU and miniature substation plinths, as well as the highmast foundations. These designs are submitted to the *Employer* for review and acceptance. The *Employer* provides plinth design drawings for information, and the *Contractor* is to further develop the designs into the detailed designs. The *Contractor* conducts a geotechnical investigation to

Survey of Proposed Locations

The *Contractor* is responsible for the complete surveying and setting out of the *works* including establishment of any benchmarks required to complete the *works*.

The *Contractor* confirms the available space in the proposed area for the plinths taking note of all existing services, roads, fencing, structures and any obstructions to the *works*.

The *Contractor* is required to consult the Surveyor-General's office to obtain information on available registered beacons near Duvha Power Station to use for the establishment of any required benchmarks close to the *works*.

Geotechnical Investigation

The *Contractor* is required to conduct a geotechnical investigation in the proposed areas which include the following:

Location of Underground Infrastructure

Geophysical testing is adopted to locate sub-surface utilities both metallic and non-metallic prior to excavation.

Testing is implemented to a maximum depth of 3 – 5 meters at the proposed location of each RMU.

The *Contractor* makes written recommendation to the *Employer* should the *Contractor* be of the opinion that geophysical testing be implemented to a greater depth that outlined within this document.

Dynamic Cone Penetrometer testing

- DCP tests are conducted in the proposed locations of the RMU's and miniature substation
- One (1) DCP test per plinth is conducted

Geotechnical Report.

After completion of fieldworks and testing, the professional Engineering Geologist or professional Geotechnical Engineer is required to prepare and submit a geotechnical report based on the works conducted.

The Geotechnical report may form part of the consolidated detailed design report to be submitted.

The geotechnical report includes all recorded field data, assumptions and calculations as appendices including all raw data.

Construction

The *Contractor* constructs foundations and plinths for installation of highmasts, miniature substation and ring main units as per the accepted designs in accordance with the detail design accepted (signed) by the *Employer* and standards listed in 2.2 of this document.

The *Contractor* ensures that all concrete works are of suitable strength, the minimum strength of structural concrete is 35MPa.

- Finishing to be smooth steel shutter or steel float.
- All corners to be chamfered 20x20mm.
- All reinforced concrete structures shall be designed in accordance with SANS 10100.

The construction of all reinforced structures, including the production, transport, placing, sampling and testing of concrete, the cutting, bending and fixing of reinforcement, the design, erection and quality of formwork, the curing of concrete, stripping of formwork etc. shall be governed by the requirements of the relevant sections of SANS 2001. Concrete may be produced from an on-site batching plant or, if available, from a local ready mix plant.

Concrete shall be placed promptly after batching.

Sampling of concrete test cubes and slump tests shall take place at the point of deposition.

Handover

Apart from any statutory data packages required, the *Contractor* also compiles a data package of the relevant drawings, test certificates etc. to the *Employer* for acceptance. These include, but are not limited to:

- Results of all surveys/test/investigations in accordance with this Technical Specification. This includes the raw survey data and detailed report/s;
- Design report inclusive of calculations;
- Detailed construction drawings;
- Comprehensive method statement/ construction methodology detailing the proposed methods of construction and erection;
- Quality Plans;
- Concrete 7 day and 28 day cube test results;
- Slump test results;
- Concrete mix designs including all required test results e.g. aggregate test results;
- As-built drawings after construction.

All submitted drawings and reports are to be signed by an ECSA professionally registered civil engineer. The Professional Civil Engineer's ECSA registration number is stated on drawing/document.

ELECTRICAL SCOPE

Distribution Board

The *Contractor* designs, provides, installs, tests and commissions sufficient distribution board for a specific area in accordance with the detail design accepted (signed) by the *Employer* and in compliance with the SANS 10142-1.

A distribution board need to be functioning and acceptable, it is the *Contractor's* responsibility to conduct an inspection and test (QCP to be compiled, accepted and applied) before delivery on site, in the present of the *Employer's* technical and quality representatives.

Miniature Substation

A 11/0.4kV, 315kVA miniature substation will be issued by the *Employer*. The *Contractor* installs, tests and commissions the miniature substation, in compliance with the relevant codes and standards listed in 2.2 of this document.

The *Contractor* designs, provides, installs, tests and commissions 11/0.4kV, 800kVA miniature substation for a specific area in accordance with the detail design accepted (signed) by the *Employer* and in compliance with the relevant standards listed in 2.2 of this document.

Ring Main Unit (RMU)

Three (3) ring main units (RMUs) will be issued by the *Employer*. The *Contractor* installs, tests and commissions each RMU next to three existing miniature substations (1A, 1B and 5) in compliance with the relevant standards listed in 2.2 of this document.

Lighting

The *Contractor* determines, provides, installs, tests and commissions sufficient lighting for specific installation in compliance with the relevant standards listed in 2.2 of this document.

Trenching

The *Contractor* excavates trenches for installation of cables in compliance with the Eskom's standard D-DT-0854.

Power Cabling

The *Contractor* determines, provides, installs, tests and terminates (both ends) a cable for specific installation in compliance with the relevant standards listed in 2.2 of this document.

The *Contractor* submits cable routing designs (trench) to the *Employer* prior installation. All cabling installation requirements are responsibilities of the *Contractor*.

Existing Miniature Substations

The new 11/0.4kV, 315kVA miniature substation will be installed and interconnected with the existing miniature substations (1A, 1B and 5) through the new ring main units, to form a complete ring main units reticulation.

The existing miniature substations (1A, 1B and 5) are damaged and do not meet the requirement of the SANS 10142. The *Contractor* provides suitable spares and refurbishes these existing miniature substations to comply with the requirements of SANS 10142.

The *Contractor* disconnects, refurbishes, tests, reconnects and commissions main cables on the existing miniature substation with the new ring main units during the accessibility of these existing.

The *Contractor* ensures the correctness of the phasing of cabling during the reconnecting of the existing and new power cable for the ring main unit reticulation.

DRAWINGS ISSUED BY THE EMPLOYER

The *Contractor* uses the related supporting documents listed in section 2.7 of this document where applicable as a basis to produce and provide detail design for a complete installation of an area.

ACCEPTANCE

This document has been seen and accepted by:

Name & Surname	Designation
Elliot Mamba	Electrical Technician

REVISIONS

Date	Rev.	Compiler	Remarks
September 2020	0.0	S Mnguni	First Draft

Duvha Installation of Lighting Systems**C3.2 CONTRACTOR'S WORKS INFORMATION**

This section of the Works Information will always be contract specific depending on the nature of the *works*. It is most likely to be required for design and construct contracts where the tendering contractor will have proposed specifications and schedules for items of Plant and Materials and workmanship, which once accepted by the *Employer* prior to award of contract now become obligations of the *Contractor* per core clause 20.1.

Typical sub headings could be

- a) *Contractor's* design
- b) Plant and Materials specifications and schedules
- c) Other

This section could also be compiled as a separate file.

7.1 Appendix A Environmental Management Policy**7.2 Appendix B ENV0005- Procedure for waste management**

Microsoft Word
Document

7.3 Appendix C Supplier Contract Quality Requirement

QM-58 Supplier
Contract Quality Req

7.4 Appendix D Access Control Visitors Appointment

Access Control
Visitors Appointment

7.5 Appendix E AKZ Plant labelling standard

Microsoft Word
97-2003 Document

7.6 Appendix F SHE Requirements

32-726 (0) SHE
Requirements for the

PART 4: SITE INFORMATION

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

PART 4: SITE INFORMATION

C4.1: Information about the *site* at time of tender which may affect the work in this contract

Safety Risk Management

- 1) The Contractor complies with the requirements of the Duvha Power Station Safety, Health & Environmental Specifications SAS 0012 rev 8.
- 2) **The documents are completed by the Contractor and submitted to the Employer before taking possession of the works.**
- 3) These documents are valid for the duration of the works.
- 4) The Contractor and all his personnel attend a Health and Safety Induction Course prior to starting with the works.
- 5) The induction course is presented by the Safety Risk Department at Duvha Power Station.
- 6) The Contractor makes arrangements with Project manager who will arrange with Safety Risk Management, for a slot and the date scheduled for the course.
- 7) The Contractor submits all the documents as indicated in the Safety, Health & Environmental Specifications relevant to the work to Safety Risk Management before the induction course.
- 8) The Contractor completes all appointments required and ensures that the appointee and appointees fully understand their responsibilities and are competent and trained to execute their duties.
- 9) The appointees/appointee ensures that all duties are carried out and records are kept by the Contractor for review/audit by the Employer or Inspector of Machinery.
- 10) Duvha Safety Risk Management has the right and authority to visit and inspect the Contractor's work place or Site establishment.
- 11) The Contractor supplies and ensures that his employees wear the necessary PPE according the risk assessments performed on the specific tasks to be carried out.
- 12) The Contractor ensures that everyone entering Duvha Power Station under his supervision are medically, physically and psychologically fit to enter Duvha Power Station.
- 13) The medical examination, at the Contractors cost, is carried out by a Registered Professional Occupational Health Practitioner and the examination shall include the following tests:
 - a. Eye Test, Blood Pressure,
 - b. Heart Function,
 - c. Hearing Test and
 - d. Lung Function.
- 14) A thorough examination is done and previous physical injuries, as well as occupational diseases/complications are covered.
- 15) If at any point in time during the execution of the works, the Contractor has a radiation-related

incident/exposure, the onus is on the Contractor to immediately notify the Employer, the Medical

Duvha Installation of Lighting Systems

Station, the Risk Manager and the Safety Risk Management Department.

- 16) The onus thereafter is for the Contractor to immediately arrange, at his/her cost, for blood samples to be taken by a Registered Laboratory and for this sample to be sent to the Excellerator Laboratory in Cape Town for full radiation exposure tests. This test results are then to be discussed with the Duvha Occupational Health Practitioners, who will then advise the Power Station Management on the risk, if any, of the incident/exposure.
- 17) The Contractor takes full responsibility and accountability for all other people/staff/personnel/labour that he/she employs or utilises, whether in full-time/part-time/contract basis, in executing the works or other work whilst on the Employers premises.
- 18) The Contractor ensures that Safety Harnesses are used for all work carried out in elevated positions, as defined in the Occupational Health and Safety Act, No 85 of 1993 or any other Code of Practice or standard or the Construction Regulations.
- 19) All safety equipment or Machinery used complies with the SANS Codes of Quality and Practice or any Code as stipulated in the Occupational Health and Safety Act, No 85 of 1993, and any amendments thereto.
- 20) The Contractor at all times consider himself as "Employer" as defined in the Occupational Health and Safety Act, No 85 of 1993 and do not consider himself as under supervision or management of the Employer with regard to Health and Safety Requirements but only from a Commercial Contractual Condition of Contract. Under no circumstances does the Contractor consider himself a sub-ordinate or being given supervision.
- 21) The Contractor provides and maintains his own facilities as required in the Occupational Health and Safety Act, No 85 of 1993 or any other Code of Practice or standard or the Construction Regulations, if not agreed contractually or arranged by the Employer.
- 22) The Contractor has Safety Systems in place at his premises for the total contract period and these shall include the following:
 - a. Safety Management Structure and Compliance to these.
 - b. Statutory Appointments.
 - c. Records and documentation of all Risk and Hazard Analyses.
 - d. Planned Job Observations Records and Documents.
 - e. Employment history and records of all personnel, part-time or full-time or contract labour.
 - f. Medical History of all personnel, part-time or full-time or contract labour
 - g. Training and Competency Records with regard to Safety, Health and Environment.
 - h. Training and Competency Records with regard to the skills he uses to carry out the works or any other works in the Employers premises.
 - i. Compensation Commissioner records and proof of registration.
 - j. Records and documentation with regard to any sub-contractor or labour-only contracts he places or uses to carry out the works or any other works in Employers premises.
 - k. Personal Protective Equipment and Safety Equipment Inspection, training and competency records and documentation.
 - l. Employment contracts for all sub-contractor or labour-only contracts.

Duvha Installation of Lighting Systems

- m. Compliance to a Safety System, such as NOSA or any other system that is similar in nature.
- n. Records of all incidents or accidents, and vehicle accidents, incurred during execution of this works or any other works in the Employers premises.
- o. Records of all man-hours, including sub-contractors or labour-only contracts, the Contractor spends on the Employers premises.
- p. Written Safe Work Procedures for all hazardous tasks the Contractor executes on the Employers premises.
- q. A Fall Protection Plan for all elevated work the Contractor does on the Employers premises.
- r. Environmental Plan and awareness training.
- s. Induction training records of his staff by himself/herself.
- t. Minimum wage compliance for the different skills and to which Bargaining Council compliance is made to and proof of membership, if any.
- u. Risk Assessment of this type of works
- v. Proof of authorisation/accreditation from Department of Labour and or other Statutory Body for this type of works, if applicable
- w. Emergency Evacuation and Rescue Plan for the hazardous tasks related to the works.

Specific Risks

23) The following risks are identified by the Employer and Contractor specifically addresses these risks to ensure that the works is carried out safely:

- a. Working at heights
- b. High temperatures
- c. Low temperatures
- d. High pressures
- e. High voltage
- f. Windy conditions
- g. Dusty conditions
- h. High noise area
- i. Work is being carried out overhead
- j. Work is being carried out below
- k. Possibility of drowning exists
- l. Work in confined spaces
- m. Possibility of noxious gasses
- n. Possibility of steam release
- o. Possibility of fires or explosions
- p. Chemicals
- q. Biological Hazards

24) Gaskets used are fit for the type of liquid, solid or gas being transported and do not contain any asbestos fibres.

Duvha Installation of Lighting Systems

- 25) The ash dust is harmful if inhaled and the Contractor provides proper dust masks to all his personnel working in dusty environments.

Plant Safety Regulations

- 26) The Employer, on request from the Contractor, isolates required plant from all sources of danger as described in the Plant Safety Regulations.
- 27) The Project Manager, on request, makes available a copy of the latest revision of the Plant Safety Regulations available to the Contractor.
- 29) The Contractor conforms to all rules and regulations applicable to plant safety and completes the Workman's Register prior to working on the plant.
- 30) The Contractor declares any grinding and welding to be carried out on the workers register.
- 31) At every permit change the Contractor withdraws himself/herself/his staff for that period of permit suspension/revocation and thereafter only proceeds with the works after signing onto the new permit.
- 32) The Contractor ensures that he/she/all sub-contractors/personnel/staff/his visitors are medically, physically and psychologically fit to enter the Duvha Power Station, and specifically any confined space.
- 33) The Contractor is prohibited from entering Radiation Areas.
- 34) The onus is on the Contractor to ensure that the correct confined space requirements and tests have been done/met by the Employer prior to entry into any confined space or hazardous plant areas.
- 35) The Contractor ensures that all personnel are competent to carry out the works.
- 36) Proof of competency for technical and safety aspects must be available as and when required on site.

Limited Access Register (LAR)

- 37) The LAR is for the person in charge of the plant to maintain control over activities taking place on his plant that are not covered by the Plant Safety Regulation and Operating Regulations for High Voltage Systems.
- 38) Activities that are allowed to be carried out under the LAR must not require a permit and must satisfy the following criteria:
- 39) They must not involve danger to the person carrying out the activity;
- 40) No plant isolations must be required;
- 41) The activity must be performed by a skilled person and there must be no risk of a production loss;
- 42) The duration of the activity must be less than 24 hours
- 43) The Supervisor accompanies the Contractor during the first instances of working under a LAR on a specific plant area.
- 44) It is very important that the person who plans to do an activity on a plant under the LAR informs the person in charge of the plant (ASS on the panel or PPO at WTP) of what will be done.
- 45) This means verbally telling the person in charge of the plant what will be done and not just signing the LAR book. The LAR book is also signed.

Duvha Installation of Lighting Systems

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

47) For more information please refer to Plant Safety Regulation C11.

Fire precautions

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

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

50) In case of a fire, report the location and extent of the fire to the Electrical Operating Desk at extension 2222.

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

52) Reporting of accidents

53) The Employer follows an accident prevention policy that includes the investigation of all accidents involving personnel and property. This is done with the intention of introducing control measures to prevent a recurrence of the same incidents.

54) The Contractor is expected to fully co-operate to achieve this objective.

55) The Project Manager is informed immediately of any Category B or C incidents. Category A incidents and any damage to property or equipment must be reported to the Supervisor within 24 hours.

56) Radiation incidents must be reported immediately.

57) In reporting Category C and D incidents, the Contractor submits the following documents, or any additional as required by the Employers investigation team.

- a. Proof of Contract of Employment.
- b. Proof of WCL notification to Department of Labour.
- c. Proof of Medical Doctors Note/Certificate detailing nature of injury and period of rest.
- d. Death Certificate, if Category C fatality.
- e. Risk and Hazard Analysis, if not in place prior to injury.
- f. Written Safe Working Procedure, if not in place prior to injury.

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

Occupational Health and Safety Act 1993 - SECTION 37

58) The Contractor and Employer agrees to the arrangements and procedures between them to ensure compliance by the main Contractor (as the mandatory) with the provisions of Section 37.2 of the

Occupational Health and Safety Act, No 85 of 1993.

59) The Contractor complies with:

- a. the Occupational Health and Safety Act, 1993, and all Regulations made hereunder;

Duvha Installation of Lighting Systems

- b. all Eskom Safety and Operating Procedures.
- 60) The Contractor acknowledges that he is fully aware of the requirements of all the above and undertakes to employ only people who have been duly authorised in terms thereof and who received sufficient safety training to ensure that they can comply therewith.
- 61) The Contractor undertakes not to do, or not to allow anything to be done which will contravene any of the provisions of the Act, Regulations or Safety and Operating Procedures.
- 62) The Contractor appoints a person who liaises with the Eskom Safety Officer responsible for the premises relevant to the Contract.
- 63) The person so appointed on request:
- a. supplies the Eskom Safety Officer with copies of minutes of all Health and Safety Committee meetings, whenever he is required to do so;
 - b. supplies the Eskom Safety Officer with copies of all appointments in respect of employees employed on this Contract, in terms of the Act and Regulations and notifies the Eskom Safety Officer of any changes thereto.
- 64) Eskom may, at any stage during the currency of this agreement, be entitled to:
- a. Do safety audits at the Contractor's premises, its work-places and its employees;
 - b. Refuse any employee, Subcontractor or agent of the Contractor access to its premises if such person has been found to commit any unsafe act or any unsafe working practice or is found to be not authorised or qualified in terms of the Act;
 - c. issue the Contractor with a work stop order or a compliance order should Eskom become aware of any unsafe working procedures or conditions or any non-compliance with the Act, Regulations and Procedures referred to in the Occupational Health and Safety Act - 1993 and all Regulations made there under as well as all Eskom Safety and Operating Procedures.
- 65) No extension of time will be allowed, as a result of any action taken by Eskom in terms of the foregoing Clause and the Contractor has no claim against Eskom as a result thereof.

Hazardous Substances

- 66) It is required in terms of the General Administrative Regulation (Regulation 7) that any Manufacture, Importer, Seller or Supplier of hazardous chemical substance supplies the receiver, free of charge, with sufficient information for the user.

Radiation protection

- 67) The Contractor conforms to Duvha procedure HMS0002 when performing any industrial radiography. Thermal insulation containing asbestos.
- 68) The Contractor does not disturb any thermal insulating material on the plant until it has been positively identified as not containing asbestos. Approval is obtained from the Supervisor before any thermal insulation is disturbed.
- 69) All stripping of asbestos material is undertaken strictly in accordance with the Employer's Standard, SAP 0022, available from Safety Risk Management.

Duvha Installation of Lighting Systems

- 70) The Project Manager advises the Contractor whether areas that are to be stripped of lagging have been identified as containing asbestos.
- 71) The Contractor is obliged to ascertain from the Project Manager in advance whether areas required to be stripped, are non-asbestos. Any contractor, other than the contractor appointed to remove asbestos strips no lagging material containing asbestos fibres.
- 72) The Contractor appointed to remove asbestos, does not begin removal without first obtaining the necessary permission from the Deputy Director of Labour and the Project Manager.

Barricading and screens

- 73) The Contractor provides and installs barricades and warning devices to ensure that equipment and persons are not exposed to danger or to prevent access to dangerous areas.
- 74) Additional to barricading, the Contractor installs screening, such as black plastic, on the roadside to keep dust away from the road. This is in the interest of transport safety.
- 75) All welding, flame cutting and grinding work is prohibited inside and directly outside the fabric filter plant area. All such work is done on ground level.
- 76) All gratings are covered with adequate protective screening when welding or flame cutting in the vicinity.

Housekeeping

- 77) The Contractors equipment does not impair the operation of the plant or access to the plant.

Vehicle Safety

- 78) No driver may disregard road signs, drive recklessly, exceed the speed limit, exceed the alcohol limit, or do anything contrary to the National Road Traffic Act while on Eskom business.
- 79) No driver may drive a vehicle while holding a cellular or mobile telephone or radio in one or both hands or with any other part of the body. A cellular or mobile telephone or radio equipment may only be used while driving if such telephone or radio device is fitted with a hands-free device, otherwise it must be switched off.
- 80) All drivers including contractor and contractor employees, when performing work for Eskom, must ensure that they and their passengers remain seated and wear seatbelts at all times.
- 81) No employee may be transported in the back of an open vehicle.
- 82) No driver should park a car in such a way that it will be a hazard to other road users.
- 83) No driver may use a vehicle without being authorised.
- 84) No employee is allowed to drive any Eskom-owned or scheme vehicle if not in possession of a valid national driver's licence as well as an Eskom driver permit.

1. Quality assurance requirements

- 1) All work will be carried out under the CONSTANT Supervision of an Experienced Competent Supervisor.